



Los Angeles County

# Transit-Oriented District (TOD) Design Guidelines

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Los Angeles County

# Transit-Oriented District (TOD) Design Guidelines

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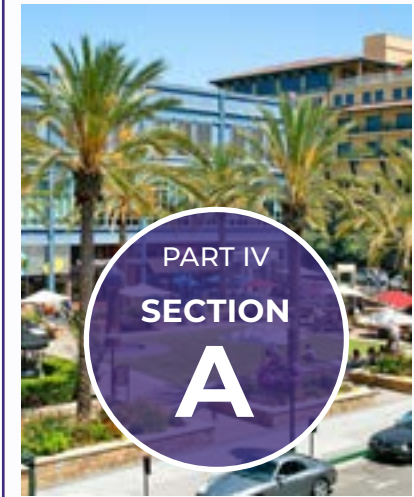
**PART III: Case Study**



Opportunities and Constraints Analysis

*This section will be completed following public input from Stakeholder and Community Meetings*

**PART IV: Appendix**



Existing Conditions Report

*This section will be completed following public input from Stakeholder and Community Meetings*

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# PART I: Overview





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# 01 Executive Summary

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IN PROGRESS

## 02 Introduction

The Los Angeles (LA) County General Plan Transit-Oriented Districts (TOD) Program was developed to enable transit-supportive uses and infrastructure in unincorporated communities near existing and new transit facilities.

The Program was developed to update planning of unincorporated communities near existing and new transit facilities. A half-mile radius around each potential new transit station is used for a preliminary study area, which is then refined later as part of a separate Specific Plan effort.

The LA County TOD Design Guidelines (TOD Guidelines) establish a framework for promoting high quality, affordable housing, increased mobility and accountability, improved and safe infrastructure, increased housing choices, healthy benefits through walking and biking, and reduced greenhouse gas (GHG) emissions. The Guidelines supplement the provisions of the General Plan and local zoning. They will also serve as a basis for developing Specific Plans for each station area as the corridors are implemented, a process that will offer the community more in-depth community outreach and analysis.

The TOD Guidelines planning process includes the following:

- Review of existing conditions for pedestrians, motorists, bicyclists and transit users in the TOD area such as demographics, zoning conditions, parking, circulation patterns, and transit services/facilities. Evaluation of applicable County policies and plans. (See Existing Conditions Report in Appendix)
- Use of the Atlantic/Whittier Station in East Los Angeles as a test case for the Design Guidelines, building in a robust public outreach process. Extrapolate those findings into the Guidelines to consider for future potential rail stations.
- Establishment of TOD guidelines generally for the station area, as well as specific interventions and associated design guidelines and best practices through a review of best practices on land use, urban design, transportation, and architecture (setbacks, heights, streetscape view, etc).
- Development and implementation of a community engagement strategy to encourage public participation, and stakeholder involvement, ownership, and buy-in.

- Formulation of a market and economic development strategy, which includes zoning suggestions and identify future needs assessment involving capital improvement opportunities and strategies for the Atlantic/Whittier Station Area.
- Identification and analysis of potential funding sources for TOD and active transportation.
- Establishment of the potential for Tax Increment Financing (TIF) districts (Enhanced Infrastructure Financing Districts, Community Revitalization and Investment Authority, etc.).

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# 03 Goals of the Guidelines

These Transit-Oriented District (TOD) Design Guidelines are a tool to implement the Los Angeles County (LA County) General Plan and are intended to guide the design of new development and infill projects for TODs in the unincorporated areas of LA County. The preparation of future Specific Plans and these Guidelines include recommendations, best practices, and precedents for high-quality transit-oriented development. The goals of these Design Guidelines are those of the County's General Plan Transit-Oriented District Program, which have been paraphrased below:

- 1 Increase walking, bicycling, and transit;
- 2 Facilitate compact, mixed-use development;
- 3 Increase economic activity;
- 4 Facilitate the private investment of infrastructure improvements;
- 5 Streamline the environmental review process for future infill development projects;
- 6 {Additional goals to be added later from the outreach process}

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# 04 Planned Rail Lines and Station Areas

Since 1990, the Los Angeles County Metropolitan Transportation Authority (Metro), responsible for the County transportation system, has implemented premium rail and busway lines including the Blue line, the Red Line, Purple Line, Metro Green Line, Metro Gold Line, the Metro Orange Line, Metro Silver Line and the Metro Expo Line. These transit services are provided in addition to the existing and planned bus system.

With the passing of Measure M in 2018, the voter-approved half-cent sales tax, Metro is currently evaluating locations for three transit corridors and extensions of existing transit corridors through unincorporated LA County. Along these corridors, there are five additional rail stations in unincorporated LA County, and another five rail stations located in neighboring jurisdictions that include unincorporated LA County land within a half-mile radius. These corridors and stations include the following:

## A Eastside Transit Corridor Phase 2

Stations:

- Atlantic/Whittier
- Santa Anita
- Peck
- The Shops at Montebello
- Norwalk
- Lambert
- Commerce

## B Purple Line Extension

Stations:

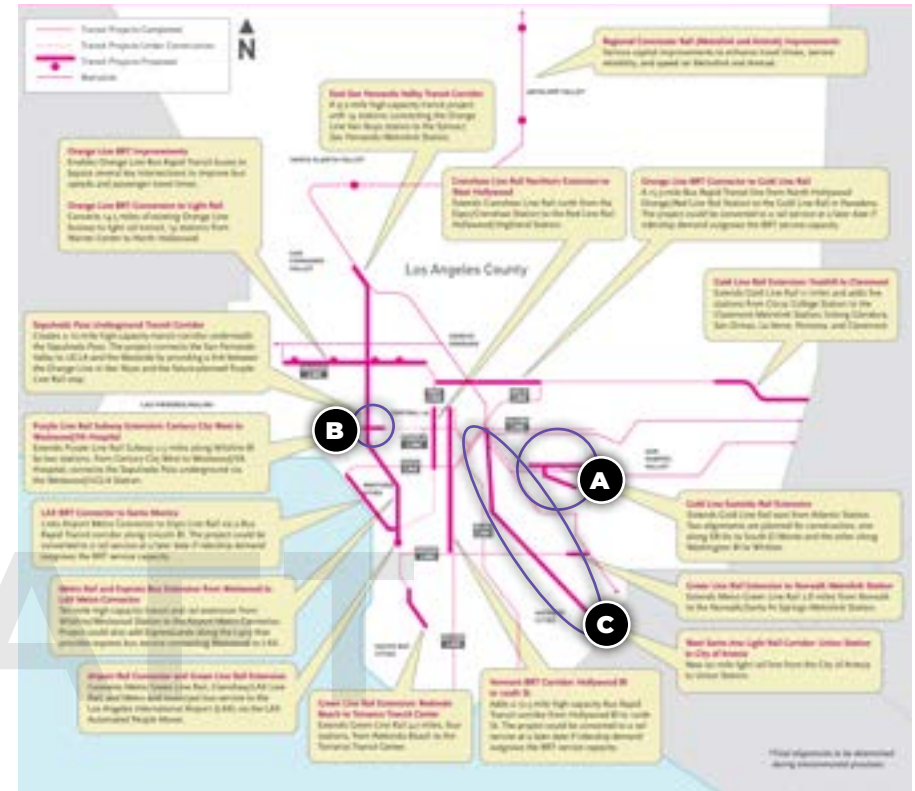
- Westwood/VA Hospital
- Westwood/UCLA

## C West Santa Ana Branch

Stations:

- Florence/Salt Lake

These three corridors are shown in the figure at right. Maps of all proposed station areas can be found in the Appendix.



Measure M Transit Projects

Source: LA County Department of Regional Planning

These potential new rail stations present the County with an opportunity to enhance and transform communities through public and private investment in all types of housing (including affordable), retail, office, open-space, other community amenities and infrastructure. In addition, active transportation and first/last-mile projects around new transit stations could be implemented with each jurisdiction's Measure M commitment to fund 3% of the total project cost, among other potential funding sources. The Design Guidelines can be applied to existing and future station areas with unincorporated LA County land.

## 05 Existing Plans and Policies

There are several existing regulatory documents in place which affect the development of existing and future TODs in unincorporated Los Angeles County. These documents are summarized briefly below:

### Plans and Policies all Unincorporated Los Angeles County

#### Los Angeles County General Plan (2015)

The 2035 Los Angeles County General Plan, adopted in 2015, provides a policy framework for guiding jobs and housing growth, within the unincorporated areas of Los Angeles County. See the Appendix for a full summary.

#### Housing Element (2014)

The Housing Element of the General Plan determines the existing and projected housing needs of the unincorporated areas, establishes goals, policies and implementation programs that guide decision making on housing needs, and implements actions that encourage the private sector to build housing. See the Appendix for a full summary.

#### Los Angeles County Code

The Subdivision Ordinance (Title 21 of the Los Angeles County Code) generally regulates the internal design of streets, lots, public utilities and other similar infrastructure in each new subdivision. The Zoning Ordinance (Title 22 of the Los Angeles County Code) regulates single-lot restrictions such as use, height, and requirements for setbacks and parking. See the Appendix for a full summary.

#### Los Angeles County Bicycle Master Plan (2012)

The County Bicycle Master Plan guides the development and maintenance of a comprehensive bicycle network and set of programs throughout the unincorporated communities of the County of Los Angeles for 20 years (2012 to 2032). See the Appendix for a full summary.

#### Los Angeles County TOD Access Study (2013)

The purpose of the TOD Access Study is to assess the station access capacity and needs within nine proposed TODs in Los Angeles County. The proposed stations are part of the Green, Blue and Gold Lines with the Sierra Madre Villa Gold Line Station being the only Gold Line station studied. See the Appendix for a full summary.

#### Metro Complete Streets Policy (2014)

The Complete Streets Policy aims to ensure that streets form a comprehensive and integrated transportation network promoting safe and convenient travel for all users while preserving flexibility, recognizing community context, and using design guidelines and standards that support best practices. See the Appendix for a full summary.

#### Los Angeles County Model Design Manual for Livable Streets (2011)

The Los Angeles County Model Design Manual is based on complete streets principles that design streets for people of all ages and physical abilities and accommodate all travel modes. See the Appendix for a full summary.

#### Los Angeles County Draft Vision Zero Action Plan (2019)

The County of Los Angeles does not have an adopted Vision Zero program, however the County has released a draft Vision Zero Action Plan to guide a new traffic safety initiative focused on eliminating traffic-related deaths on unincorporated County roadways by 2035. See the Appendix for a full summary.

#### Parks Needs Assessment (2016)

The Countywide Parks Needs Assessment was designed to quantify the need for parks and recreational resources. See the Appendix for a full summary.

#### On-Demand Personal Mobility Devices Pilot Program (2019)

The County of Los Angeles will be implementing the On-Demand Personal Mobility Devices (Devices) Pilot Program to support transportation alternatives, reduce greenhouse gases, and connect to transit. Devices will allow on-demand shared personal mobility companies to operate on unincorporated County streets which will assist the County in the management of its transportation network. See the Appendix for a full summary.

## Plans and Policies for only the Atlantic/Whittier Station Area

### East Los Angeles 3rd Street Plan (2014)

The 3rd Street Plan is a vision plan that sets forth a comprehensive set of strategies and design guidelines consistent with the goals, objectives, and policies of the County of Los Angeles General Plan and the East Los Angeles Community Plan. See the Appendix for a full summary.

### East Los Angeles 3rd Street Form-Based Code Specific Plan (2014)

This Form-Based Code Specific Plan (Form-Based Code or ordinance) is established as the primary means to implement the East Los Angeles 3rd Street Plan. See the Appendix for a full summary.

### East LA Community Plan (1988)

The community plan establishes a framework of goals, policies and programs that is designed to provide guidance to those making decisions affecting the allocation of resources and the pattern, density, and character of development in East Los Angeles. See the Appendix for a full summary.

## Other Related Plans

### SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS)

The Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS or Plan) is a long-range visioning plan that integrates land use and transportation, and balances future mobility and housing needs with economic, environmental and public health goals. See the Appendix for a full summary.

### National Association of City Transportation Officials (NACTO) Urban Street Design Guide

The Urban Street Design Guide provides the blueprint to NACTO's mission of making streets safer, more livable, and more economically vibrant. See the Appendix for a full summary.

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## 06 The Need for Regional Collaboration

Regional collaboration is paramount for the success of the TOD Program and Design Guidelines to achieve continuous safe and comfortable connectivity (walking and bicycling) to the existing and proposed transit stations requires collaboration with cities within the half-mile area.

### Shared Jurisdictions

Each of the proposed station areas include significant land area outside of unincorporated LA County which are subject to the jurisdiction of local cities. At a minimum, the County should extend invitations to comment on the development of related guidelines, active transportation plans, and specific plans to residents and other stakeholders in adjacent jurisdictions within the half-mile radius. The jurisdictions which have land area within the proposed half-mile station areas are:

#### City of South El Monte

The City has land area which comprises a significant portion of the Santa Anita and Peck half-mile station areas. The proposed Santa Anita station is located in unincorporated LA County but the proposed Peck station is located in South El Monte.

#### City of Montebello

The City has land area which comprises the majority of the The Shops at Montebello half-mile station area. The station is located in Montebello.

#### City of Commerce

The City has minimal land area in the Atlantic/Whittier half-mile station area and land area which comprises the vast majority of the Commerce half-mile station area. The proposed Atlantic/Whittier station is located in unincorporated LA County but the proposed Commerce station is located in the City of Commerce.

#### City of Santa Fe Springs

The City has some land adjacent to the Norwalk half-mile station area and has land area which comprises the majority of the Lambert half-mile station area. The proposed Lambert station is located in Santa Fe Springs.

#### City of Huntington Park

The City has land area which comprises the majority of the Florence/

Salt Lake half-mile station area. The proposed station is located in Huntington Park.

#### City of Los Angeles

The City has minor land area in the Westwood/VA Hospital half-mile station area and a considerable amount of land area in the Westwood/UCLA station area. The proposed VA Hospital station is located in unincorporated LA County but the proposed UCLA station is located in the City of Los Angeles.

#### Neighboring Cities

In addition, collaboration with neighboring cities in planning and implementing more transit-supportive land uses with intensities and densities will be necessary for the TOD's success at realizing the benefits of TOD.

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## 07 Benefits of TOD

**Catalyst for economic development:** TODs can act as a catalyst for nearby properties to invest in development and take advantage of the higher land use density, customer base and walkable TOD community.

**Redevelopment:** TODs can be used to redevelop vacant or underutilized properties and declining auto-oriented neighborhoods.

**Increased property value:** TODs can be used to revitalize the area within 1/2 mile of the station resulting in increased property values.

**Reduced per capita infrastructure costs:** TODs help reduce infrastructure costs due to compact and infill development that, on a per capita basis, is less expensive to service relative to auto-based development.

**Revenue for transit systems:** Increased ridership leads to additional revenues for transit service.

**Reduced household spending:** By reducing auto, parking and travel costs, TODs contribute to an expansion of household net income, which can instead be invested in the community. Households that use transit and reduce the need for one car can save up to \$1,000 per car per year (SCAG RTP/SCS Performance Measures, 2015).

**Increased transit ridership:** By decreasing driving and creating a walkable environment, TODs will increase transit ridership and may result in less roadway congestion with new development.

**Improved air quality and energy consumption:** Decreased auto trips lead to lower emissions which results in improved air quality.

**Conservation of land and open space:** TODs are compact developments, and therefore, consume less land than lower-intensity, auto-oriented development.

**Expanded housing and employment choices:** TODs provide a diversity of housing and employment types in conveniently close proximity to the transit station.

**Greater mobility choices:** By creating activity nodes linked by transit, TODs increase mobility options in congested areas. Young people, the elderly, those without cars or not wanting to drive also have mobility options.

**Health benefits:** By providing more opportunities for walking and bicycling, TODs areas can lower rates of obesity, heart attacks, and other chronic health conditions.








**Enhanced sense of community:** Bringing more people and businesses closer in a pedestrian environment creates an activity hub, as TODs enhance community engagement and activity.

**Enhanced public safety:** Creating more active pedestrian places used throughout the day and evening promotes natural surveillance, which can lead to lower crime rates.

**Quality of life:** Reducing the driving time for long automobile commutes, enables commuters to repurpose this time or other activities.

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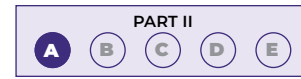
# 09 How to Use This Document

Who Am I?	What do I want to accomplish?	What can I do?	Important Sections					
			II A	II B	II C	II D	II E	III A*
 <b>Elected/ Appointed Official</b>	<ul style="list-style-type: none"> <li>Improve city through policies and/or physical improvements</li> <li>Meet the needs of constituents</li> <li>Understand existing conditions of station area</li> </ul>	<ul style="list-style-type: none"> <li>Approve a project</li> <li>Public-private partnership (P3)</li> </ul>	X	X	X	X		X
 <b>City/County Planner</b>	<ul style="list-style-type: none"> <li>Contribute to a successful and impactful project</li> <li>Engage with developers + applicants</li> <li>Develop TOD-supportive policies</li> <li>Understand existing conditions of station area</li> <li>Respond to residents, business, and/or local organizations needs</li> </ul>	<ul style="list-style-type: none"> <li>Manage a project</li> <li>Recommend a project</li> <li>Apply for grant for public improvements</li> <li>Recommend approval of a project</li> </ul>	X	X	X	X	X	X
 <b>Local Business Owner</b>	<ul style="list-style-type: none"> <li>Build a project that benefits the community</li> <li>Generate profit</li> <li>Grow customer base</li> <li>Retain and build upon local revenues</li> <li>Understand characteristics of my station area</li> </ul>	<ul style="list-style-type: none"> <li>Buy property</li> <li>Develop a project</li> <li>Rehabilitation of storefronts/buildings</li> <li>Provide bicycle and transit-supportive amenities</li> </ul>	X	X	X	X	X	X
 <b>Developer/ Property Owner</b>	<ul style="list-style-type: none"> <li>Build a project that benefits the community</li> <li>Generate profit</li> <li>Develop more effectively integrated projects into station areas</li> <li>Understand characteristics of my station area</li> </ul>	<ul style="list-style-type: none"> <li>Acquire key sites</li> <li>Develop a project</li> <li>Public-private partnership (P3)</li> <li>Work with county to entitle, permit, and seek approval for projects</li> </ul>	X	X	X	X		X
 <b>Community Organizer / Activist</b>	<ul style="list-style-type: none"> <li>Improve neighborhood for local residents</li> <li>Champion engagement and social change</li> <li>Understand characteristics of my station area</li> <li>Implement walkable neighborhoods</li> </ul>	<ul style="list-style-type: none"> <li>Lead community outreach efforts</li> <li>Advocate for transit-supportive projects</li> </ul>	X	X	X	X		X
 <b>Local Resident</b>	<ul style="list-style-type: none"> <li>Learn about urban planning best practices</li> <li>Improve my neighborhood</li> <li>Preserve and enhance the character and transit supportive qualities of my neighborhood</li> <li>Understand characteristics of my station area</li> </ul>	<ul style="list-style-type: none"> <li>Define a project need</li> <li>Provide feedback on a project</li> <li>Advocate for transit-supportive projects</li> </ul>	X	X	X			X
 <b>Architecture / Planning / Landscape Consultant</b>	<ul style="list-style-type: none"> <li>Learn about new planning trends, tools, and metrics</li> <li>Design a project that is both transit, pedestrian, and cyclist friendly</li> </ul>	<ul style="list-style-type: none"> <li>Design compact infill TOD projects</li> <li>Incorporate amenities that support the use of transit/improve walkability in my projects</li> <li>Design active transportation improvements</li> </ul>	X	X	X	X	X	X

\* Please Refer to Section III for additional considerations for the Atlantic/Whittier station area

A vibrant outdoor plaza scene featuring several tall palm trees, people sitting on benches, and colorful umbrellas. In the background, there are multi-story buildings, one of which has a 'cielo' sign. The foreground shows a paved area with a few cars and a motorcycle. The entire image has a blue tint.

# PART II: Design Guidelines



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# 01 Mix of Uses and Densities/Intensities

Compact development with a mix of uses places more people in walking distance of the station. This concentration fosters walking, bicycling, and shared modes between uses to minimize auto trips and pollution. Introducing transit-supportive uses to a TOD can further support multi-modal transportation and an active, vibrant neighborhood. Transit-supportive uses include retail, restaurants, outdoor cafes, grocery stores, bookstores, neighborhood services, daycare, multi-family residential, affordable housing, offices, entertainment, hotel, medical clinics, recreational facilities, fitness clubs, educational facilities, regional hospitals, and other uses that cater to the needs of transit users, residents and employers.



Pasadena, CA;

Source: Gruen

## Guidelines

### Mix of Uses

- 1 **Market Rate Housing:** Remove barriers to the construction of market-rate housing.
- 2 **Affordable Housing:** Develop innovative strategies to introduce affordable housing into a TOD:
  - Remove maximum density and height restrictions for affordable housing projects and affordable housing in mixed-use developments with improved transportation infrastructure and public amenities/benefits.
  - Preserve and increase the amount of affordable housing by techniques such as rent stabilization, inclusionary zoning ordinances, development of County-owned land, and County programs now in effect.
- 3 **Proportion of Uses:** Vary the proportion of mix of uses in a half-mile area depending on the characteristics of an individual area.
- 4 **Transit Supportive Uses:** Provide transit-supportive uses that generate high pedestrian activity support multiple trips, foster an active environment throughout the day and increase transit ridership.

### Recommended



East Los Angeles, CA;

Source: Gruen

### Not Recommended



Los Angeles, CA;

Source: Google

### Recommended



Los Angeles, CA;

Source: Gruen



**5 Economic Development:** Balance new economic development with support for local business and current residents.

**6 Tailor Designs to Reflect Uniqueness of an Area:** Vary the design character of developments based on the land use and urban design theme envisioned, unique characteristics of a specific geographic location, and sensitive existing features and context.

Compact Development

**7 Joint Development:** Coordinate with Metro Joint Development for development on County-owned land.

**8 Infill Development:** Remove barriers to infill development on small lots by reducing parking, height, setbacks, and other requirements.

**9 Compact Development:** To encourage compact development in TODs:

- Allow the highest densities and intensities permitted in the area directly around the transit station
- Provide minimum densities and floor area ratios for new development
- Provide incentives for additional densities if public benefits are provided such as affordable housing, streetscape improvements, and reduced parking.
- Provide incentives for lot consolidation
- Allow two to four housing units per parcel in lower density residential areas within the half-mile TOD area depending on the size of lots, infrastructure, and amenities in the area.

Not Recommended



Whittier, CA;

Source: Google

Recommended



Fort Collins, CO;

Source: Google

Not Recommended



East Los Angeles, CA; Source: Gruen

Recommended



East Los Angeles, CA; Source: Gruen

# 02 Built Form and Architectural Design

The design of buildings at or near the transit stop plays a key role in the attractiveness, activity, and safety of the area. In areas designated for mixed-use, pedestrian-friendly architectural design is preferable at the ground floor along the pedestrian realm. The pedestrian realm is generally a 12'-30' area located between the face of the curb of a street and the face of the building. It includes parkways, sidewalks, and any landscaped areas, and can include public or private areas.



Camarillo, CA;

Source: Gruen

## Guidelines

### Building and Site Access

- 1 **Lighting for Adjacent Uses:** Avoid lighting that interferes with residential uses.
- 2 **Lighting for Security:** Place lighting to accent façades at night and provide security and wayfinding for public and private open spaces.
- 3 **Service Entries:** Service entries should be oriented to the side or rear of the building.
- 4 **Secondary Building Access:** Provide secondary access from internal pathways or adjacent streets or alleys where appropriate.
- 5 **Visibility:** Design entryways to be highly visible and well-lit.
- 6 **Primary Building Access:** Orient primary building access to the street.

### Not Recommended



El Monte, CA;

Source: Google

### Recommended



Fullerton, CA;

Source: Gruen



## Ground Floor Uses and Design

**7 Active Uses:** Use clear glass rather than dark tinted glass or reflective along ground level frontages of retail/restaurants and active uses to increase a buildings visual and physical interaction with those on the sidewalk and create a safer and more vibrant pedestrian environment.

**8 Visual Interest at Street Level:** Design the form of buildings and architectural details to create visual interest for pedestrians at the street level using techniques such as:

- Staggering the frontage of the building;
- Recessing doors and windows;
- Providing varied display windows;
- Providing awnings, louvers, and canopies for weather protection and shade; and
- Visually extending interior spaces outside through paving and glazing.

**9 Awnings:** Where appropriate, use awnings for sun protection for a distinctive identity and for visual interest along the pedestrian center:

- Mount awnings so as to respect the architecture and character of a building and its function.
- Project awnings over doors and windows and not blank walls.
- Open ended awnings are preferred over closed in awnings.
- Encourage creative steel, canvas, and glass awnings with signage incorporated.

**10 Street-side design:** Design buildings with walk-up order windows, bar style seating along the façade.

## Sustainable Development

**11 Energy Efficient Designs:** Consider passive solar and ventilation techniques, as well as specification of “green” materials in building design and site planning.

### Not Recommended



East Los Angeles, CA;

Source: Gruen

### Recommended



Source: Google

### Not Recommended



East Los Angeles, CA; Source: Gruen

### Recommended



Orenco Station, OR; Source: Gruen

### Lot Size & Topography

- 12 Topography:** Design the site and buildings to capitalize on its unique topography where applicable. Consider site designs which increase accessibility.
- 13 Lot Size:** Design the project to be appropriate for the lot size. Avoid building and site designs which limit open space.

### Building Form and Façade Design

- 14 Signage:** Provide storefront signage at multiple levels, such as wall signs above windows and hanging signs from awnings; avoid neon or fluorescent illuminated signage.
- 15 Building Heights:** Vary building heights within the TOD with taller structures near the station, along wider streets, and as focal points.
- 16 Contemporary, Pedestrian-Friendly Design:** Design buildings to be visually attractive and fit with the vision of a pedestrian-friendly, vibrant streetscape. For example, contemporary glass storefronts inserted into an older building if sensitive to the building key architectural features are encouraged subject to the unique character envisioned by each community for each TOD.
- 17 Building Shaped at Corners:** When located at the corner of an important pedestrian intersection or a focal point, design the building to reflect the corner by using a variety of techniques such as strong vertical mass or a tower at the corner, a diagonal setback at the intersection, a corner plaza at the intersection, and/or a recessed building entrance at the corner.
- 18 Materials and Colors:** Select materials and colors to unify the building appearance and fit into the pedestrian realm context. For example, avoid chain link fences, imitation rock/stone veneer and extensive use of wood siding, heavily textured stucco walls, adobe, or slump stone masonry.

#### Recommended



Montclair, CA;

Source: Westsiderentals.com

#### Recommended



Portland, OR;

Source: Gruen

#### Recommended



Los Angeles, CA;

Source: Gruen

#### Recommended



Los Angeles, CA;

Source: Google

- 19** **Variety in Building Façades and Urban Form:** Vary building form and façades from building to building and from project to project to create interest along the street and a vibrant area.
- 20** **Articulated Building Façades and Massing:** To create visual interest and to avoid large bulky façades and blank walls, articulate building massing in form using techniques such as some stepping back of upper floors, stepped terraces, changes in plane, recessed windows, bay windows, balconies, trellises, which create shadow lines, varied roof lines and changes in color.
- 21** **Equal Design Treatment on Façades:** Design buildings to be attractive in all directions. Where the rear or sides of the building are visible from streets and alleys these façades should receive equal design treatment to the main façade.

**Recommended**



Portland, OR;

Source: Gruen

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# 03 Open Space and Urban Design

Parks and other forms of open space are critical for an active and healthy TOD. Parks can serve as neighborhood focal points, and provide opportunities for recreation, events, exercise, and more.



East Los Angeles, CA;

Source: Google

## Guidelines

### Neighborhood Character and Identity

- 1 **Rehabilitation of older buildings:** Encourage the rehabilitation of older buildings to avoid the demolition of neglected buildings.
- 2 **Public art:** Commission local artists to decorate County infrastructure such as utility boxes, blank walls adjacent to or visible from major arterials, and on pavement as part of temporary installations.
- 3 **Cultural preservation and resiliency:** Preserve cultural institutions, events, public art, and urban design features, wherever possible.
- 4 **Wayfinding signage:** Provide wayfinding signage at key points throughout the half-mile area to direct travelers to the station. Signs should be clear and use a unified style

### Not Recommended



Montebello, CA;

Source: Google

### Recommended



Los Angeles, CA;

Source: Gruen

### Open Space Network

- 5 **Transit user amenities:** Collaborate with public agencies at transit stations to include park or plaza space with amenities for transit users such as benches, water fountains, waste receptacles, lighting, etc.



**6 Enhance existing parks:** Existing parks should have enhanced connections to the station.

**7 Publicly-accessible open space on private property:** Encourage publicly-accessible open space on private property by density and intensity incentives and encourage participation in established County programs which aim to increase public space, such as the Parklet Program.

**Not Recommended**



Los Angeles, CA; Source: Google

**Recommended**



Portland, CA; Source: Gruen

**Recommended**



Los Angeles, CA;

Source: Google

**Recommended**



San Jose, CA;

Source: Gruen

# 04 Mobility and Complete Streets

Providing safe, reliable, and accessible routes to and from the transit station is a fundamental component of a successful TOD. As public transit opportunities are added in the station area, certain amenities should be added to ensure pedestrians, cyclists, visitors, and commuters are able to enjoy the TOD.

## Guidelines

### Multi-Modal Accessibility

- 1 **Interconnected Parking:** Where possible, link the new parking with that of adjacent development to facilitate vehicular and pedestrian movements, especially when streets are congested.
- 2 **Joint and Shared Parking:** Incorporate strategies to encourage joint and shared parking opportunities amongst multiple properties, including "park once" concepts.
- 3 **First/Last Mile Connections:** Provide continuous bus, pedestrian and bicycle networks and new first/last mile (shared vehicle, bike, scooters, etc.) to the transit station linking the mix of uses in the ½ mile station area.
- 4 **Pick-up and Drop-off Areas:** Provide pick-up and drop-off space at or near the transit station for buses, shuttles, and shared vehicles.



Los Angeles, CA;

Source: Google

- 5 Bicycle & Pedestrian Safety:** For safety for pedestrians and bicyclists, ensure the following:
- Increase pedestrian and bicycle activity so there will be more “eyes on the street”
  - Utilize techniques such as curb extensions, more signalized and specialized designed crosswalks, road diets, on street parking to slow vehicular speeds
  - Provide bike lanes including protected bike lanes as a part of complete streets leading to the transit station
  - Provide attractive, well-lit pedestrian and paths along major arterials including over and/or under barriers such as freeways
  - Study bicycle/pedestrian collisions and provide safety improvements to address problem areas

- 6 Minimize Curb Cuts:** To minimize traffic congestion and breaks in the pedestrian realm, avoid multiple parking access points along major streets. Joint use or combined driveways are encouraged. The width of driveway area cuts should be minimized.

- 7 On-Street Parking:** On-street parking, where appropriate, is encouraged to buffer pedestrians along the sidewalk, as well as shared parking access/structures.

- 8 Location of Parking:** To emphasize the pedestrian realm, discourage on-site parking adjacent to the sidewalk along major streets and encourage on-site parking located underground, at the rear of the parcels, or buffered from view by transit supportive uses with convenient pedestrian access to non-residential and residential uses.

- 9 Amount of Parking:** Consider reduced parking standards in TOD areas. In addition to a reduction in required parking, City standards may include provisions for shared parking, unbundled parking, in-lieu parking fees, provisions for transit passes or other mechanisms.

**Not Recommended**



Los Angeles, CA;

Source: Google

**Recommended**



Los Angeles, CA;

Source: Google

**Not Recommended**



Los Angeles, CA;

Source: Google



**10 Traffic Calming:** Use traffic calming techniques such as curb extensions, chokers, speed bumps, and raised crosswalks to channel traffic to the arterial streets and minimize impacts on the community.

**11 Bicycle Network:** Plan for an integrated bike network including bike Lane streets, bike boulevards, and amenities within the TOD and connections to the County bike network.

**Pedestrian Connectivity**

**12 Sidewalks and Pedestrian Pathways:** Provide adequate sidewalk widths and canopy street trees to accommodate pedestrians and amenities within the street right-of-way:

- Along arterials, provide a combined sidewalk and parkway widths of 12' to 15' or more to accommodate two pedestrians walking side by side and space for street trees, street lights and other pedestrian amenities.
- Provide combined sidewalks and parkways not less than 10' with a 5' minimum clear walking area and 5' for amenities on all streets.
- Utilize techniques such as curb extensions or "bump outs" to increase sidewalk width and reduce crossing lengths of roadways at crosswalks
- In constrained conditions, consider sidewalk easements on private property and "road diets" to increase sidewalk width.

**13 Street Furniture:** At transit stations and along arterials leading to the stations, provide pedestrian and bicycle amenities appropriate to ridership such as sufficient lighting, street furniture, bike racks, wayfinding signage, decorative paving, and public art.

**14 Street Layouts:** Provide dispersed access to transit from TOD uses and a more walkable pedestrian environment with a grid network of local through streets with sidewalks. Discourage "superblocks" and cul-de-sacs.

**Recommended**



Solana Beach, CA;

Source: Gruen



Los Angeles, CA;

Source: Gruen



Santa Monica, CA;

Source: Gruen

**Not Recommended**



Whittier, CA;

Source: Google ;

**Recommended**



Source: Google



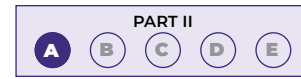
**15 Safety Devices:** To make an area safer for pedestrians include devices such as “Z” crossings of major streets, median refuge areas for pedestrians, beeping crosswalk signals, countdown timers, and embedded flashing devices in crosswalks at non-signalized intersections.

**16 Street Width:** In order to slow traffic and make wider pedestrian linkages, consider a modification in the lane widths of streets and an increase in pedestrian sidewalk widths, where appropriate.



Warner Center

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# 01 Identify Your Station Area

## Process

The project team analyzed 10 potential station areas and has identified six TOD Station Area typologies. The shared characteristics amongst stations in a typology form the basis of design guidelines presented in Part II A.

## Characteristics

The six typologies, presented at right, factor both existing conditions shown in [Table IIB.1](#) as well as potential TOD-supportive land-use, urban design, and infrastructure changes that may be feasible to implement as the station area develops. The framework in [Table IIB.2](#) can be used to develop additional typologies for other station areas that are not captured by the six typologies presented.

## Typologies Summarized

### Urban Mixed-Use

Dense residential development supported by a mix of non-residential uses.

**Stations:**

- Atlantic Blvd/Whittier Blvd Station

### Urban Residential

A half-mile area dominated by single-family or medium-density residential uses.

**Stations:**

- Florence Ave/Salt Lake Ave Station
- Norwalk Blvd/Washington Blvd Station

### Mixed-Use Job Center

A significant presence of local-serving retail and/or a significant mix of non-residential uses.

**Stations:**

- Lambert Rd/Washington Blvd Station

### Institutional

One major institution, or a cluster of institutions, which anchors the half-mile area.

**Stations:**

- Westwood/VA Hospital Station
- Westwood/UCLA Station

### Regional Retail Center

One large regional-serving retail center which accounts for the majority of through traffic for the TOD.

**Stations:**

- Commerce/The Citadel Station
- The Shops at Montebello/60 Fwy

### Open Space-Dominated

A significant presence of agricultural land, parkland, river, cliffs, or other natural open space amenity.

**Stations:**

- Santa Anita Ave/60 Fwy Station
- Peck Rd/60 Fwy Station

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**Table IIB.1: Existing Station Area Characteristics**





















		EXISTING CHARACTERISTICS				
		Potential TOD Station Areas	Land Use	Built Form and Architectural Design	Open Space and Urban Design	Mobility and Complete Streets
Station Area TOD Typologies	Urban Mixed-Use	Atlantic Blvd/ Whittier Blvd Station 	Medium density residential uses.  <b>Atlantic/Whittier:</b> Single-story commercial along major corridors and single-to medium-residential throughout most of half-mile. A big-box and large industrial center as well.	<ul style="list-style-type: none"> <li>Buildings are primarily 2-4 stories.</li> <li>Lots are typically less than 125ft in depth.</li> <li>Residential lots have short front yards, stoops, fences or lawn walls.</li> </ul>	<ul style="list-style-type: none"> <li>Limited public parks.</li> </ul>	<ul style="list-style-type: none"> <li>3 major corridors</li> <li>Some streetscape improvements</li> <li>High demand for parking</li> <li>Street grid is regular and includes service alleys</li> </ul>
	Urban Residential	Florence Ave/ Salt Lake Ave Station 	Majority of land uses in unincorporated County are single-family residential.  <b>Norwalk:</b> Most uses in the half-mile are residential.	<ul style="list-style-type: none"> <li>Primarily 2-3 stories.</li> </ul>	<ul style="list-style-type: none"> <li>Limited public parks.</li> </ul>	<ul style="list-style-type: none"> <li>No alleys.</li> <li>Street grid is inconsistent and includes superblocks</li> <li>Major highway acts as a barrier.</li> <li>Pedestrian amenities are lacking</li> </ul>
		Norwalk Blvd/ Washington Blvd Station 	<b>Florence/Salt Lake:</b> Most uses in the half-mile are single- to medium-residential.			
Mixed-Use Job Center	Lambert Rd/ Washington Blvd Station 	Majority of land uses in unincorporated County are single-family residential. Most uses in the half-mile are residential.	<ul style="list-style-type: none"> <li>Primarily 2-3 stories.</li> </ul>	<ul style="list-style-type: none"> <li>Limited public parks.</li> </ul>	<ul style="list-style-type: none"> <li>No alleys.</li> <li>Street grid is inconsistent and includes superblocks</li> <li>Major highway acts as a barrier.</li> <li>Pedestrian amenities are lacking</li> </ul>	

Table IIA.1: Existing Station Area Characteristics (cont.)

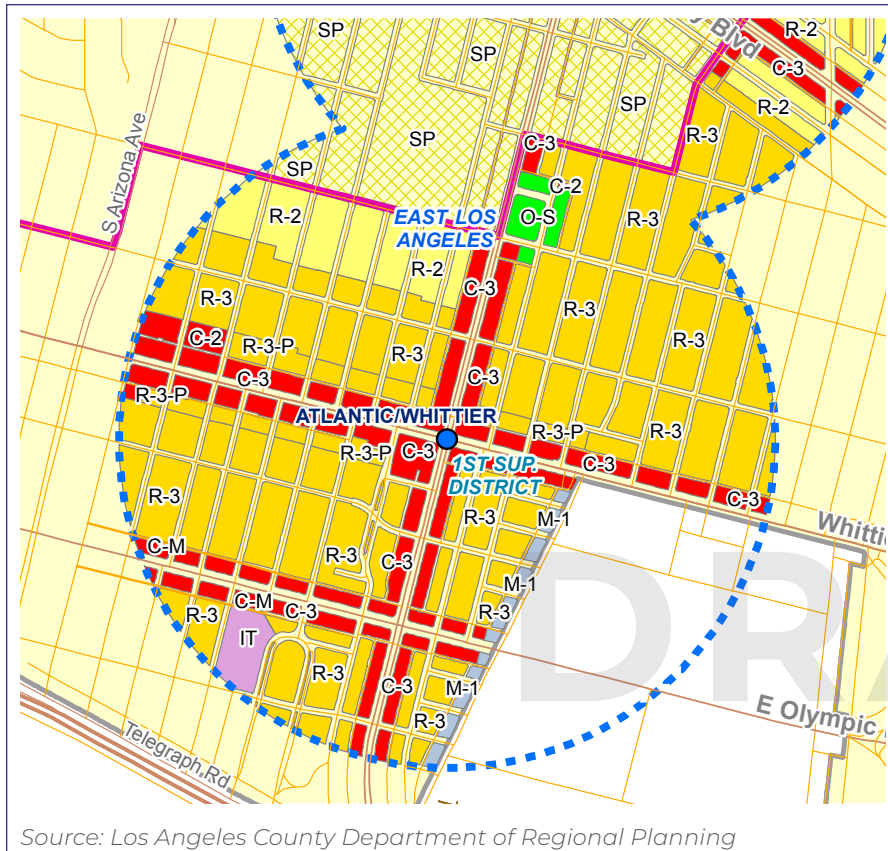
		EXISTING CHARACTERISTICS				
		Potential TOD Station Areas	Land Use	Built Form and Architectural Design	Open Space and Urban Design	Mobility and Complete Streets
Station Area TOD Typologies	Institutional	Westwood/VA Hospital Station 	Majority of land uses within half-mile are medium-to high-residential but are anchored by a large employment or activity center (VA Hospital or UCLA). The VA Hospital and VA Cemetery are both within unincorporated LA County, but are under federal control.	<ul style="list-style-type: none"> <li>10+ story buildings, most buildings are around 4-stories</li> </ul>	<ul style="list-style-type: none"> <li>Large public open spaces.</li> </ul>	<ul style="list-style-type: none"> <li>Inconsistent street grid</li> <li>Alleys are present in select blocks</li> <li>Institution breaks the regularity of street grid</li> </ul>
		Westwood/UCLA Station 				
	Regional Retail Center	Commerce/The Citadel Station 	One development which acts as a regional destination or activity center.	<ul style="list-style-type: none"> <li>Buildings are primarily 2 stories</li> </ul>	<ul style="list-style-type: none"> <li>Limited public parks.</li> </ul>	<ul style="list-style-type: none"> <li>Major activity center is isolated and difficult to walk to</li> <li>Pedestrian amenities are lacking</li> </ul>
		The Shops at Montebello/60 Fwy 	<p><b>Montebello:</b> Aside from the mall, most uses in the half-mile are open-space or single-residential.</p> <p><b>Commerce:</b> Most uses in half-mile are a regional mall, industrial complexes, and medium-residential.</p>			
	Open Space-Dominated	Santa Anita Ave/60 Fwy Station 	Majority of land uses in unincorporated County are designated as open space or agriculture.	<ul style="list-style-type: none"> <li>Buildings are 1-2 stories.</li> <li>Lots are larger on average than other TOD typologies</li> </ul>	<ul style="list-style-type: none"> <li>Adjacency to a natural park, large regional park, cliffs, hills, stream, river, or other natural open space amenity.</li> </ul>	<ul style="list-style-type: none"> <li>No alleys</li> <li>Street grid consists of cul-de-sacs and superblocks</li> </ul>
		Peck Rd/60 Fwy Station 	<p><b>Santa Anita:</b> Somewhat even mix in the half-mile of industrial, open space, and single-residential.</p> <p><b>Peck:</b> Most land uses in the half-mile are open space or single-residential.</p>			

**Table IIB.2: Future Station Area Characteristics**

		FUTURE CHARACTERISTICS				
		Land Use	Built Form and Architectural Design	Open Space and Urban Design	Mobility and Complete Streets	
Station Area TOD Typologies	Urban Mixed-Use	 	<ul style="list-style-type: none"> <li>Office or residential above retail, restaurants, and other pedestrian-friendly uses</li> <li>Multi-family residential</li> </ul>	<ul style="list-style-type: none"> <li>Larger parcel patterns &amp; infill developments</li> </ul>	<ul style="list-style-type: none"> <li>Infill neighborhood parks</li> <li>Publicly-accessible private open space</li> </ul>	<ul style="list-style-type: none"> <li>Well connected street network</li> <li>High path directness</li> <li>Shared parking strategies</li> </ul>
	Urban Residential	 	<ul style="list-style-type: none"> <li>Residential above retail, restaurants, and other pedestrian-friendly uses</li> <li>Multi-family and single-family residential</li> </ul>	<ul style="list-style-type: none"> <li>Smaller parcel patterns &amp; infill developments</li> </ul>	<ul style="list-style-type: none"> <li>Playgrounds and other neighborhood amenities</li> </ul>	<ul style="list-style-type: none"> <li>Well connected street network</li> <li>Secondary pathways for pedestrian and cyclist circulation to neighborhood centers</li> </ul>
	Mixed-Use Job Center	 	<ul style="list-style-type: none"> <li>Office above retail, restaurants, and other pedestrian-friendly uses</li> <li>Multi-family residential</li> </ul>	<ul style="list-style-type: none"> <li>Larger parcel patterns &amp; infill developments</li> </ul>	<ul style="list-style-type: none"> <li>Parks and recreational space adjacent to major job centers</li> </ul>	<ul style="list-style-type: none"> <li>Well connected street network</li> <li>Pedestrian- and cyclist-friendly major roadways</li> </ul>
	Institutional TOD	 	<ul style="list-style-type: none"> <li>Institutional offices/facilities above retail, restaurants, and other pedestrian-friendly uses</li> <li>Limited residential (high density)</li> </ul>	<ul style="list-style-type: none"> <li>Larger parcel patterns &amp; infill developments</li> </ul>	<ul style="list-style-type: none"> <li>Parks and recreational space adjacent to or within major institution</li> <li>Publicly-accessible private open space</li> </ul>	<ul style="list-style-type: none"> <li>Well connected street network</li> <li>Safe, attractive internal pathways leading from major roadways to institutional centers</li> </ul>
	Regional Retail Center TOD	 	<ul style="list-style-type: none"> <li>Anchored by regional commercial uses</li> <li>Limited residential (high density)</li> </ul>	<ul style="list-style-type: none"> <li>Infill and adaptive re-use developments</li> </ul>	<ul style="list-style-type: none"> <li>Recreation areas to break up larger developments</li> <li>Publicly-accessible private open space</li> </ul>	<ul style="list-style-type: none"> <li>Well connected street network</li> <li>Pedestrian and cyclist circulation from residential areas to commercial core</li> </ul>
	Open Space-Dominated TOD	 	<ul style="list-style-type: none"> <li>Anchored by regional open space</li> <li>Limited residential (low density)</li> </ul>	<ul style="list-style-type: none"> <li>Limited development</li> </ul>	<ul style="list-style-type: none"> <li>Region-serving open space amenities</li> </ul>	<ul style="list-style-type: none"> <li>Limited street network</li> <li>Pedestrian trails with clear access from major roadways</li> </ul>



# 02 Urban Mixed-Use TOD



The Urban Mixed-Use TOD typology is characterized by dense residential development supported by a mix of non-residential uses. Urban Mixed-Use TODs may have one or more major commercial corridors.

Additional considerations for the Atlantic/Whittier station area are presented in Section III A.

## General Characteristics

- **Land Use:** Commercial uses and mixed-use buildings along major corridors, medium-density residential
- **Built Form and Architectural Design:** 2-4 story buildings throughout the station area
- **Open Space and Urban Design:** Smaller private yards, public parks.
- **Mobility and Complete Streets:** Major commercial corridors, frequent bus stops, etc.

## Applicable Stations

As of 2019, the following proposed transit stations have half-mile TOD areas which match this typology:

- Atlantic/Whittier



Source: Gruen Associates (Gruen)

### Profile Station: Atlantic/Whittier

The Atlantic/Whittier station area is largely residential, but has three major commercial corridors. Whittier Boulevard has some streetscape improvements already, but additional improvements are encouraged along other corridors. See Part III for a for a full case study of this station area.

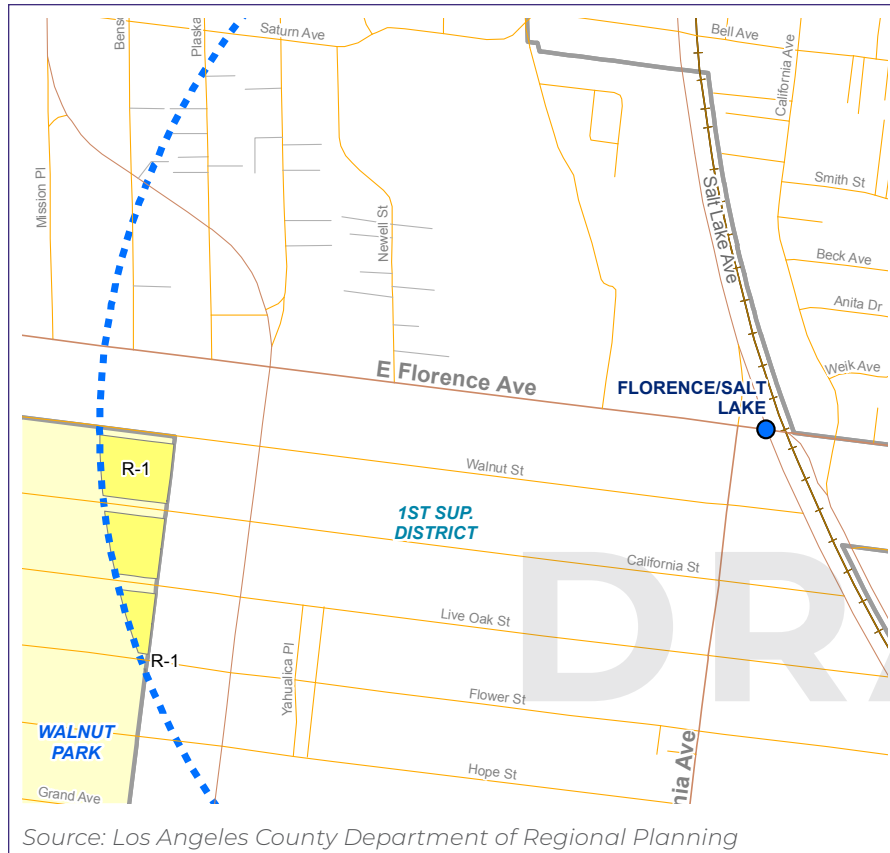


Claremont, CA



Pasadena, CA

# 03 Urban Residential TOD



Source: Los Angeles County Department of Regional Planning

The Urban Residential TOD typology is characterized by a half-mile area dominated by single-family or medium-density residential uses. This TOD typology often lacks a major commercial corridor or an employment hub to anchor the neighborhood.

## General Characteristics

- **Land Use:** Primarily residential
- **Built Form and Architectural Design:** 2-4 story buildings throughout the station area
- **Open Space and Urban Design:** Neighborhood-serving public open spaces; limited publicly accessible private open space
- **Mobility and Complete streets:** Out-bound traffic to adjacent areas with employment opportunities

## Applicable Stations

As of 2019, the following proposed transit stations have half-mile TOD areas which match this typology:

- Florence/Salt Lake



Source: Gruen

### Profiled Station: Florence/Salt Lake

Only a few unincorporated area parcels are within the half-mile station area. These parcels are removed from the station, and the station area is in Huntington Park. The station area parcels within the unincorporated area are designated as single-family residential.

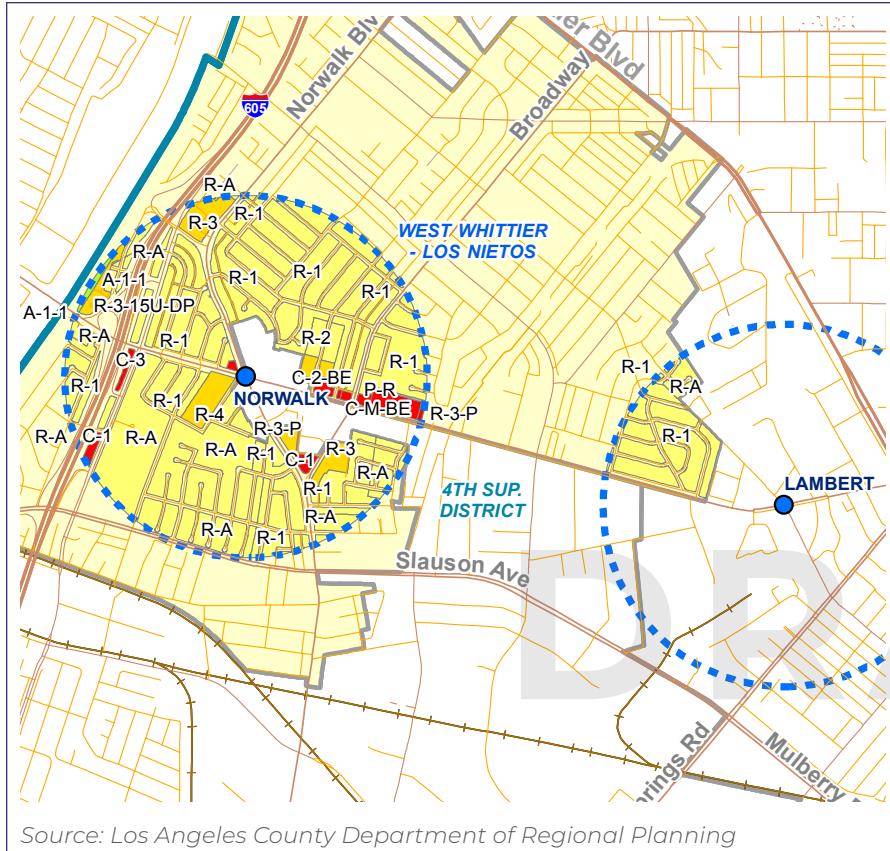


Queenstown, New Zealand



Duarte, CA

# 04 Mixed-Use Job Center TOD



The Mixed-Use Job Center TOD typology is characterized by a significant presence of local-serving retail and/or a significant mix of non-residential uses.

## General Characteristics

- **Land Use:** Commercial or office core anchoring the station area surrounded by residential uses
- **Built Form and Architectural Design:** 2-4 story buildings throughout the station area
- **Open Space and Urban Design:** Neighborhood-serving public open spaces; opportunities for publicly accessible private open space at central employment core
- **Mobility and Complete streets:** Major commercial corridor(s)

## Applicable Stations

As of 2019, the following proposed transit stations have half-mile TOD areas which match this typology:

- Norwalk
- Lambert



Source: Gruen

### Profiled Station: Norwalk

Only a small portion of the half-mile station area is not unincorporated County land. Though the Norwalk Station is under the jurisdiction of Santa Fe Springs, there is a potential for a coordinated development approach between the two jurisdictions. There are also a few parcels in the area that are zoned for commercial or multi-family development.



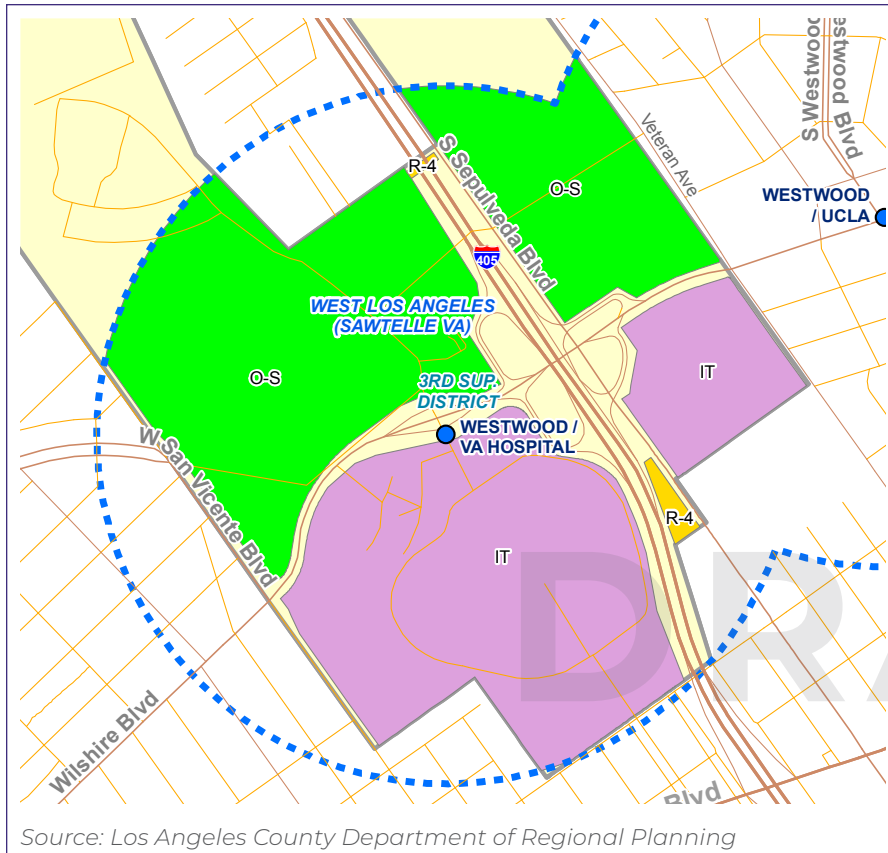
, CA



, CA



# 05 Institutional TOD



The Institutional TOD typology is characterized by one major institution, or a cluster of institutions, which anchors the half-mile area around a transit stop. Most uses are often complimentary to the anchoring institution, and traffic congestion is highest at the entry and exit points to the institution. Institutions may be schools, hospitals, major employment centers, etc. Larger blocks typically comprise the institution and may break up a regular street grid from the surrounding area.

## General Characteristics

- **Land Use:** One or more major institution (i.e. university, medical campus, etc.) surrounded by complimentary uses (i.e. hotels)
- **Built Form and Architectural Design:** Considerable variety in building height and mass ranging from 3 to 10+ stories
- **Open Space and Urban Design:** Significant presence of publicly-accessible private open space; wayfinding signage directing visitors to the major institution
- **Mobility and Complete streets:** Pedestrian amenities clustered around the major institution(s)

## Applicable Stations

As of 2019, the following proposed transit stations have half-mile TOD areas which match this typology:

- Westwood/VA Hospital
- Westwood/UCLA



### Profiled Station: Westwood/VA Hospital

The majority of the half-mile station area is within unincorporated Los Angeles County area. The majority of the unincorporated area parcels are designated as institutional (IT) and open space (O-S). A very small portion of this area is designated as medium density multi-family residence (R-4).

Source: Gruen

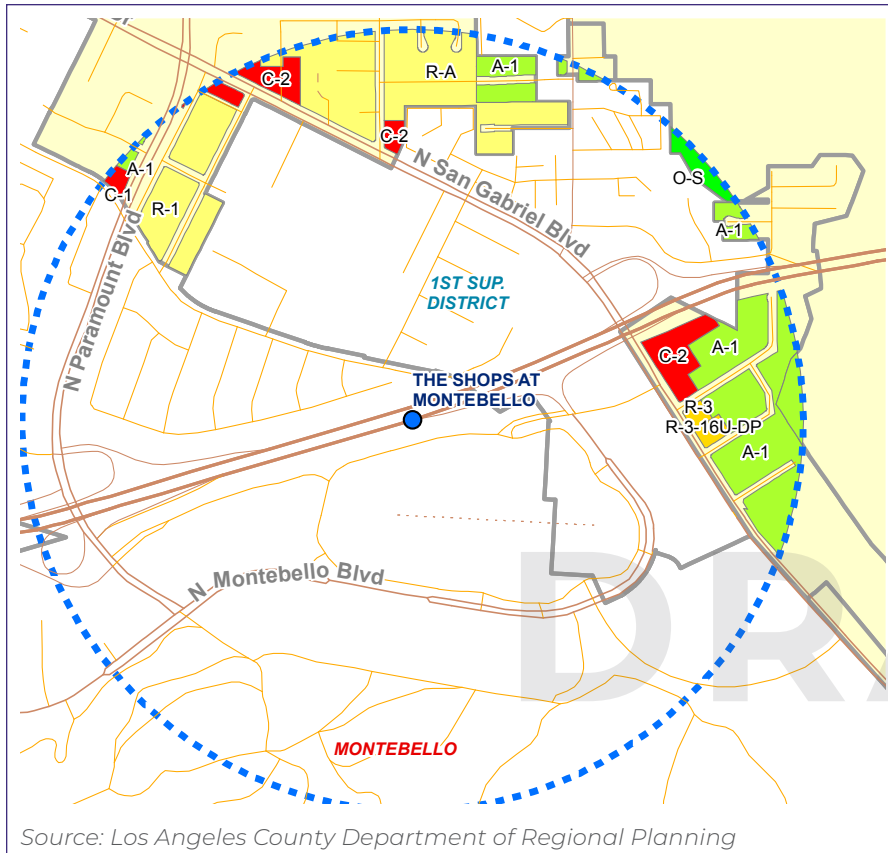


Fresno, CA



Fontana, CA

# 06 Regional Retail Center TOD



The Regional Retail Center TOD typology is characterized by one large regional-serving retail center which accounts for the majority of through traffic for the TOD. Surrounding uses may be supplementary to the retail center, or may be isolated from the center.

## General Characteristics

- **Land Use:** Significant presence of commercial uses (i.e. retail, restaurants, etc.) surrounded by complimentary uses
- **Built Form and Architectural Design:** 2-4 story buildings throughout the station area
- **Open Space and Urban Design:** Potential for significant publicly-accessible private open space in the form of plazas and paths through the shopping center
- **Mobility and Complete streets:** Limited connectivity from regional shopping center to surrounding uses due to man-made barriers

## Applicable Stations

As of 2019, the following proposed transit stations have half-mile TOD areas which match this typology:

- The Shops at Montebello
- Commerce



### Profiled Station: The Shops at Montebello

Less than 20% of the half-mile station area is in unincorporated LA County, plus the future transit station adjacent to the Shops at Montebello is outside the unincorporated County area. Land within the incorporated area is scattered on the perimeter of the half-mile station area cut off from the station by the 60 Freeway and major roadways.

Source: Gruen



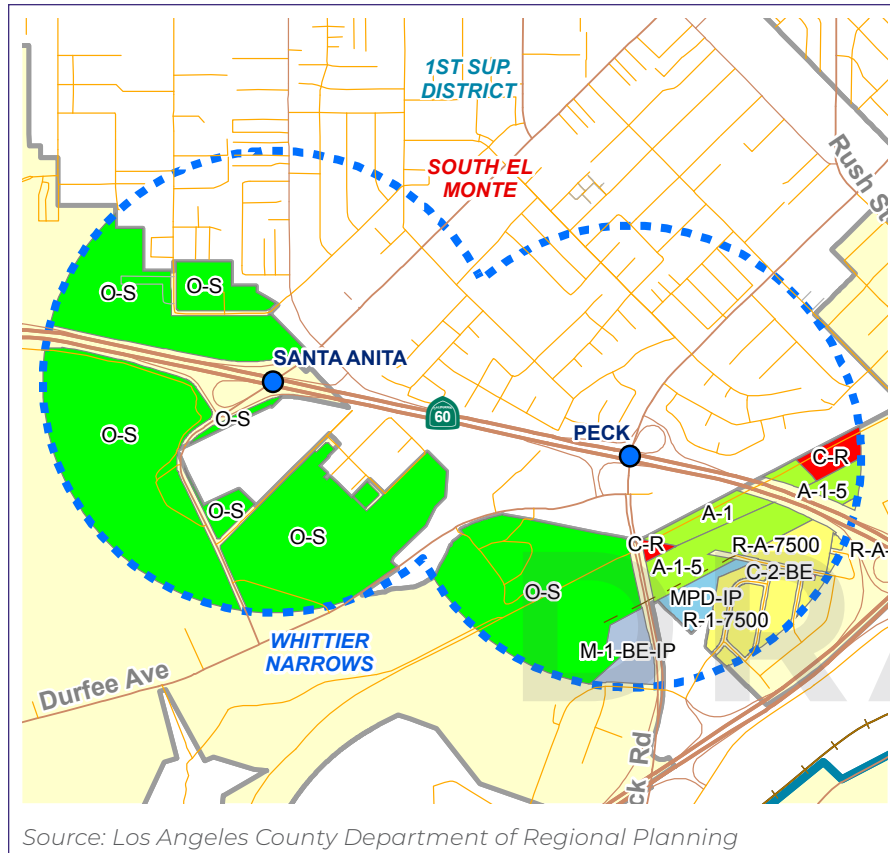
Cerritos, CA



Source: Gruen

San Francisco, CA

# 07 Open Space-Dominated TOD



The Open Space-Dominated TOD typology is characterized by a significant presence of agricultural land, parkland, river, cliffs, or other natural open space amenity. Uses tend to be lower-scale in relation to other TOD typologies and more spread out. Open Space-Dominated TODs tend not to have major activity centers and have limited expansion potential.

## General Characteristics

- **Land Use:** Lower density uses surrounding the major open space area; primarily lower-density residential
- **Built Form and Architectural Design:** Buildings often with heights no taller than 3 stories to preserve natural viewsheds
- **Open Space and Urban Design:** Significant presence of natural open space; protection of vistas and natural viewsheds
- **Mobility and Complete streets:** Limited connectivity from major open space to surrounding uses due to natural barriers

## Applicable Stations

As of 2019, the following proposed transit stations have half-mile TOD areas which match this typology:

- Santa Anita
- Peck



### Profiled Station: Santa Anita

Less than 50% of the half-mile station areas is within unincorporated Los Angeles County, plus the future transit stations are outside the County unincorporated area. Aside from the area designated as open space, a small portion of the County area is designated for agriculture related uses and manufacturing.

Source: Gruen



San Bernardino County, CA



Banning, CA





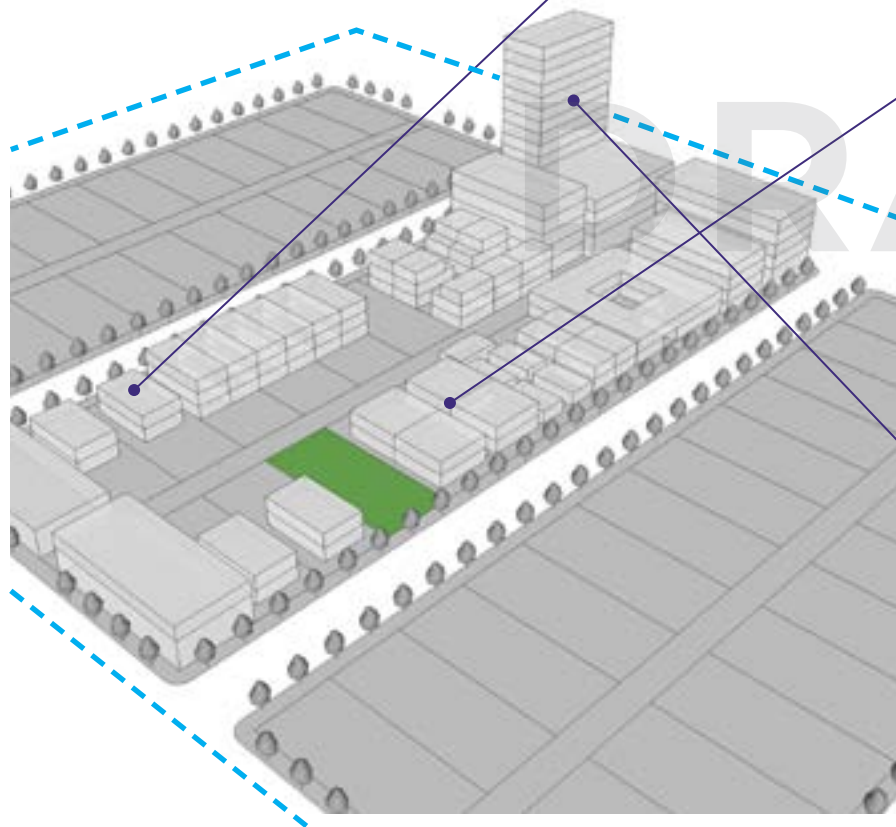
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# 01 How to Use the Building Design Guidelines

Meeting residential and job density targets that support transit ridership and walkable communities can be achieved through a wide variety of building types. The Design Guidelines recognizes the diversity of building stock throughout Los Angeles County by organizing building types into the three categories listed to the right (see the table on the following page for more detail). The typologies are informed by the following considerations:

- **Primary means of access:** external; internal from streets; blocks
- **Orientation to the street:** primary; secondary corridors and alleys
- **Construction type:** wood-frame; concrete block
- **Parking configuration:** surface; structure; podium; on-street



<p><b>LOW DENSITY</b></p> 	<ul style="list-style-type: none"> <li>• Single-Family House</li> <li>• Accessory Dwelling Unit</li> <li>• Shopfront House</li> <li>• Bungalow Courtyard</li> <li>• Rosewalk</li> <li>• Compact Lot Subdivision</li> </ul>	<p><b>LED BY</b></p> <ul style="list-style-type: none"> <li>• <i>City/County Planners</i></li> <li>• <i>Pub/Priv Partnership</i></li> </ul> <p>TBD</p>
<p><b>MEDIUM DENSITY</b></p> 	<ul style="list-style-type: none"> <li>• Duplex</li> <li>• Triplex/Fourplex</li> <li>• Attached Townhouse</li> <li>• Live/Work</li> <li>• Courtyard</li> <li>• Hybrid Courtyard</li> </ul>	<p><b>LED BY</b></p> <ul style="list-style-type: none"> <li>• <i>Developers</i></li> <li>• <i>Homeowners</i></li> <li>• <i>Other Property Owners, including Businesses</i></li> </ul> <p>TBD</p>
<p><b>HIGH DENSITY</b></p> 	<ul style="list-style-type: none"> <li>• Hybrid Podium</li> <li>• Flex Apartment/ Mixed-Use</li> <li>• Liner Structure/ Commercial Block</li> <li>• Mid-Rise Tower</li> <li>• High-Rise Tower</li> </ul>	<p><b>LED BY</b></p> <ul style="list-style-type: none"> <li>• <i>LA County</i></li> <li>• <i>P3 Developer Contribution</i></li> </ul> <p>TBD</p>



# 02 Select Appropriate Building Typologies

	Building Typologies	Station Area Typologies					
		Urban Mixed-Use TOD	Urban Residential TOD	Mixed-Use Job Center TOD	Institutional TOD	Regional Retail Center TOD	Open Space-Dominated TOD
Lower Density	Single-Family House		x				x
	Accessory Dwelling Unit	x	x	x	x	x	x
	Shopfront House	x	x	x	x	x	x
	Bungalow Courtyard	x	x	x	x	x	x
	Rosewalk	x	x				x
	Compact Lot Subdivisions						x
Medium Density	Duplex	x	x	x	x	x	x
	Triplex/Fourplex	x	x	x	x	x	x
	Attached Townhouse	x	x	x	x	x	x
	Live/Work	x	x	x	x	x	
	Courtyard	x	x	x	x	x	
	Hybrid Courtyard	x	x	x	x	x	
Higher Density	Hybrid Podium	x	x	x	x	x	
	Flex Apartment/Mixed-Use	x	x	x	x	x	
	Liner Structure/Commercial Block	x	x	x	x	x	
	Mid-Rise Tower	x			x	x	
	High-Rise Tower				x	x	

# 03 Lower Density

## Single-Family House

Detached single-family dwelling units are the most common form of housing in the County. While single-family homes do not provide the density desired for TODs, existing housing stock should be preserved where possible to maintain community continuity.

### Guidelines

**Dwelling Units per Acre:** TBD

100 +	51 - 99	13 - 50	< 12
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**Residential:** 100%

**Commercial:** 0%

**FAR:** TBD

3.0 +	2.0 - 2.9	1.0 - 1.9	< 1
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- A Vehicle Access:** Driveways may be accessed from the front of the property..
- B Parking:** Garages may be attached or detached from the residence, but should be located toward the rear of the property.
- C Pedestrian / Bicycle Access:** Single-family residences provide private pedestrian access to the front door.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



East Los Angeles, CA

## Accessory Dwelling Unit

Accessory dwelling units are permitted statewide in California since the passage of SB 229 and AB 494 in 2017 and 2018. The bills allow owners of single or multi-family residences to build a secondary unit on their property with minimal restrictions from local zoning ordinances. Units can be free-standing or located above a garage or other structure. Provisions allow for the addition of a studio or 1-bedroom unit of up to 1,200 square feet with bathroom and kitchen facilities, among other conditions.

### Guidelines

**Dwelling Units per Acre:** TBD

100 +	51 - 99	13 - 50	< 12
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**Residential:** 100%

**FAR:** TBD

3.0 +	2.0 - 2.9	1.0 - 1.9	< 1
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**Commercial:** 0%

- A Vehicle Access:** Garages or carports can be accessed from an alley or existing streetside curb cut.
- B Parking:** No additional parking is required per recent California legislation.
- C Pedestrian / Bicycle Access:** Owners are encouraged to provide convenient storage for bicycles, scooters, or other non-motorized forms of transport. Pedestrian access to ADUs can be shared with an existing driveway or provided from the alley.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Piedmont, CA



## Shopfront House

Shopfront houses are commercial structures that can be added to existing single-family homes. They are typically found along arterials and lower-density commercial corridors that include a mix of single-family homes and retail. The shopfront house can be an effective way to enliven the street scene while providing neighborhood-serving retail, new stores and boutiques, and coffee shops, among other uses.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 90%



**FAR:** TBD



**Commercial:** 10%



- A Vehicle Access:** Vehicles typically access shopfronts from an alley.
- B Parking:** If alley access is provided, conventional spaces for customers and tandem spaces for employees can be provided. On-street parking is encouraged.
- C Pedestrian / Bicycle Access:** Pedestrians and cyclists access shopfronts from the sidewalk.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Minneapolis, Minnesota



Saint Paul, MN

## Bungalow Courtyard

Bungalow courtyards emerged in Pasadena in the early 20th century as a way to provide amenities typically offered in a single family home in a more affordable complex. As its name implies, units are organized around a common courtyard and designed in the low-density (1-2 story) bungalow design. Multiple units can be clustered together (duplex, triplex, etc.) to achieve even higher densities.

### Guidelines

**Dwelling Units per Acre:** TBD

100 +	51 - 99	13 - 50	<b>&lt; 12</b>
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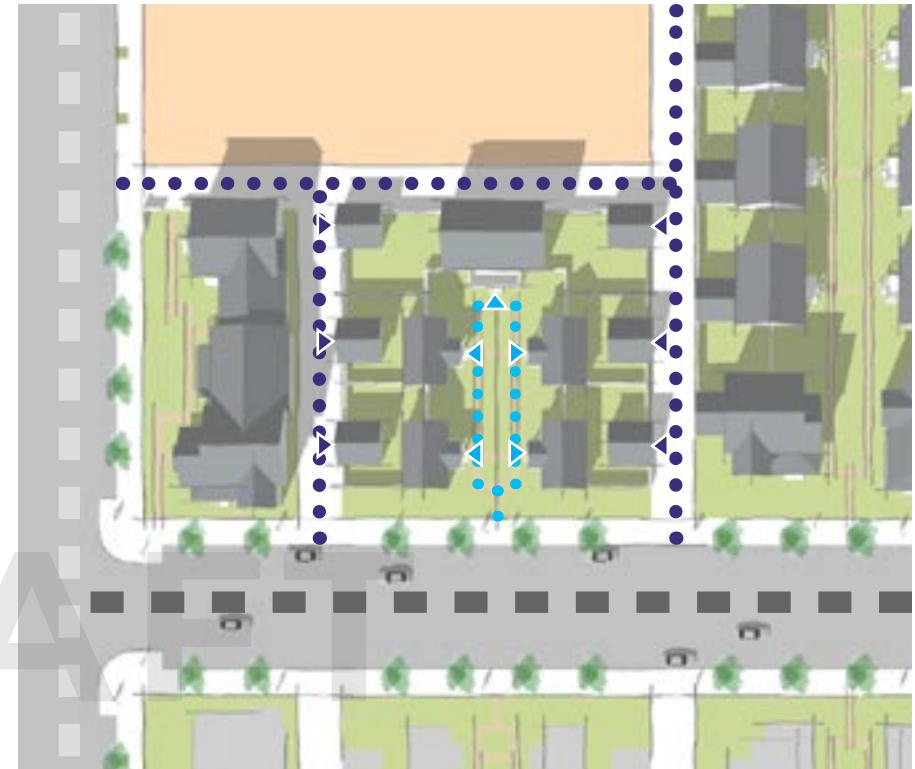
**Residential:** 100%

**FAR:** TBD

3.0 +	2.0 - 2.9	1.0 - 1.9	<b>&lt; 1</b>
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**Commercial:** 0%

- A Vehicle Access:** Vehicles can access units from driveways along the side lot line or alley.
- B Parking:** Parking can be provided in a common suite of garages or carports in the rear of the complex. Alternatively, each unit may include its own single-stall garage.
- C Pedestrian / Bicycle Access:** Pedestrians access units from the courtyard. Secure bicycle storage should be provided in each garage stall.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Pasadena, CA

## Rosewalk

Rosewalks are similar to bungalow courtyards, but the common amenity space takes the form of a narrow mall. Additionally, the mall typically extends across the whole block in a linear arrangement (from street to street). Given space constraints, garages are typically attached to the rear of each unit. Rosewalks achieve slightly higher densities than bungalow courtyards and provide for public pedestrian access and excellent circulation throughout the neighborhood.

### Guidelines

**Dwelling Units per Acre:** TBD

100 +	51 - 99	13 - 50	< 12
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**Residential:** 100%



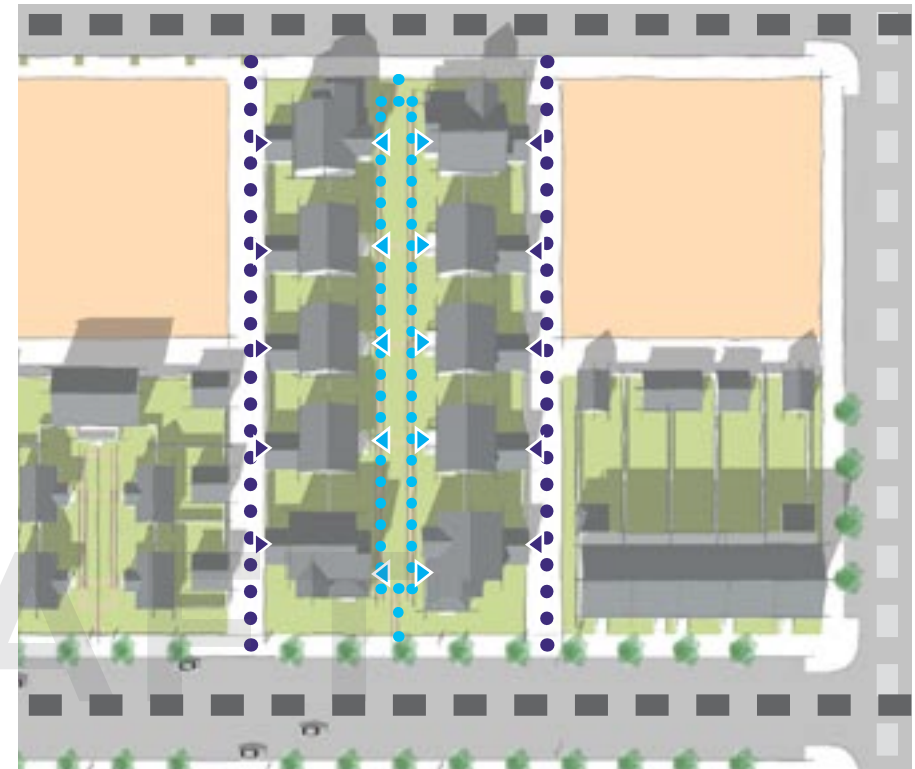
**FAR:** TBD

3.0 +	2.0 - 2.9	1.0 - 1.9	< 1
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**Commercial:** 0%



- A Vehicle Access:** Driveways are provided along the side lot line.
- B Parking:** Parking garages are typically attached to the rear of each unit.
- C Pedestrian / Bicycle Access:** Units are accessed from the mall, while bike storage should be provided at the rear of each unit.



- ▼ Vehicular Entry
- ▼ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Venice, CA



## Compact Lot Subdivisions

Compact lot subdivisions are smaller, fee simple lots, in areas zoned for two-family and multi-family housing where infill development is encouraged. A “compact lot subdivision” is a land division that creates single-family residential lots with an area of less than 5,000 square feet. These compact lots are generally less than 50 feet wide, with modifications to other development standards, including but not limited to setback, street frontage, and access requirements.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 100%



**FAR:** TBD



**Commercial:** 0%



- A Vehicle Access:** Vehicles can access units from driveways along the side lot line or alley.
- B Parking:** Parking can be provided in a common suite of garages or carports in the rear of the complex. Alternatively, each unit may include its own single-stall garage.
- C Pedestrian / Bicycle Access:** Pedestrians access units from the courtyard. Secure bicycle storage should be provided in each garage stall.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Los Angeles, CA



Los Angeles, CA

# 04 Medium Density

## Duplex

A structure that consists of two side-by-side or stacked dwelling units, both facing the street and within a single building; with the appearance of a single-family home, it is appropriately scaled to fit within primarily single-family neighborhoods or medium-density neighborhoods.

### Guidelines

**Dwelling Units per Acre:** TBD

100 +	51 - 99	13 - 50	< 12
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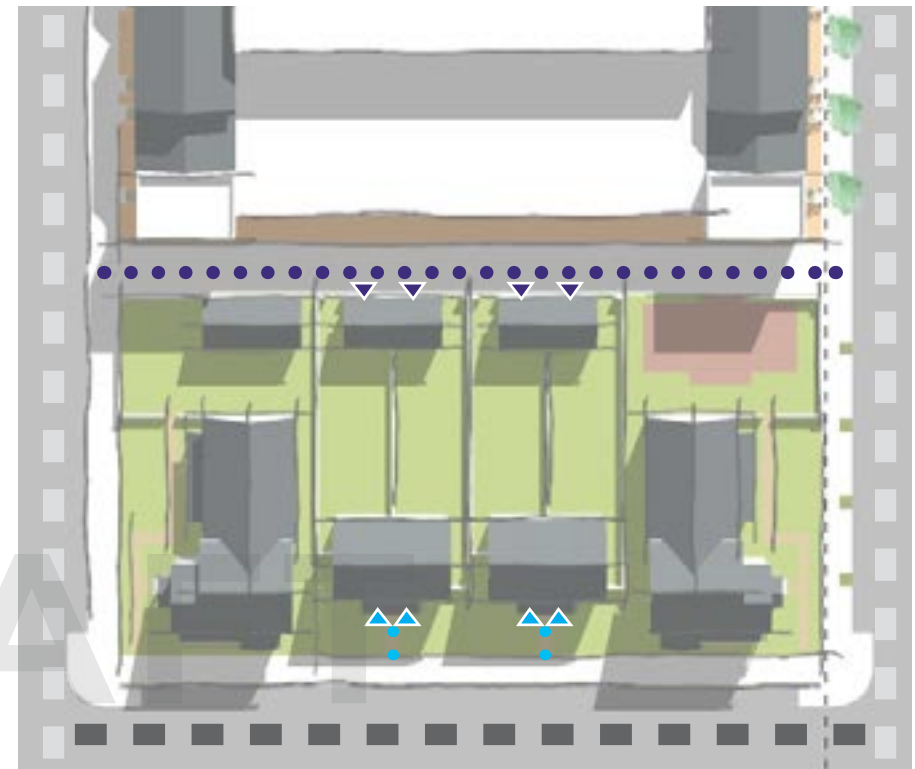
**Residential:** 100%

**Commercial:** 0%

**FAR:** TBD

3.0 +	2.0 - 2.9	1.0 - 1.9	< 1
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- A Vehicle Access:** Vehicle access is preferred from an alley. If no alley is present, a driveway for single car width along one edge of the lot is acceptable.
- B Parking:** Surface parking is located behind the building, or located along an alley, and should be hidden from the street. On-street parking should also be utilized to reduce amount of on-site parking.
- C Pedestrian / Bicycle Access:** Pedestrian access can be from the front of the building, or from the side driveway. Side yard duplex should have entrances fronting both streets.



- ▼ Vehicular Entry
- ▼ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Los Angeles, CA

## Triplex/Fourplex

Triplexes and fourplexes are similar in concept to the duplex, but can be configured in a variety of ways to achieve higher density structures that come in combinations of three or four units. A common entrance may lead to three or four units, or individual entrances may be located along the front and/or sides of each building.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 100%



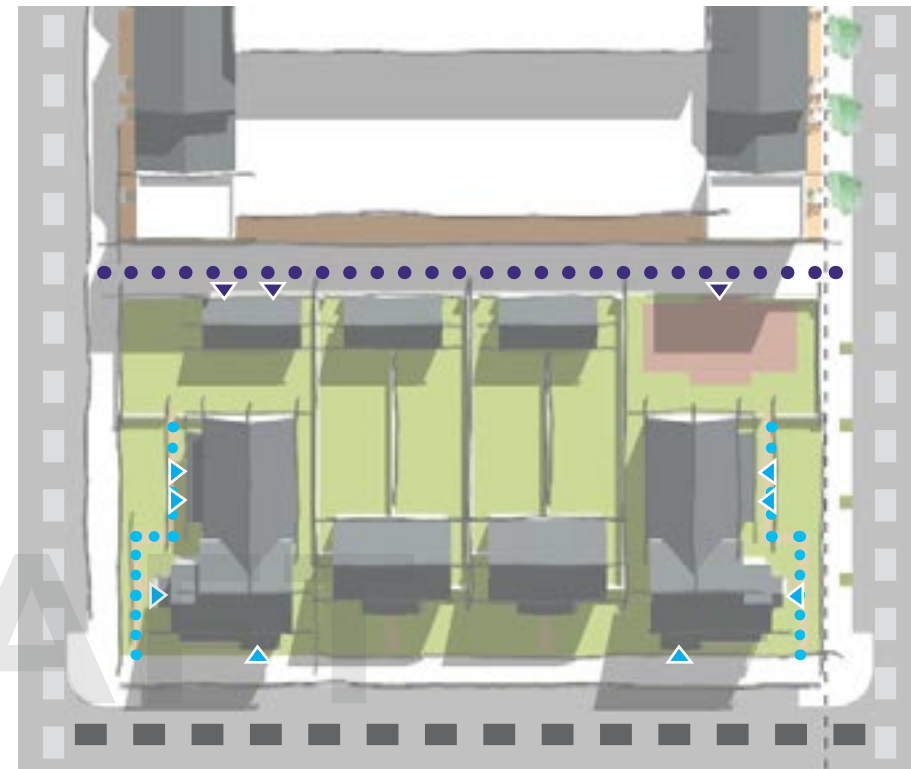
**FAR:** TBD



**Commercial:** 0%



- A Vehicle Access:** Vehicles can access shared lots or garages from the street or alley.
- B Parking:** Shared lots or garages can be provided, although some units may not include any dedicated parking. On-street parking should be made available.
- C Pedestrian / Bicycle Access:** Pedestrians and cyclists access units from the sides and front of each complex. Bicycle parking should be provided in common garages or racks near the alley.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Los Angeles, CA



## Attached Townhouse

Attached townhomes offer many of the same benefits of single-family at higher residential densities. Units are typically 1-2 stories with up to three bedrooms and are typically no more than 30-40' wide. This unit size allows for higher densities (20-25 units/acre) when compared with single-family homes (7 units/acre). Attached units can include private backyards and feature minimal sidewalk setbacks. To facilitate pedestrian circulation, at least one public walkway should be provided at or near the center of each block.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 100%



**FAR:** TBD



**Commercial:** 0%



- A Vehicle Access:** Guests arriving by car park on-street, while townhome owners access each garage from a shared alley.
- B Parking:** Up to two stalls can be provided in a detached, private garage that is located off the alley. On-street parking should be provided for guests.
- C Pedestrian / Bicycle Access:** Pedestrians access units from the sidewalk and secure bicycle parking should be provided in each private garage.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Los Angeles, CA

## Live/Work

Live-work lofts are a unit type that can be integrated into duplexes, detached/attached townhomes, and small lot projects. These units are typically two- or three stories, face the primary street, and include second and/or third-levels that open to the main living space below. Living spaces may be converted to workspace for small retail or office operations, artist studios, or other low volume commercial uses. They help to activate the street in areas where traditional retail is not feasible.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 90%



**FAR:** TBD



**Commercial:** 10%



- A Vehicle Access:** Commercial patrons park on-street and access units from the sidewalk.
- B Parking:** Garages can be provided in shared complexes or as tuck-under stalls facing the alley.
- C Pedestrian / Bicycle Access:** Pedestrians and cyclists can access units from the sidewalk. Convenient bicycle parking (typically a pole or rack) should be provided for guests.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Santa Ana, CA

## Courtyard

Courtyards are similar to bungalow courtyards (see earlier description) but units are fully attached and arranged in higher densities (2-3 stories). This arrangement yields more units per acre, but does not include private backyards. Instead, social interaction among residents is encouraged through a well-designed and maintained common courtyard.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 100%



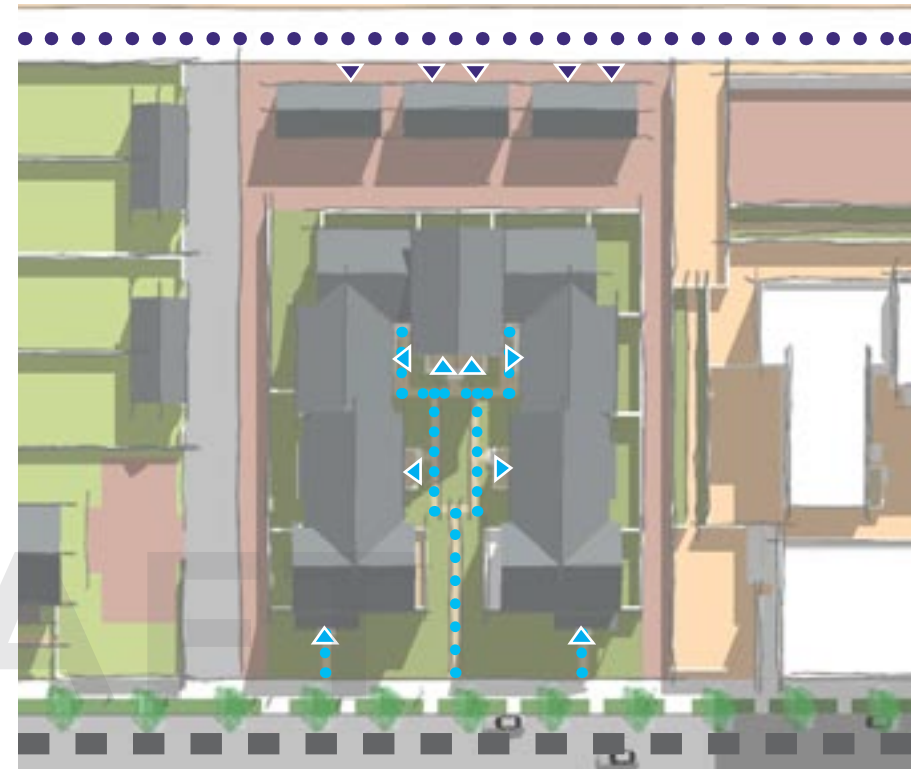
**FAR:** TBD



**Commercial:** 0%



- A Vehicle Access:** Vehicles access to the complex is typically through a driveway along the side lot line.
- B Parking:** Parking is provided in carports or garages at the rear of the building. Residents park and walk through arcades to access courtyards and units.
- C Pedestrian / Bicycle Access:** Pedestrian/cyclist access to each unit is provided from the courtyard.



- ▼ Vehicular Entry
- ▼ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Los Angeles, CA



## Hybrid Courtyard

Like the bungalow courtyard, hybrid courtyards share a common, central amenity space that is shared among residents and tenants. Hybrid courtyards, however, include a mix of higher density (2-4 story) attached multi-family buildings and/or a mixed-use (retail/office or retail/residential) building that is oriented to the primary street. This building type achieves high densities (40-50 units/acre) and a desirable mix of uses using Type V construction, which is less expensive to build.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 90%



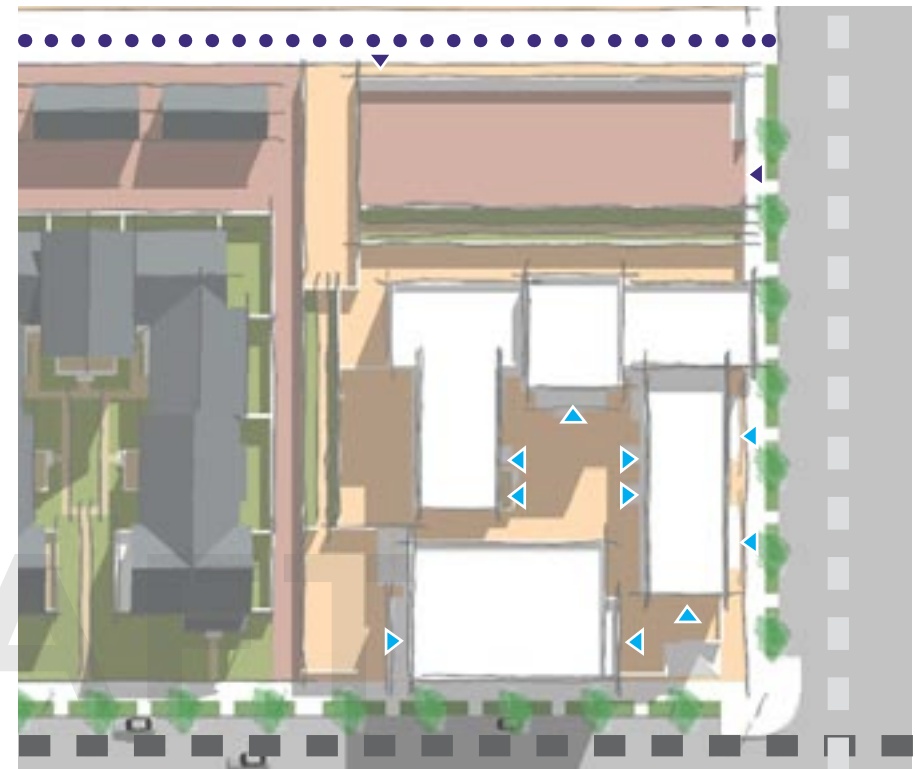
**FAR:** TBD



**Commercial:** 10%



- A Vehicle Access:** Access is provided from an alley or through a driveway along the side lot line.
- B Parking:** Parking is provided in a shared lot at the rear or in a garage below the complex.
- C Pedestrian / Bicycle Access:** Ground-floor residential units are accessed from the courtyard, while upper units can be reached from a stairwell and hall. Commercial suites include street-facing entrances.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



South Pasadena, CA

# 05 Higher Density

## Hybrid Podium

Hybrid Podiums are buildings with one or two stories of concrete or steel floors, typically occupied by retail or parking, and 2 to 5 stories of wood frame construction residential or office uses. Hybrid podiums are common building forms for mixed-use developments along commercial corridors.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 75%



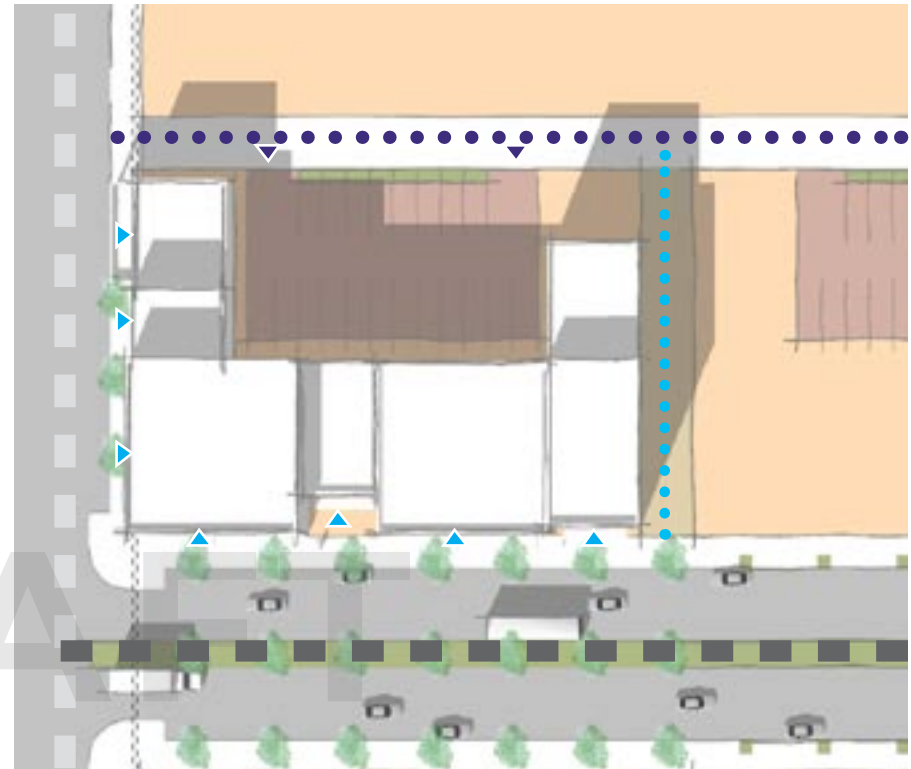
**FAR:** TBD



**Commercial:** 25%



- A** **Vehicle Access:** Vehicles access the complex from curb cuts located at the ends or rear of the building.
- B** **Parking:** Parking for residents and customers is located below grade or at the rear of the property.
- C** **Pedestrian / Bicycle Access:** Retail suites include street-facing entrances, while residents access units from a separate, private entrance that leads to stairwells/elevators and common corridors.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Williamsburg, VA

## Flex Apartment/Mixed-Use

Flex apartments are a general, catch-all term for the most common building type used in TOD construction. These are multi-family structures between 3 and 7 stories in height, and may be build using Type V or modified Type III construction types, depending on the type and presence of retail. Buildings may be all-residential or include a mix of street-facing retail or commercial units. Densities of 50-100 units/acre are possible depending on the density.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 75%



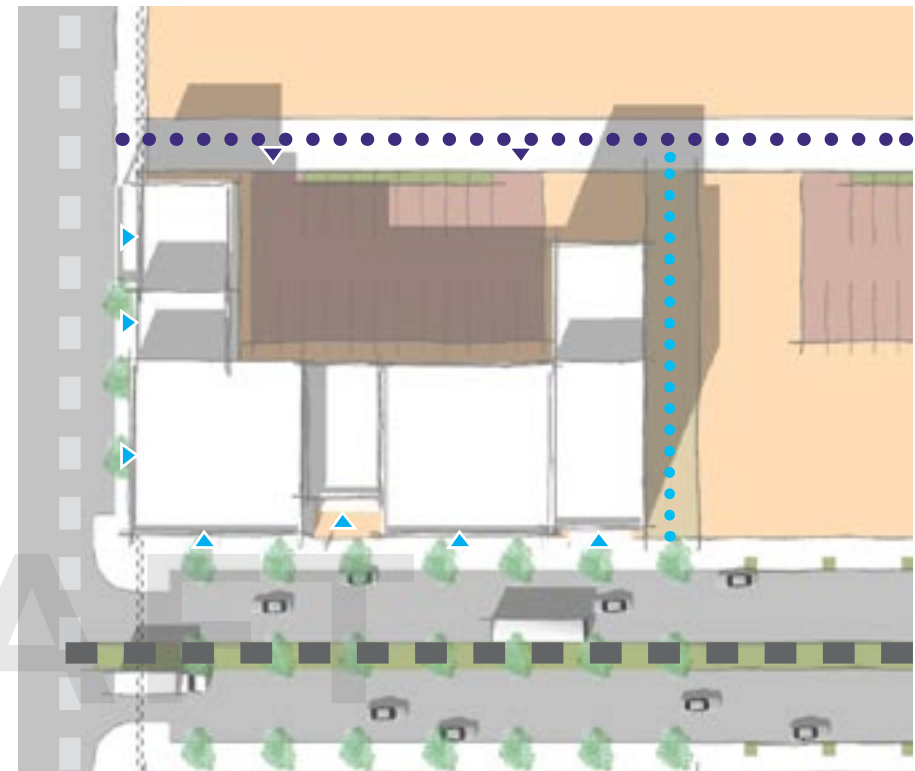
**FAR:** TBD



**Commercial:** 25%



- A Vehicle Access:** Vehicles access the complex from curb cuts located at the ends or rear of the building.
- B Parking:** Parking for residents and customers is located behind the building, in upper level podiums, or in below-grade garages.
- C Pedestrian / Bicycle Access:** Retail suites include street-facing entrances, while residents access units from a separate, private entrance that leads to stairwells/elevators and common corridors.



- ▼ Vehicular Entry
- ▲ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Williamsburg, VA



## Liner Structure/Commercial Block

Liner structures are single-loaded (units located along only one side of a corridor) and are used to screen the blank façades of free-standing or podium parking structures. Units at-grade can be configured as live-work units or loft-style residential units with entrances facing the primary street.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 75%



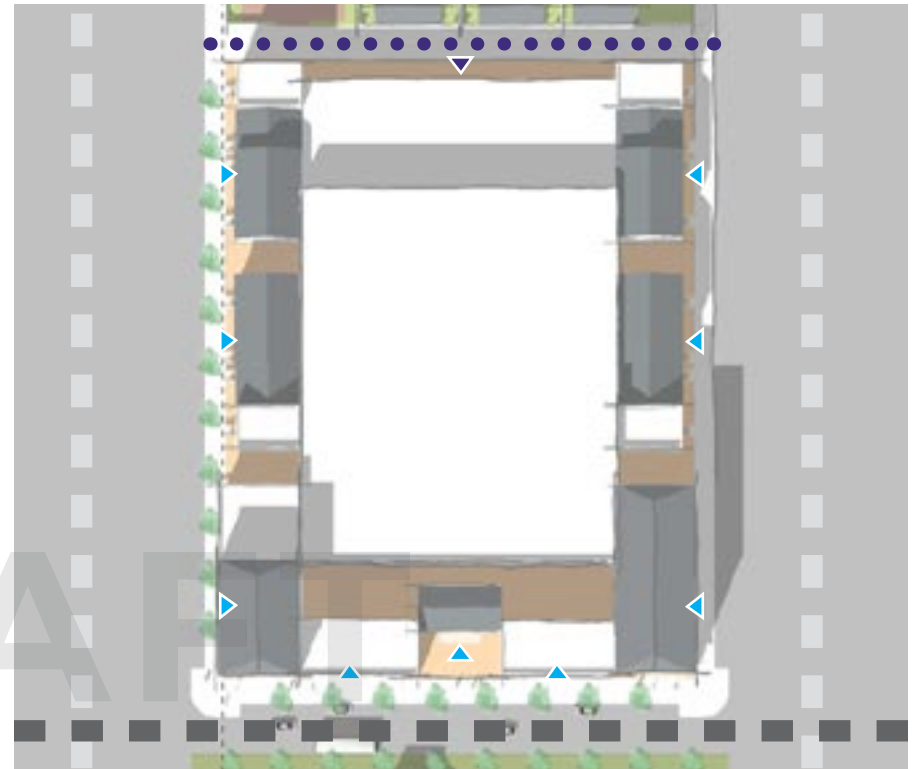
**FAR:** TBD



**Commercial:** 25%



- A Vehicle Access:** Vehicles park in a podium parking structure with entrances located around the block.
- B Parking:** Liner buildings typically wrap above-grade parking structures. Retail customers park on the lower levels and walk through arcades to access street-fronting retail, while residents can park on the upper levels and access units directly from the garage.
- C Pedestrian / Bicycle Access:** Pedestrians may access the building directly from the corridor, or from the rear through the parking structure.



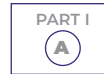
▼ Vehicular Entry      ●●● Vehicular Path      ■■ Primary Street  
▶ Pedestrian Access      ●●● Pedestrian Path      ■■ Side Street



Axon



Boulder, CO



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## Mid-Rise Tower

Mid-rise towers are higher density (7-10 story) structures that are organized around a common set of elevators and stairwells. Several residential units can be located on a single floor plate in a number of configurations, from studio to four bedroom units. Parking is provided in above-grade podiums or in garages below-grade. An amenity deck that includes a terrace, barbecue, pools, gyms, and other features is typically included and maintained by the landlord or association.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 36%



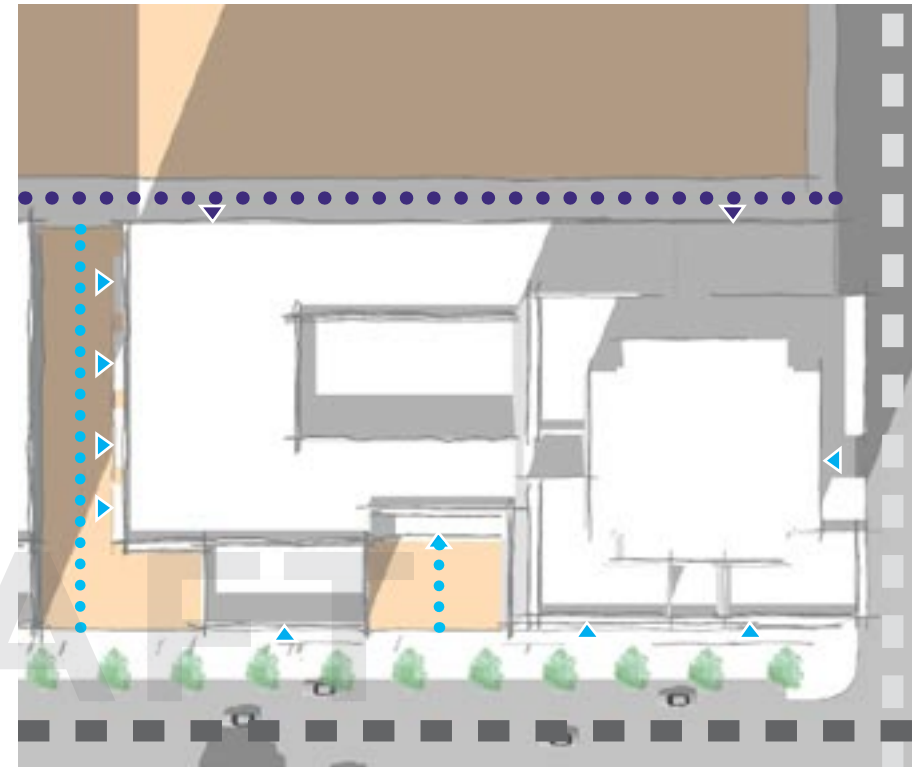
**FAR:** TBD



**Commercial:** 64%



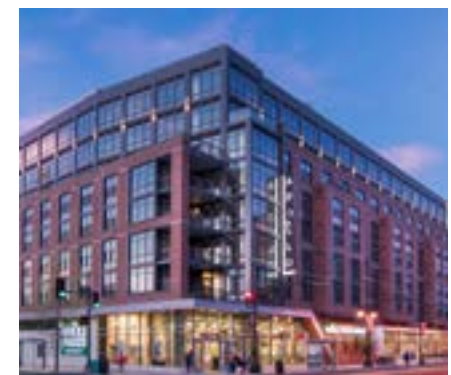
- A** **Vehicle Access:** Access is provided from curb cuts located from an alley or from an adjacent street if permitted by individual cities.
- B** **Parking:** Parking is located in upper-level podium structures or in below-grade garages.
- C** **Pedestrian / Bicycle Access:** Privately-owned pocket parks and plazas should be provided to encourage social activity and provide for convenient pedestrian/cyclist access and parking.



Vehicular Entry  
 Pedestrian Access  
 Vehicular Path  
 Pedestrian Path  
 Primary Street  
 Side Street



Axon



Washington, D.C.



## High-Rise Tower

While mid-rise towers achieve significant densities (100-150 units/acre), high-rise towers can be in excess of 10, 20, 30 or more stories. In most other respects, high-rise towers are similar. A diverse mix of residential, office, retail, or hotel can be included in a high rise tower, with separate entrances provided for each use. High-rise towers are feasible in select few, highly desirable markets (typically central business districts). Existing office towers may also be converted to a mix of uses.

### Guidelines

**Dwelling Units per Acre:** TBD



**Residential:** 36%



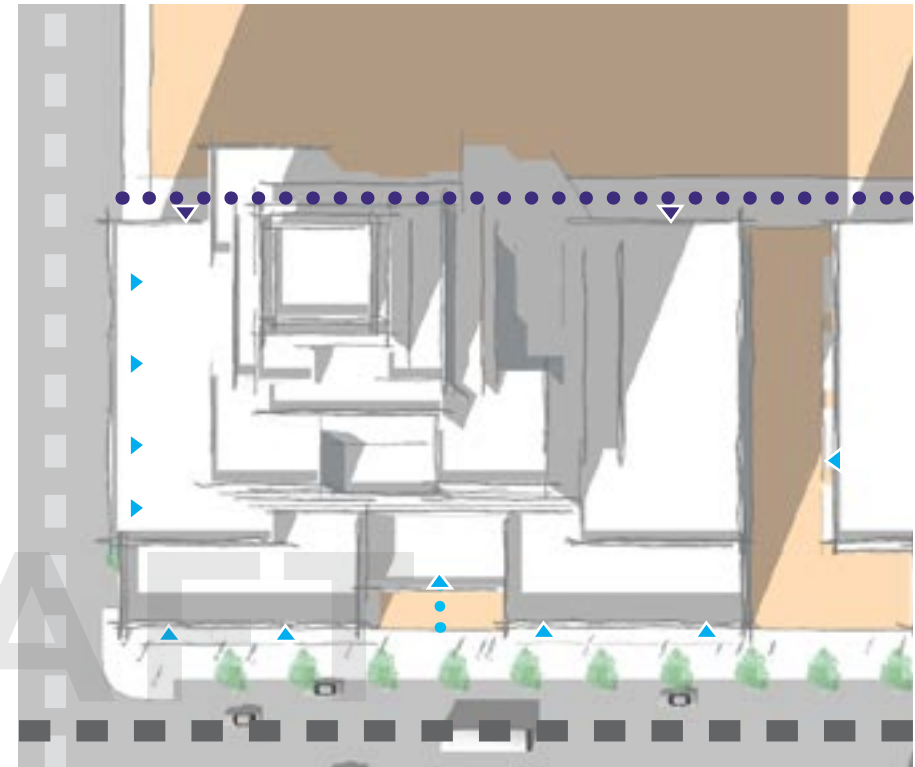
**FAR:** TBD



**Commercial:** 64%



- A** **Vehicle Access:** See mid-rise tower description.
- B** **Parking:** See mid-rise tower description.
- C** **Pedestrian / Bicycle Access:** See mid-rise tower description.



- ▼ Vehicular Entry
- ▼ Pedestrian Access
- Vehicular Path
- Pedestrian Path
- Primary Street
- Side Street



Axon



Los Angeles, CA



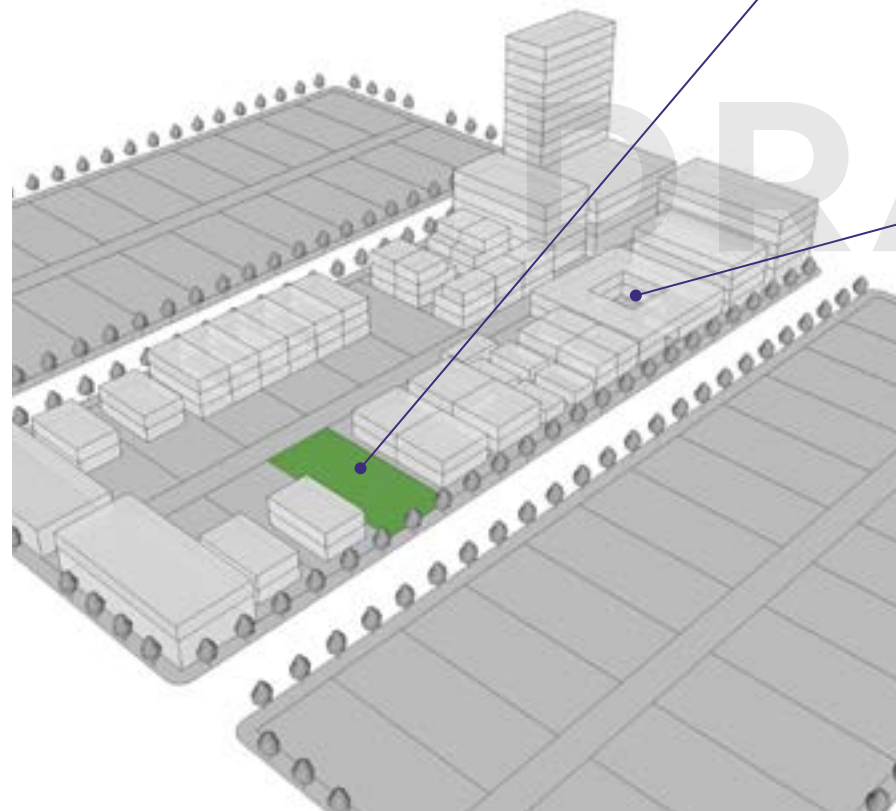
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# 01 How to Use the Open Space/Public Realm Guidelines

A key ingredient in creating a dynamic, urban TOD environment which is connected by transit and active transportation is to create attractive and functional places that people want to be. Placemaking includes providing public gathering and open spaces which are linked to transit and transit supportive housing, educational, institutional, and commercial uses. These open spaces vary in size and function, some are programmed for events to activate an area, some may be adjacent to a transit station or civic building and others may be entirely for recreation.



<p><b>PUBLIC</b></p> 	<p><b>Passive</b> Passive public open space includes open plazas, paths, walkways, and trails</p> <p><b>Active</b> Active public open space includes areas for events, exercise equipment, etc.</p>	<p><b>LED BY</b></p> <ul style="list-style-type: none"> <li>• City/County Planners</li> <li>• Pub/Priv Partnership</li> </ul>
<p><b>PRIVATE</b></p> 	<p><b>Passive</b> Passive private open space may include paths and outdoor seating</p> <p><b>Active</b> Active private open space may include event space, dining areas, etc.</p>	<p><b>LED BY</b></p> <ul style="list-style-type: none"> <li>• Developers</li> <li>• Homeowners</li> <li>• Other Property Owners, including Businesses</li> </ul>



# 02 Open Space Typologies

## Parklet

Parklets convert curbside on-street parking spaces into viable community spaces for recreation, seating and outdoor dining. By connecting one or two parking spaces into gathering spaces, the sidewalk is extended for passive recreation or as additional sidewalk seating for adjacent coffee shops, restaurants or other businesses. In addition to the County of Los Angeles, San Francisco, Boston, Los Angeles, Long Beach, all have parklet programs. In Long Beach, the City has a pilot program with local restaurants to create these spaces. On Broadway and Spring Street in downtown Los Angeles, there are many parklets.

### Best Design Practices / Guidelines

- A** Parklets should not encroach into the walking path and should be flush with the sidewalk.
- B** Parklets should not impede proper stormwater drainage of the street. Some parklets can be used to infiltrate stormwater. Electrical wires should not be exposed.
- C** A buffer should be provided from the parklet of at least 2 ft from travel lanes.
- D** If there are multiple parklets on a street, the programming of the activities should vary between passive recreation and revenue generation for nearby businesses, such as outdoor dining connected to restaurants.



San Francisco, CA



Spring Street, Los Angeles, CA

## Public Pocket Park/Private-Owned Public Space (POPs)

Pocket parks offer small areas for sitting, dining, recreation, and could be located on public or private property. Privately-owned public spaces may be internal courtyards, a sidewalk-adjacent easement designated for outdoor dining, or any other open spaces on private property designated for public uses or connectivity. A variety of social and recreational functions could take place in the pocket parks and certain pocket parks could be designed for a unique use, such as a dog park. Potential elements include lighting, permeable or decorative paving, fitness equipment, tables for games and dining; seating, planting, trees, water features to mask noise, public art, wayfinding, play equipment, and community information signage.

### Best Design Practices / Guidelines

- A** Design of parks should accommodate a diversity of users although some depending on simplicity; universal design could be devoted to specialty users, such as a children's playground or a dog park.
- B** Sustainable features, such as bioswales, permeable paving, LED lighting, solar lighting, drought-tolerant landscaping, and canopy trees for shade should be incorporated.
- C** Program parks to be integrated with surrounding uses, such as a coffee shop, restaurant, or other businesses.
- D** Exercise equipment can be installed for public use.



Formosa Park, Los Angeles, CA



Greenacre Park, New York, NY

## Paseo

A paseo is a landscaped public place containing a path designed for walking, strolling, and passive use. They can be used for biking. Paseos could be a mid-block pedestrian connection or part of a larger trail system connecting neighborhoods, parks, schools, and city sidewalks.

### Best Design Practices / Guidelines

- A** Paseos are wider than normal sidewalks as they contain a wide pathway (min. 15' to 20') with landscaping in the middle of or on each side of the pathway. They can contain pedestrian scaled lighting, an occasional bench for resting, trash receptacles, artwork, and could contain pet waste bag dispensers.
- B** Pathways could be serpentine or straight and in some communities are grade separated from major streets. Alternatively, bollards can be used in non-grade separated treatments to delineate the paseo
- C** For security and to create an active edge, blank walls causing limited surveillance should be avoided in favor of windows and active yards.

## Linear Park

A linear park is a wide landscaped area parallel to a public street curb, a rail line, or a busway and used by pedestrians, bicyclists, joggers and other social, health and recreational opportunities. While similar to paseos, linear parks can be seen as extensions of a standard street right-of-way. A linear park may also be in a wide landscaped median of a public street.

### Best Design Practices / Guidelines

- A** Curb cuts and entrances for pedestrian/vehicular and bicycle crossings should be designed to provide safe, and attractive pedestrian access.
- B** Pedestrian and bicycle pathways should cross at signalized perpendicular street intersections with consideration for separate striping for pedestrians and bicyclists.
- C** Connecting pathways should meander through canopy trees for shade and colorful planting with active recreational and passive places dispersed as appropriate.
- D** The character of linear parks could vary from low maintenance drought tolerant landscaping with bioswales to vibrant colorful planting with water features and art, and to an active market space atmosphere such as Las Ramblas in Barcelona.



Claremont, CA



Claremont, CA



Portland, OR



Klyde Warren Park, Dallas, TX

## Pedestrian Malls

Providing a sense of place and history involves creating great urban spaces but also preserving, where appropriate, landmarks and historic buildings adjacent to these spaces. The focus of a Station Area could be a traffic free street reclaimed for pedestrians, active transportation, and transit, often called a pedestrian mall, with dense retail, office, and residential interspersed with the areas historic fabric.

### Best Design Practices / Guidelines

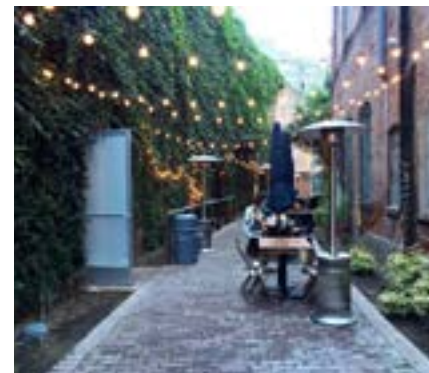
- A** Pedestrian malls could be considered where they may operate as the main street, or in cities with a strong market for retail, restaurants and entertainment uses such a tourist destinations and university settings.
- B** For economic viability, pedestrian malls should extend on multiple blocks, should have frequent programming of events and be designed with consistent textured pavings, street furniture, outdoor dining, wayfinding signage, art work, and dramatic lighting.
- C** For flexibility and fire life safety, consideration should be given to incorporating a two lane vehicular path that can be open and closed depending on events and anticipated crowds. This roadway space could be designed curbless with bollards.
- D** Active ground level uses with large clear windows and entrances from the pedestrian mall is essential.



Minneapolis, MN



16th Street Mall, Denver, CO



Arts District, Los Angeles, CA



Mercantile Alley, Pasadena, CA

## Green Alleys

While similar to pedestrian malls and paseos, green alleys are typically narrower passage ways designed for less frequent pedestrian and bicycle traffic. Vehicle traffic is often discouraged or limited using removable bollards. Green alleys typically form when vehicular service alleys are repurposed to include more pedestrian-friendly lighting and paving, as well as planting and permeable surfaces.

### Best Design Practices / Guidelines

- A** Repurpose service alleys which are underutilized to create green alleys to improve pedestrian circulation.
- B** Pave the main pathway with permeable paving and landscape the outer portion of the alley to allow surface water infiltration.
- C** Line pathways with pedestrian lighting such that the alley is sufficiently lit for pedestrian traffic, but does not disturb adjacent residents.

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## Neighborhood Park

A neighborhood park is typically recreation-oriented with children’s playgrounds, community gardens, picnicking, and could include swimming, tennis, or basketball courts as well as passive landscaped areas. The neighborhood park could be public or private. If private it may be a part of a housing or mixed use development.

### Best Design Practices / Guidelines

- A** Each neighborhood park’s uses and design should respond to the individual needs and character of a neighborhood.
- B** If on private property the park should be designed to intuitively welcome the public by its visibility through limited barriers from the sidewalks and streets.
- C** The programming of existing neighborhood parks and recreation centers should be regularly monitored and adapt to new trends such as skate parks, soccer fields, or dog parks.

## Town Square

Historically, a Town Square is situated within a grided street system and framed by active uses. Town Squares can also be defined as a civic space adjacent to a public building such as a cathedral or a civic building. They include features including a fountain, space for large events, performance space like a band shell, sculpture, sitting areas, cafes, and landscaping for storm water management. Seasonal activities such as temporary ice skating are also common to a Town Square depending on its size.

### Best Design Practices / Guidelines

- A** The town square/transit plaza should be easy in walking distance of the most dense portions of the Station Areas, preferable in the core and appeal to diverse multi-generations.
- B** Amenities to consider for the town square include arbors, trellises, sun terraces, decks, art installations, concert and performance spaces, formal seating areas, secondary sitting areas such as seating walls and steps, lighting, focal points, out door dining areas, recreational activities, bicycle hubs, shared vehicles, fountains, play areas, way finding signs and kiosks, trees and landscaping with a variety of color and forms.

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Gladys Jean Wesson Park, Los Angeles, CA



Battery Park, New York, NY



West Los Angeles, CA



Cerritos, CA

## Plazas

Plazas are diverse in scale and character, and will typically respond to its context to create a vibrant pedestrian environment. Plazas are flexible in their programming and use which allows for a variety of plaza types such as a transit plaza, street plaza, and gateway plaza. A transit plaza is an open space adjacent to a transit center and should serve rail or multiple bus lines or both. Passenger amenities are appropriate including vendors for newspapers, flower stands and coffee. A street plaza is a small public open space immediately adjacent to a sidewalk or an extension of the sidewalk. It may be used for people watching, sitting waiting for the bus, and for eating lunch. A gateway plaza in front of a major building operates as a gateway or entrance to the building and may be privately owned but open to the public.

### Best Design Practices / Guidelines

- A** Each plaza should contain amenities comfortable for people to use and be planned with enough flexibility to respond to the seasons and time of day.
- B** Plazas should be distinct places which as visible and easily accessible to people from the public street and connected to the pedestrian and bicycle network in the Station Areas.
- C** Amenities to consider for the plaza include arbors, trellises, sun terraces, decks, art installations, concert and performance spaces, formal seating areas, secondary sitting areas such as seating walls and steps, lighting, focal points, out door dining areas, recreational activities, bicycle hubs, shared vehicles, fountains, play areas, way finding signs and kiosks, trees and landscaping with a variety of color and forms.

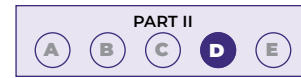


South Pasadena Transit Plaza



South Pasadena Transit Plaza

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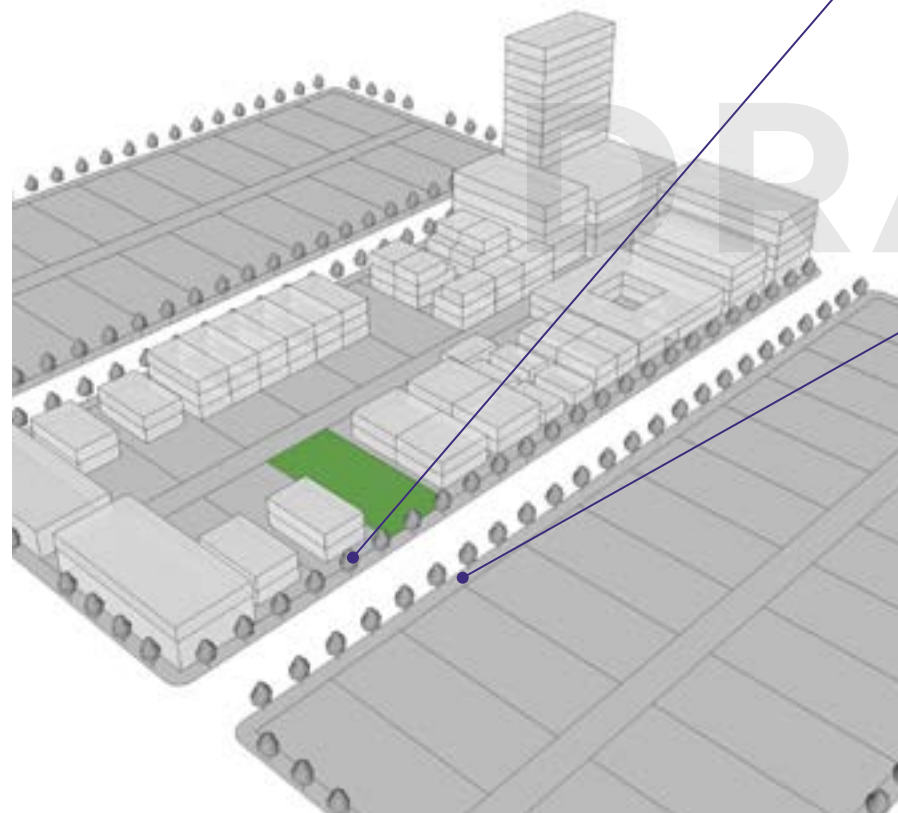
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# 01 How to Use the Complete Streets Design Guidelines

Complete streets are designed and constructed to serve all users of streets regardless of age or ability or whether they are driving, walking, bicycling, or taking transit<sup>1</sup>. In many areas vehicular travel lanes have been given priority within the public right-of-way over other forms of transportation leaving little space for sidewalks, bicycle paths, and transit. Within the constrained street right-of-way, the challenge is to create a network of complete streets where tree-lined walkways, bicycle paths, pedestrian/bicycle amenities and transit connections are balanced with the requirements of automobiles.



**CORRIDORS & STREETSAPES**



- Lane Width and Reupposing
- Sidewalks
- Street Trees
- Treelets
- Greenway Planter/ Bioswale
- Lighting

**LED BY**

- City/County Planners
- Pub/Priv Partnership

**PEDESTRIAN AMENITIES**



- Wayfinding Signage
- Benches
- Trash Receptacles
- Pedestrian Lighting
- Transit Shelters

**LED BY**

- LA County
- P3 Developer Contribution
- Businesses and Commercial Property Owners

<sup>1</sup>State of California OPR, General Plan Guidelines: Complete Streets and the Circulation Element, 2010.

## Benefits

Transforming a major corridor into a more multi-modal, transit-supportive street can result in several benefits to the community:

- **Safety** – Designing streets that consider safe travel for all modes can reduce occurrences and severity of vehicular collisions with pedestrian and bicycles.
- **Health** – Promotes a healthy lifestyle by encouraging physical activity.
- **Greenhouse Gas Emission reduction** – Developing an integrated land use and transportation pattern in can reduce VMT and greenhouse gas emissions.
- **Economic Development** – Multi-modal transportation networks can improve economic activity of local business and attract new economic development.

## Streetscape Zones

The figure at right illustrates the different areas or zones which makeup a typical corridor's streetscape: Frontage, Throughway, Furnishings, Extension, and Drive Lane(s). Each zone has its own function and purpose. While not every corridor will have all of the listed zones, a "complete street" will have each of the following areas:

- **Frontage:** The area on private property which abuts the public sidewalk, ideal for outdoor dining, product displays, etc.
- **Throughway:** The portion of the sidewalk which is used for pedestrian passage, and should be kept clear of obstructions.
- **Furnishings:** The portion of the sidewalk, sometimes referred to as a parkway, which may contain landscaping or street furniture.
- **Extension:** A portion of the road not used for vehicular traffic. Extension zones are often used for on-street parking, bike lanes, or parklets.
- **Drive Lane:** A vehicular lane of traffic, which may be transit-only, vehicle-only, or shared with vehicles and bicycles when bike lanes are not present.



Streetscape Zone	Frontage	Throughway	Furnishings	Extension	Drive Lane
Recommended Width	Min. 2' Max. 10'	Min. 6'	Min. 4' with 2' edge zone	Max. 8' parking lane and min. 5' bike lane	Max. 11'

Source: Metropolitan Council



## Potential Design Elements to Improve Wayfinding, Walkability, and Quality of the Sidewalk Environment

Throughways and Drive Lanes should be kept free of obstructions to ensure smooth pedestrian and vehicular traffic respectively. Frontage, Furnishings, and Extension zones of a streetscape can contain a number of amenities, as illustrated in the diagram at right.



### Essential Features

#### Tree Canopy and Vegetation

#### Street Furniture

#### Outdoor Dining

#### Wayfinding + Safety

#### Pedestrian-Scale Lighting

#### Public Art and Landmarks

### Potential Design Elements

- A continuous canopy of street trees to provide shade
- B stormwater infiltration devices using native vegetation, pervious pavers
- C planters, hanging baskets, and vegetation at all levels

- D benches, ledges, chairs, places to gather and sit
- E trash cans, utility boxes, drinking fountains, hydrants, parking meters
- F transit shelters, bus stop sign, canopies, kiosks, vendors

- G enclosed area for patio seating
- H covering to provide protection from the elements
- I vegetation to create an attractive buffer

- J kiosks, maps, street signs to highlight important destinations
- K ADA-accessible ramps to navigate grade changes, sidewalks and entrances clear of snow

- L sidewalk fixtures at 12'-14' that are shielded, uplights, building-mounted; illuminated bollards, banners to create identity
- M 20'-22' lighting for drive lanes

- N sidewalk art, colorful/patterned pavers
- O stormwater integrated into public art installations
- P interactive installations

Source: Metropolitan Council



# 02 Street Design

## Lane Width and Repurposing

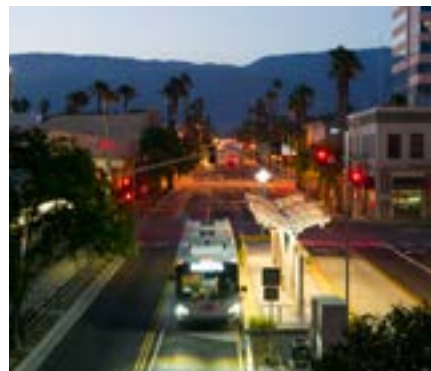
In Station Areas reducing the width of vehicular travel lanes will allow more space to be devoted to other mobility modes including pedestrian. In addition, narrowing lane widths act as traffic calming by reducing vehicular speeds which can decrease pedestrian-auto collisions. Repurposing a vehicular travel lane to a bus only lane can increase the number of people being moved along the street in less space. The example shown illustrates a street with four vehicle lanes of 12' to 13' width repurposed for two vehicular travel lanes, a bus only lane, a parking lane, and a one way buffered bike lane. There are many ways streets can be reconfigured to accommodate multiple transportation modes. The key is to determine for each street which modes are to be given priority if there is not space for all. Many cities define in their plans which streets should have transit priority, pedestrian priority, vehicle enhanced or be bike enhanced streets and apply these categories to address constrained right-of-way conditions.

### Best Design Practices / Guidelines

- A** In constrained conditions, vehicular roadway lane widths may be reduced to 10', parking lanes to 7' to 8', exclusive bus lanes to 12' to 13', one way Class II bike lanes from 5' to 7', one way buffered bike lanes from 8' to 10', and two way bike lanes to 12' including shoulders.



Source: NACTO



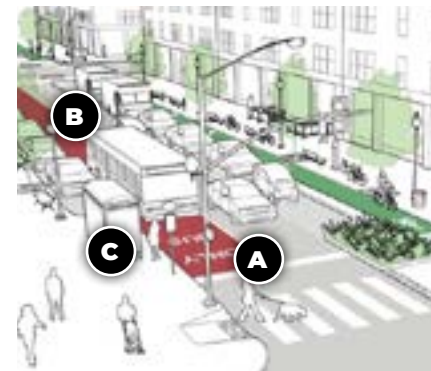
SbX BRT; San Bernardino, CA

## Transit Lanes

Transit on a complete street may include 1) a bus that shares a vehicular lane, 2) a peak-hour bus lane that prohibits curbside parking in peak hours, 3) a bus only lane, (either curb side or in the median), 4) a streetcar, 5) a rail line, or 6) a shuttle. Peak-hour bus lanes or exclusive bus only lanes shown in the illustrations increase the efficiency of transit especially on congested streets. On exclusive bus only lanes high ridership buses with transit signal priority at intersections move more quickly than adjoining traffic. Mixed traffic is only allowed to enter or cross a bus only lane to turn at an intersection or park at designated parking areas. Bus only lanes may be used by emergency vehicles.

### Best Design Practices / Guidelines

- A** Exclusive (dedicated) bus lanes width varies from 12' to 13' depending on transit agency requirements and street constraints.
- B** Exclusive bus lanes require physical barriers to separate bus lanes from mixed flow traffic which could be concrete barriers, bollards, delineators, or other devices.
- C** Well designed and branded transit shelters with ample space for waiting, protection from the sun, rain and wind, adequate lighting, variable message signs, seating, trash, receptacles will contribute positively to the passenger experience and the streetscape environment.



Source: NACTO



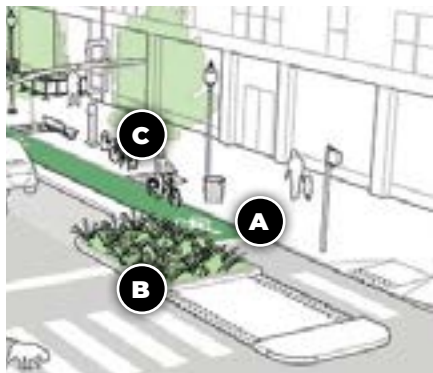
34th Street, New York

## Bicycle Lanes and Paths

Providing a robust bicycle network within 3 miles of a Station Area transit station/stop will assist in the first last mile connections to the transit station/stops and provide an alternative to the automobile for those living, working and playing within the Station Areas. Options to consider in providing safe, dedicated bicycle lanes/path in the Station Area include: 1) bicycle lanes (class II) are striped lanes located adjacent to the curb or to parked cars. 2) a bicycle path (class III) is a two way path usually on one side of a street or in a separate right-of-way 3) protected bike lanes or cycle tracks(class IV) contain a buffer or physical separation between the bike lane and parked cars or vehicular travel lanes as shown in the illustration.

### Best Design Practices / Guidelines

- A** Bike lanes are a minimum of 5' width; 7' width desirable.
- B** Protected bike lane – Buffers could be wide striping in the pavement, a raised concrete curb or median, bollards or landscaping. The buffer should be a minimum of 3' if adjacent to parked cars and will need to be broken at driveways and at intersections.
- C** Along the bike lane/bike path there needs to be adequate bicycle parking which could include bike racks, bicycle lockers, bike corrals, bike bulbs and shared bike stations.



Source: NACTO



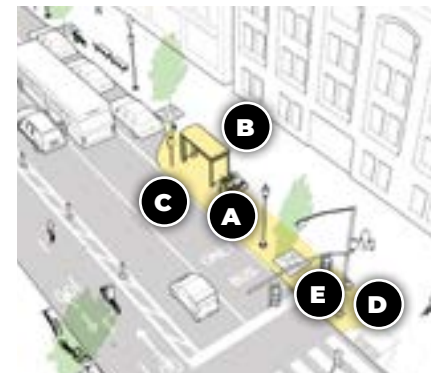
Class IV bike path, Rosemead Blvd, Temple City, CA

## Bus Bulb

A bus bulb is a curb extension that allows buses to stop in a vehicular travel lane increasing transit efficiency as the bus stopped at the curb does not need to wait to pull into moving traffic. Bus bulbs create more space adjacent to the sidewalk for pedestrian and transit amenities.

### Best Design Practices / Guidelines

- A** Bus bulbs are typically located on multi-lane arterials with curb side parking allowing for an extension of the sidewalk at intersections and for vehicles to pass stopped buses in adjoining lanes.
- B** Bus bulbs are used in constrained sidewalk conditions where there is limited space for a transit shelter and other amenities.
- C** Bus bulbs may be used in high bus ridership corridors for premium service such as Rapid or Bus Rapid Transit.
- D** Far side bus bulbs are preferred over near side bus bulbs to avoid right turn interference.
- E** The length of bus bulbs vary depending on the type of transit vehicle (local or articulated) and the number of buses at a stop. The length of the bus bulb is often constrained by driveways and other physical conditions. For conceptual design guidance a minimum length of 60' to 140' and a width of 8' should be considered and longer if more than one bus will be stopping at the same time.



Source: NACTO



Dexter Avenue, Seattle, WA



## Sidewalks

A continuous, attractive landscaped pedestrian network provided in a Station Area will connect a dynamic mix of uses with transit facilities. Adequate sidewalk width and pedestrian amenities will help create a walkable environment throughout the entire Station Area. In addition to having travel lanes, devices such as “bump outs” or curb extensions are methods to provide more sidewalk width in constrained right-of-way conditions. These curb extensions may be used for bus stops, additional landscaping, outdoor dining and other amenities. Sidewalks typically can be classified into the following three zones. 1) a furnishings/amenity zone next to the curb, 2) a throughway/pedestrian zone for access and, 3) a frontage zone.

### Best Design Practices / Guidelines

- A** The furnishings zone, sometimes occupied by landscaping in a parkway, can otherwise include street lights, street trees, landscaping, signage, bike racks, trash receptacles, local bus stops with transit shelters, seating, and utilities. It could contain storm water treatment, parking meters, public art, and outdoor dining.
- B** The throughway zone includes at least enough walking area to meet ADA requirements and should be kept free of clutter that may obstruct pedestrian movement and detract from the image of the commercial corridor. Tents, obtrusive plastic signs or installations, and flags should be avoided.
- C** The frontage zone is adjacent to the property line and its width will vary depending on the adjacent land use. In a retail area it may contain outdoor dining, planter boxes, railings, seating, and other amenities.
- D** Combined sidewalks and parkways of 12' to 15' or more are desirable as they are wide enough for street trees, pedestrian amenities, and allow at least two people to pass another. Sidewalks/parkways should not be less than 10'.
- E** Paving patterns will vary per City/County requirements for construction and maintenance and could include standard gray concrete, colored concrete, decorative paving, permeable paving, and others.
- F** To create a lively active pedestrian environment, the building entrances should be located with access directly from the sidewalk. The ground level frontage of the building facing the sidewalk should provide visual interest with clear glass windows that support the pedestrian environment.



Culver City, CA

Source: Gruen



Tokyo, Japan

Source: Gruen



West Hollywood, CA

Source: Gruen

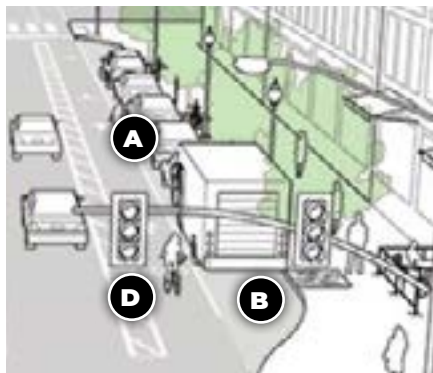


## Curb Space

Corridors wide enough and with sufficient traffic patterns to resize or repurpose lanes should utilize curb space between travel lanes and the sidewalk can provide additional pedestrian amenities, bicycle and transit infrastructure, and on-street parking. Curb space can be designed to be flexible to accommodate multiple elements, allowing for temporary programming or for multiple installments at a time. The most common use of curb space is on-street parking, and replacing certain parking stalls with bulbouts, treelets, or bikeshare stations can further expand the pedestrian experience.

### Best Design Practices / Guidelines

- A** If traffic patterns allow, repurpose the outermost vehicular travel lane for bike lanes and/or on-street parking along residential and commercial streets.
- B** Along commercial corridors, establish an on-street parking strategy to enable short-term parking next to retailers, restaurants, and other businesses.
- C** Develop a parklet program for commercial corridors with on-street parking to allow adjacent businesses to utilize curb space to provide outdoor seating and dining.
- D** Provide an additional 1' to 3' of buffer space between travel lanes and curb space amenities to increase pedestrian and bicyclist safety.
- E** Encourage food trucks to gather at consolidated locations, such as an empty parking lot, so they do not compete with on-street parking demand, particularly along corridors with limited sidewalk width. At least 12' of sidewalk width should be provided for at-curb food truck parking to allow for truck sales and operations, while maintaining adequate pedestrian movement.



Source: NACTO



Los Angeles, CA Source: Santa Monica Next



Source: NACTO



Speedway, IN

## Speed Table

Speed tables are traffic calming devices that raise the pavement several inches to reduce traffic speed and improve safety for pedestrians and bicycles crossing a roadway.

### Best Design Practices / Guidelines

- A** Speed tables have a flat surface with sloped ramps for vehicles.
- B** To shorten the distance of crossing a street and improve recognition of pedestrians, speed tables are typically located in conjunction with a curb extension and with the flat surface at the level of the curb.

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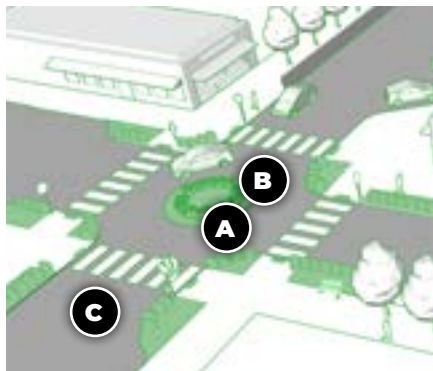
# 03 Intersections

## Traffic Circle

Traffic circles are circular islands in the center of intersections that control the flow of traffic. Drivers that enter the traffic circle must travel in a counter-clockwise direction around the island to get to the other side. Intersections with traffic circles can be stop-controlled or yield-controlled. Traffic circles slow the flow of vehicular traffic into intersections and reduce collision potential, which creates a more safe and comfortable environment for bicyclists and pedestrians. Studies have shown traffic circles improve air quality and roadway circulation by eliminating the stop-and-start movements associated with a four-way stop.

### Best Design Practices / Guidelines

- A** Use permeable materials and low water landscaping within the traffic circle for storm water management and create an attractive image.
- B** Use signs and reflective paint on the curb to improve visibility.
- C** Design speeds for vehicular movement, around the traffic circle should be 10 to 15 mph.
- D** Include red curb at the edges of the center circle to allow for fire engine access.



Source: Gruen Associates



Vista Bike Boulevard, Long Beach, CA

## Diverter

A traffic diverter is a roadway design feature which is placed upon a street or roadway in order to prohibit vehicular traffic from entering into, or from any street. Traffic diverters can be low cost and be large planters, signs, dirt filled concrete drums, curbs, curb extensions or more permanent installations. A raised median diverter allows through movements by bicycles while directing drivers onto an arterial street more appropriate for car traffic. Diverters also make the crossing much easier and safer for pedestrians. Diverters may include drought-resistant landscaping that can integrate them into the feel and fabric of the surrounding neighborhood.

### Best Design Practices / Guidelines

- A** Use signs within the diverter and reflective point on the curb to improve diverter visibility.
- B** Use permeable materials and low water landscaping within the diverter for storm water management and aesthetics.
- C** Bicycles can freely pass through the diverter. Enhanced cross walks and a "Z" pedestrian crossing can improve pedestrian safety.



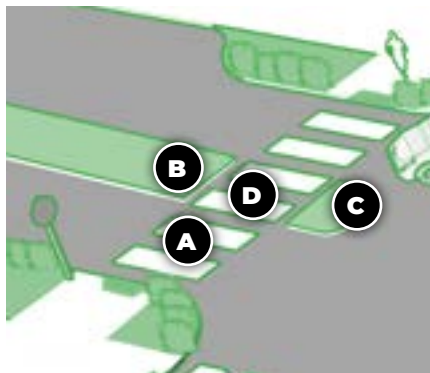
Source: Gruen Associates

## Median Refuge Island

Median refuge islands can provide a protected space for pedestrians or bicyclists crossing the street. Medians are elevated barricades that divide the roadway down the center. A refuge island can provide additional protection for pedestrians and bicyclists along busy corridors by allowing them to navigate only one direction of traffic at a time. They are especially recommended for wide streets and arterials that pedestrians may have trouble crossing before the end of a traffic signal phase.

### Best Design Practices / Guidelines

- A** Median refuges should accommodate pedestrians with disabilities and provide all pedestrians with a clear path of travel.
- B** The minimum width is 6 feet, a preferred width of 10', and a length of 12' or the length of the crosswalk which ever is wider.
- C** Signage and reflective material should identify the refuge island.
- D** Provide detectable paving for visually impaired users to indicate the line between the travel lanes and the pedestrian refuge.



Source: Gruen Associates



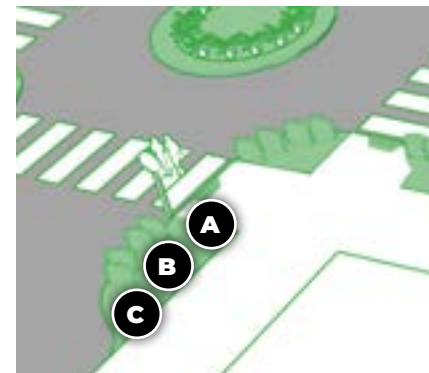
Arlington, VA

## Curb Extension

A curb extension is a portion of the sidewalk that is extended into the street or parking lane and typically occurs at intersections. This reduces the distance that pedestrians need to walk to cross the street, makes pedestrians more visible to motor vehicles, and causes drivers to reduce speeds by narrowing the roadway. Curb extensions offer space for amenities such as street furniture, bike racks, public art, transit shelters and landscaping. Curb extensions must be installed with curb ramps that comply with ADA standards. Curb extensions are typically installed at corners but they can be used at mid-block crossings as well.

### Best Design Practices / Guidelines

- A** A curb extension should not obstruct sight lines and allow motorist to clearly see pedestrians and bicyclists. Well designed curb extensions could include low height landscaping, bioswale planting, bike parking, or seating.
- B** To avoid conflict with bike lanes curb extensions often occupy a portion of a curb side parking lane.
- C** A curb extension could modify the storm water flow and the street may need to be redesigned by providing curb breaks into a bioswale, relocating catch basins or an ADA compliant grated channel to re-divert stormwater to existing catch basins.



Source: Gruen Associates



Long Beach, CA

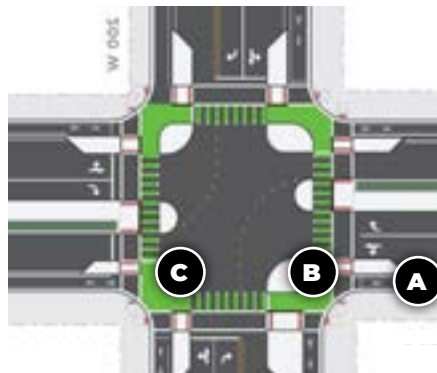


## Protected Bicycle Intersection

A protected bicycle intersection utilizes curb extensions to add a barrier between a bicycle lane and vehicle travel lanes at an intersection. Like other curb extensions, this makes cyclists and pedestrians more visible to motor vehicles. This arrangement provides greater safety for cyclists at intersections by preventing motorists from intersecting with cyclists when making a right turn and providing turning cyclists with an area to queue without interfering with either cyclist or motorists traffic. Protected bicycle intersections offer less space for pedestrian amenities such as other forms of curb extensions.

### Best Design Practices / Guidelines

- A** A protected bicycle intersection can be implemented in configurations with shared travel lanes or bicycle-only lanes. Roads with shared traffic lanes will have dedicated bicycle lanes at intersections to accommodate protected intersections.
- B** Well-designed protected bicycle intersections provide sufficient space for at least one cyclist to queue in the protected area. Queuing space can be maximized by widening the inside radius of the corner safety island.
- C** A protected bicycle intersection can include low height landscaping in raised corner safety islands.



Source: ALTA



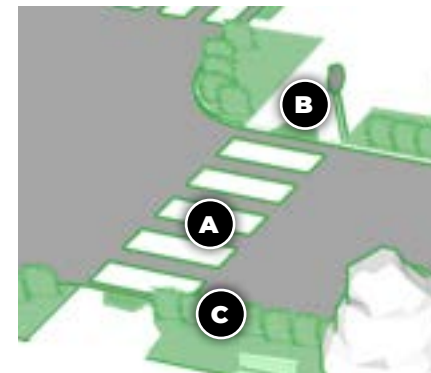
San Francisco, CA

## Enhanced Crosswalk

Installing crosswalks at controlled and mid-block help pedestrians to identify ideal locations at which to cross a street. Marked crosswalks also indicate more clearly to motorists where pedestrians have right-of-way and where to yield. Crosswalks should be highly visible to both drivers and pedestrians and can be installed with basic striping or decorative pavers. Crosswalks can also be supplemented with in-pavement flashing lights, elevated "table crosswalks," or freestanding beacons to increase visibility, which is particularly important for mid-block crossings.

### Best Design Practices / Guidelines

- A** A continental crosswalk has wide highly visible longitudinal strips paired with a stop line setback from the crosswalk.
- B** Curb ramps shall be designed to align with crosswalks.
- C** Vertical elements such as street trees should not block visibility of pedestrians in the crosswalk.



Source: Gruen Associates



Chicago, IL

## High-Intensity Activated Crosswalk (HAWK) Beacon

HAWK pedestrian signals, beacons, and push buttons promote intersection safety. Pushing the pedestrian button alerts the signal system of the presence of a pedestrian requesting a “walk” signal. In some cases, such as at a mid-block crossing, the pedestrian must press the button to receive a “walk” sign. This unique type of signal is more visible to drivers in an urban area than traditional crosswalks.

### Best Design Practices / Guidelines

- A** Push buttons should incorporate tones for the visually impaired.
- B** Push buttons are appropriate for arterial streets, congested streets and in areas with a high concentration of seniors as they can allocate more time for pedestrian crossing.

## Scramble Crosswalk

When activated, scramble crosswalks signalization temporarily stops traffic to allow pedestrians to cross at an intersection in any direction. The crossings can be striped with paint or pavers and can be used to direct pedestrian movement. Scramble crosswalks are advantageous in areas with high pedestrian traffic, as they more efficiently allow pedestrians to cross directly to their desired corner even diagonally, as opposed to having to wait for successive crossing signals.

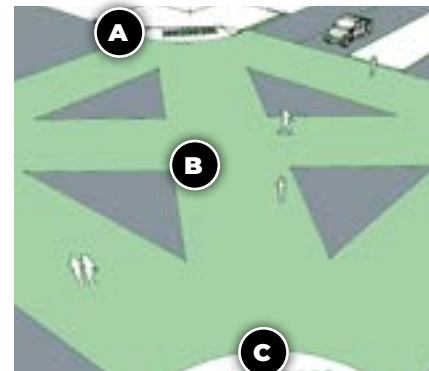
### Best Design Practices / Guidelines

- A** Scramble intersections have “pedestrian only” phase in signal light cycles during which vehicles at all approaches are prohibited from entering an intersection including right turns.
- B** “Continental” crosswalks or decorative concrete unit pavers may be used at scramble intersections. Continental crosswalks include wide bands perpendicular to the direction of travel.
- C** Curb ramps and tactile warning strips should be provided at curbs to meet ADA requirements.

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Source: NACTO



Source: Gruen Associates



Pasadena, CA

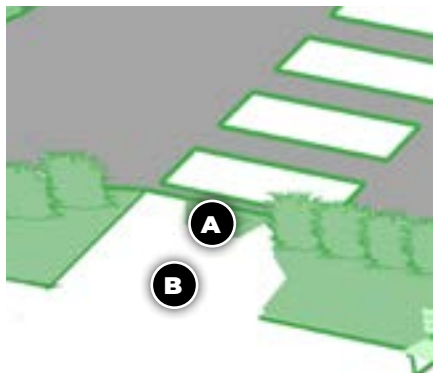
## Curb Ramp

Curb ramps allow persons in wheelchairs, with walkers, with strollers, and with other disabilities convenient access to the sidewalk from the street. The Americans with Disabilities Act (ADA) requires curb ramps to be installed at all locations where pedestrians cross. Curb ramps for each crossing approach are preferred rather than one curb cut per corner so that visually impaired persons have better orientation. Warning strips should be installed on all ramps.

### Best Design Practices / Guidelines

- A** All curb ramps should have ADA - approved ramps with detectable warning surface (min. width 24") in yellow.
- B** At least 48" of landing should be provided behind the curb ramp.

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Source: Gruen Associates



Long Beach, CA



# 04 Streetscape Infrastructure

## Chicane

Chicanes reduce vehicle speeds by visually narrowing the roadway and requiring vehicles to shift their positions horizontally. Chicanes and chokers are curb extensions that alternate from one side of the street to the other and calm traffic. If supplemented with landscaping, bike parking, seating and other amenities, chicanes can also create a more pleasant walking environment and a buffer between the sidewalk and the street. The City of Seattle found an 18-35% reduction in travel speeds and a 32-45% decrease in average daily traffic (ADT) volumes at locations with chicanes.

### Best Design Practices / Guidelines

- A** A chicane may require special striping of the street and signage reflective paint on the curb to ensure drivers are aware of the serpentine roadway.
- B** Landscaping and storm water infiltration in the chicane contributes to a pleasant walking environment and can aid in wayfinding for drivers.

## Street Trees

Street trees will enhance the walkability, comfort and attractiveness of the Station Area streets. Street trees provide visual interest, unity and shade protection from the hot sun. Landscaping of parkways and tree wells compliment and support street trees and assist in storm water management. Street trees reduce the heat island effect, reduce storm water runoff, improve air quality by absorbing greenhouse gases, and can provide wild life habitat and food.

### Best Design Practices / Guidelines

- A** Street trees and landscaping in the amenity zone should be specified to achieve a strong visual image that fits in the neighborhood, to respond to the area's climate, for low water requirements, for resistance to disease, for compatibility with soil and drainage conditions, and to avoid invasive roots that will uplift sidewalks.
- B** If streets are wide, tall canopy trees should be selected to create a strong visual impact and smaller trees may be selected for local small scaled street.
- C** Typical street trees should be spaced 30' - 35" apart while avoiding interference with street lighting, utilities and visibility of approaches to intersections and driveways.



Source: Gruen Associates



Austin, TX



Vancouver, British Columbia



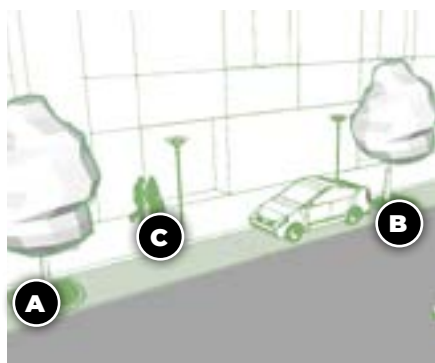
Culver City, CA

## Treelet

A treelet is a curbed tree well that is extended into the parking lane between on-street parking spaces. Treelets are typically used as an alternative to planting strips and tree wells in business districts and other areas where the existing sidewalk width is narrow and it is important to maintain the maximum width to accommodate pedestrian volumes and accessibility. Treelets can often be accommodated between existing parking spaces and typically do not impact the number of parking spaces along the street. A tree pit is saw-cut out of the street and a curb extension is built outside the gutter dimensions to prevent conflicts with existing drainage infrastructure.

### Best Design Practices / Guidelines

- A** Treelet island length and widths vary with on-street parking conditions and existing utilities.
- B** Treelets should not obstruct sight lines of drivers viewing pedestrians. Parallel parking lengths should meet city standards.



Source: Gruen Associates



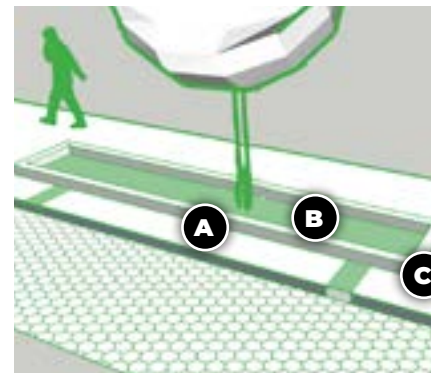
Long Beach, CA

## Greenway Planter/Bioswale

Greenway planters/bioswales meet an increasing demand to mitigate storm water pollution from our streets and impermeable surfaces in our urban areas. Bioswale parkways between the street and sidewalk collect and filter stormwater run off from streets. Curb cut-outs direct street runoff into the permeable soils and native plants or grasses to help reduce the flow of water and to filter out pollutants such as sediment, trash, and heavy metals. Drainage pipes installed beneath the soil carry the filtered water to the storm drain system.

### Best Design Practices / Guidelines

- A** Greenway planters or bioswales may be designed in many ways and individual cities are starting to develop standards for green streets that filter storm water. The illustration is one example of a greenway planter where the curb is broken to allow storm water in the gutter to flow into a bioswale planter in the sidewalk area.
- B** If there is not curbside parking, place the greenway planter next to the curb. If there is curb side parking, place an accessible area between the curb and the greenway planter.
- C** Allow for accessible breaks in the greenway planters periodically.



Source: Gruen Associates



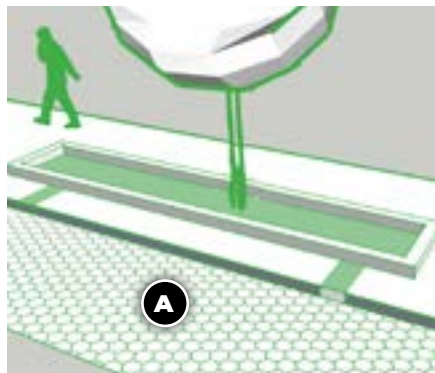
Hope St/11th St, Los Angeles, CA

## Permeable Paving

Permeable pavement allows stormwater runoff to seep through and into the soil below where the water is filtered and eventually directs to the existing aquifer. Permeable pavement is an alternative to typical concrete and asphalt paving and offers a range of utility, strength and sustainable properties. These materials include permeable concrete, asphalt, clay brick interlocking unit pavers, open grid pavers, gravel pavers or decomposed granite. Joints usually include aggregate.

### Best Design Practices / Guidelines

- A** Permeable paving may be used in the street, in parking lots and in sidewalks, especially in the amenity zone. Soil tests are needed to establish soil characteristics and to determine proper aggregate materials so water filters properly through the system. Maintenance is required to keep debris from clogging joints.



Source: Gruen Associates



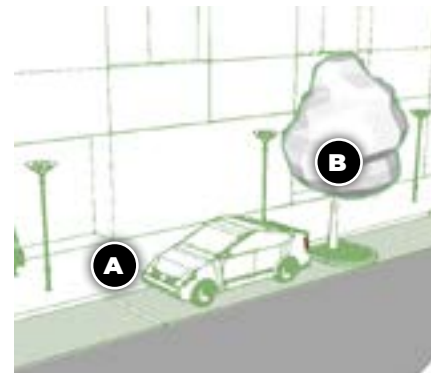
Source: NACTO

## Lighting

Street lighting improves streetscapes by improving security and visibility for both bicyclists and pedestrians. Street lights should be installed on both sides of the street and the level of lighting should be consistent throughout the segment. To accompany city standard street lights, which are tall and often spaced over 100' apart, pedestrian scale lighting is shorter in height, more frequent and creates a more aesthetically pleasing, comfortable and safe environment to walk and stroll. Pedestrian-scaled lighting along bike paths and at bus stops also add to the safety and security of those arriving within the Station Area. Intersections often require additional lighting to allow motorists to see pedestrians crossing. In addition, when operation and maintenance funds are available specialty lighting of trees and digital signage can add to the vitality of the area.

### Best Design Practices / Guidelines

- A** Lighting should have energy efficient fixtures such as LED which provides even, uniform distribution of light enhancing visibility and safety.
- B** Pedestrian-scaled lighting can be located between street lights, interspersed with street trees in the amenities zone or if sidewalks are wide enough at the back of the sidewalks to maximize the number of street trees.



Source: Gruen Associates



Uptown Transit Hub, Cincinnati, OH



# 05 Amenities

## Wayfinding

Wayfinding improvements can help visitors navigate to major destinations, public facilities, and transit connections. Wayfinding signage can be divided into three categories: 1) Identification signs that mark important destinations such as buildings, activity centers, and public facilities. 2) Informational signage that provides more background information on a point of interest and often uses maps. 3) Directional signage that shows the optimal route between key destinations. A successful wayfinding strategy should make use of all three types of signage. As part of this strategy, cities should develop directional signage for transit stations and informational signage for major destinations.

### Best Design Practices / Guidelines

- A** Graphic designers should develop a comprehensive signage system that is clear and concise for each of the type of signage.
- B** Directional and informative signage should use a consistent color palette, fonts, materials and graphics and be scaled for its purpose.



Source: Gruen Associates



Manufaktura Square, Łódź Poland



Source: Gruen Associates



Grand Park, Los Angeles, CA

## Street Furniture

Street furniture on sidewalks acts as a buffer between pedestrians and vehicular traffic and contributes to an active vital, walkable environment. Benches, water receptacles, and bicycle racks are recommended types of street furniture because they address needs that a pedestrian may have, such as a place to rest. Street furniture should be placed outside of the walking zone as to not create a hazard to pedestrians.

### Best Design Practices / Guidelines

- A** Except at bus shelters and when space allows, benches should face or be perpendicular to the sidewalk creating a seating node. Waste receptacles should be placed near nodes of activity and spaced frequently along the streetscape. Considerations should be given to providing waste receptacles for recycling. Bicycle racks should be located near transit stops, major destinations and bike paths. Outdoor dining on private property and in the frontage zone should be encouraged where adequate space exists.

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## Transit Shelter

Providing a shelter at all transit stops and stations allows commuters protection from sun and from inclement weather. Shelters should be established outside of the pedestrian walking zone and with sufficient room for bus wheelchair lifts to load and unload passengers. If there is not adequate space to install a dedicated shelter, at a minimum a bench and signage should be provided.

### Best Design Practices / Guidelines

- A** Transit shelters should provide protection from the elements, adequate lighting, seating, a 5'x8' passenger loading area at the front door of the bus, accessibility to the bus and the sidewalk, and information signage.
- B** Benches or seats should be provided at all transit stops and stations for commuters to rest while waiting for the bus or train. Elderly and disabled passengers often have difficulty standing for long periods. Seating should be installed within close proximity of transit stops and stations and under the provided shelter if feasible.
- C** At a minimum, all transit stops and stations should provide signage displaying the route number. Providing timetables and maps are recommended to increase convenience for commuters with transfers and those that are less familiar with the network, such as a bicyclist with a flat tire in an unfamiliar location. For major transit stations and terminals, providing passengers with real time information on arriving transit vehicles is a valuable customer service improvement.

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sbX BRT Shelter, San Bernardino, CA



Transit Stop, Temple City, CA

# 06 Other

## Demonstration or Pilot Project

Demonstration projects are temporary, low-cost public realm improvements that serve to introduce new pedestrian safety techniques to the general public. During the pre-design phase for projects, cities and partners should consider installing temporary elements such as curb extensions, plastic bollards, or striping. These improvements typically last no longer than one-two years. These temporary projects can help to demonstrate the benefits of pedestrian and bicycle improvements to the general public, as well as potential funders as the City seeks financial support through public and private grants, and sponsorship opportunities.

### Best Design Practices / Guidelines

- A** Flexible Bollards: Can be used to define pedestrian-only zones, curb extensions, cycle tracks, and other areas where cars are not permitted.
- B** Striping: Used to define areas where curbs will eventually be installed, new lanes of traffic, parking stalls, crosswalks.
- C** Planters: Temporary planters can bring shade and refuge to sidewalks, plazas, and pocket parks. Temporary painting can be used to create colorful plazas and pocket parks.
- D** Surface Painting: They can also be used to delineate important zones such as parking stalls, cycle tracks pedestrian areas, or medians.

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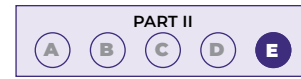


Lincoln Hub, Chicago, IL



Sunset Triangle Park, Los Angeles, CA





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