LOMITA BLDG. DIST. NO. 7.1

BENCH MARK: 50-7
Crenshaw Blvd. and Crest Rd. - N.E. corner 92.5' E'ly from ℄ of pavement & 40' N'ly from ℄ of pavement under guy cable 55.3' N.E. of power pole #1036438.
A Std. C.S. Mon. stamped "B.M. #50-7 1956 - R.E 5869
12" Conc. Post 4" above ground.
1953 Adj. Elev. 1201.398 (Per C.S.F.B. 2400-13)

NOTES:

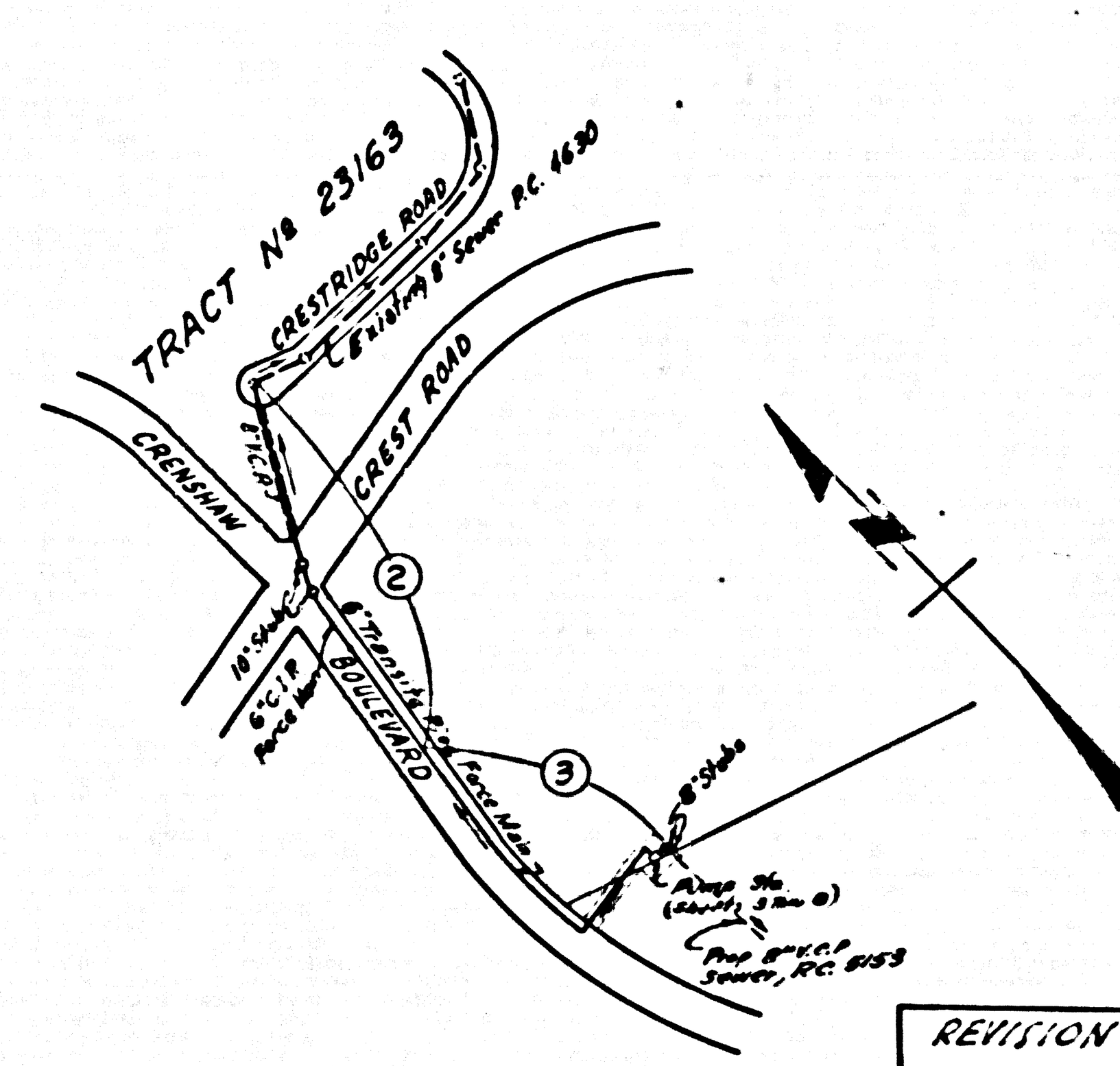
PROVIDE STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE.

NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAYOUT ANY PORTION OF THE WORK.

THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL FURNISH THE COUNTY ENGINEER WITH GRADE SHEETS AND STATION FOR ALL HOUSE LATERALS AN. Y BRANCHES AND SHALL PROVIDE STAKES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ANY CHANGE IN LOCATION SHALL BE REQUESTED IN WRITING BY THE OWNER OR HIS REPRESENTATIVE.

NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.

1. USE STANDARD MANHOLE FRAMES AND COVERS, S-A-117, EXCEPT AS NOTED.
2. USE STANDARD STRENGTH PIPE EXCEPT AS NOTED.
3. USE JOINT COMPOUND, OR "WEDGE LOCK", OR "SPEED SEAL" FOR ALL VITRIFIED CLAY PIPE. JOINTS PER SPECS. SEC. 36 & 48
4. RESURFACE ALL TRENCH WITHIN PAVED AREA TO MEET L. A. COUNTY ROAD DEPT., OR CALIF. STATE HIGHWAY DEPT. REQUIREMENTS IN ACCORDANCE WITH PERMITS.
5. ENCASE FOUR FEET OF SEWER AT POINTS OF INTERFERENCE WITH POLES, S-A-119.
6. HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT PROPERTY LINE — FEET BELOW CURB GRADE EXCEPT AS NOTED.
7. ALL STRUCTURES SHALL BE BRICK SEWER STRUCTURES, S-A-104, EXCEPT AS NOTED.
8. FOR ALLOWABLE LEAKAGE TEST USE FORMULA NO. 2 SPEC'S., SEC. 34
9. MANHOLE TOPS IN UNIMPROVED RIGHTS-OF-WAY TO BE 6" ABOVE FINISHED GRADE.
10. THE PRIVATE ENGINEER IS TO FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.
11. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION AND STORM DRAIN DIVISION BY TELEPHONE, MADISON 9-4747, EXT. 162, AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.
12. TRANSITE PIPE SHALL BE CLASS 150# PIPE WITH RING TIGHT COUPLINGS OR EQUAL.
13. C.I.P. SHALL BE CLASS 150# STD. TYTON WITH NEOPRENE GASKETS.
14. CONCRETE THRUST BLOCK ARE REQUIRED AT ANGLE POINTS WHERE NOTED ON PLAN. TWO SQUARE FEET OF BEARING SURFACE AGAINST TRENCH WALL IS NOTED AS 2□' OF THRUST BLOCK.



INDEX MAP

SCALE: 1" = 400'

NO CHARGE FOR CONNECTION
Carl & H. Pearson

REVISION
1. Page 1A - Relocated M.H. from Sta. 0151.45 to Sta. 013230
2. Page 1A - Revised sewer grade between Sta. 0132.30 and Sta. 1127.62.
Checked by: S.K. Oride 9-24-59
Office of County Engineer Reg. C.E. Nº 9406

ENGINEERING SERVICE CORPORATION 1127 W. WASHINGTON BLVD. LOS ANGELES 15, CALIF. RI. 9-7281					
REVISIONS			TRACED BY B.B.		
			DESG'D BY B.B.		
			CK'D BY		
			SUBMITTED		
SUB STRUCTURES OK'D					
W. O. NO.	DWG. NO.	DATE	SCALE	L. B.	F. B.
6777-52	Parcel 74	March 1958	As Noted		548 & L.L.

PROFILE ALIGNMENT AND GRADE OF

SANITARY SEWERS
AND PUMP STATION
TO BE CONSTRUCTED FOR

TRACT Nº 24872

P.C. 4787
PAGE 1

PRIVATE CONTRACT NO. 4787

W.S. 27

8 SHEETS; 10 PAGES

SCALE: VERT. 1"=8' HORIZ. 1"=40' MARCH, 1958

28,532

PREPARED IN THE OFFICES OF
ENGINEERING SERVICE CORPORATION

By: E. F. Kuenz
REG. C. E. NO. 3692

FOR LEGEND SEE PLAN NO. S-A-64

NOTE:

GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES. GRADE POINTS FOR TOP OF CURBS, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEYS ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN DESIGNATED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS.

ELEVATIONS ARE IN FEET ABOVE U.S.C.&G.S. SEA LEVEL DATUM OF 1929

THIS DRAWING AND THE DATA HEREON ARE HEREBY MADE A PART OF THE SPECIFICATIONS.

WORK SHALL BE CONSTRUCTED ACCORDING TO SPECIFICATIONS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.

BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN COUNTY STREETS FROM THE L. A. COUNTY ROAD DEPT., DISTRICT # 3 AND MAKE A DEPOSIT WITH THE COUNTY ENGINEER, ROOM 324 PAN AMERICAN BUILDING, 253 SO. BROADWAY SUFFICIENT TO COVER THE COST OF CONSTRUCTION INSPECTION AND RECORD PLANS.

APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.

IF WORK IS TO BE DONE IN A STATE HIGHWAY, A PERMIT MUST BE OBTAINED FROM THE STATE OF CALIFORNIA, DIVISION OF HIGHWAYS, 120 SOUTH SPRING STREET.

COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED, JOHN A. LAMBIE, COUNTY ENGINEER
BY C. H. Hughes
SANITATION ENGINEER

APPROVED, A M RAWN, CHIEF ENGINEER
CO. SAN. DIST. NO. 5
BY [signature]
OFFICE ENGINEER

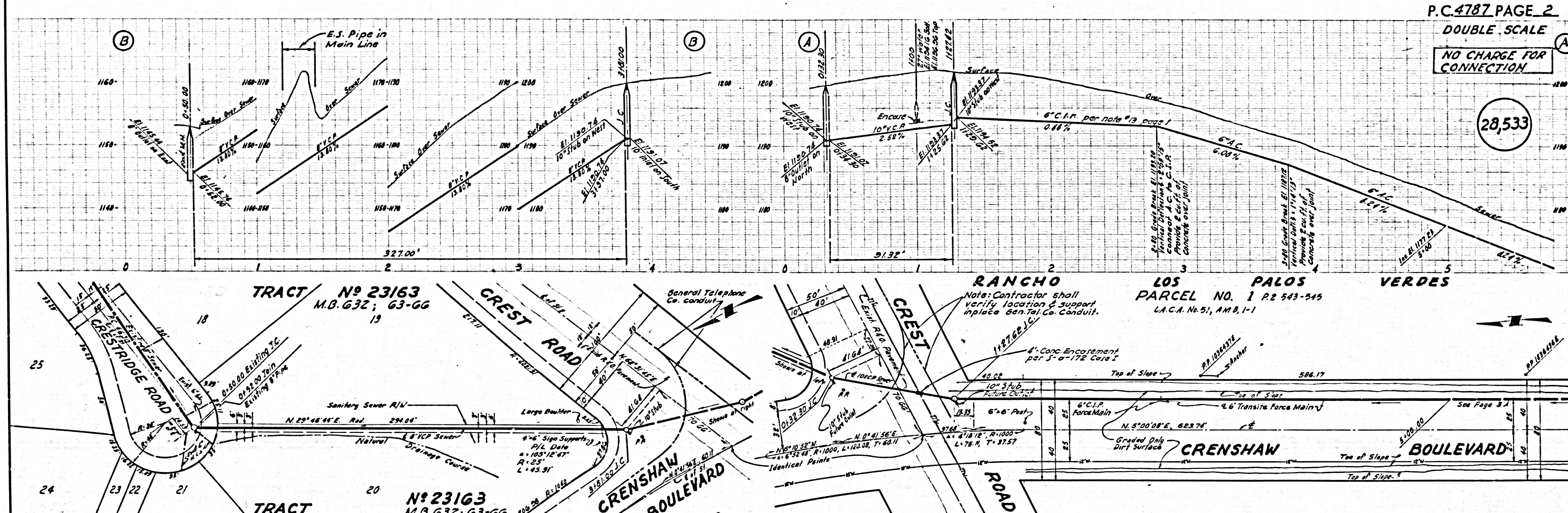
CHECKED BY S.K. Oride 9-1-59
OFFICE OF COUNTY ENGINEER, REG. C. E. NO. 9406

P.C. 4787 PAGE 2

DOUBLE SCALE

NO CHARGE FOR CONNECTION

28,533

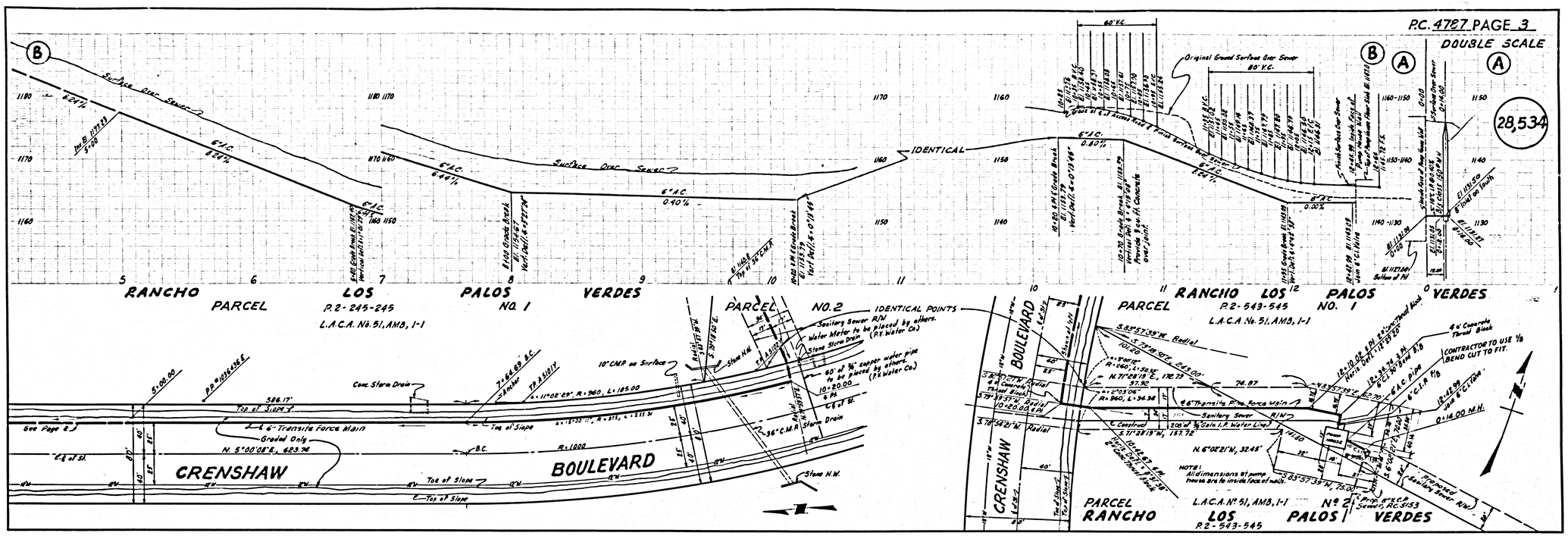


B. & C. 100 SO. CAL. BLUE PRINT SHEET NO. 1

P.C. 4727 PAGE 3

DOUBLE SCALE

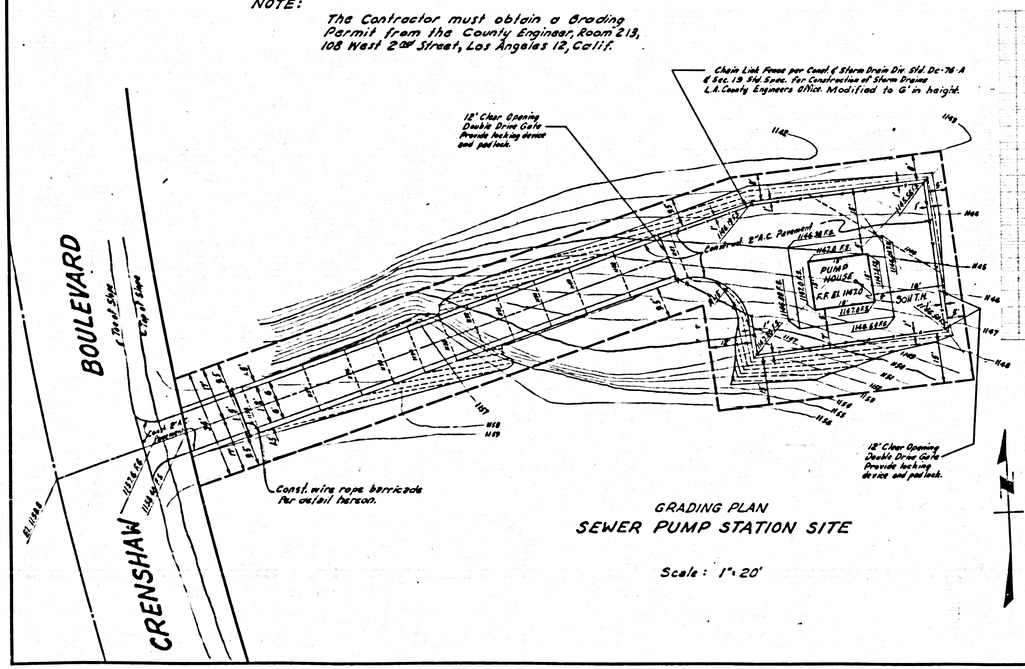
28,534



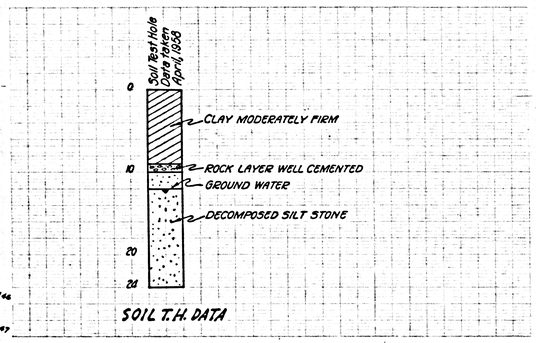
P.C. 4787 PAGE 4

28,535

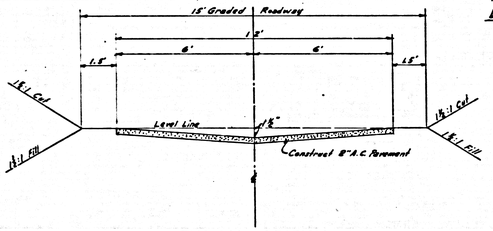
NOTE:
The Contractor must obtain a Grading Permit from the County Engineer, Room 213, 108 West 2nd Street, Los Angeles 12, Calif.



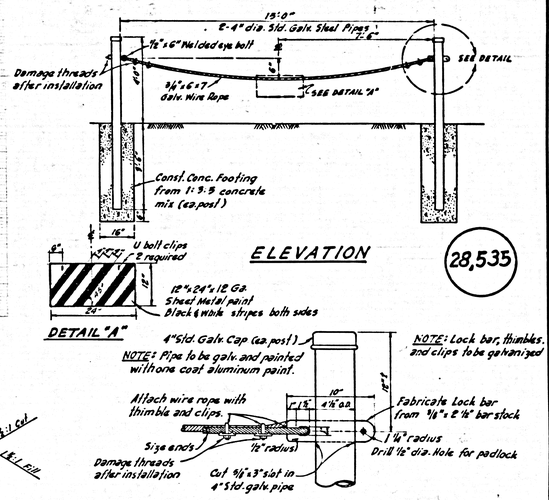
GRADING PLAN
SEWER PUMP STATION SITE
Scale: 1" = 20'



SOIL T.H. DATA



TYPICAL SECTION OF ACCESS ROAD
No Scale



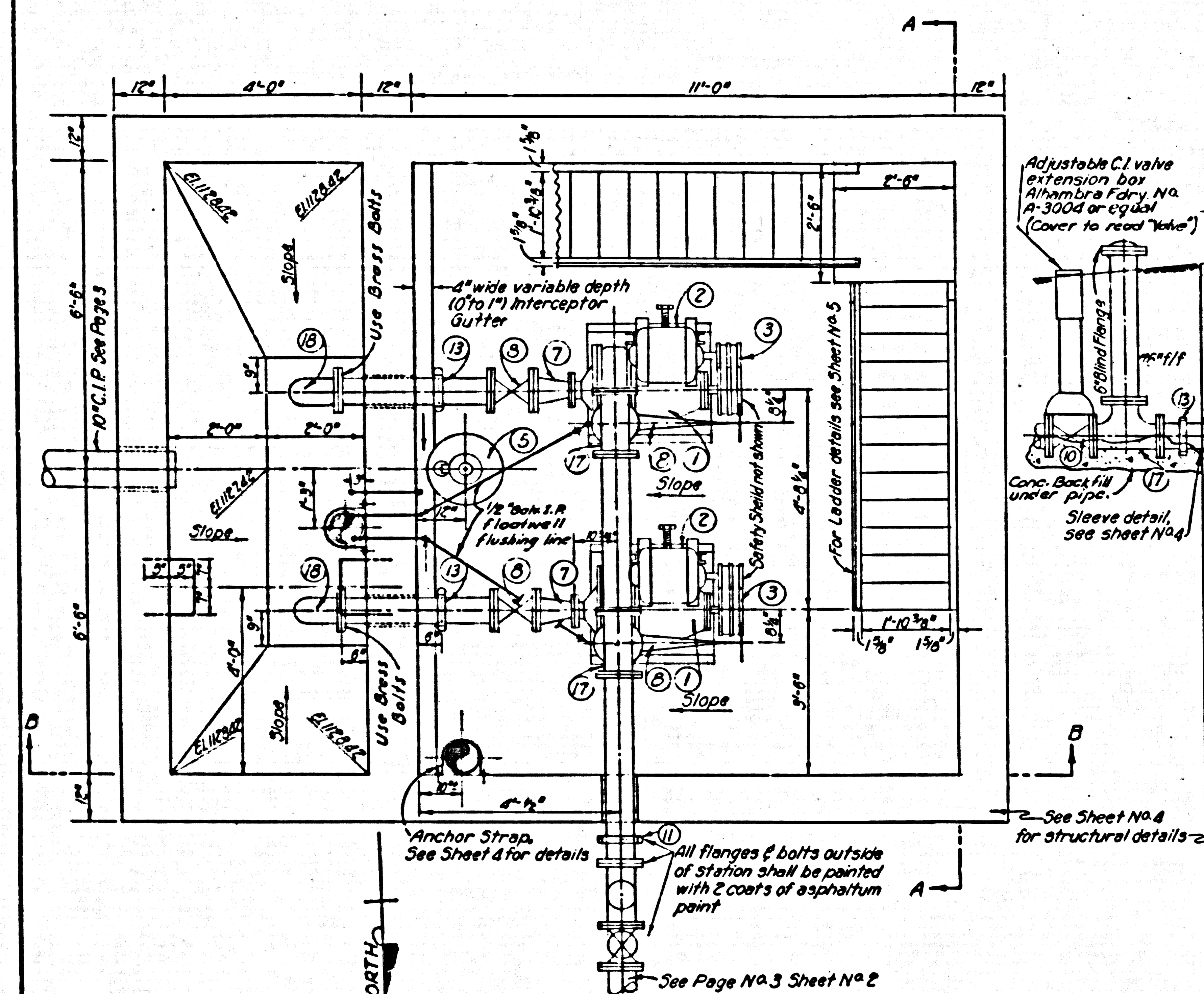
ELEVATION

DETAIL "A"

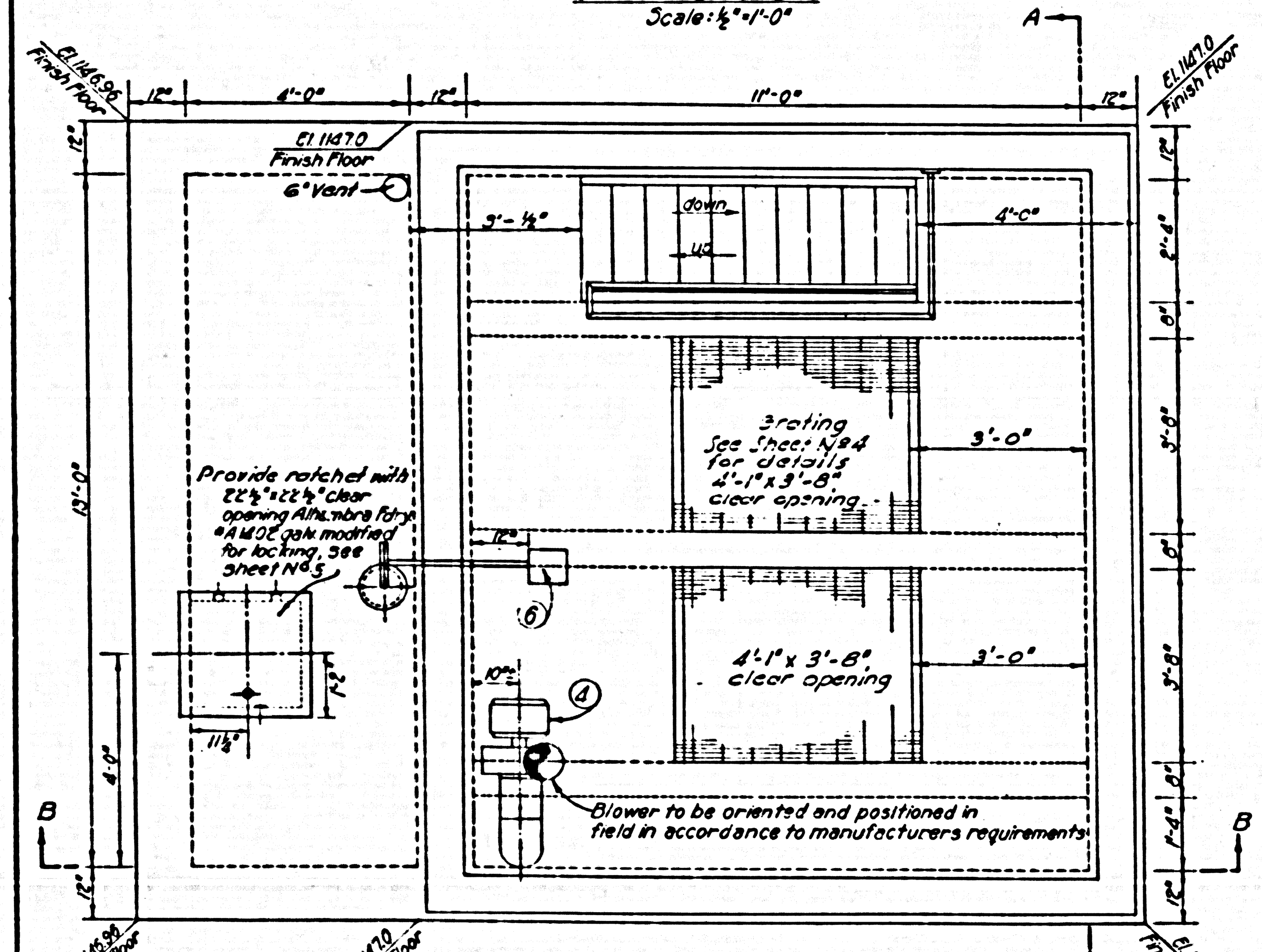
DETAIL
LATCHING ASSEMBLY

WIRE ROPE BARRICADE
NO SCALE

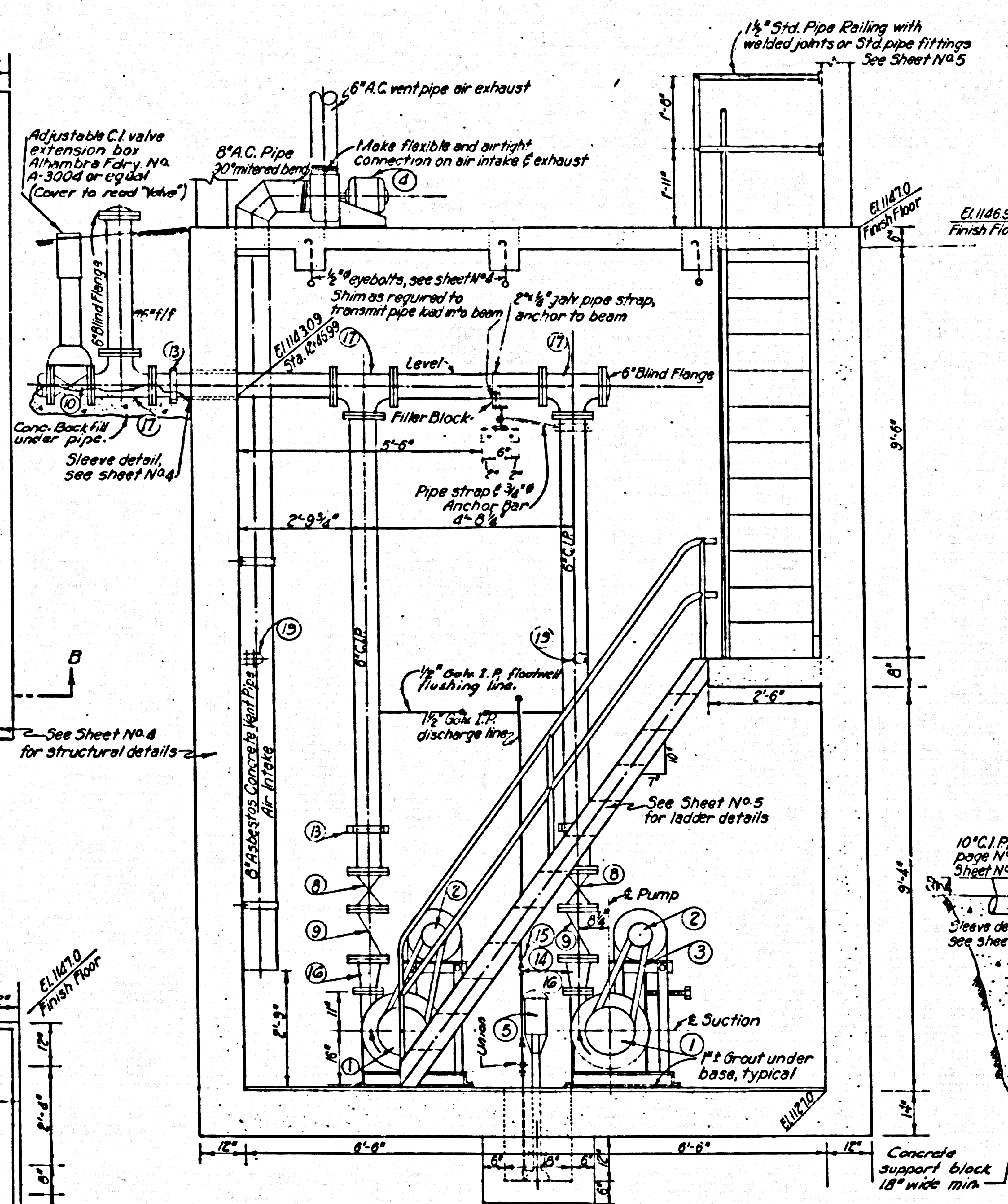
28,536



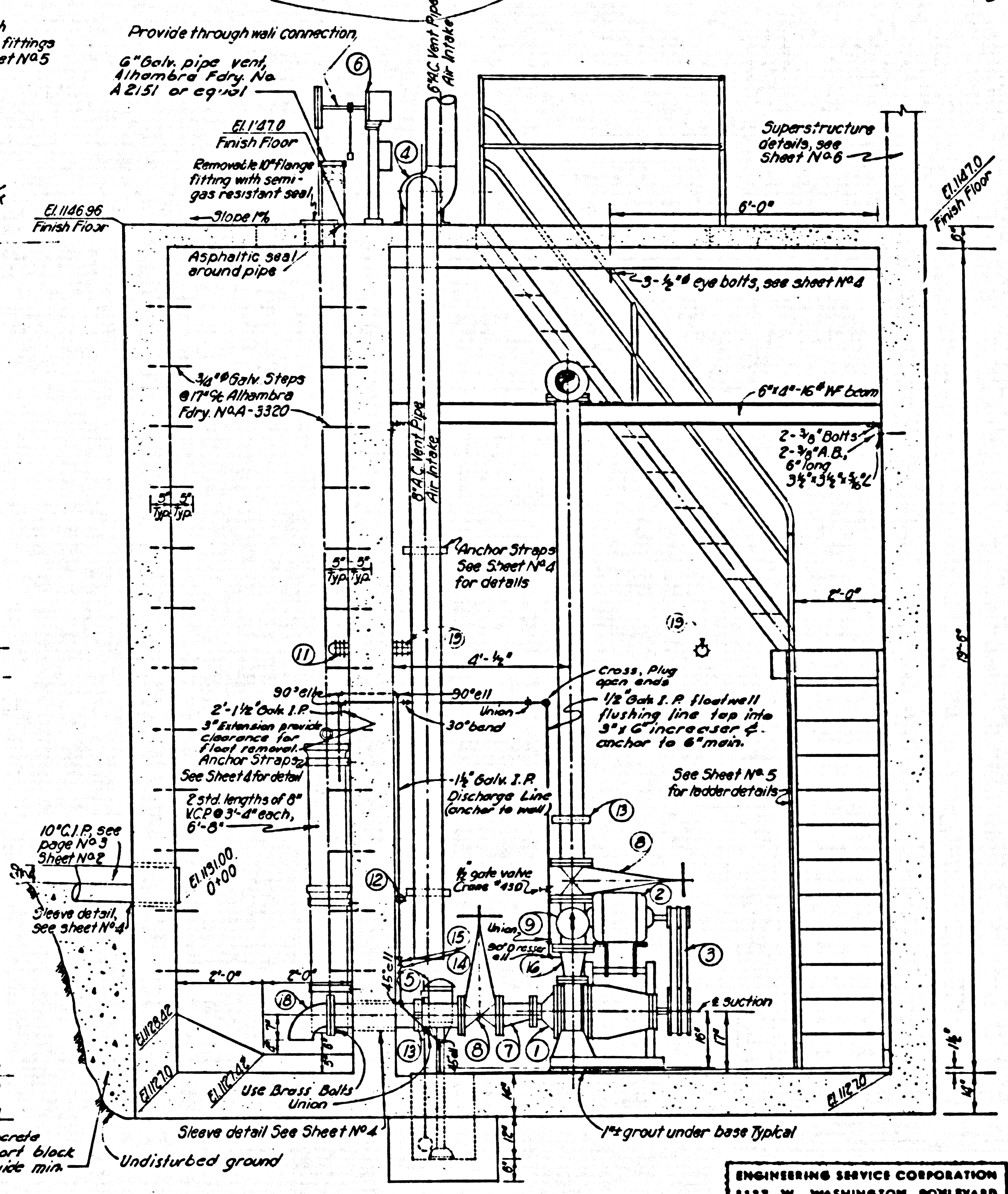
BOTTOM FLOOR PLAN
Scale: ½" = 1'-0"



TOP FLOOR PLAN
Scale: ½" = 1'-0"



SECTION A-A
Scale: ½" = 1'-0"



SECTION B-B
Scale: ½" = 1'-0"

ITEM DESCRIPTION

1. 2-Torque flow Wemco Model "C" 4" x 3" solids pumps or equal operating at 1500 R.P.M. and capable of delivering 350 g.p.m. at 81 ft. T.D.H. functioning singly or 475 g.p.m. at 89 ft. T.D.H. functioning together.
2. 2-20 H.P., 1750 R.P.M., 3φ, 60 cy., 220/440 v. drip proof squirrel cage induction motor to be mounted "piggy back"
3. 2-variable speed (1750 R.P.M. to 1500 R.P.M.) V-belt drive with safety shield.
4. 1-⅙ H.P., 1150 R.P.M. 1φ, 60 cy., 110 v. drip proof squirrel cage induction motor Buffalo Forge Co. Baby Vent Size "E" or equal capable of delivering 512 C.F.M. at ⅛" static pressure.
5. 1-¼ H.P., 1750 R.P.M., 1φ, 60 cy., 110 v drip proof squirrel cage induction motor Yeoman's "Drain Dri" Model B or equal with diving bell explosion proof switch, copper float capable of delivering 15 g.p.m. at 20 ft. T.D.H.
6. 1 Float Control "Floatrol" type HSB-3 Automatic Control Company or equal with automatic alternator, pedestal mounted direct through wall connection stainless steel tape, 6½" ceramic float and semi gas resistant seal flange.
7. 2-6" x 4" eccentric reducer
8. 4-6" double disc O.S.&Y. flanged, brass trimmed gate valve Crane No 2495 or equal.
9. 2-6" swing check valve, iron body, brass trimmed Crane No 373 or equal, with O.L. & W.
10. 1-6" double disc gate valve, non-rising stem, iron body, brass trimmed, Crane No 2485 or equal with one valve extension handle 5'-2" long Alhambra Fdry. A-3008 or equal.
11. 1-Explosion proof light fixture (150 Watt)
12. Double convience outlet (vapor proof)
13. 5-6" Dresser couplings style No 53 with neoprene gaskets
14. 1-1½" swing check valve, brass disc Crane No 34 or equal
15. 1-1½" Clamp gate valve, wedge disc, iron body-brass trimmed Crane No 490 or equal.
16. 2-3" x 6" Increaser
17. 3-6" x 6" x 6" flanged double sweep tee
18. 2-6" ¼ 90° ell cut off one flanged end
19. 3-150 vapor proof light fixture condulet with guard includes one light in super structure see sheet No 6

GENERAL NOTES

1. All cast iron pipe & fittings shall be Class 125# std. unless otherwise noted.
2. Contractor shall contact the Palos Verdes Water Co 8 Malaga Cove Plaza, Palos Verdes, Calif., for water service.
3. Contractor shall contact the So. Calif. Edison Co. 5431 Torrance Blvd., Redondo Beach, Calif. for power supply service.
4. All metal parts shall be painted with one shop coat and two coats of aluminum paint, see spec.'s
5. After pump station equipment has been erected by Contractor, the equipment shall be placed in final adjustment and operation by a qualified Engineer furnished by the Manufacturer.
6. The pump station, in its entirety, shall be in successful operation prior to being accepted by the County Engineer.

ENGINEERING SERVICE CORPORATION
1127 W. WASHINGTON BOULEVARD
LOS ANGELES 15, CALIF.

Designed By J.R.P. | Approved By
Chk'd By
Date APRIL, 1958
W.O. 6777-52 | F.B. | L.B.

DATE	REVISION	APPROVED

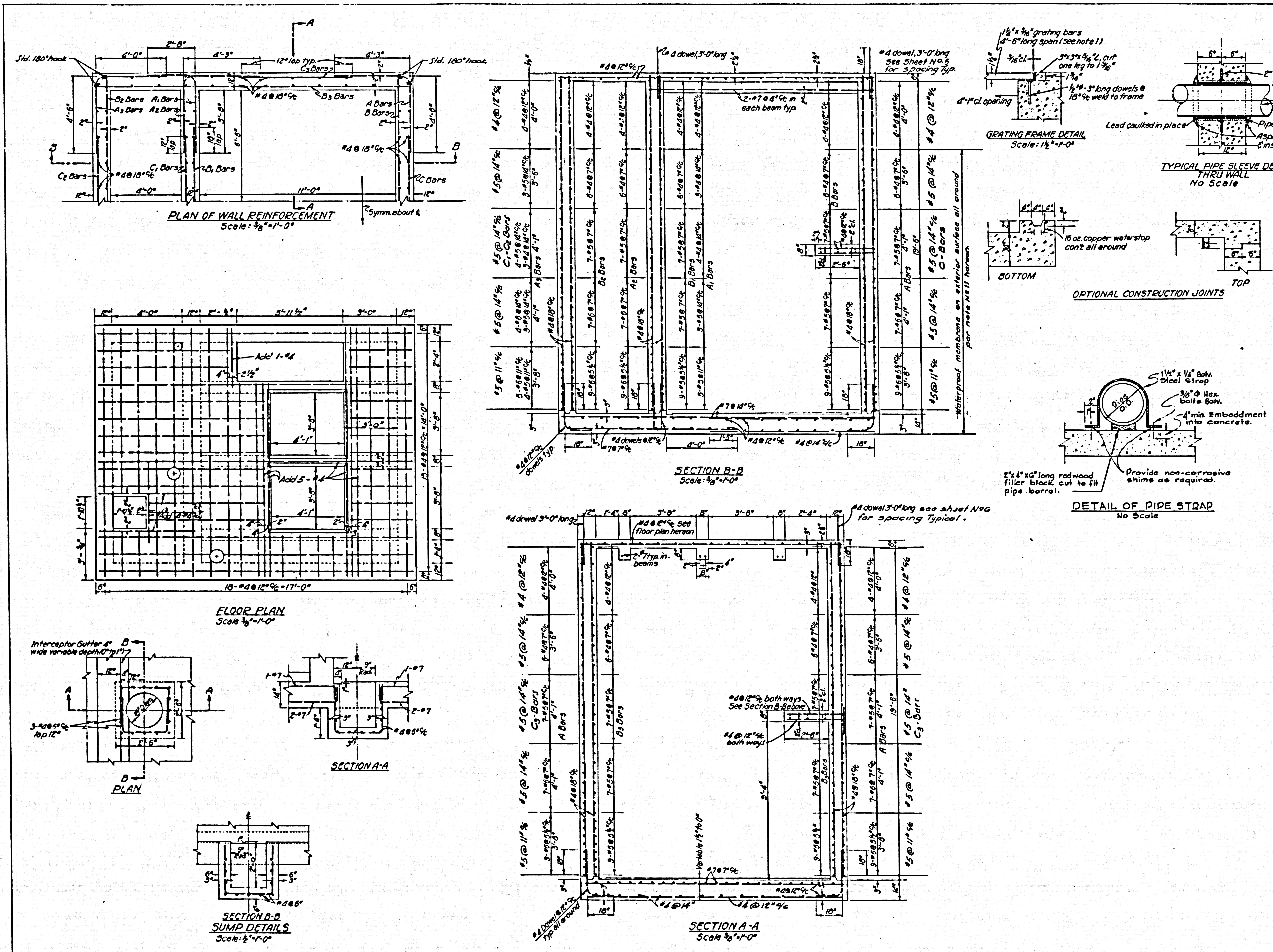
PRIVATE CONTRACT No 4787
SEWAGE LIFT STATION
MECHANICAL DETAILS

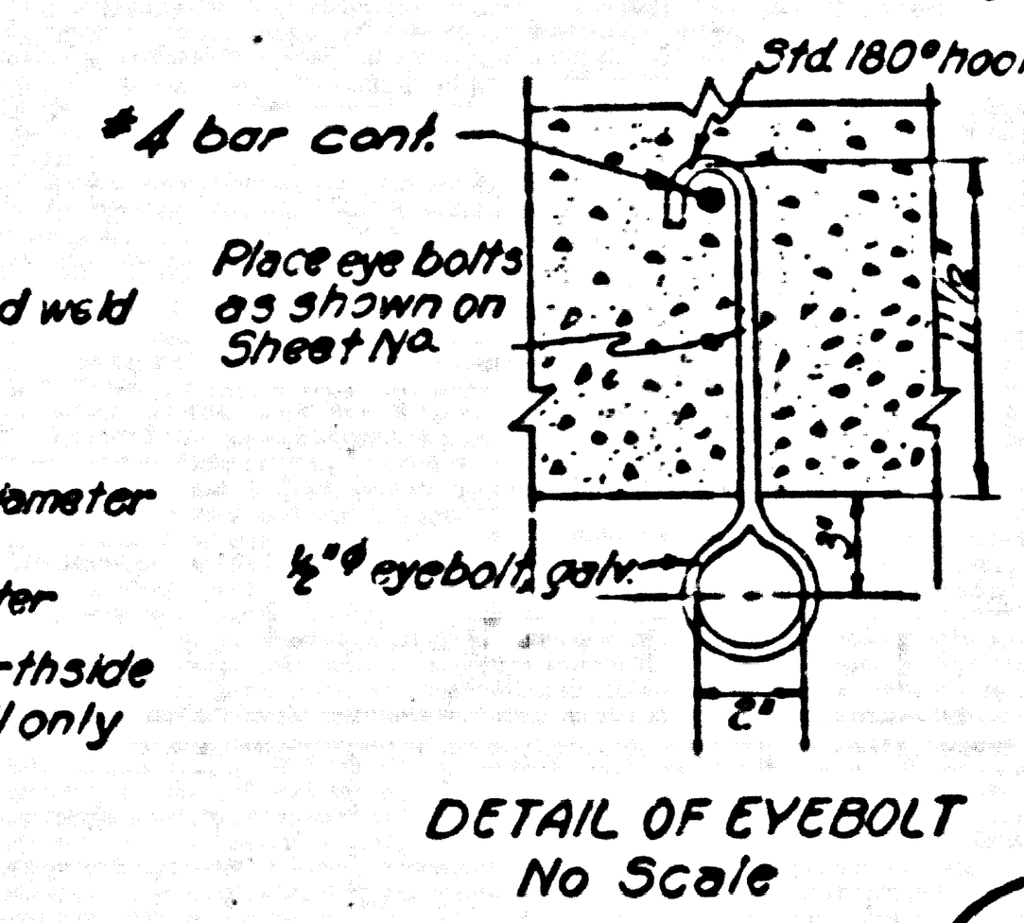
COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED: JOHN A. LAMBIE, COUNTY ENGINEER
APPROVED: A.M. RAWN, CHIEF ENGINEER, CO. SAN. DIST. No 5

BY: SANITATION ENGINEER
BY: OFFICE ENGINEER
CHECKED BY: 7-1-59
OFFICE OF COUNTY ENGINEER REG. C.E. No 9406

DATE: APRIL, 1958	SCALE: As Shown	SHEET No 3 OF 8 SHEETS





(28,537)

GENERAL NOTES

1. GRATING SHALL BE IRVING GRATING PRODUCTS "GRIPWELD" TYPE AA OR KLEMP WELDED GRATING TYPE KWA OR EQUAL WITH 1 1/4" x 3/16" BARS 4'-6"x4'-1" GALV. FINISHED SECTIONS
2. CONCRETE SHALL HAVE AN ULTIMATE COMPRESSIVE UNIT STRESS OF 3000 P.S.I. IN 28 DAYS.
3. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS PER A.S.T.M. A-15-50T WITH DEFORMATIONS PER A.S.T.M. A 305-50T.
4. ALL BARS, BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STD. PRACTICE."
5. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTER OF BARS AND SPACING OF BARS ARE CENTER TO CENTER OF BARS UNLESS OTHERWISE NOTED.
6. BAR SPLICES, OTHER THAN THOSE SHOWN ON THE PLANS, SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER. THE MIN. SPLICE FOR STRESSED STEEL CARRYING MOMENT OR DIRECT STRESS SHALL BE 30 DIAMETERS AND THAT FOR TIE BARS SHALL BE 20 DIAMETERS.
7. EXPOSED EDGES OF CONCRETE SHALL BE BEVELED OR ROUNDED.
8. END STEEL 2" CLEAR OF OPENINGS AND EDGES.
9. INTERIOR SURFACES OF WET WELL INCLUDING STEEL PARTS THEREIN SHALL RECEIVE ONE COAT OF COAL TAR PRODUCT "INERTOL" OR EQUAL APPLIED IN ACCORDANCE TO MANUFACTURERS SPECIFICATIONS.
10. SURFACES OF FLOOR SLAB & BOTTOM SLAB SHALL BE NON-SKID BROOM FINISH OR EQUAL.
11. WATER PROOFING MEMBRANE SHALL CONSIST OF ONE COTTON FABRIC AND 2 COATS OF ASPHALT SEE SPEC'S.
12. PRIOR TO FABRICATION OF REINFORCING STEEL; THE CONTRACTOR SHALL SUBMIT BAR SCHEDULES FOR APPROVAL TO ENGINEER.

ENGINEERING SERVICE CORPORATION
1127 W. WASHINGTON BOULEVARD
LOS ANGELES 15, CALIF.

Designed by J.R.P.	Approved by
Ch'k'd by J.R.P.	
Date APRIL 25, 1958	
W.O. 6777-58	

DATE	REVISION	APPROVED

PRIVATE CONTRACT NO. 4787

SEWAGE LIFT STATION

STRUCTURAL DETAILS

COUNTY OF LOS ANGELES, CALIFORNIA

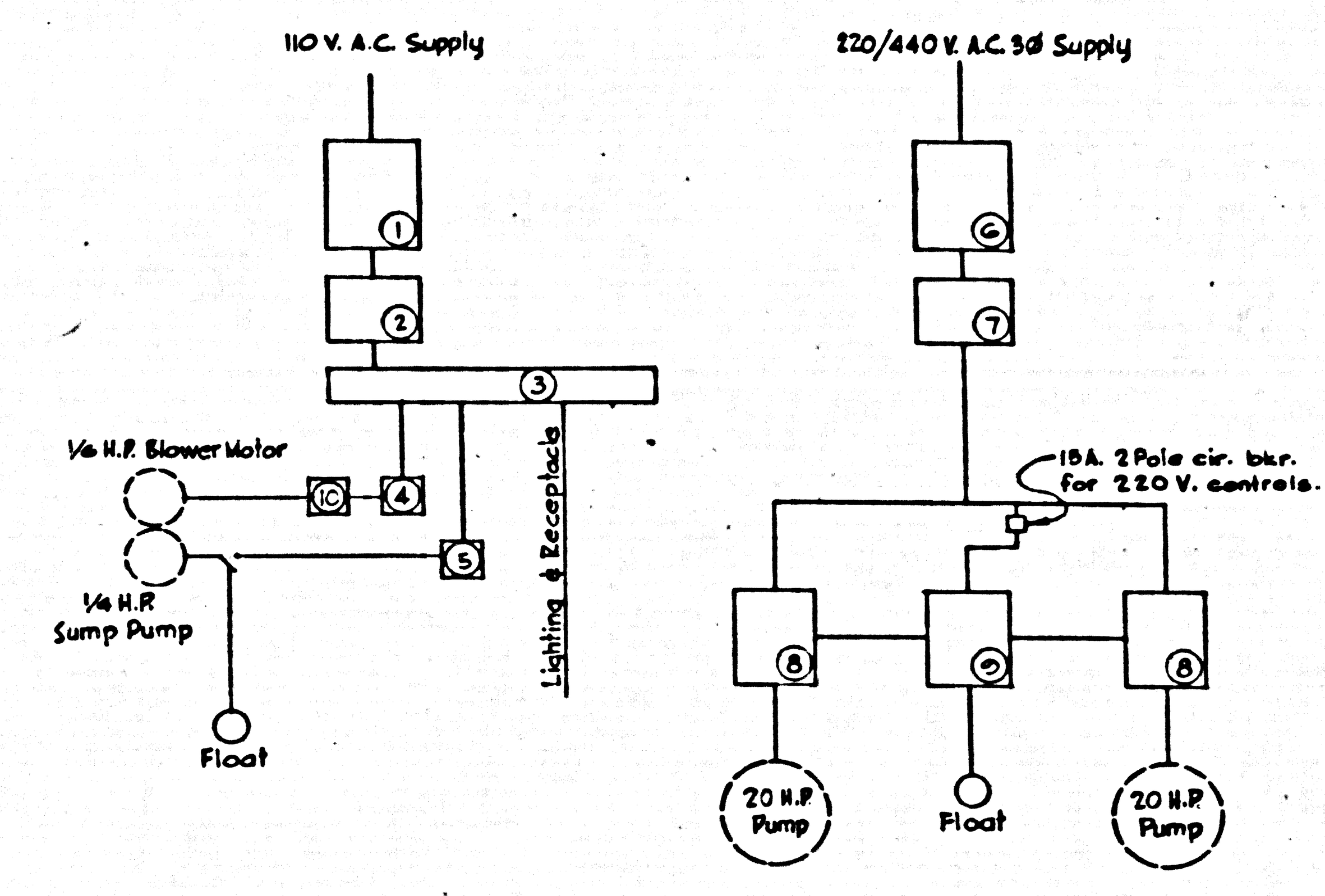
APPROVED: JOHN A LAMBIE
COUNTY ENGINEER

APPROVED: AM RAWN
CHIEF ENGINEER
CO. SAN DIST. No 5

BY: SANITATION ENGINEER
BY: OFFICE ENGINEER

CHECKED BY: 7-1-59
OFFICE OF COUNTY ENGINEER REG. C.E. No 9406

DATE: APRIL, 1958 SCALE: As Shown SHEET No 4 OF 8 SHEETS



SINGLE LINE ELECTRIC DIAGRAM

① 1-100A. safety socket box. Sq."D" #1096 RO or approved equal.

② 1-100A. 2 pole s/n circuit-breaker. Sq."D" #75016 or approved equal.

③ 1- circuit breaker load center. Sq."D" #QO6A w/4-15A. 1 pole c/b #QO115 or approved equal.

④ 1-F.H.P. man. starter. 1/6 H.P., 110V., 1Ø. Sq."D" #2510-AG1 or approved equal.

⑤ 1-F.H.P. man. starter. 1/4 H.P., 110V., 1Ø. Sq."D" #2510-AG1 or approved equal.

⑥ 1-300A. C.T. cabinet. Sq."D" #1136 RO w/ #1180L C.T. mounting base, or approved equal.

⑦ 1-200A. 3 pole, 600V. main circuit-breaker. Sq."D" #78726 or approved equal.

⑧ 2-comb. cir. bkr. & mag. starter. 20 H.P., 220V., 3Ø, 60 cyc. Sq."D" class 8539, EAG-1. Form C, H.O.A. selector sw. or approved equal.

⑨ 1-float control - three circuits; automatic pump alternation, high level two-pump operation, low level cut-out operation. Automatic Control Co. #H.S.B-3, 110/220V. AC., pedestal mounted "Floatrol", or approved equal.

⑩ 1-Electrical Timer - Auto Electrical Manuf. Co. Model #620, or approved equal. Continuous 24 hour operation set for "15 min. off" and "5 min. on" cycling.

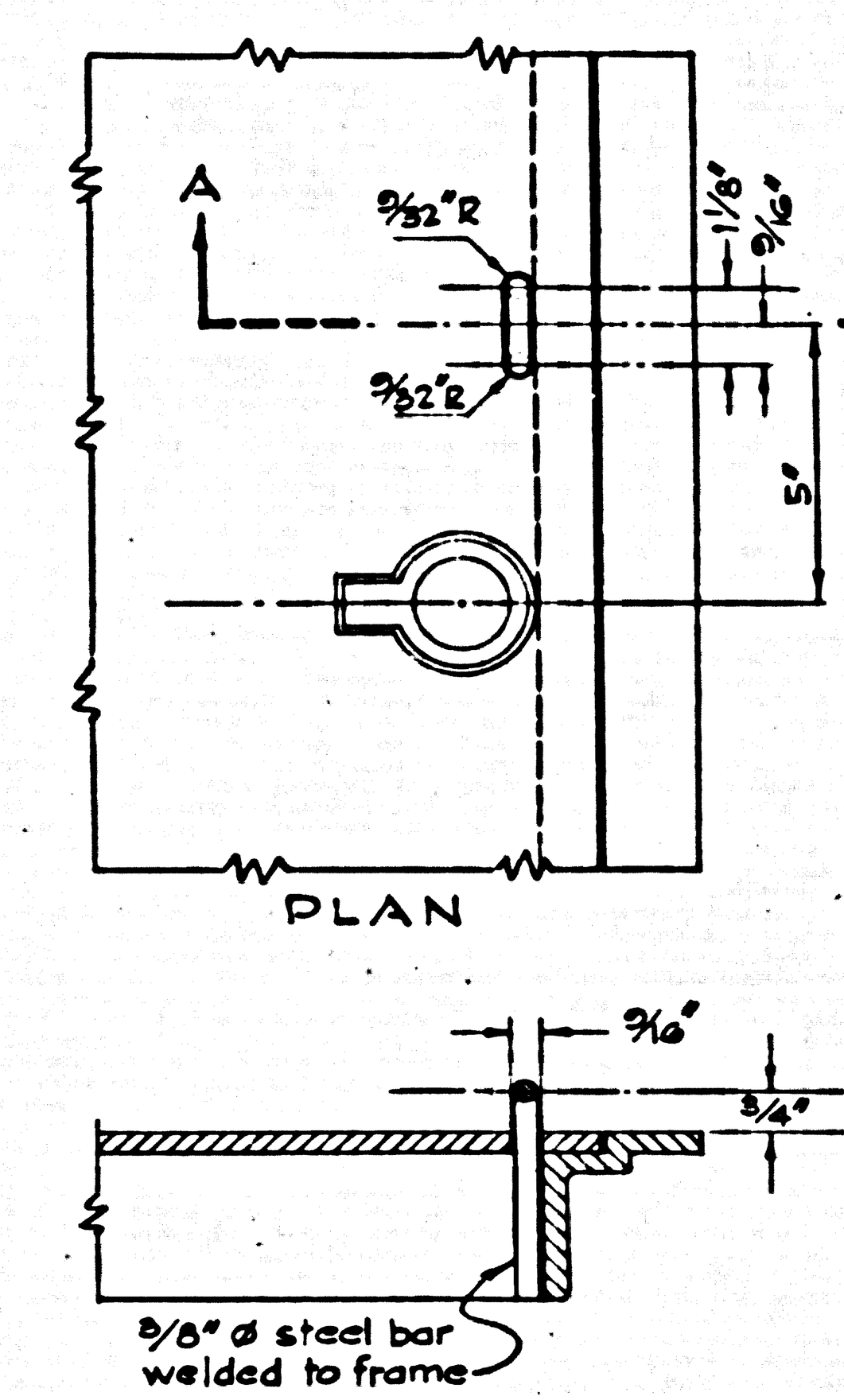
ELECTRICAL GENERAL NOTES

All conduit and wire materials and sizing as well as all other applicable electrical materials and work shall meet requirements of the National Electrical Code for Class I, Group D, Hazardous Locations, and Los Angeles County Electrical Code.

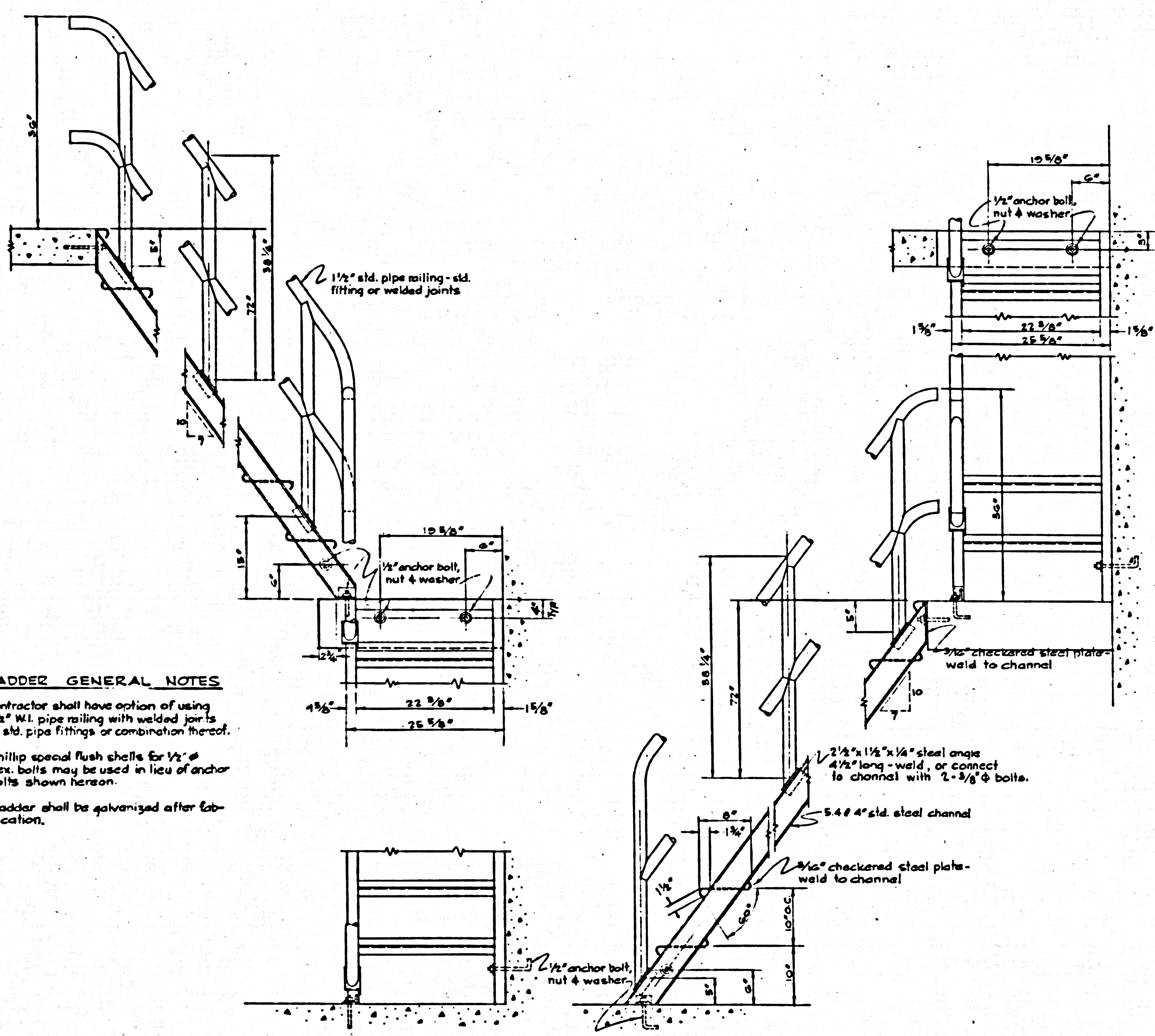
All rigid conduits shall be imbedded in walls and floors of reinforced concrete.

The Contractor shall submit prints of shop drawings showing a proper and adequate wiring diagram with all necessary controls and electrical equipment. The Contractor shall perform no electrical work until he secures approval of such shop drawings.

28,538



DETAIL OF LOCKING PROVISION FOR WETWELL M.H. FRAME AND COVER (modified Alhambra #A1402)
no scale



LADDER GENERAL NOTES

1. Contractor shall have option of using 1½" W.I. pipe railing with welded joints or std. pipe fittings or combination thereof.
2. Phillip special flush shells for ½" Ø hex. bolts may be used in lieu of anchor bolts shown hereon.
3. Ladder shall be galvanized after fabrication.

LADDER DETAILS
SCALE 1" = 1'-0"

ENGINEERING SERVICE CORPORATION
1127 W. WASHINGTON BOULEVARD
LOS ANGELES 15, CALIF.

Designed by A.M.	Approved by:
Ch'k'd by JRP	
Date APRIL 1958	Reg. C. E. No.
W.O. 6777-52 F.B.	L.B.

DATE	REVISION	APPROVED

PRIVATE CONTRACT No. 4787
SEWAGE LIFT STATION
ELECTRICAL AND MISCELLANEOUS DETAILS

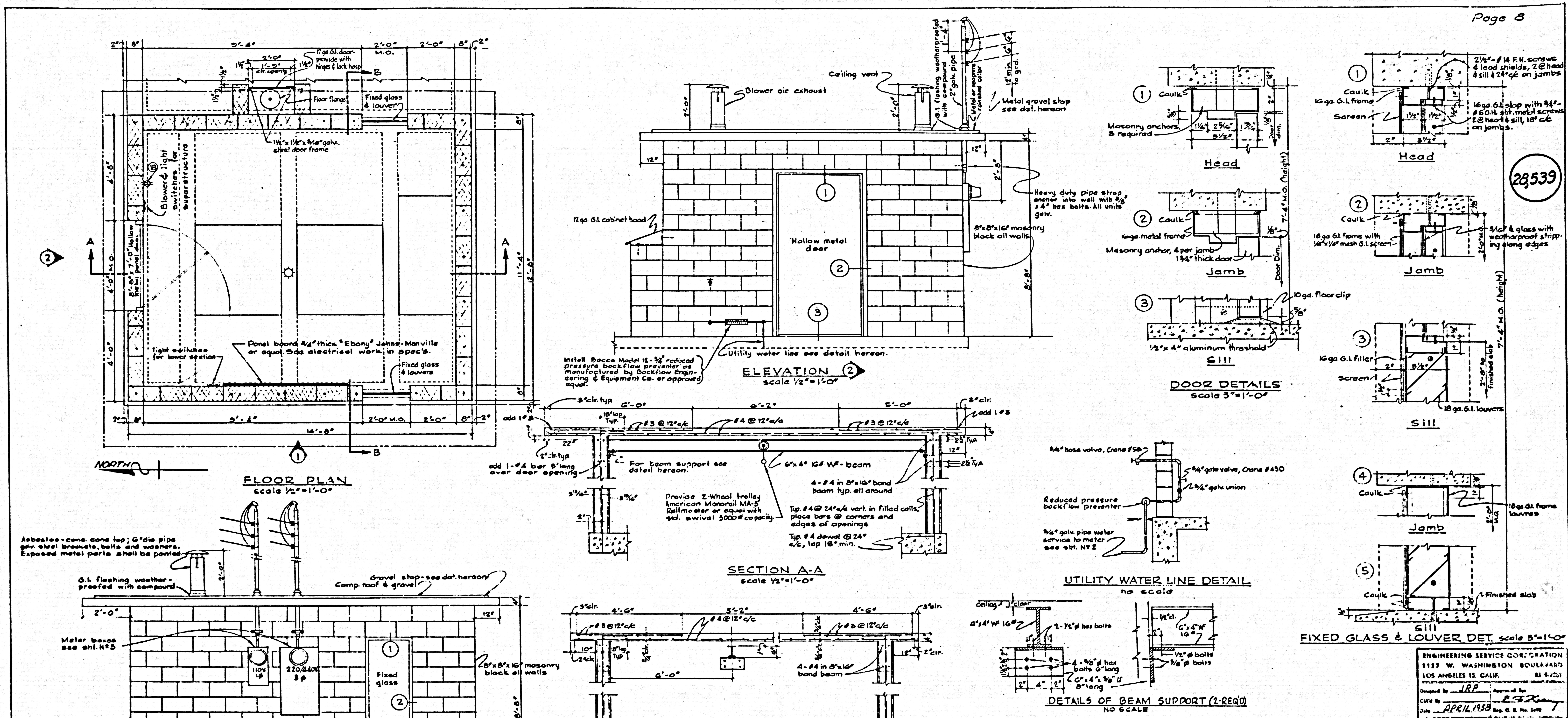
COUNTY OF LOS ANGELES, CALIFORNIA

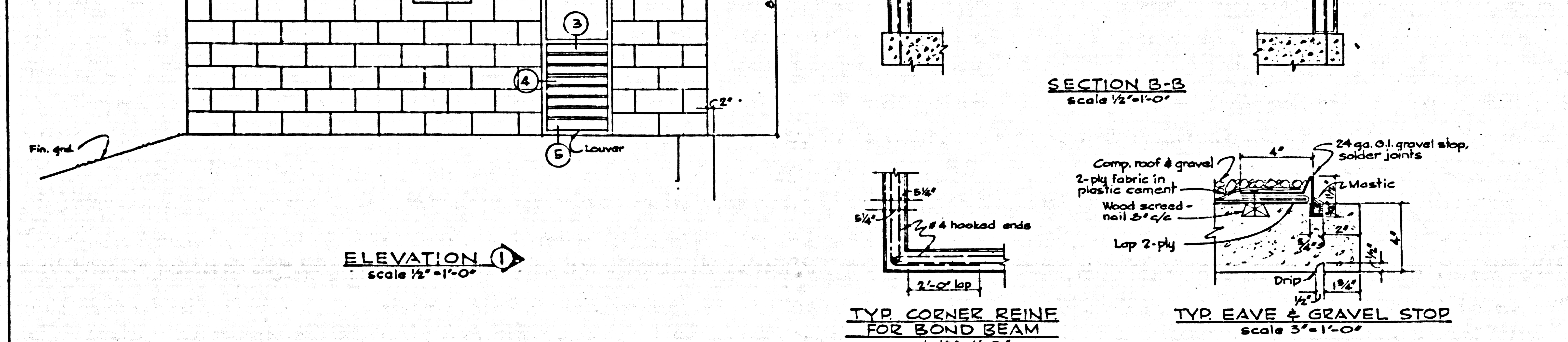
APPROVED: JOHN A. LAMBIE, COUNTY ENGINEER
BY: SANITATION ENGINEER

APPROVED A.M. RAWN, CHIEF ENGINEER, CO. SAN. DIST. No 5
BY: OFFICE ENGINEER

CHECKED BY: 7-1-59
OFFICE OF COUNTY ENGINEER REG.C.E. No. 9406

DATE: APRIL, 1958	SCALE: AS SHOWN	SHEET No 5 OF 8 SHEETS





GENERAL NOTES

1. Hollow masonry units shall be grade A units and construction therewith shall conform to Sec. 2415 of L.A. Co. Unif. Bldg. code.
2. Concrete & steel in roof slab, filled cells & bond beam shall comply with applicable notes on Sheet 4.
3. Brick layout based on 3/8" mortar joint. All horizontal joints shall be rodded "V" joint. All vertical joints shall be flush.
4. Composition roofing shall be as stated in Sec. 3202 of L.A. Co. Unif. Bldg. Code.

DATE	REVISION	APPROVED
7-22-59	Added Reduced pressure backflow preventer & Detail of WF beam support	

PRIVATE CONTRACT NO. 4787

SEWAGE LIFT STATION

SUPERSTRUCTURE DETAILS

COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED: JOHN A. LAMBIE
COUNTY ENGINEER

APPROVED: C.R. COMPTON
CHIEF ENGINEER
CO. SAN. DIST. No. 5

BY: [signature] SANITATION ENGINEER

BY: [signature] OFFICE ENGINEER

CHECKED BY: [signature] 7-1-59

OFFICE OF COUNTY ENGINEER REG. C.E. No. 9406

DATE: APRIL, 1958 | SCALE: As Shown | SHEET No. 6 OF 8 SHEETS

28,539

LOMITA BUILDING DISTRICT NO. 7.1
PRIVATE CONTRACT NO. 4787

SPECIAL PROVISIONS

1. WORK TO BE DONE

The Contractor shall furnish all labor, materials, equipment and services and shall do whatever else is required to construct the force main and pumping plant and gravity sewer line in accordance with the details shown on P. C. No. 4787 (8 sheets), the plans referred to thereon, and the requirements of these specifications and of the County Engineer's Standard Specifications for the Construction of Sanitary Sewers approved May 15, 1959 and all subsequent amendments thereto.

2. SHOP DRAWINGS

The Contractor shall prepare shop drawings and submit them to the County Engineer for approval wherever said drawings are required by the plans or other sections of these specifications or wherever the Contractor proposes to construct the work different from the details shown on the plans and/or the requirements of the specifications.

A shop drawing shall first be submitted in print form, in triplicate, not less than 30 days prior to the date on which its approval is required. After being checked, one print of the drawing will be returned to the Contractor. The Contractor shall then make any and all corrections thereon to the original drawing and shall furnish and deliver to the County Engineer a transparent positive print of the corrected drawing.

The transparent positive print will be checked and if found correct will be approved and retained by the County Engineer as a permanent record. Prints from approved transparent positives will be furnished to the Contractor.

Approval of any drawing by the County Engineer shall be subject to the conditions that the dimensions thereon which affect other portions of the work will be checked and verified by the Contractor in the field.

If a shop drawing includes a change of any requirement of the contract plans or specifications, the Contractor shall make a clearly legible note of the change on the drawing. If the County Engineer approves, a change order will be issued and the approved shop drawing, together with the change order, shall supersede the requirements of the contract plans and/or specifications, where applicable.

3. TYPE, QUALITY AND MAKE OF MATERIALS AND EQUIPMENT

Each type of material furnished hereunder shall be uniformly of the same type and brand throughout the work. All units of equipment, performing like and equal functions, shall be of the same type, brand and manufacture.

Wherever any material or piece of equipment is referred to herein, or on the plans by manufacturer's name, symbol or catalog number, it shall be understood to indicate its type, style and quality, and not necessarily its manufacturer. Whenever a brand name is specified, it shall be understood to mean that brand or equal.

The Contractor may request substitution of material or equipment other than those names, in which case, he shall furnish all information required by the County Engineer to determine the acceptability of the proposed substitutions.

The Contractor shall, at no additional expense to the Subdivider or the County Engineer, make all revisions and/or alterations necessary to install approved substitute materials and/or equipment.

4. GUARANTEE

The Contractor shall fully guarantee that all of the equipment furnished and installed by him will comply with the requirements of these specifications for a period of one year from the date of acceptance of the installation; he shall further guarantee to remove any equipment which fails to so comply or is found to be deficient in workmanship or materials and shall replace and install said equipment to the satisfaction of the County Engineer, all without cost to the County Engineer or Subdivider.

5. PRESERVATION OF PROPERTY

The Contractor's attention is directed to Section 15 of County Engineer's Standard Specifications for Construction of Sanitary Sewers. The requirements of said Section shall apply to all improvements and facilities located in easements or rights-of-way.

6. CONSTRUCTION PUMP STATION

A. All concrete and reinforcing steel shall be of the type shown on the drawings and shall comply with the requirements of applicable sections of the County Engineer's Standard Specifications for Construction of Sanitary Sewers.

B. All exterior surfaces, as shown on plans, shall be waterproofed in conformance with the requirements of Section 29 of Standard Specifications of the State of California, Department of Public Works, Division of Highways, August, 1954.

C. Manhole frame and covers, ladders, rungs, structural steel, cast iron castings, and steel castings, as indicated in drawing, shall comply with applicable sections of the Standard Specifications for Construction of Sanitary Sewers.

D. Excavation and backfill around structure shall be per Sections 43, 52 and 53 of Standard Specifications for Construction of Sanitary Sewers.

E. Grade A hollow masonry units construction and composition roofing and materials shall be in accordance with Los Angeles County Uniform Building Code.

7. FORCE MAIN

A. Asbestos - Cement pressure pipe shall be Class 150 pound with ring-tite couplings per requirements of A. W. W. A. Specification C 400-53 T, and shall also comply with applicable section of Transite Sewer Pipe Specifications as published by Johns-Manville Specification BMT-925 to BMT 931 inclusive.

B. All Ring-Tite Cast Iron Pipe Fittings shall be Class 150 pound bell to bell, or as required for connections as shown on drawing and shall comply with A. W. W. A. Specifications C 110-52.

C. Concrete thrust blocks shall be used on vertical and horizontal angle deflection points as recommended by manufacture of transite pipe. The Contractor may use long circular curves and vertical curves in lieu of sharp angle points.

D. Excavation, backfill and bedding for Asbestos-Cement pipe shall be in conformance to Sections 43, 52 and 53 of Standard Specifications for Construction of Sanitary Sewers.

E. Cast iron bell and spigot pipe shall be Class 150 pound with lead caulked joints. Installation of pipe, joint materials, backfill, excavation and method of construction shall conform to applicable section of Standard Specifications for the Construction of Sanitary Sewers.

8. FINISH PAINTING

A. Schedule of Finish Painting

The exposed surfaces of construction and equipment shall be painted as follows:

1. Wainscots on Interior of Drywell

Two wainscots shall be painted on the interior walls of the pumping station, one extending 4'-6" above the bottom floor and one extending 4'-6" above the grating floor. The wainscots shall receive one coat of Rust-Oluem 713 Surfa-Sele cement sealer and two coats of Rust-Oluem 837 Sun-Glo.

2. Ceiling and Walls Other Than Wainscots on Interior of Drywell

The ceiling and interior walls, other than wainscots, of the pumping

plant, shall receive one prime coat of 713 Surfa-Sele cement sealer and two coats of high reflective 500 Chrome Ready Mixed Aluminum - SO as manufactured by Rust-Oleum Corporation

3. Motors

All electric motors and electric control boxes shall receive one coat of Rust-Oleum Corporation 1282 Quick Drying Green - SO and appropriate prime coat as recommended by manufacturer.

4. Ferrous Metal Surfaces

The following items shall receive one prime coat as recommended by paint manufacturer and two coats of Rust-Oleum Corporation 500 Chrome Ready Mixed Aluminum - SO.

(a) Railings, ladders, structural members, angles, brackets and fastenings.

(b) Pipe, valves and pipe fittings.

(c) Conduit and fittings.

(d) Hoist anchors.

(e) Blower, sump pump, sewage pump, and the supports for same.

5. All interior surfaces of wet-well, including all metal parts therein, shall receive two coats of Intertol Black or an approved equal.

6. Exterior painting will be required for the masonry super-structure, doors, louvers, framing, roof and gravel stops. The Contractor shall use the following color shades of Rust-Oleum Corporation or equal exterior paints of the Long Oil Types. One prime coat and one finish coat are required.

(a) Roof shall be semi-gloss white finish.

(b) Masonry shall be semi-gloss rose finish.

(c) Doors and louvers shall be semi-gloss light green finish.

(d) All exposed metals not mentioned in (c) above, shall be semi-gloss aluminum finish.

B. Preparation of Surfaces

Surfaces to be painted shall be free of dirt, grease, oil, mortar, rust, efflorescence or other foreign substance before painting is started.

Shop coated metals shall have all field connections, welds, soldered joints, burned and abraded portions spot-coated with the proper primer.

Galvanized surfaces shall be chemically treated to insure bonding of paint.

C. Application

Paint shall not be applied in rainy, foggy, windy or excessively cold weather.

Paint shall be hand brushed in smooth, even, uniform coats free of dirt, runs, brush marks and sags. Top edge of wainscot and edges of paint adjoining unpainted surfaces shall be clean, sharp and straight without overlapping.

Care shall be taken not to injure or spatter paint on adjacent work. Should any paint be spattered or applied where not specified, the defaced surface shall be cleaned and its original finish restored.

9. BLOWER

The blower, required as shown on the plans, shall be a Buffalo Forge Company's size E, Baby Vent Set with cast iron housing; shall have clockwise rotation with up-blast discharge; and shall be capable of exhausting 512 CFM at 1/8-inch static pressure when operating at 1150 RPM.

The blower shall be direct connected to a motor that will drive the blower continuously under the condition specified herein without exceeding the rated horsepower. The motor shall conform to the applicable requirements set forth under the "Electrical Work" section of these specifications.

10. SUMP PUMP

The sump pump, required as shown on the plans, shall be a Model "B", size D-2 Sump Pump, as manufactured by the Yeomans Brothers Company, and shall be capable of delivering 15 gallons per minute at a total head of 20 feet. Said pump shall be equipped with galvanized steel diving bell.

The sump pump motor shall conform to the requirements of the "Electrical Work" section of these specifications.

The sump pump shall be equipped with a copper float and a float switch. The motor manual starter for the sump pump shall be furnished and installed as a part of the "Electrical Work" section of these specifications.

11. SEWAGE PUMPS

A. General

The Contractor shall furnish and install two horizontal Model 4C33 Wemco pumps as manufactured by Western Machinery Company. Each pump shall be belt driven with motors mounted horizontally above pump housing. Pumps shall be capable of delivering 350 GPM at 81 feet of total head when operating singly and 475 GPM at 89 feet of total head when operating together at 1500 RPM. Belt drive shall be of the variable speed type 1750 RPM at motors and 1500 RPM at pump. A safety shield shall be provided.

B. Motors

The motors shall be of sufficient size to produce the above pumping and shall conform to requirements set forth under "Electrical Work" section of these specifications.

C. Float Control

The float control shall be an automatic alternating type, complete with 6-1/2" ceramic float, semi-gas resistant seal flange, pedestal mounted direct through wall connection and stainless steel tape. The controls shall be so arranged that on rising water level in wet well, pump No. 1 shall automatically start. If level continues to rise, pump No. 2 shall start. On falling water level, pump No. 2 shall stop first and thereafter pump No. 1 shall stop. The sequence of operation shall be automatically changed by the alternation of pumps after each cycle. Controls shall be equal to Automatic Control Co. Type HSB-3 and shall conform to applicable requirements set forth in "Electrical Work" of these specifications.

The Contractor shall have the option of installing Sealtrode No. Y59 two pump control, three electrodes, with automatic pump alternation as manufactured by Chicago Pump Co. in lieu of the float control. Sealtrodes shall be set to operate pumps as stated above. Contractor shall submit drawings for complete electrical and mechanical installation of Sealtrodes. In the option to use Sealtrodes, equipment required for float controls will be voided. Said equipment shall be float, tape, 8 inch V. C. P. float chamber, electric and mechanical units required for float control units. The 1/2 inch float flushing line shall be installed as shown on plans.

12. PIPING

A. Flanged Cast Iron Pipe

Flanged cast iron pipe may have integral flanges cast with the pipe or threaded flanges. All flanged cast iron pipe shall be Class 125 pipe conforming to the requirements of A. S. A. Specifications A. S. A. 21-2. Screw-on flanges shall be Class 125 and shall conform to the requirements of A. S. A. Specifications B 16. 1 - 1948.

B. Galvanized Steel Pipe

All galvanized steel pipe shall be standard weight and conform to the requirements of A. S. T. M. Specifications A 120-46.

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DATE	REVISION	APPROVED

PRIVATE CONTRACT No. 4787
SEWAGE LIFT STATION
SPECIFICATIONS

COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED: JOHN A. LAMBIE, COUNTY ENGINEER
APPROVED: A.M. RAWN, CHIEF ENGINEER, CO. SAN. DIST. No. 5

BY: SANITATION ENGINEER
BY: OFFICE ENGINEER
CHECKED BY: J.K. Wade 7-6-59
OFFICE OF COUNTY ENGINEER REG. C.E. No. 9486

DATE: APRIL, 1958 | SCALE AS SHOWN | SHEET No. 7 OF 8 SHEETS

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C. Galvalized Malleable Iron Fittings

All fittings required for galvanized steel pipe shall be 150-pound, banded, screwed, galvanized malleable iron fittings conforming to the requirements of ASA Specifications B 16 C-1939.

D. Installation

1. General

Proper judgement shall be exercised in the installation of plumbing and piping to secure the best possible headroom and space conditions throughout, to secure a neat arrangement of piping and to overcome local difficulties and interference with architectural, mechanical, electrical and/or structural features. All pipes shall be accurately cut to measurements established by the Contractor at the site of the work and shall be installed without straining or forcing.

All plumbing and piping work shall be properly protected to prevent obstruction or damage. All pipe openings shall be closed with caps or plugs during installation. All fixtures and equipment shall be tightly covered and protected to prevent adhesion of foreign materials and to prevent mechanical damage.

2. Pipe Joints

(a) Screw Joints

Threads for screw joints shall be full cut. Excessive numbers of threads exposed when a screw joint has been made will not be permitted. All abrasions to pipes and fittings and all exposed threads shall receive a coat of red lead immediately after a screw joint has been made. Any leaky joints in threaded pipe shall be remade with new material. The use of thread cement or caulking to make the joints tight is prohibited.

(b) Flanged Joints

Pipe flanges shall not loosen under any condition of service. Pipe shall finish flush with the face of the flange, and the inner edge of the pipe shall be rounded to eliminate sharp edges. Flange faces shall be made perpendicular to the long axis of the pipe. Bolt holes in flanges shall be accurately drilled to standard template. All materials shall be fabricated with a tolerance of plus or minus 1/16 inch on all dimensions. Flanged joints shall be made with full face, 1/16 inch, Garlock No. 122, red rubber gaskets, and shall be firmly and fully bolted with galvanized machine bolts and nuts of the proper size.

13. ELECTRICAL WORK AND INSTRUMENTATION

A. General

Where electrical work is shown schematically on the plans, and details for the same are not set forth under the specifications, the Contractor shall furnish all materials and do all work necessary to construct the electrical work as complete and properly operating electrical systems.

All electrical materials and equipment shall be new and shall be listed by the Underwriters Laboratories, Inc. as conforming to its standards in every case where such standard has been established for the partciular type of material or piece of equipment in question.

B. Codes and Safety Orders

All electrical work shall comply with the applicable requirements of the Los Angeles County Electrical Code and the Electrical Safety Orders of the Division of Industrial Safety of the State of California.

C. Service

The electrical service shall have the following characteristics:

Lighting: 110/220 volts, single phase, 3 wire, 60 cycle alternating current.

Power: 220/440 volts, 3 phase, 3 wire, 60 cycle alternating current.

The contractor shall notify the Southern California Edison Company three weeks prior to the time at which power supply is required for the pumping station. The Contractor shall construct service head pipe to meter box and install wires for connection thereto by the Power Company. All said work shall conform to the requirements of the Southern California Edison Company.

The Subdivider will pay all costs which may be charged by the Company for permanent services.

D. Conduit

1. The actual location of conduit and conduit termination at motors shall be determined in the field.

2. All conduit shall be surface mounted, except where noted on drawings, and shall be fastened to the adjacent concrete with one hole, galvanized, cast malleable conduit straps and brass screws. Suitable expansion anchors shall be installed as required.

3. All conduit, except short lengths of flexible conduit for connection to motors, shall be standard galvanized rigid steel conduit, with a smooth interior coating of lacquer equal to Republic's Blue Label "Galvite" finish and shall bear the Underwriters Laboratories' label on each length.

4. The minimum inside radius of a conduit bend shall be six conduit diameters. All flattened bends will be rejected. The use of 90° standard factory conduit elbows in conduit runs will be permitted only in locations where concrete walls or slabs will not permit the use of long radius bends.

5. All conduit ends shall be reamed smooth after cutting and before threading. All conduit joints shall be made-up gas and liquid tight. The conduit thread shall be thoroughly filled with red lead before screwing into couplings, unions or fittings.

6. Approved conduit unions may be used where required. Running thread connections will not be permitted.

7. All machined surfaces of conduit fittings shall be protected during construction.

E. Boxes

1. All boxes and fittings shall be approved by the Underwriters Laboratories, Inc.

2. Outlet boxes shall be mounted exposed, except where noted on drawing for connecting conduits. Each box shall be plumbed and securely fastened to the adjacent structure independently of the conduit.

F. Conductors

1. Conductors shall be single, solid or stranded, copper conductor with 600-volt type TW insulation.

2. All wires and cables shall be identified at points of splicing and termination with approved marking tape.

3. Conductors shall be continuous from outlet to outlet, and no splices shall be made except within an outlet box or junction box.

4. Any lubricant used to aid pulling of conductors shall be chemically inert, and shall meet the recommendations of the manufacturer of the conductor.

5. Splices shall be mechanically strong, electrically perfect, soldered and taped so that the completed joint shall be at least equal to the original conductor, and shall be painted with Scotchkote.

6. All wiring shall be installed so that, when completed, the system shall be free from short circuits and grounds. The Contractor shall conduct a megger test of each circuit in the presence of the Inspector before the circuit is energized. The insulation and resistance shall be in conformance with the Los Angeles County Electrical Code.

G. Lighting Fixtures

Each lighting fixture shall be properly connected to the branch circuit and lamped with 150 watt lamps.

H. Grounding

Continuity of conduit and equipment grounding, where required, shall be established by a green bonding jumper and/or ground fitting, and shall be the same size as equipment leads.

I. Panel Board

1. The panel board shall be fastened on the walls of the superstructure as shown on drawing and shall be 3/4 inch thick sheet of Johns-Manville "Ebony" or equal. The length and width of panel board will vary as required for electrical equipment which shall be mounted thereon.

2. Before construction of the panel board is initiated, the Contractor shall submit for approval, shop drawings, showing the assembly of electrical equipment thereon, complete wiring diagram, material list and nameplate list.

3. Motor and control equipment shall be designed and built for 120 volt, single phase, 2 wire, 60 cycle alternating current or 240 volt, three phase, 3 wire, 60 cycle alternating current as shown on the plans; lighting equipment for 120/240 volt, single phase, 3 wire, 60 cycle alternating current.

4. All wiring in the panel board shall be neatly formed and fastened with clips and/or lacing.

5. Standard type wiring will be acceptable provided that the minimum wire size is #14 gauge.

6. Bussing shall consist of pure electrolytic copper bus bar at not less than 98% conductivity and shall conform to the following requirements.

The current density in the bus shall not exceed 1000 amperes per square inch in cross sectional area, and 200 amperes per square inch in any bolted joint.

All bus bar joints shall be silver plated.

7. Circuit breakers shall be of the thermal magnetic type, and shall incorporate time overcurrent and instantaneous short circuit protection with means for locking them in open position. Each motor starter shall be equipped with bi-metal type overload relays.

8. Nameplates shall be made to black and white laminated engraving stock with white lettering.

9. A photostat of the wiring diagram shown on the approved shop drawing shall be mounted under a transparent cover beside the panel board.

J. Motors

Electrical motors shall conform to the following requirements:

Compressor Motor

20 HP, 1750 RPM, 240 volt, 60 cycle, three phase, motor equal to General Electric type K Code F.

Blower Motor

1/6 HP, 1725 RPM, 120 volt, 60 cycle, single phase motor equal to General Electric type KH.

Sump Pump Motor

1/4 HP, 1750 RPM, 120 volt, 60 cycle, single phase motor equal to General Electric type KH.

14. FIELD TESTS

A. General

In addition to conducting shop tests specified under other sections of these specifications, the Contractor shall conduct the field tests specified hereunder.

All field tests shall be conducted in the presence of County Inspector. The Contractor shall furnish all equipment and materials and shall do all work required to complete the tests and to make necessary corrections.

B. Force Main

The force main from the pump discharge 6-inch gate valve to the force main discharge manhole shall be tested using a test pressure of 20 psi at the discharge manhole. There shall be no visible leakage within the pump station.

C. Equipment

1. Preliminary Tests

The Contractor shall make preliminary tests of the pumps, blower, valves and automatic controls to demonstrate that they are in proper working order.

2. Operation of Plant

When the equipment has satisfactorily passed the preliminary tests, the Contractor shall divert sewage into the pumping plant. The County will then take over operation of the plant. Such operation shall not be deemed acceptance of the equipment, and the Contractor shall be solely responsible for all damage resulting from this operation, except any damage resulting directly from negligent acts of the County or any of its representatives.

3. Final Acceptance Tests

During the operation of the plant by the County, and prior to the final acceptance of the contract work, tests shall be made to demonstrate that the equipment meets the following requirements:

(a) The pumps and blower units shall operate without excessive noise or vibration and without overheating of bearings.

(b) All automatic and manual electric controls shall function in accordance with specification requirements.

(c) All motors shall operate without being overloaded.

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PRIVATE CONTRACT No. 4787

SEWAGE LIFT STATION

SPECIFICATIONS

COUNTY OF LOS ANGELES, CALIFORNIA

APPROVED: JOHN A. LAMBIE
COUNTY ENGINEER

APPROVED: A.M. RAWN
CHIEF ENGINEER
CO. SAN. DIST. No. 5

BY:
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BY:
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