

CITY OF BUENA PARK
Department of Public Works
STANDARD PLANS



2003

City of Buena Park
Engineering Services

James A. Biery
Director of Public Works

**CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS**

STANDARD SPECIFICATIONS

SECTION 1	General Provisions
SECTION 2	Roadway
SECTION 3	Sewer Construction Methods and Controls
SECTION 4	Water Construction Methods and Controls



CITY OF BUENA PARK

Department of Public Works

CITY STANDARDS

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(revised 2/12/01)

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**CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS**

STANDARD SPECIFICATIONS

SECTION 1	General Provisions
SECTION 2	Roadway
SECTION 3	Sewer Construction Methods and Controls
SECTION 4	Water Construction Methods and Controls

SECTION 1 - GENERAL PROVISIONS

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1-02	Abbreviations
1-03	Permits and Licenses
1-04	Traffic Control
1-05	Surveying

1-01 DEFINITIONS

Whenever the following terms or corresponding pronouns are used in these specifications or plans, the intent and meaning shall be interpreted as follows:

- a. Engineer The City Engineer or his authorized representative
- b. City The Director of Public Works/City Engineer or his authorized representative
- c. Developer The person or organization having legal responsibility for construction in conjunction with development of property.
- d. Contractor The agent who furnishes labor, material, equipment, method, etc. to perform the requirements of these specifications in the construction.
- e. Private Engineer The agent who has responsibility for the design and drawing of construction documents not prepared by the City.
- f. Approved equal An equivalent product to that specified in these standard specifications, approved by the City before beginning of construction. No approved equal project is intended, unless so stated in these standard specifications.
- g. Engineering specifications Those specifications as defined and published by the City Engineer of the City of Buena Park
- h. Standard specifications The latest Edition of the Standard Specifications for Public Works Construction (the Green Book), and all subsequent supplements.

1-02 ABBREVIATIONS

Whenever the following abbreviations are used in these specifications, the meaning shall be interpreted as follows:

APPWA	American Public Works Association
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
CALTRANS	State of California, Department of Transportation
OCEMA	Orange County Environmental Management Agency

1-03 PERMITS AND LICENSES

The contractor shall assure the City that he has a current, valid State contractor's license for the type of construction involved, and a current valid City business license. The contractor shall obtain all necessary permits, licenses or agreements and Worker's Compensation Insurance required by any legally constituted agency. A permit from the State Department of Industrial Safety shall be required for excavations five feet or greater in depth. A permit shall be required from the Engineer for all work within the public right of way. The contractor shall observe all safety procedures as required by CAL-OSHA. All provisions of these permits and licenses or agreements shall be binding upon the contractor as though stated herein. The City will not be responsible for actions involving the agencies controlling such licenses, permits or agreements.

1-04 TRAFFIC CONTROL

Reference subsections 7-10 of the Standard Specifications. Warning lights, signs, flares, barricades, plastic single post delineators and other facilities shall be placed and maintained at all times by the contractor as directed by the Engineer. Lane closures shall not be allowed without approval of the Engineer. Traffic control plan shall be required for lane closures on arterials. When allowed, lane closures shall be adequately delineated in conformance with the City and State Standards as approved by the Engineer. Delineation that has to be replaced or modified by the City shall be chargeable to the contractor.

Arterial lane closures and delineation plans shall be prepared by a licensed Civil/Traffic Engineer.

1-05 SURVEYING

The contractor shall provide equipment, method, and labor to locate accurately all proposed improvements. The contractor

shall further guarantee the accurate location of all utility facilities by constructing curb and gutter prior to the

beginning of any utility improvements. If, in the opinion of the City, this sequence of construction cannot be followed, the contractor shall submit signed documents that place all liability for error and subsequent cost of relocation on the contractor.

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2-02	Aggregate Base
2-03	Concrete curbs, sidewalks and drive approaches
2-04	Removals
2-05	Removal of utilities
2-06	Trench excavation
2-07	Backfilling of trench
2-08	Repaving and finishing
2-09	Sheeting and shoring
2-10	Jacking of steel casing

2-01 ASPHALT CONCRETE

2-01.01

Asphalt concrete shall conform to the provisions of Subsections 302-5 and 400-4 of the Standard Specifications with the following modifications:

1. Asphalt binder shall be grade AR 4000 (85-100) paving asphalt.
2. The amount of asphalt binder shall be 4-1/2 to 6-1/2 percent by weight of the dry mineral aggregate.
3. At least 75% by weight of the material retained on the No. 4 sieve shall have at least one fractured face as determined by Test Method No. California 205.
4. Aggregate grading for surface course shall be 1/2" maximum for finish course and 3/4" maximum for base course.

2-01.02

Tack coat shall be applied to all areas to be surfaced, in accordance with Subsection 302-5.4 of the Standard Specifications. Tack coat shall be Type SS-1h emulsified asphalt.

2-01.03

Rolling equipment shall conform to the provisions of Subsection 302-5.6 of the Standard Specifications, except three-wheel rollers shall not be permitted and pneumatic rollers shall be used on base courses only.

2-02 AGGREGATE BASE

2-02.01

Aggregate base shall conform to Subsections 400-2 and 301-2 of the Standard Specifications. Required compaction shall be 95%. At the time of spreading it may have a moisture content sufficient to obtain required compaction. Moisture shall be distributed uniformly throughout. A certificate of compliance with all the requirements shall be provided.

2-03 CONCRETE CURB & GUTTER, SIDEWALKS, WHEELCHAIR RAMPS AND DRIVE APPROACHES

2-03.01

Concrete work shall conform to Section 201 and Subsection 303-5 of the Standard Specifications. Concrete to be used shall be designated Class 520-C-2500 with max slump of 4", except for drive approaches, which shall be Class 564-C-3000.

2-04 REMOVALS

2-04.01

Concrete and asphalt paving shall be sawcut prior to removal. All edges shall be straight as possible. The contractor shall not use equipment that damages existing street improvements that are not to be removed.

2-04.02

Asphalt concrete roadway shall be sawcut a minimum of 12 inches from edge of concrete. When concrete sidewalk is to be removed, a minimum of 32 square feet shall be removed. When concrete curb is to be removed, a minimum of 8 linear feet shall be removed. All removals shall be to the nearest score line as approved by the Engineer.

2-04.03

Material after removal, shall be disposed of outside the public right of way.

2-05 REMOVAL OF UTILITIES

Utilities shall be removed only as stated on the construction plans. Structures or piping not shown on the construction plans shall be brought to the attention of the City. Disposition of these structures shall be determined by the city prior to proceeding with the work. The contractor shall notify UNDERGROUND SERVICE ALERT and the representatives of any utility which must be removed or relocated at least 48 hours prior to starting work.

2-06 TRENCH EXCAVATION

Sections 2-06, 2-07, 2-08 and 2-09 refer to any excavation in the public right of way including but not limited to water, sewer, storm drain or other utility installation. Trench excavation shall include any excavation in which the depth is greater than the width at the bottom of the excavation. Such excavation as vaults, thrust blocks, boring pits and service laterals shall be considered as trench excavation. All earthen material and water which shall interfere with the placement of utilities shall be removed. Sufficient means shall be used to protect any existing utilities from damage during trench excavation.

The maximum length of open trench shall be 500 feet or the

distance of pipe installed in one day, whichever is less. The width of trench at the bottom of excavation shall be from six inches to ten inches greater than the exterior dimension of the pipe. Bell and coupling holes shall be used as required to complete a satisfactory pipe joint.

Pipe shall be placed to the grade and depth specified on the construction drawings. When not specified, pipe shall be placed as follows:

- a. 36" standard cover to finished surface of streets
- b. 6" minimum clearance from any crossing utility or structure
- c. When constructing sewer or water mains in the vicinity of existing sewer or water mains, protection for the new or existing water main shall be provided per Standard 535.

The trench bottom shall be graded to provide a smooth, firm and stable foundation which is free of rocks and other obstructions. All soft, spongy, and unstable material shall be overexcavated to a depth of two feet and replaced with earth or sand which shall be compacted to provide a firm and stable foundation. All rocks or cobbles shall be removed to a depth of 6" below pipe grade and replaced with compacted earth or sand.

2-07 BACKFILLING OF TRENCH

The contractor shall backfill the utility trench as soon after placement of the utility as practical. All fittings, valves and assemblies shall be visually inspected by the City prior to backfilling. Backfill shall be placed in accordance with Section 300-3 of the Standard Specifications. Native material shall be allowed only when approved by the Engineer. Compaction to 90% shall be required. Backfill on all arterial streets shall be 1-1/2 sack slurry.

2-08 REPAVING AND FINISHING

The contractor shall replace all removed or damaged pavement with a section equal to that removed, plus one inch but not less than four inches of AC over native material. All pavement replacement shall be as specified herein and shall be inspected by the Engineer within the limits of traveled way. The contractor shall place temporary or final pavement following final compaction of the backfill. The contractor shall not wait for completion of the full length of project to begin resurfacing. Pavement that settles shall be repaired immediately whether temporary or final surfacing. Manholes and valve boxes shall be located after final paving and brought to finished grade. The contractor shall raise the valve box to top or manhole section to finished surface, in accordance with the applicable standard drawing(s) contained herein. Additional materials or equipment

necessary to raise valve boxes or manholes, such as valve can extensions, manhole sections and rings shall be supplied and installed by the contractor.

2-09 SHEETING AND SHORING

All trench excavation shall be adequately protected to provide a safe working condition and protection to adjacent utilities and structures. The contractor shall work in such manner and install such protective devices, shoring, and bracing to comply with all rules, regulations and orders of the Division of Industrial Safety of the State of California.

Prior to any trench excavation where the depth is more than five feet, the Contractor shall submit a plan of sheeting and shoring to the city for approval and obtain suitable permits from the State Division of Industrial Safety. Any variance from the Safety Orders of the Division of Industrial Safety shall be prepared by a licensed Civil or Structural Engineer, and approved by the City. Sheeting and shoring shall not place any undue strain on existing utilities or structures nor on completed sections of construction. Sheeting and shoring may be removed during backfilling, provided adequate protection is provided at all times. The Contractor shall be responsible for any damage to existing utilities or structures due to placement, removal, or failure of any sheeting and shoring system. The Contractor shall repair or have repaired any damage as soon as practical.

2-10 JACKING OF STEEL CASING

Steel casing shall be placed at the location, elevations, and limits shown on the construction drawing. Known existing utilities will be shown on the construction drawing. Any utilities or structures encountered which will interfere with construction shall be brought to the attention of the City. Only new steel casing shall be used for jacking. Jacking shall be at a rate that will not overstress the casing causing failure. Any damage to the casing during placement of the pipe shall be brought to the attention of the City. The jacking and receiving pit shall be sheeted and shored as provided in Section 2-09 of these specifications. The excavated area ahead of the casing shall not be larger than 0.1 foot greater than the outside diameter of the casing. Over-excavation beyond the above described limits shall be sanded or pressure grouted as directed by the City. Sluicing or jetting ahead of the jacking casing shall not be permitted.

SECTION 3 - SEWER CONSTRUCTION METHODS AND CONTROL

- | | |
|---------|-----------------------------------|
| 3-01.01 | General |
| 3-01.02 | Connection to Existing Facilities |
| 3-01.03 | Material |

3-01 SEWER CONSTRUCTION METHODS AND CONTROL

3-01.01 General

See Sections 1 and 2 of these specifications.

3-01.02 Connection to existing facilities

The Contractor shall make connection to the existing public facilities as shown on the Standard Drawings. All connections shall be made under inspection of the City. Connections to manholes shall be made by core drilling. When "Y's" are cut into existing lines (unless the connection is "core-drilled"), the removal of the existing main shall be done only in the presence of the inspector. The Contractor is responsible for cleaning existing mains to remove material from his operations.

3-01.03 Material

Sewer, pipe and fittings shall be "extra strength" Vitrified Clay Pipe. Joints shall be "Wedge Lock" or approved equal.

SECTION 4 - WATER CONSTRUCTION METHODS AND CONTROL

4-01.01	General
4-01.02	Copper Tubing
4-01.03	Fittings
4-01.04	Connection to Existing Facilities
4-01.05	Pressure Tapping
4-01.06	Shutdown of Main
4-01.07	Thrust Restraint
4-01.08	Disinfection
4-01.09	Testing
4-01.10	Hydrostatic Pressure Testing

4-01.01 General

The City shall at all times have access to the manufacturing facilities and the right to test and inspect the work and materials. The manufacturer shall test and furnish the City with reasonable facility for obtaining such information as he may desire regarding the progress of the work and the character and quality of materials used. When requested by the City, the manufacturer shall submit a certificate certifying that the product meets the requirements of these specifications.

4-01.02 Copper Tubing

Copper tubing shall be type K soft copper tubing, conforming to ASTM Specification B-88-62, as referenced in the appendix to AWWA Standard C800.

4-01.03 Fittings

All fittings shall be cast iron and shall conform to ASA A21-10 or AWWA C-110 and shall be cement mortar lined in accordance with AWWA C-104 or ASA A21.4 Specifications.

4-01.04 Connection to existing facilities

The Contractor shall make connections to the existing public facilities as shown on applicable standard drawing(s) contained herein. All connections must be made under inspection of the City. The inspector shall consider and establish with the Contractor the means of chlorinating those sections of main, fittings of valves in contact with the public system. When such connection provides a direct closure between the existing public system and that under construction, such valves shall become the property of the City and shall be operated only by the City.

4-01.05 Pressure Tapping

Mains may be tapped under pressure by the Contractor. The exterior surface of the pipe shall be cleaned to provide a smooth surface for the tapping sleeve. The tapping sleeve shall be secured to the pipe to prevent movement during the tapping process. Taps under pressure shall be done by the Koppl Company, Montebello, California, or approved contractor. Tapping nozzles shall be bolted or welded on as determined by the steel liner thickness. See standard drawing(s).

4-01.06 Shutdown of main

All work necessary to shut down an existing public water main shall be done by the City at the Contractor's expense. Under no circumstances shall activated valves or fire hydrants be operated by the Contractor. Emergency situations shall be reported to the City. When extensive main shutdown is required, the City will determine what temporary service connections may be required. The Contractor shall furnish whatever hose, piping, valves, tank trucks and associated labor required to provide such temporary service. Materials supplied for temporary connection shall be clean and suitable for transporting potable water.

4-01.07 Thrust restraint

The Contractor shall use suitable means to anchor the pipe and fittings against movement due to water pressure. Poured in-place concrete thrust blocks shall be placed against an undisturbed earth bearing surface. Concrete shall be placed so as not to interfere with the fitting joint. Concrete shall be as specified under 2-03.01 of these specifications. Anchor block locations and dimensions shall be per Standard Drawing STD-532.

4-01.08 Disinfection

Tests shall be conducted in accordance with AWWA Standard C601, "Disinfecting Water Mains", as modified herein. During construction, the interior of all pipe, fittings and accessories shall be kept free from dirt and foreign matter at all times. When construction is not in progress, pipe ends shall be closed with a water tight plug. Joints of pipe in the trench shall be completed prior to stopping work.

The system shall be thoroughly flushed with potable water prior to chlorinization, utilizing a minimum flow of 2.5 feet per second.

A chlorinating agent, as specified by AWWA Standard C601, shall be introduced into one end of the test section. During chlorination, all air pockets shall be eliminated and all valves and appurtenances shall be operated to expose all surfaces to the chlorinating agent. Sufficient quantity of the chlorinating agent shall be introduced to produce a minimum dosage of 50 ppm in all portions of the pipe. After 24 hours, the residual dosage shall be 25 ppm. Following the chlorination period of 24 hours, the water shall be flushed from the line at its extremities and at all outlets until the chlorine residual of the water being flushed equals that of the public water system.

The Contractor shall have a State certified laboratory perform the bacteriological tests. Samples shall be taken at the direction of the City with at least one sample taken from each dead-end main section. Samples shall be taken 24 hours after final flushing. Tests shall be performed to determine that the samples meet the City requirements for domestic water use. All samples must indicate five tubes negative. All samples shall show negative results for two consecutive days. Lines failing the tests shall be rechlorinated and retested until passing.

4-01.09 Testing

General

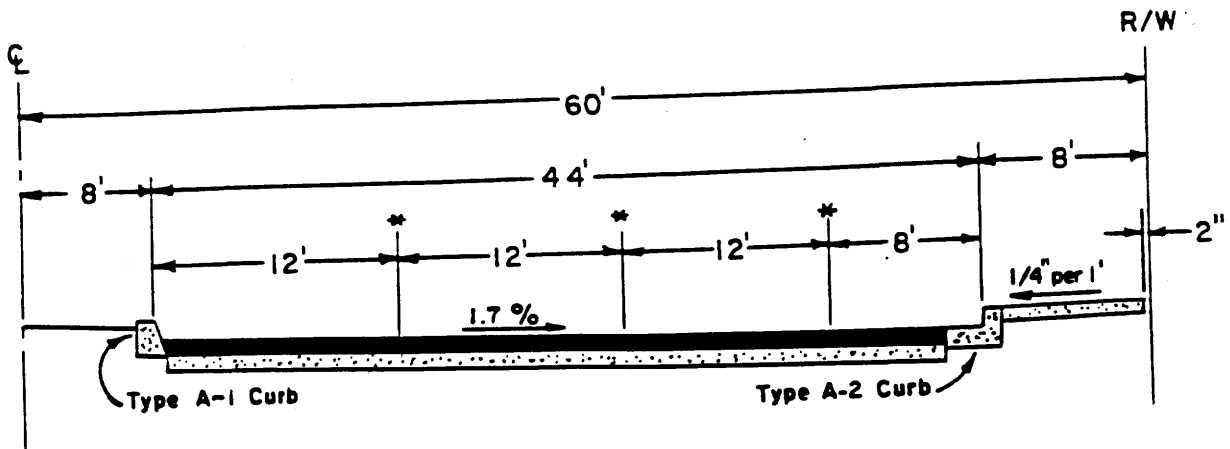
The Contractor shall supply all material, labor, equipment, and method necessary to conduct the required test. All tests shall be made during inspection by the City. All constructed facilities shall be kept isolated from the existing public system while being tested.

4-01.10 Hydrostatic pressure testing

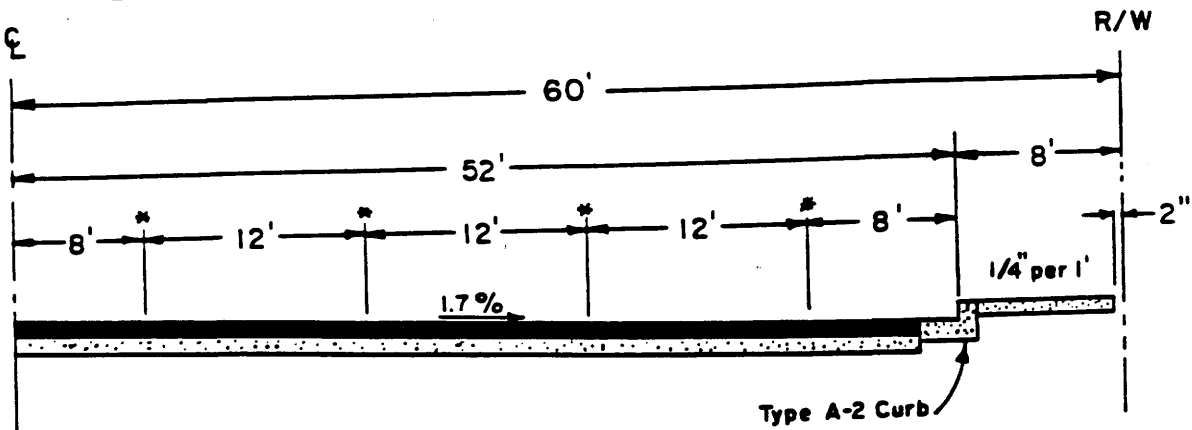
Tests shall be conducted in accordance with AWWA Standard C600, Section 13, as modified herein. The section of pipe under test shall be allowed to stand 40 psi minimum pressure for one hour prior to the beginning of the test. The pressure shall then be increased to 150 psi maximum. At one hour intervals during the 4-hour test, the pressure shall be increased to the initial test pressure and the amount of water added measured. The amount of water added shall not be more than that required by AWWA Standard C600, Section 13.7. Any excessive leakage shall be located, repaired by the Contractor and the pressure test repeated.

ENG/CONST. STANDARDS

STREET AND HIGHWAY
STANDARDS



SECTIONS
SYMMETRICAL
ABOUT CL



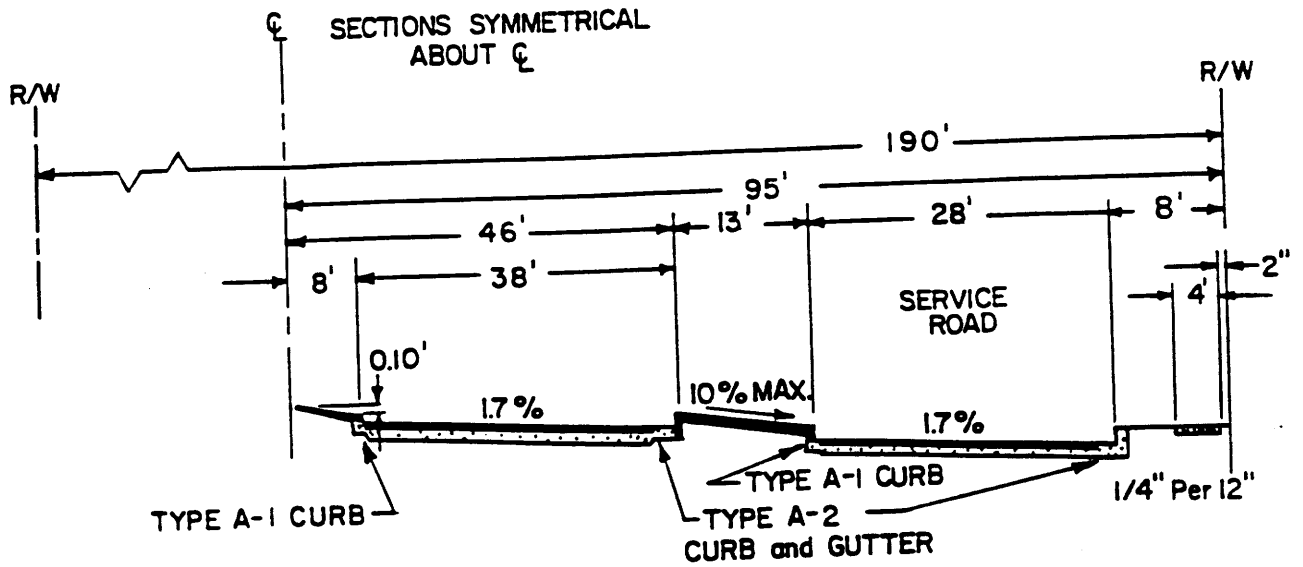
ALTERNATE SECTION

NOTES:

1. Design speed shall be 55 mph.
2. Thickness of pavement & base to be determined by Soil Test.
3. With minimums of:
 Major Highway: 4" AC Over 8" AB
 Service Road: 3" AC Over 4" AB
 Islands: 2" AC Over Sterilized Soil or Landscaped with Sprinkler Systems.
4. For Asphalt Concrete, and Aggregate base see STD. 100 sect. 2.
5. See Std. 201 for Type A-1 Curb.
6. See Std. 202 for Type A-2 Curb and Gutter.
7. See Std. 206 for Sidewalk details.

* Longitudinal joint for finish course A.C.

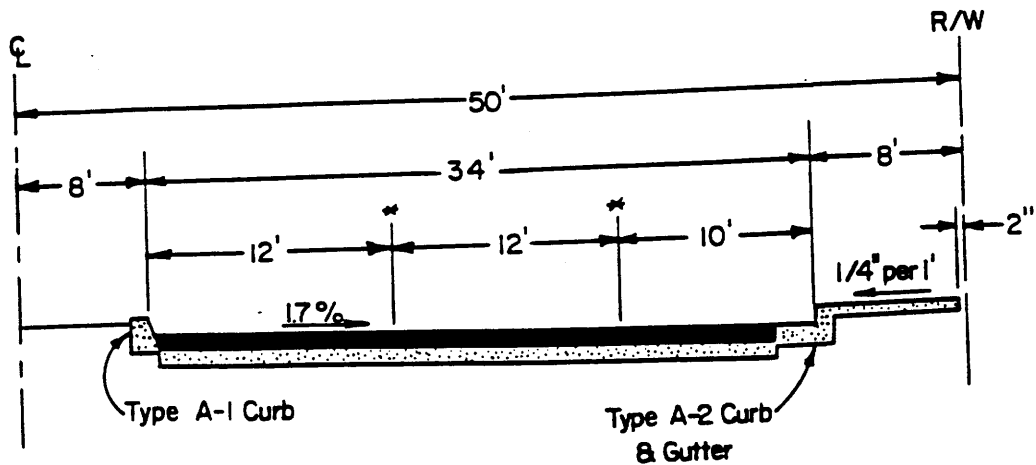
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald K. Jensen</i> CITY ENGINEER DATE <u>5/14/87</u> REVISED _____ NO. _____	STD 101
MAJOR HIGHWAY TYPICAL SECTIONS		



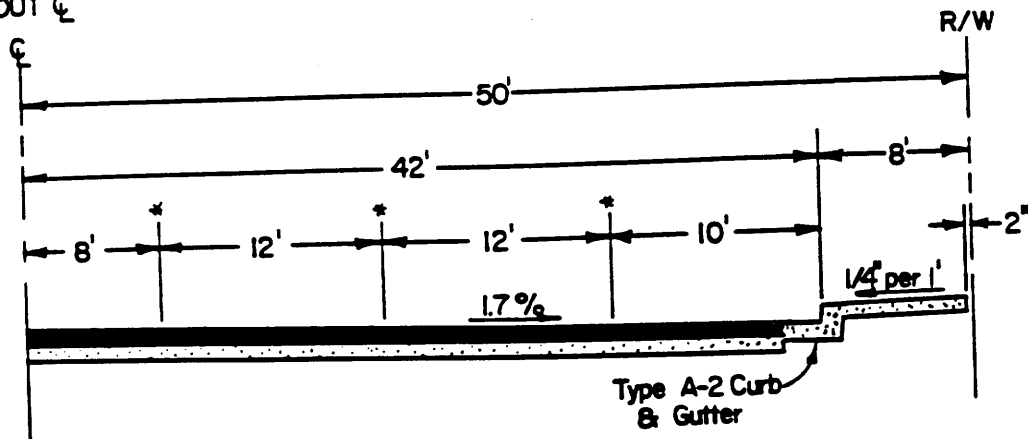
NOTES:

1. Design speed shall be 55 m.p.h.
2. Thickness of pavement & base to be determined by soil test.
3. With minimums of:
 - Major Highway: 4" AC over 8" AB.
 - Service Road: 3" AC over 4" A.B.
 - Islands: 2" AC over sterilized soil or landscaped with sprinkler systems.
4. For asphalt concrete, and aggregate base see STD. 100 sect. 2.
5. See STD. 201 for type A-1 curb.
6. See STD. 202 for type A-2 curb and gutter.
7. See STD. 206 for sidewalk details.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <u><i>Donald K. Jensen</i></u> <small>city engineer</small> DATE <u>5/15/87</u> REVISED _____ NO. _____	STD 101-1
MAJOR HIGHWAYS TYPICAL SECTIONS (SERVICE ROAD)		



SECTIONS
SYMMETRICAL
ABOUT C

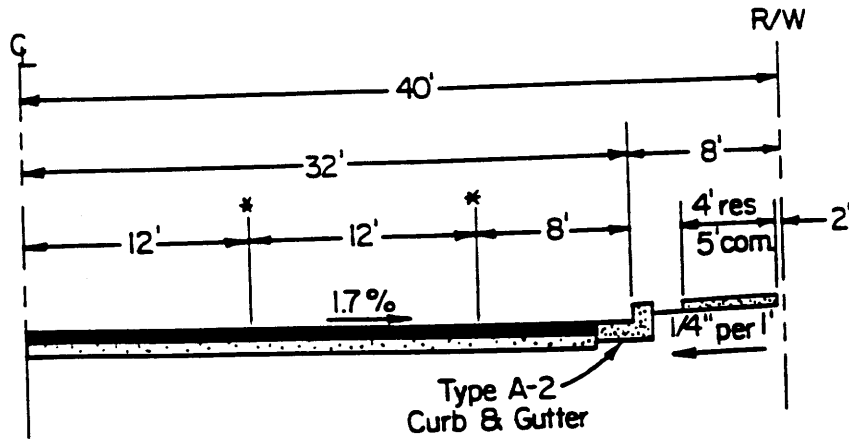


ALTERNATE SECTION

NOTES:

1. Design speed shall be 55 m.p.h.
 2. Thickness of pavement & base to be determined by soil test.
 3. With minimums of:
 Major Highway: 4" A.C. over 8" A.B.
 Service Road: 3" A.C. over 4" A.B.
 Islands: 2" A.C. over sterilized soil or landscaped with sprinkler systems.
 4. For asphalt concrete, and aggregate base see STD. 100 sect. 2.
 5. See STD. 201 for type A-1 curb.
 6. See STD. 202 for type A-2 curb and gutter.
 7. See STD. 206 for sidewalk details.
- * longitudinal joint for finish course A.C.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVAL <u>Donald K. Jensen</u> <small>city engineer</small> DATE <u>5/15/87</u> REVISED _____ NO. _____	STI 102
PRIMARY HIGHWAY TYPICAL SECTIONS		

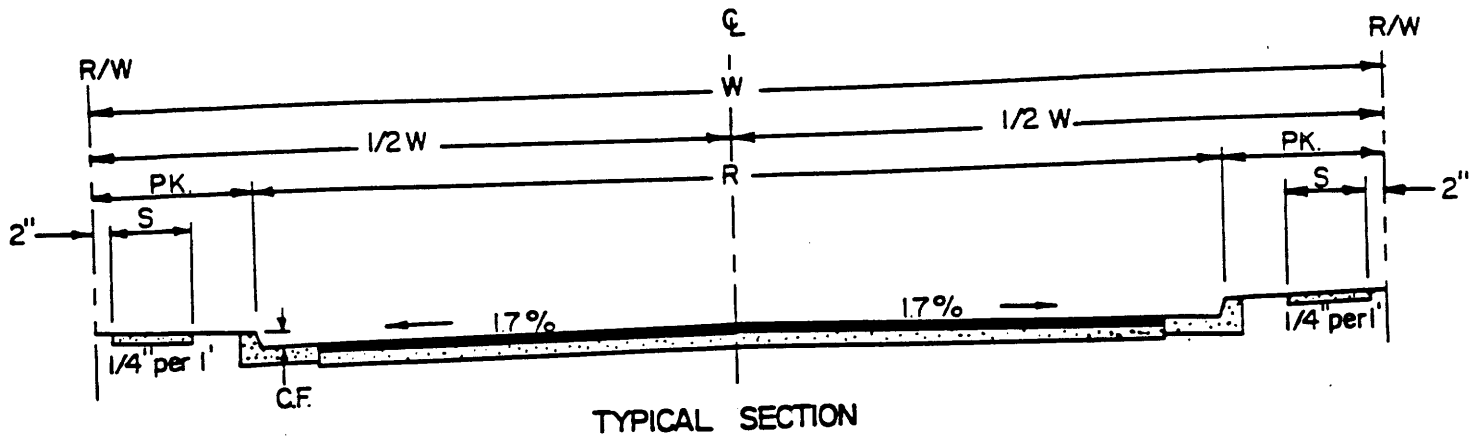


Section
Symmetrical
About C

NOTES:

1. Design speed shall be 50 mph.
 2. Thickness of pavement & base to be determined by soil test.
 3. With a minimum section of 3" AC. over 6" A.B.
 4. For asphalt concrete, and aggregate base see STD. 100 sect. 2.
 5. See STD. 202 for type A-2 curb and gutter.
 6. See STD. 206 for sidewalk.
- * longitudinal joint for finish course AC.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <u>Donald K. Jensen</u> <small>city engineer</small> DATE <u>5/15/87</u> REVISED _____ NO. _____	STD 103
SECONDARY HIGHWAY TYPICAL SECTION		



TYPICAL SECTION

TYPE	W	R	PK	S	LEGEND
Industrial / Comm.	64'	52'	6'	N/A	W=Width of street in feet. R=Width of roadway in feet. PK=Width of parkway in feet. (including sidewalk) S=Width of sidewalk in feet. CF=Curb face (see curb stds).
Residential/Comm.	60'	44'	8'	4' Res. 5' Comm.	
Residential *	52'	40'	6'	Full	

* Requires specific approval by the City Engineer.

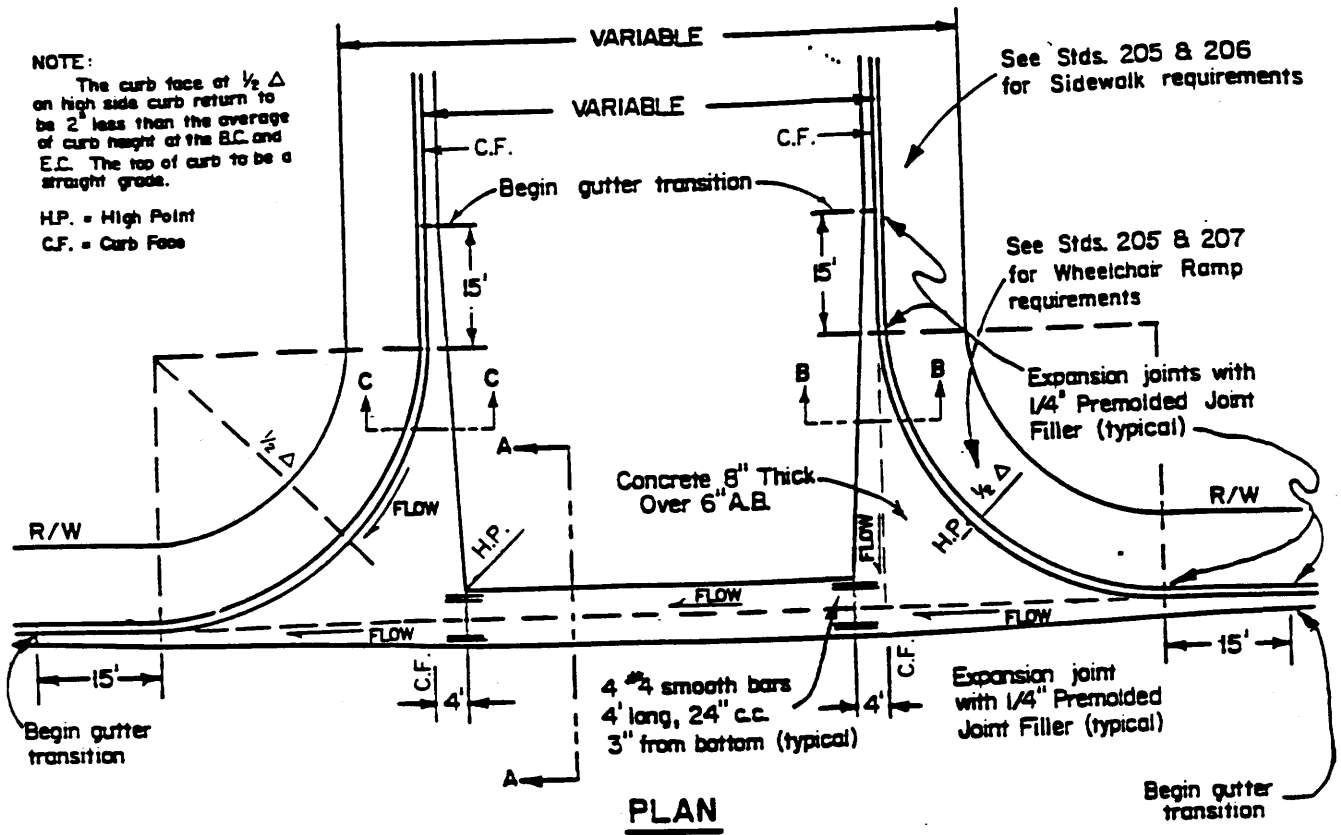
NOTES:

1. Thickness of pavement & base to be determined by soil test.
2. With minimums of 3" A.C. over 4" A.B.
3. For asphalt concrete, and aggregate base see STD. 100 sect. 2.
4. Type of curb determined by the City Engineer.
5. See STD. 202 for type A-2 curb and gutter.
6. See STD. 204 for type D curb and gutter.
7. See STD. 206 for sidewalk details.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald K. Jensen</i>	STD. 104
	DATE <i>5/15/87</i> REVISED _____ NO. _____	
STREET IMPROVEMENT TYPICAL SECTIONS		

NOTE:
 The curb face of $\frac{1}{2} \Delta$ on high side curb return to be 2' less than the average of curb height at the B.C. and E.C. The top of curb to be a straight grade.

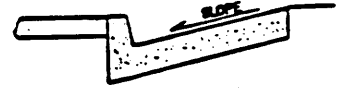
H.P. = High Point
 C.F. = Curb Face



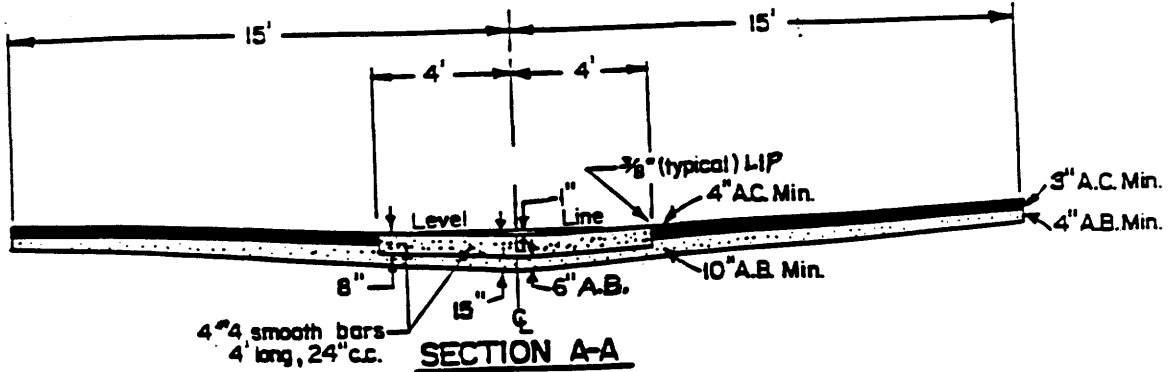
PLAN



SECTION B-B



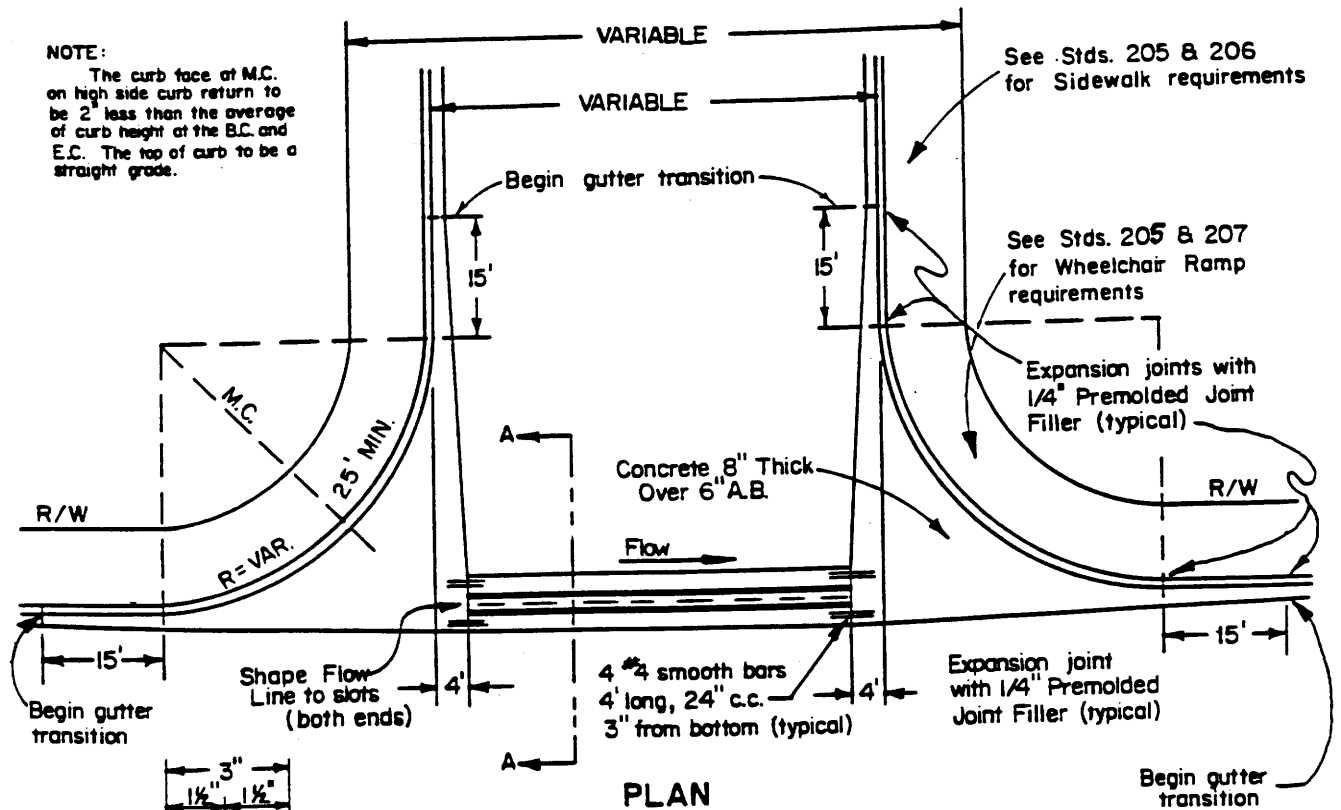
SECTION C-C



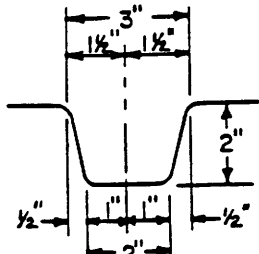
SECTION A-A

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Ronald K. Jensen</i> city engineer	STD. 105
	DATE 10/16/90	
CROSS GUTTER		

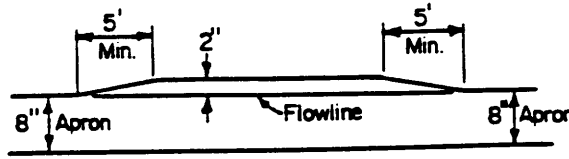
NOTE:
The curb face at M.C. on high side curb return to be 2" less than the average of curb height at the B.C. and E.C. The top of curb to be a straight grade.



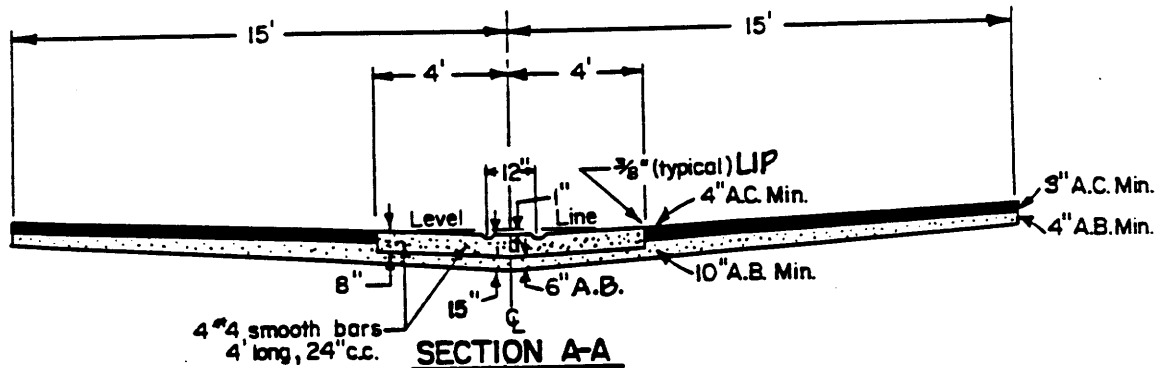
PLAN



SLOT DETAIL



ELEV.

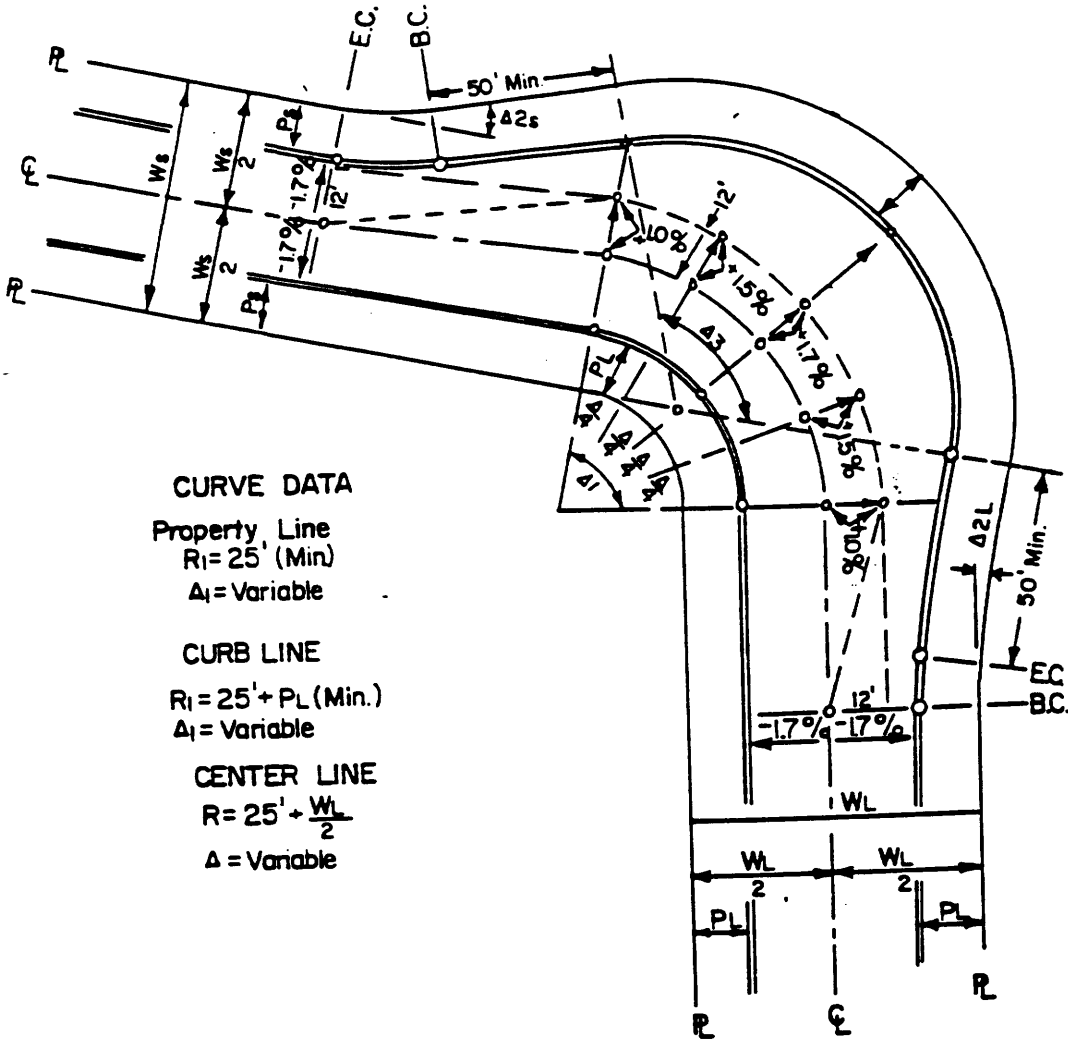


CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald V. Jensen</i> city engineer	STD. 105 A
	DATE 5/15/87	
CROSS GUTTER - SLOTTED GUTTER ONLY		

CURVE DATA
 Curb radius = 50'
 R_c radius = 50' - P_s

CURVE DATA
 Property Line
 $R = W_L + 10' - P_L$
 $\Delta_3 = \Delta_1 + \Delta_2 S + \Delta_2 L$

CURB LINE
 $R_3 = W_L + 10' - P_L$
 $\Delta_3 = \Delta_1 + \Delta_2 S + \Delta_2 L$

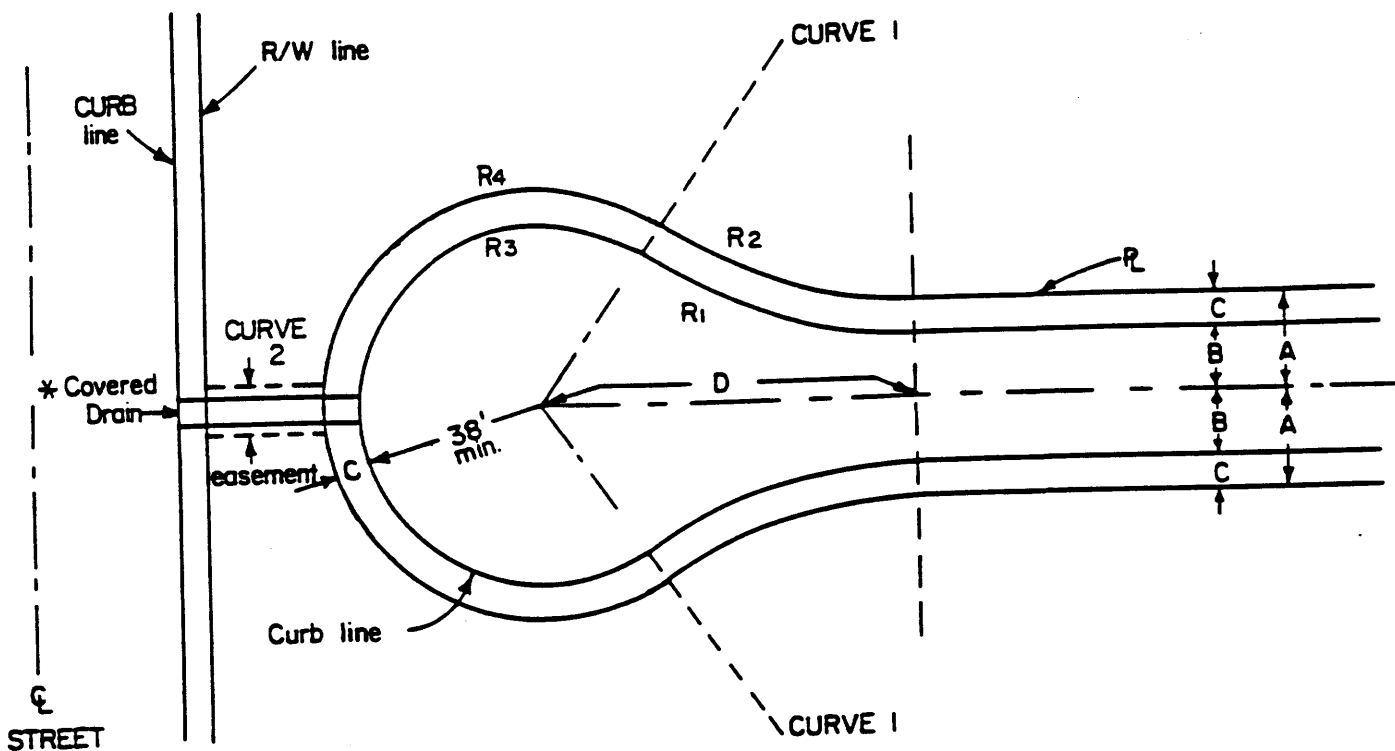


CURVE DATA
 Property Line
 $R_1 = 25'$ (Min.)
 $\Delta_1 =$ Variable
 CURB LINE
 $R_1 = 25' + P_L$ (Min.)
 $\Delta_1 =$ Variable
 CENTER LINE
 $R = 25' + \frac{W_L}{2}$
 $\Delta =$ Variable

CURVE DATA
 Curb radius = 50'
 R_c radius = 50' - P_L

1. Use normal section from inner curb to center line.
2. From crown line to outer curb, the maximum slope is 1" per foot.
3. Subscripts "S" and "L" denote smaller and larger streets respectively.
4. Superelevations percentages shown are a straight grade from center line to crown line.
5. Elevations are required where circled.
6. When streets have tilt-type section, the crown line will not necessarily terminate on center line at angle point of curb.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <u>Donald K. Jensen</u> <small>city engineer</small> DATE <u>5/15/87</u> REVISED _____ NO. _____	STD. 106
STANDARD KNUCKLE		



* In the case where a Cul-de-sac backs into another street and drains toward it, a covered drain shall be provided thru a drainage easement. Plans shall show exact location of drain. Drain shall conform to Std. 214 or Std. 215 unless otherwise approved.

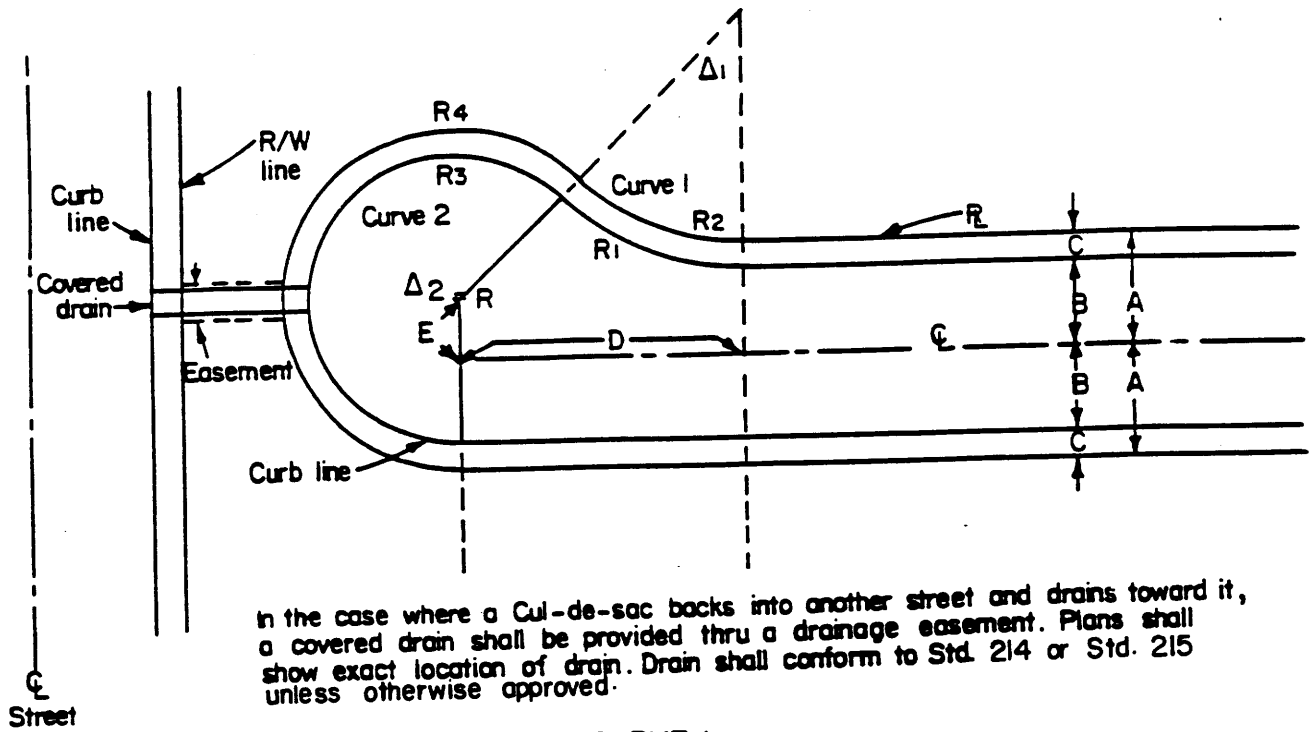
CURVE 1

R/W	A	B	C	D	Δ	CURB			PROPERTY LINE		
						R ₁	L	T	R ₂	L	T
80'	40'	32'	8'	40.25'	16°57'27"	100'	29.60'	14.91'	92'	27.23'	13.71'
64'	32'	26'	6'	56.29'	24°04'14"	100'	42.01'	21.32'	94'	39.49'	20.04'
60'	30'	22'	8'	64.50'	27°51'51"	100'	48.63'	24.81'	92'	44.74'	22.82'
52'	26'	20'	6'	68.15'	29°35'30"	100'	51.65'	26.41'	94'	48.55'	24.83'

CURVE 2

R/W	A	B	C	D	Δ	CURB		PROP LINE	
						R ₃	L	R ₄	L
80'	40'	32'	8'	40.25'	213°54'53"	38'	141.87'	46'	171.74'
64'	32'	26'	6'	56.29'	228°08'28"	44'	175.20'	50'	199.09'
60'	30'	22'	8'	64.50'	235°43'42"	38'	156.34'	46'	189.25'
52'	26'	20'	6'	68.15'	239°11'01"	38'	158.63'	44'	183.68'

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald K. Jensen</i> city engineer	STI 107
	DATE <u>5/15/87</u> REVISED <u>4/13/94</u> NO. <u>1</u>	
STANDARD CUL-DE-SAC		



In the case where a Cul-de-sac backs into another street and drains toward it, a covered drain shall be provided thru a drainage easement. Plans shall show exact location of drain. Drain shall conform to Std. 214 or Std. 215 unless otherwise approved.

CURVE 1

R _W	A	B	C	D	E	Δ ₁	CURB			PROP. LINE		
							R ₁	L	T	R ₂	L	T
80'	40'	32'	8'	49.48'	6'	27°15'58"	70'	33.31'	16.98'	62'	29.50'	15.04'
60'	30'	22'	8'	76.73'	16'	45°16'31"	70'	55.31'	29.19'	62'	48.99'	25.86'
64'	32'	26'	6'	83.14'	18'	46°49'35"	70'	57.20'	30.31'	64'	52.20'	27.71'
52'	26'	20'	6'	80.50'	18'	48°11'23"	70'	58.87'	31.31'	64'	53.83'	28.62'
*49'	22'	14'	8'	104.61'	24'	49°17'39"	100'	86.03'	45.88'	92'	79.15'	42.21'

CURVE 2

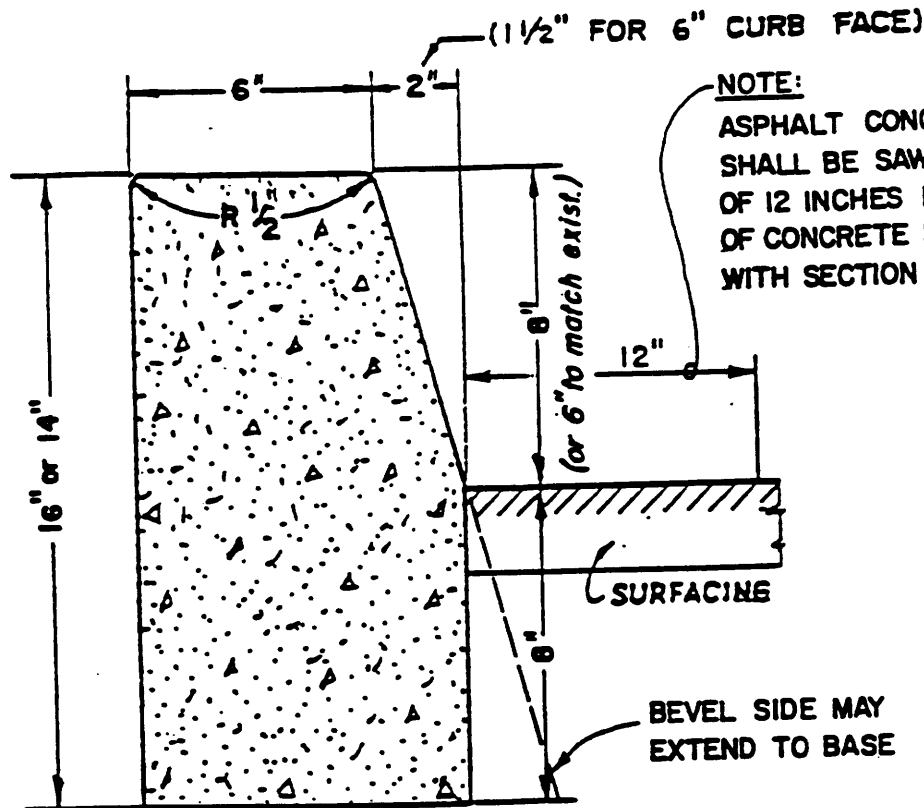
R _W	A	B	C	D	E	Δ ₂	CURB		PROP. LINE	
							R ₃	L	R ₄	L
80'	40'	32'	8'	49.48'	6'	207°15'58"	38'	137.46'	46'	166.40'
60'	30'	22'	8'	76.73'	16'	225°16'31"	38'	149.41'	46'	180.86'
64'	32'	26'	6'	83.14'	18'	226°49'35"	44'	171.80'	50'	195.23'
52'	26'	20'	6'	80.50'	18'	228°11'23"	38'	151.34'	44'	175.24'
*40'	22'	14'	8'	104.61'	24'	229°17'39"	38'	152.07'	46'	184.09'

* For Service Road Cul-de-Sac

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Ronald K. Jensen</i> city	STD. 108
	DATE <u>5/15/87</u> REVISED <u>4/13/94</u> NO. <u>1</u>	
OFFSET CUL-DE-SAC		



PARKWAY STANDARDS



NOTE:

ASPHALT CONCRETE ROADWAY SHALL BE SAW CUT A MINIMUM OF 12 INCHES FROM THE EDGE OF CONCRETE IN ACCORDANCE WITH SECTION 2 OF STD. 100.

QUANTITIES

6" CURB FACE

CONCRETE PER LIN. FT. = 0.027263 CU. YDS.

1 CU. YD. = 36.7 LIN. FT.

8" CURB FACE

CONCRETE PER LIN. FT. = 0.03084 CU. YDS.

1 CU. YD. = 32.4 LIN. FT.

NOTES:

1. FOR CONCRETE SPECIFICATIONS SEE STD-100
2. EXPANSION JOINTS FILLED WITH 1/4" PREMOLDED JOINT FILLER SHALL BE PLACED AT 60' INTERVALS, AND AT EACH SIDE OF DRIVEWAYS, ENDS OF CURB RETURNS, BETWEEN FULL SIDEWALK AND CURB; WEAKENED PLANE JOINTS AT 20' INTERVALS.

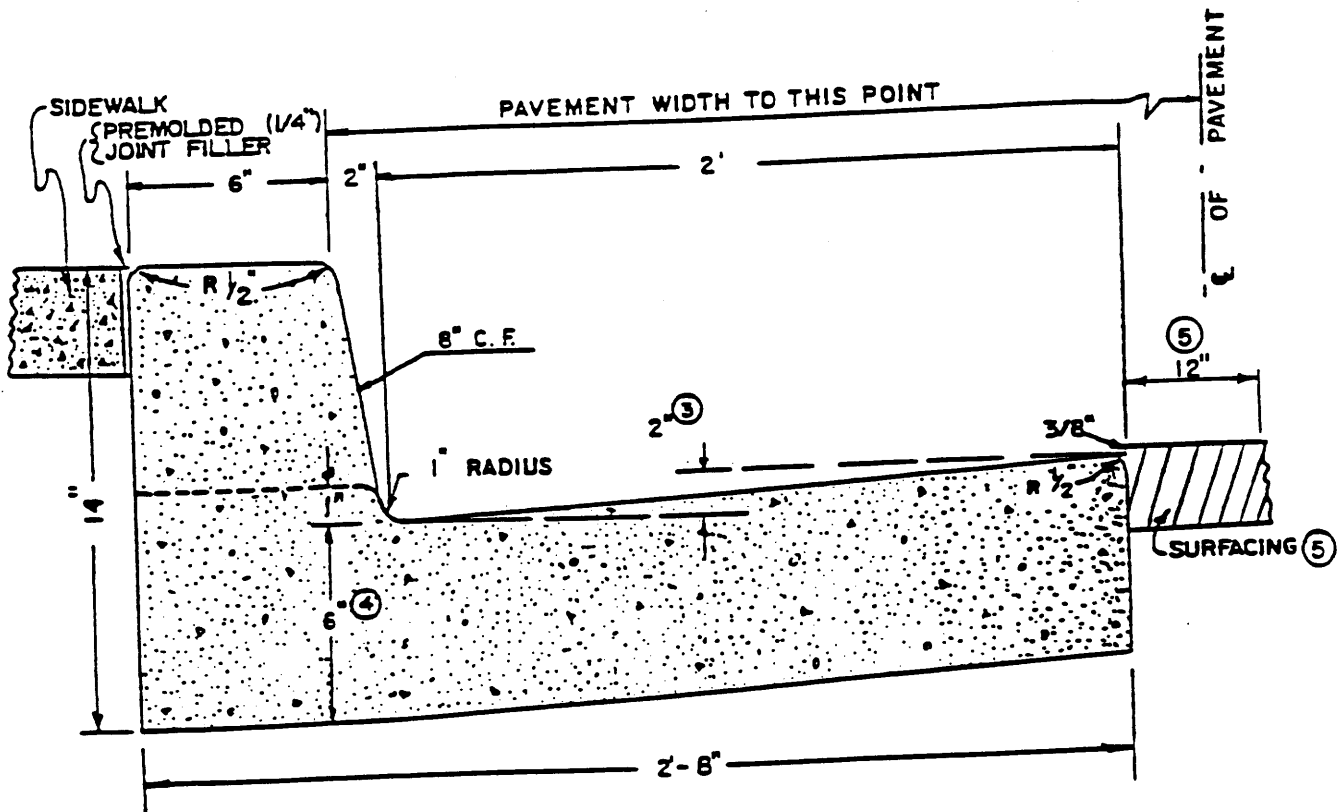
CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

Approved Norvald K. Jensen 5/15/87
City Engineer Date

CONCRETE CURB TYPE A-1

ST
20

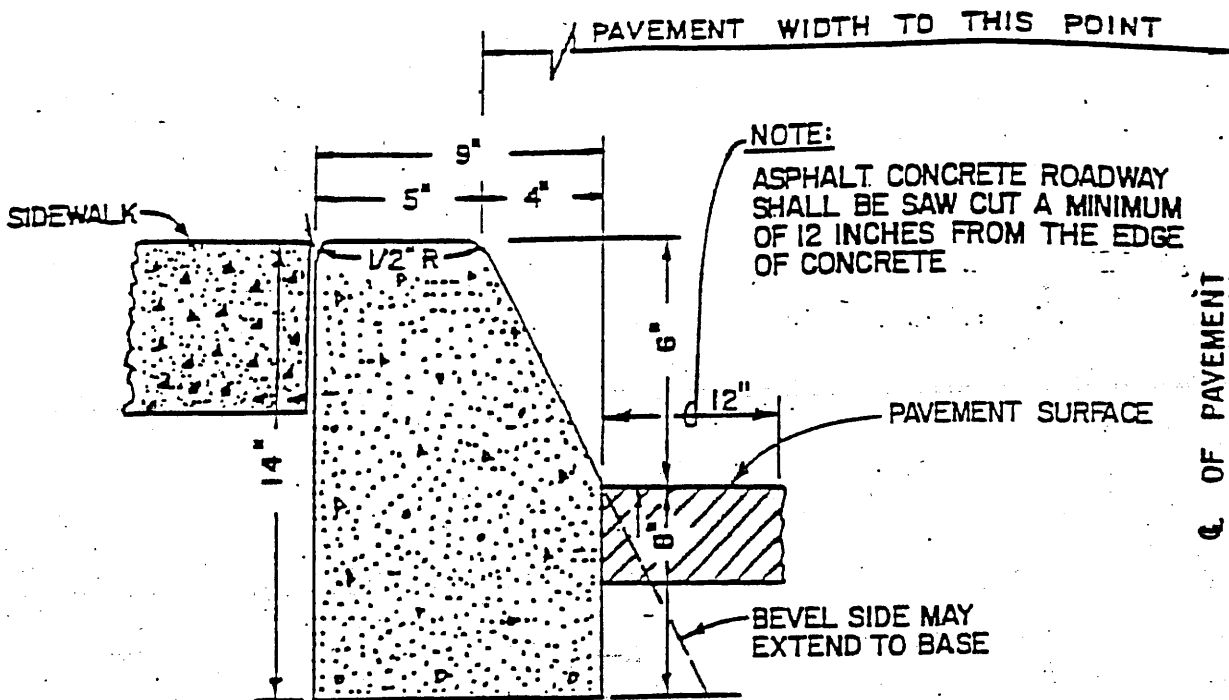
CONC. PER LIN. FT. = .0638 CU YDS.
 1 CU YD. = 15.7 LIN. FT.



NOTES:

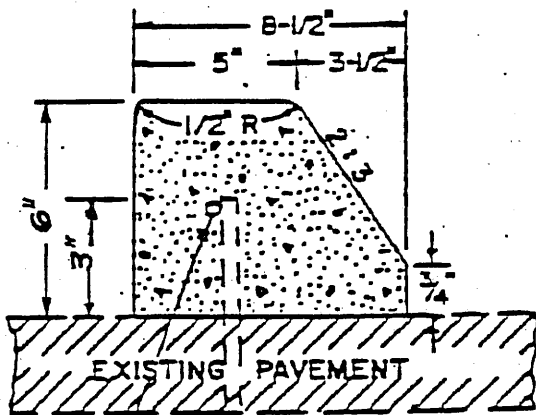
1. ALL CONCRETE PER STD-100
2. EXPANSION JOINTS FILLED WITH 1/4" PREMOLDED JOINT FILLER SHALL BE PLACED AT 60' INTERVALS, AND AT EACH SIDE OF DRIVEWAYS, ENDS OF CURB RETURNS, BETWEEN FULL SIDEWALK AND CURB; WEAKENED PLANE JOINTS AT 20' INTERVALS.
3. GUTTER HIKE-UP IN PLANE OF PAVEMENT IF CROSS-SLOPE OF PAVEMENT IS AWAY FROM CURB.
4. INCREASE DIM. BY 2" AT ALL COMMERCIAL DRIVEWAYS.
5. ADJACENT EXISTING STREET SECTION SHALL BE SAWCUT, REMOVED AND REPLACED FOR FULL GUTTER THICKNESS IN ACCORDANCE WITH SECTION 2 OF STANDARD 100.
 THE PRICE SHALL BE INCLUDED ON CURB OR CURB & GUTTER REMOVAL AND REPLACEMENT.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald H. Jensen</u> 5/15/57 City Engineer Date	STD. 202
CONCRETE CURB & GUTTER TYPE A-2		



C.Y. PER LIN. FT. = 0.02930
L.F. PER C.Y. = 34.13

TYPE "B-1"



WHEN EXTRUDED CONCRETE IS USED, BOND PAVEMENT SURFACE WITH APPROVED ADHESIVE.

C.Y. PER LIN. FT. = 0.01075
L.F. PER C.Y. = 93.0

1/2" LONGITUDINAL BAR - 3"
1/2" DOWEL SPACED 4', MIN. LENGTH 8"

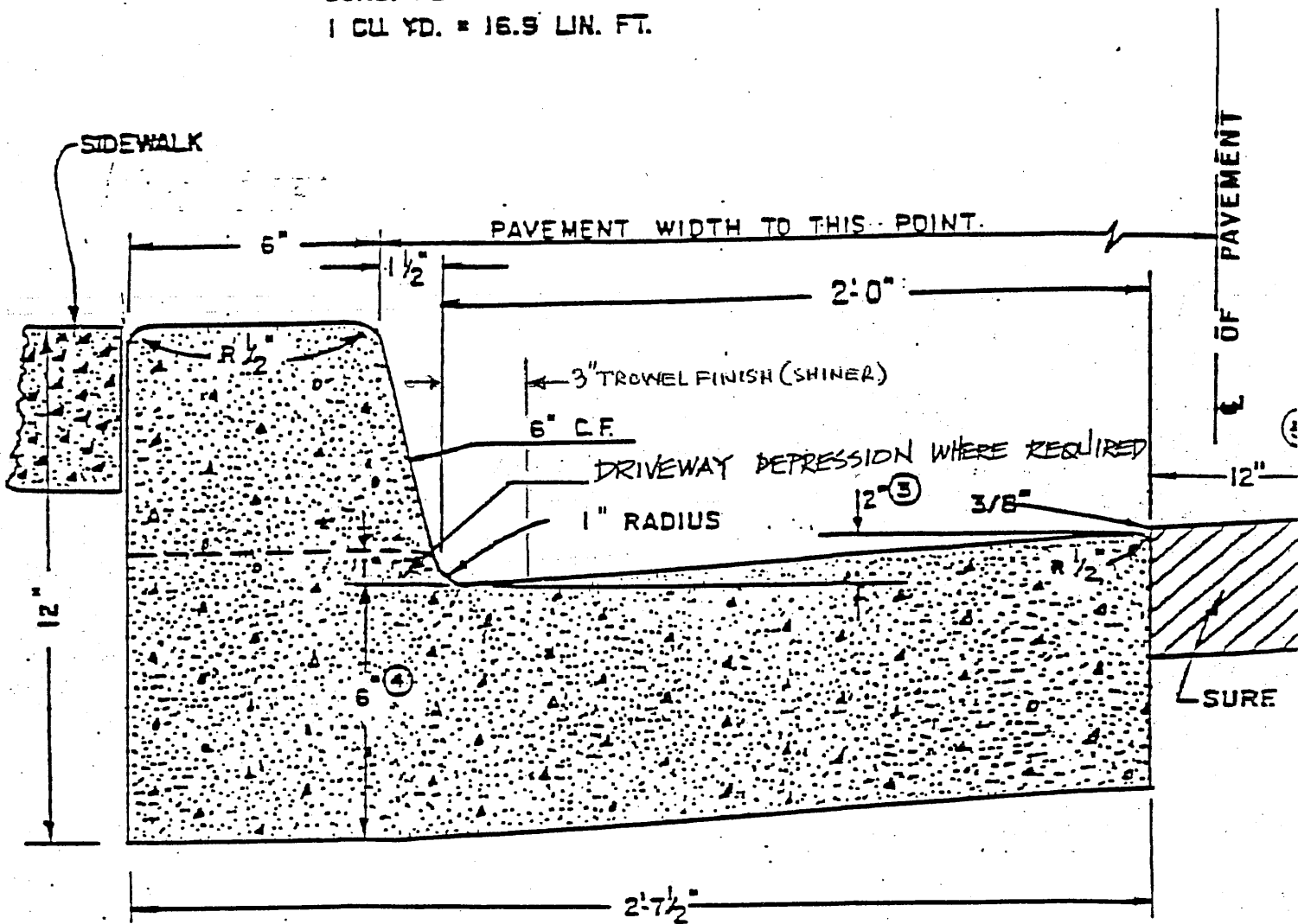
TYPE "B-3"

NOTES:

1. FOR CONCRETE SPECIFICATIONS: 520C. 2500 PSI minimum.
2. CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS, AND AT EACH SIDE OF DRIVEWAYS, ENDS OF CURB RETURNS

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD. 203
CONCRETE CURB TYPE "B"		

CONC. PER LIN. FT. = 0.0591 CU. YD.
 1 CU. YD. = 16.9 LIN. FT.



NOTES:

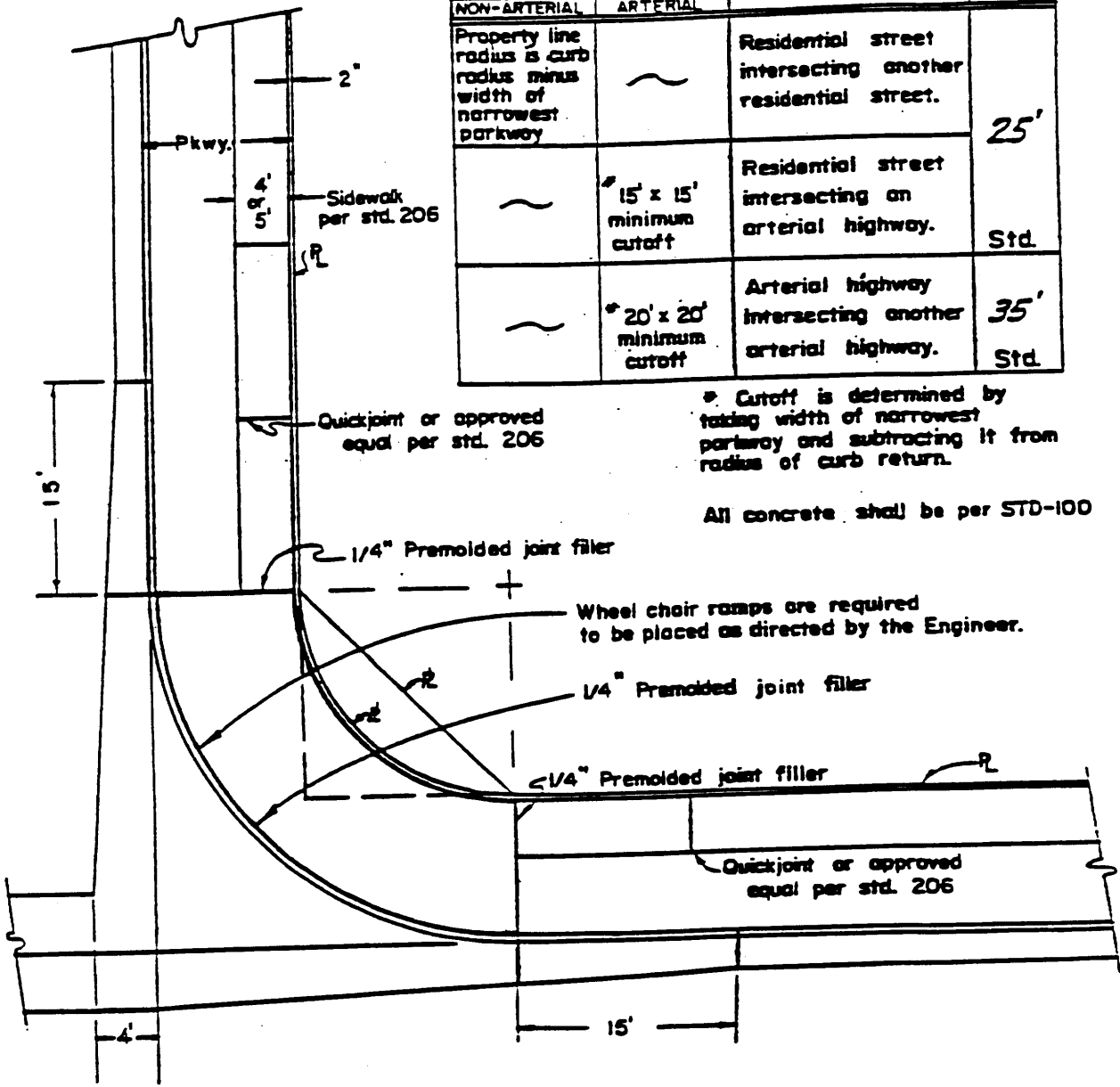
1. ALL CONC SHALL BE 520 C - 2500 PSI minimum.
2. CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS, AND AT EACH SIDE OF DRIVEWAYS, ENDS OF CURB RETURNS,
3. GUTTER HIKE-UP IN PLANE OF PAVEMENT IF CROSS-SLOPE OF PAVEMENT IS AWAY FROM CURB.
4. INCREASE DIM. BY 2" AT ALL COMMERCIAL DRIVEWAYS.
5. ADJACENT EXISTING STREET SECTION SHALL BE SAWCUT, REMOVED AND REPLACED FOR FULL GUTTER THICKNESS
 THE PRICE SHALL BE INCLUDED ON CURB OR CURB & GUTTER REMOVAL AND REPLACEMENT.

CITY OF BUENA PARK
 DEPARTMENT OF PUBLIC WORKS

Approved M. J. Jensen 5/15/87
 City Engineer Date

STD
 204

CONCRETE CURB & GUTTER TYPE "D"



PROPERTY-LINE RADIUS OR CORNER CUT-OFF		APPLICATION	CURB RADIUS
NON-ARTERIAL	ARTERIAL		
Property line radius is curb radius minus width of narrowest parkway	~	Residential street intersecting another residential street.	25'
~	* 15' x 15' minimum cutoff	Residential street intersecting an arterial highway.	Std.
~	* 20' x 20' minimum cutoff	Arterial highway intersecting another arterial highway.	35' Std.

* Cutoff is determined by taking width of narrowest parkway and subtracting it from radius of curb return.

All concrete shall be per STD-100

Wheel chair ramps are required to be placed as directed by the Engineer.

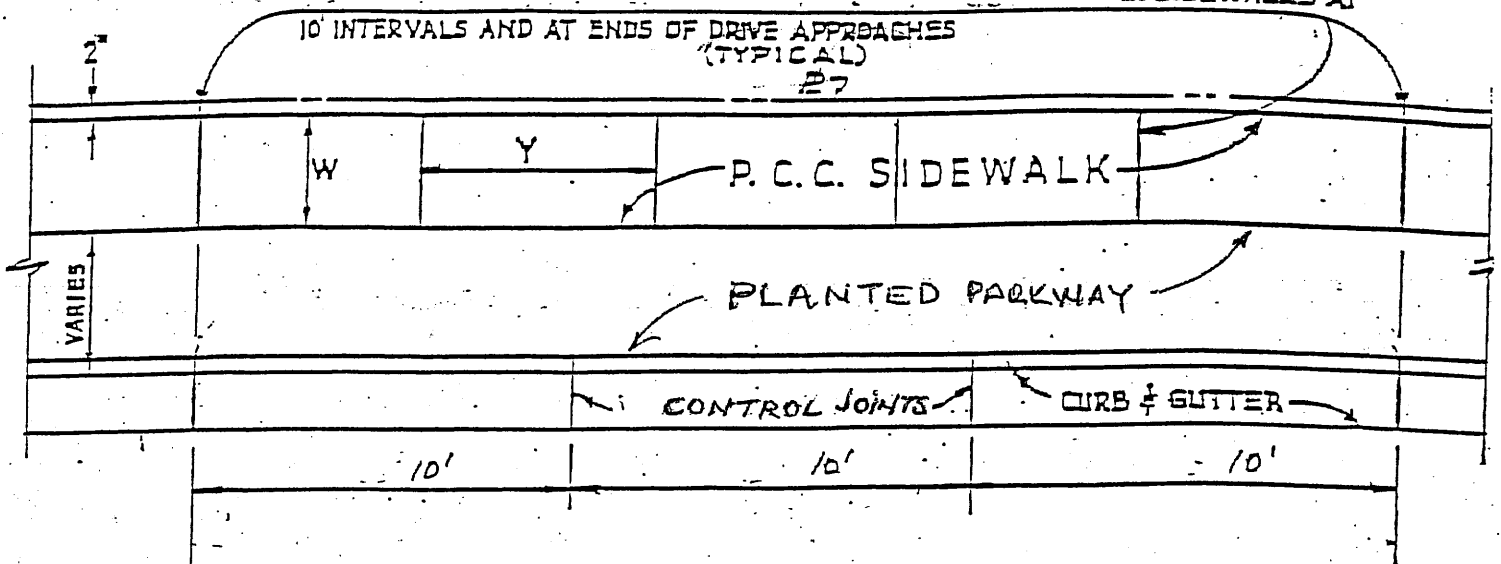
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87	STD 205
	City Engineer	
SIDEWALK RETURNS		

FOR CONCRETE 5200 C. 2500 psi

IN SIDEWALKS AT

10' INTERVALS AND AT ENDS OF DRIVE APPROACHES (TYPICAL)

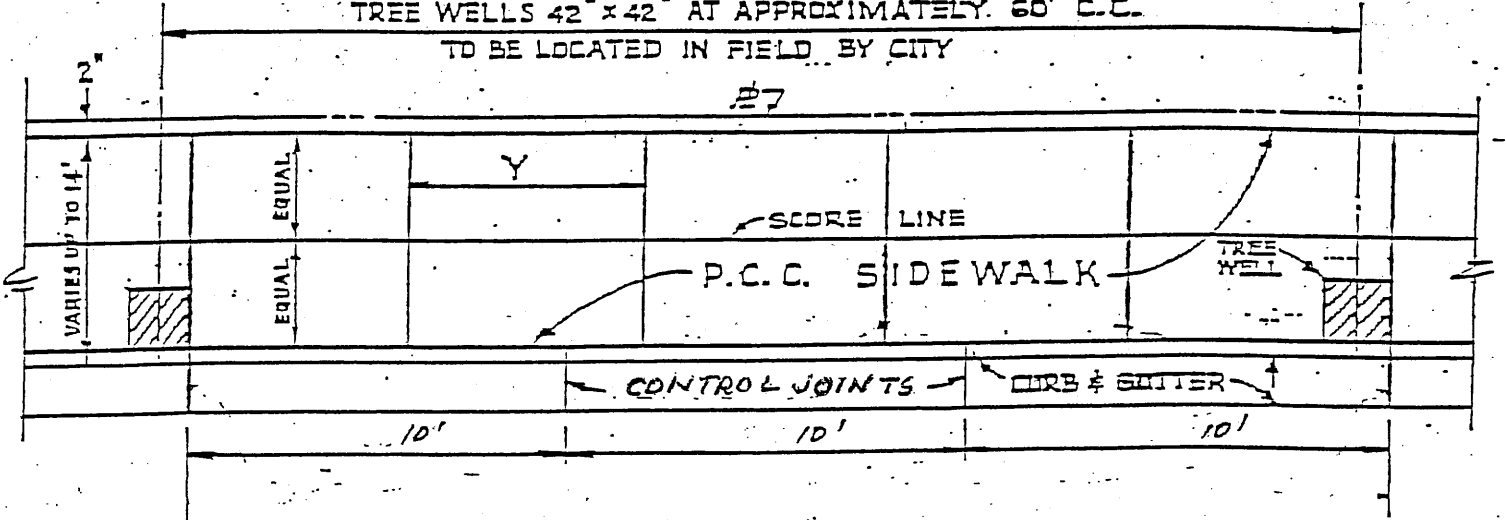
#7



PLANTED PARKWAY PLAN

TREE WELLS 42" x 42" AT APPROXIMATELY 60' C.C. TO BE LOCATED IN FIELD BY CITY

#7



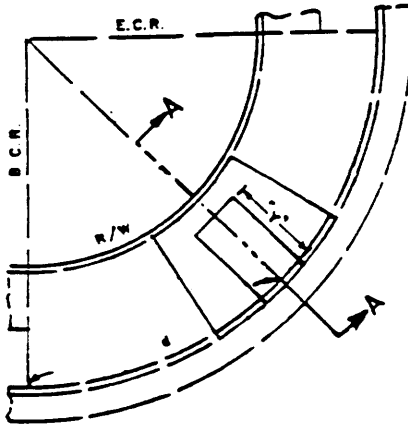
FULL SIDEWALK PLAN

SIDEWALK APPLICATION

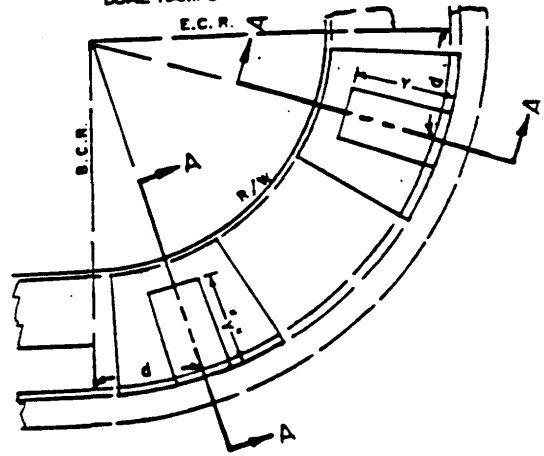
TYPE	PARKWAY WIDTH	TREE WELLS TO BE LOCATED ADJACENT TO BACK OF CURB	W	Y	THICKNESS	
					4, 5 OR FULL	DRIVEWAYS
RESIDENTIAL	SIDE-ON AND BACK-UP 8'-0" AND UNDER	TO BE LOCATED ADJACENT TO BACK OF CURB	FULL	10'	4"	5"
	6'-0" AND UNDER					
	OVER 6'-0" TO 8'-0"		4'			
COMMERCIAL	OVER 8'-0"					
	8'-0" & UNDER		FULL			8"
	OVER 8'-0"		5' OR FULL			

NOTE: NO TREES REQUIRED FOR PARKWAYS 6'-0" AND UNDER.

CASE I
SINGLE RAMP IN CURB RETURN

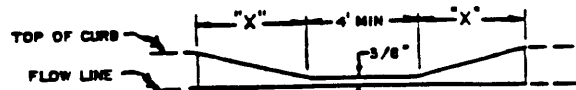


CASE II
DUAL RAMP IN CURB RETURN

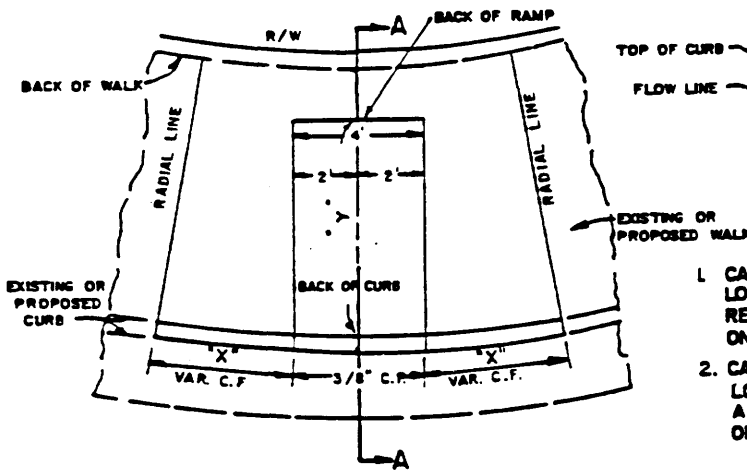


RAMP SIZE CHART

FOR 8' OR LARGER PKWY.	6" C.F.	6' 4"	FOR 6' PKWY.	6" C.F.	5' 4"
	8" C.F.	8' 6"		8" C.F.	6' 6"



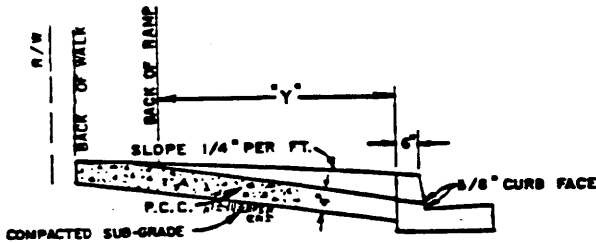
CURB DEPRESSION DETAIL



RAMP DETAIL

NOTES

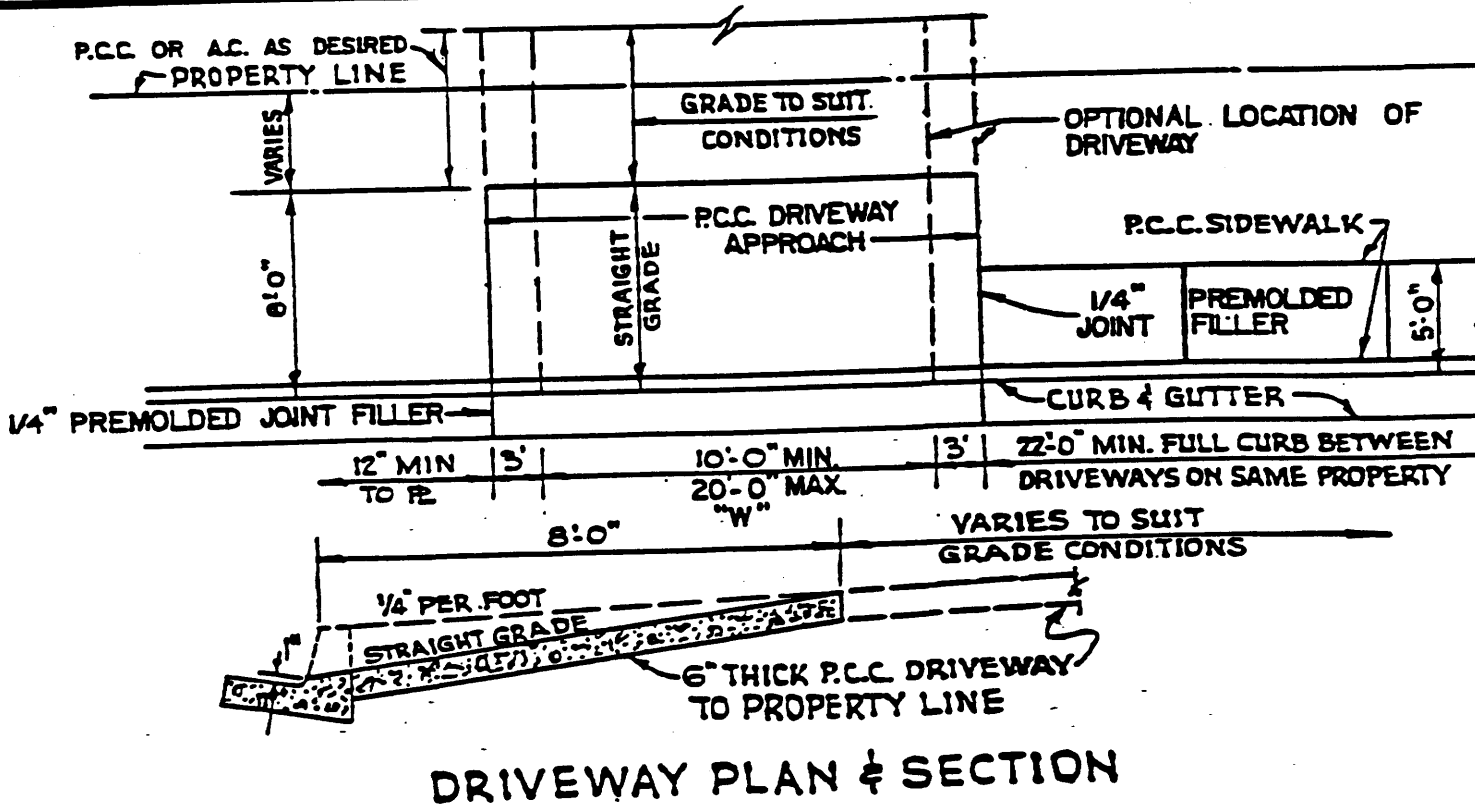
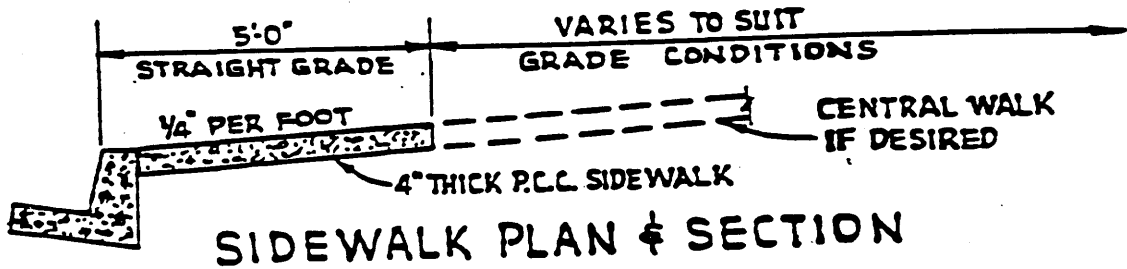
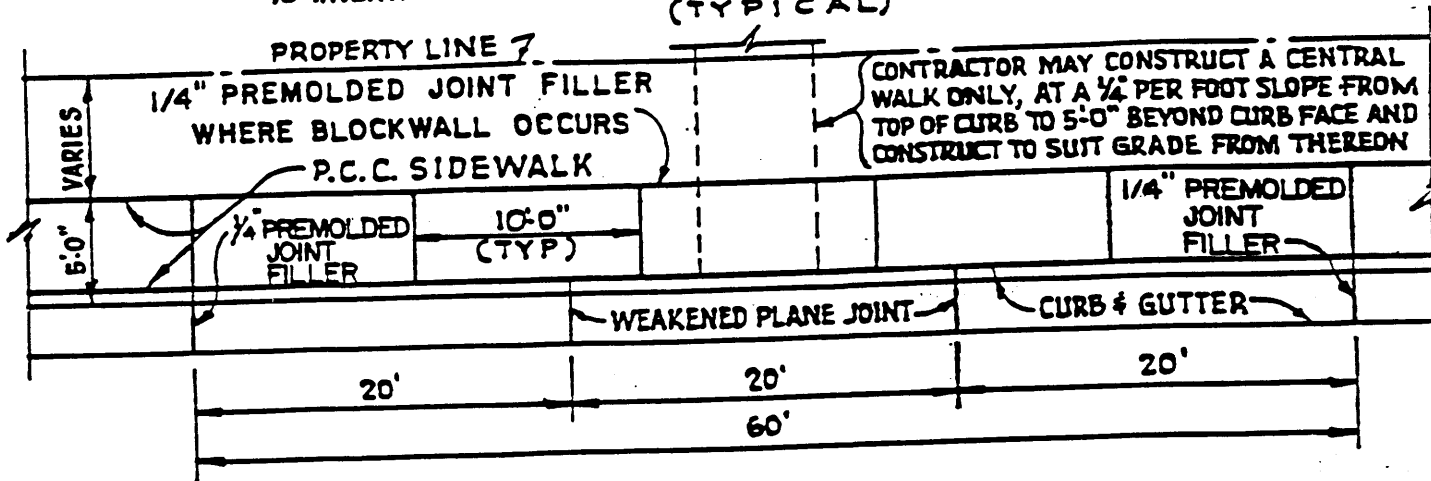
- CASE I: WHEELCHAIR RAMPS SHALL BE LOCATED AT THE MIDPOINT OF THE CURB RETURN UNLESS DISTANCE 'd' IS INDICATED ON PLAN
- CASE II: WHEELCHAIR RAMPS SHALL BE LOCATED AT DISTANCE 'd' FROM THE B.C.R. AND THE E.C.R. AS INDICATED ON THE PLAN OR AS DETERMINED BY THE CITY ENGINEER.
- RAMPS SHALL BE CONSTRUCTED WITH A ROUGH-BROOM FINISH TRANSVERSE TO THE AXIS OF THE RAMP IN ORDER TO INDICATE A CHANGE OF TEXTURE WITH THE ADJACENT WALK
- RAMPS SHALL BE CONSTRUCTED OF CLASS 520-C-2500 CONCRETE WITH MAX. SLUMP OF 4
- USE CASE I UNLESS OTHERWISE SHOWN ON PLAN
- IN AREAS OF EXISTING CURB & GUTTER, REMOVE CURB ONLY AND POUR NEW CURB MONOLITHIC WITH WHEELCHAIR RAMP, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER
- RAMP SHALL BE 'SCORED' PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION.



SECTION A-A

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED: <i>Donald K. Jensen</i> 5/15/87 ENGINEER DATE	STD. 207
	REVISED 4/13/94 NO. _____	
WHEELCHAIR RAMPS		

ADJUSTABLE CONTROL JOINTS, QUICK JOINT OR EQUAL SHALL BE CONSTRUCTED IN SIDEWALKS AT 10' INTERVALS AND AT ENDS OF DRIVE APPROACHES AND AT CURB RETURNS (TYPICAL)



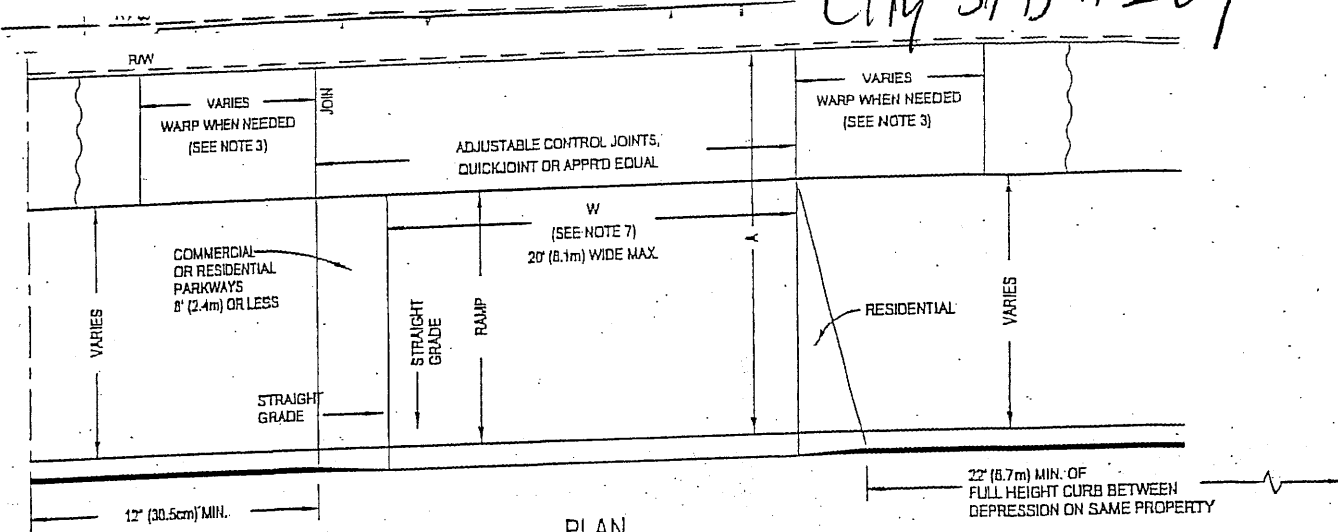
FOR CONCRETE SEE STD-100

CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

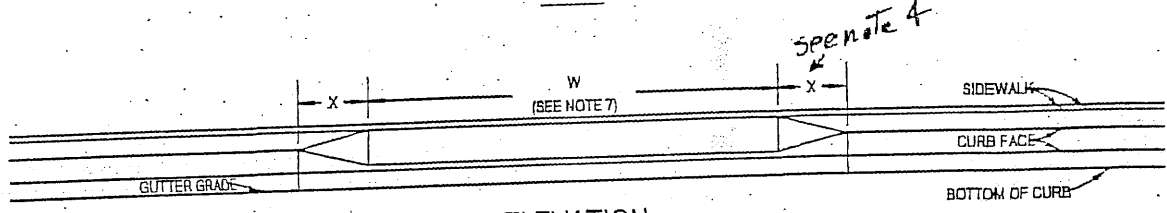
Approved: *Ronald K. Jensen* 5/15/87
City Engineer Date

SIDEWALK AND DRIVEWAY DETAILS (BELLEHURST RESIDENTIAL ONLY)

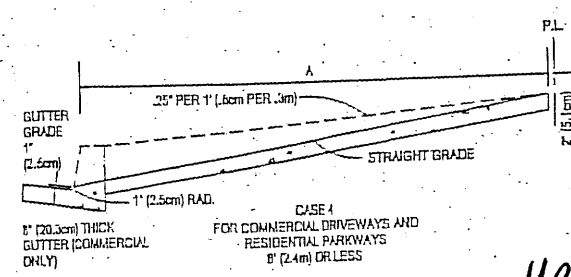
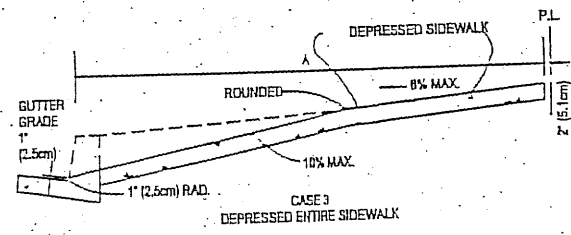
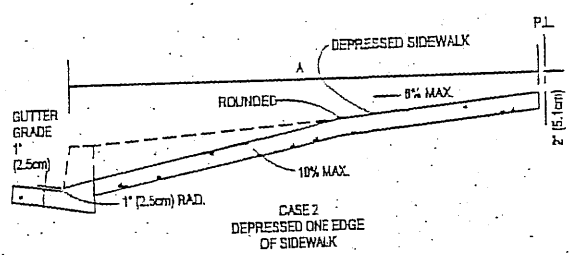
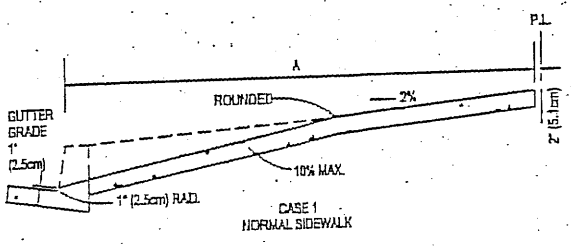
ST
20



PLAN



ELEVATION



NOTES:

- CASE 1 NORMALLY APPLIES.
- USE CASE 2 WHEN RAMP SLOPES WOULD EXCEED 10% IN CASE 1.
- USE CASE 3 WHEN SIDEWALK SLOPE WOULD EXCEED 6% IN CASE 2. LONGITUDINAL SLOPE OF WARPED AREA ADJACENT TO DRIVEWAY SHALL NOT VARY MORE THAN 6% FROM THE LONGITUDINAL GRADE LINE OF THE SIDEWALK.
- X=3' (.9m) EXCEPT FOR CURB HEIGHTS OVER 10' (25.4cm) WHERE 3:1 SLOPES SHALL BE USED ON CURB SLOPES.
- SIDEWALK AND RAMP THICKNESS "T" AT DRIVEWAY SHALL BE 6" (15.2cm) FOR RESIDENTIAL AND 8" (20.3cm) FOR COMMERCIAL DRIVES.
- DIFFERENCE IN SLOPE OF THE DRIVEWAY RAMP AND THE SLOPE OF A LINE BETWEEN THE GUTTER AND A POINT ON THE ROADWAY 5' (1.5m) FROM THE GUTTER LINE SHALL NOT EXCEED 15%. REDUCE DRIVEWAY RAMP SLOPE, NOT GUTTER SLOPE, WHERE REQUIRED.
- WIDTH OF DRIVEWAY "W" SHALL BE 20' (6.1m) WIDE MAXIMUM.
- MAINTAIN 12" (30.5cm) OF FULL HEIGHT CURB BETWEEN P.L. AND EDGE OF DRIVEWAY.
- NOT LESS THAN 22' (6.7m) OF FULL HEIGHT CURB SHALL BE MAINTAINED BETWEEN DRIVEWAYS ON THE SAME PROPERTY.
- IN THE SASE OF MULTIPLE DRIVEWAYS ON A SINGLE OWNERSHIP PARCEL FRONTAGE, THE TOTAL "W" SHALL NOT EXCEED 60% OF THE FRONTAGE AND THE PARCEL FRONTAGE MUST BE A MINIMUM OF 120' (36.6m) FOR A CIRCULAR DRIVEWAY.
- CASE TABLE:

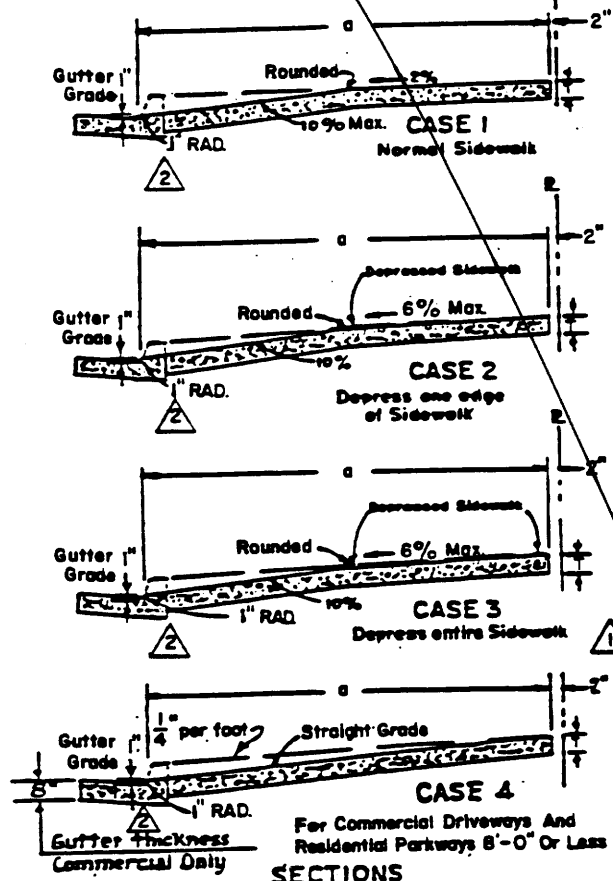
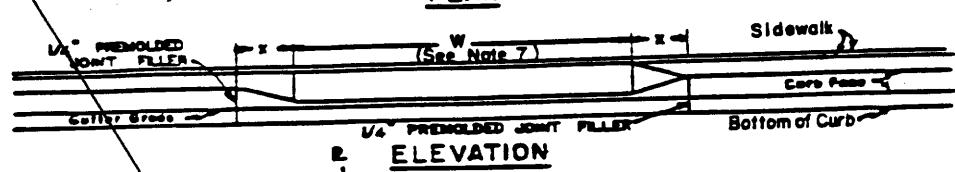
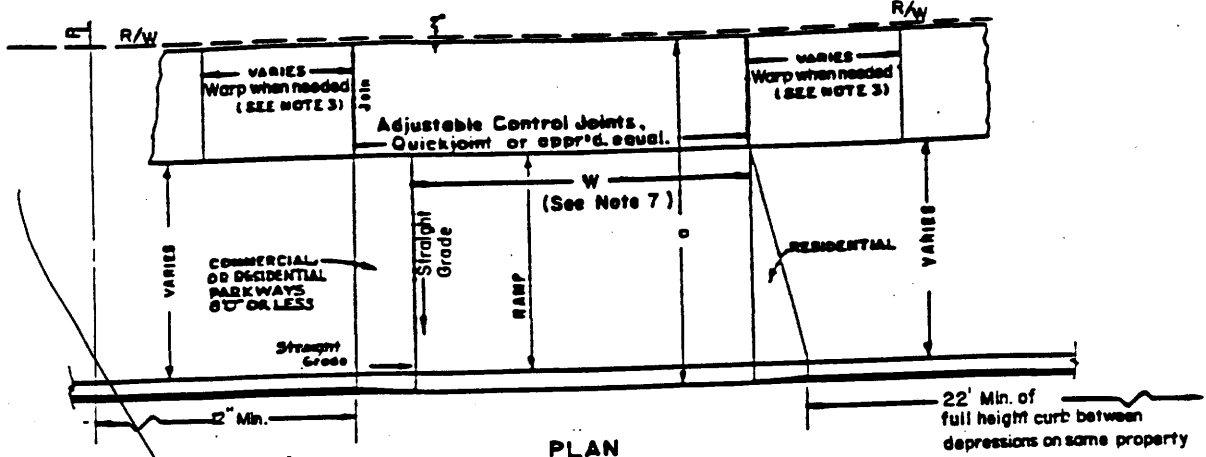
CURB FACE HEIGHT	6" (15.2cm)	6" (15.2cm)	6" (15.2cm)
PARKWAY A	7' (2.1m)	10' (3m)	12' (3.7m)
CASE	4	1	1
	8" (20.3cm)	8" (20.3cm)	8" (20.3cm)
	8' (2.4m)	10' (3m)	11' (3.4m)
	4	2	2

- CONCRETE SHALL BE 560-C-3250 P.S.I WITH 4" (10.2cm) MAX SLUMP.
- FOR NEW DRIVEWAYS THE EXISTING CURB AND GUTTER AND SIDEWALK SHALL BE REMOVED AND RECONSTRUCTED TO THE SATISFACTION OF THE CITY ENGINEER.
- WHEN TWO DRIVE APPROACHES ABUT EACH OTHER ON DIFFERENT PROPERTIES, THEY SHALL BE MADE INTO A COMMUNITY DRIVE APPROACH.

Updated Copy City Standard #209

DEPRESSED CURB DRIVEWAY APPROACH

DRAWN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.



NOTES

- Case 1 normally applies.
- Use Case 2 when ramp slopes would exceed 10% in Case 1.
- Use Case 3 when sidewalk slope would exceed 6% in Case 2. Longitudinal slope of warped area adjacent to driveway shall not vary more than 6% from the longitudinal grade line of the sidewalk.
- X=3'-0" except for curb heights over 10" where 3:1 slopes shall be used on curb slope.
- Sidewalk and ramp thickness "T" at driveway shall be 6" for Residential and 8" for Commercial drives.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5 feet from the gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Width of driveway (W) shall conform to Title 19 of the City Code (Zoning Ordinance)
- Maintain 12" of full height curb between R/L and edge of driveway.
- Not less than 22' of full height curb shall be maintained between driveways on the same property.
- In the case of multiple driveways on a single ownership parcel frontage, the total "W" shall not exceed 60% of the frontage and the parcel frontage must be a minimum of 120' for a circular driveway.
- CASE TABLE:**

Curb Face Height	6"	6"	6"	8"	8"	8"
Parkway s	7	10	12	8	10	11
Case	4	1	1	4	2	2
- For concrete see STD-100
- For new driveways the existing curb and gutter and sidewalk shall be removed and reconstructed to the satisfaction of the City Engineer.
- When two drive approaches abut each other on different properties, they shall be made into a community drive approach.

CITY OF BUENA PARK
 DEPARTMENT OF PUBLIC WORKS
 REVISED 4/13/94

Approved: *Donald K. Jensen* 5/15/87
 City Engineer Date

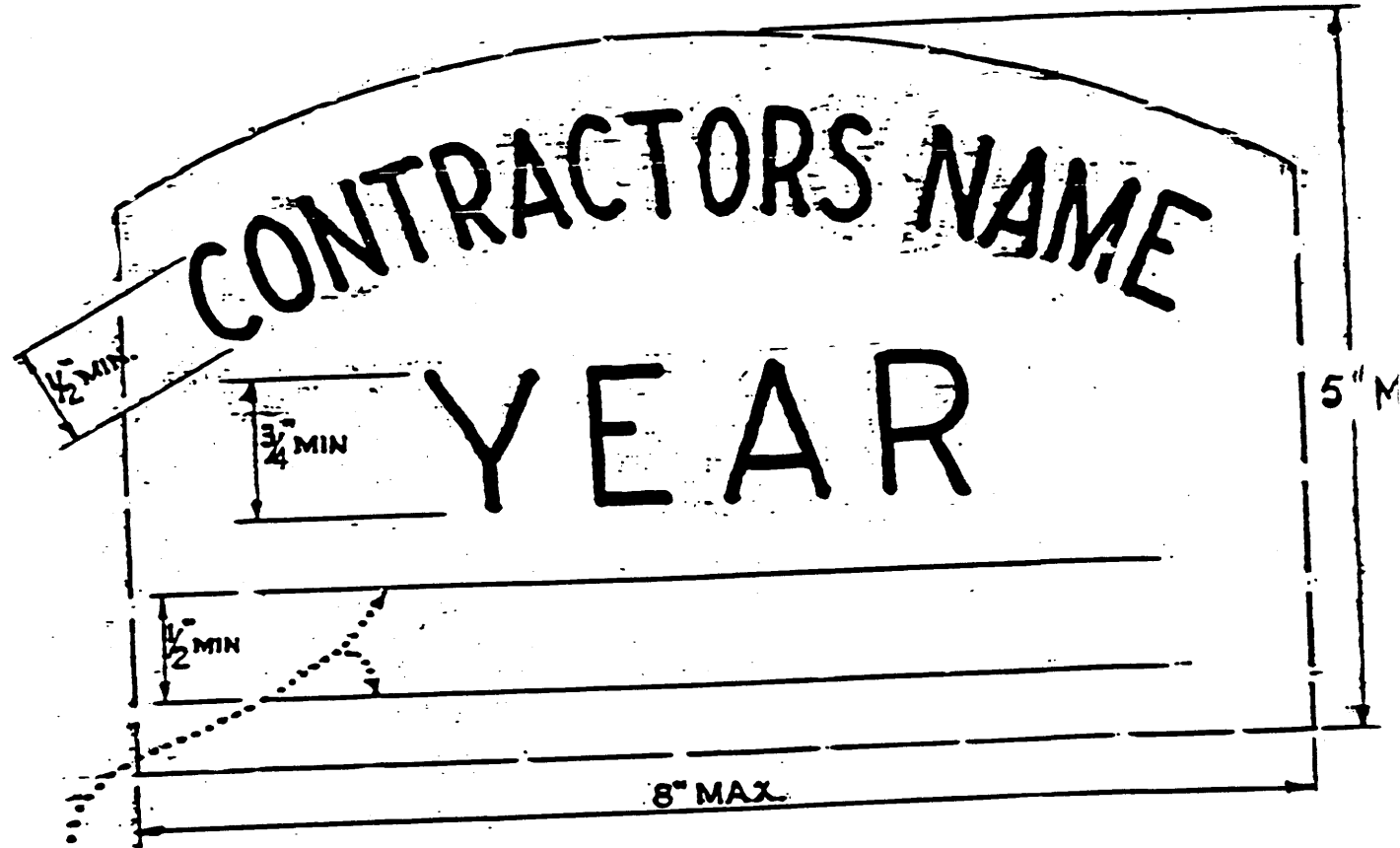
STD 209

DEPRESSED CURB DRIVEWAY APPROACH

See update dated 9/1/00

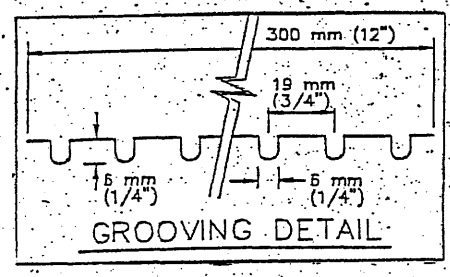
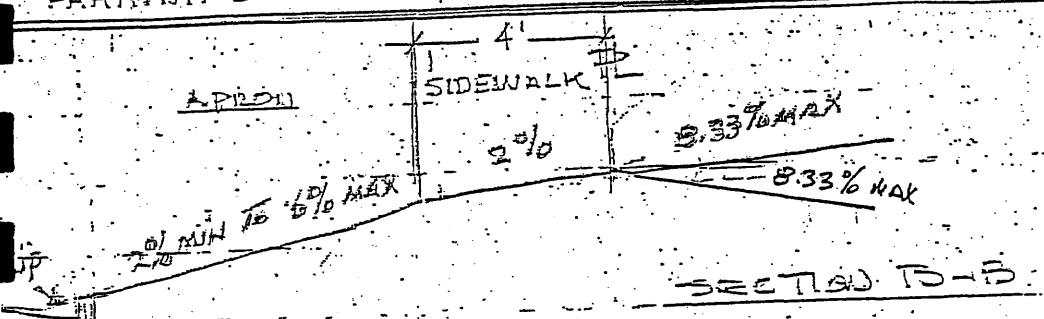
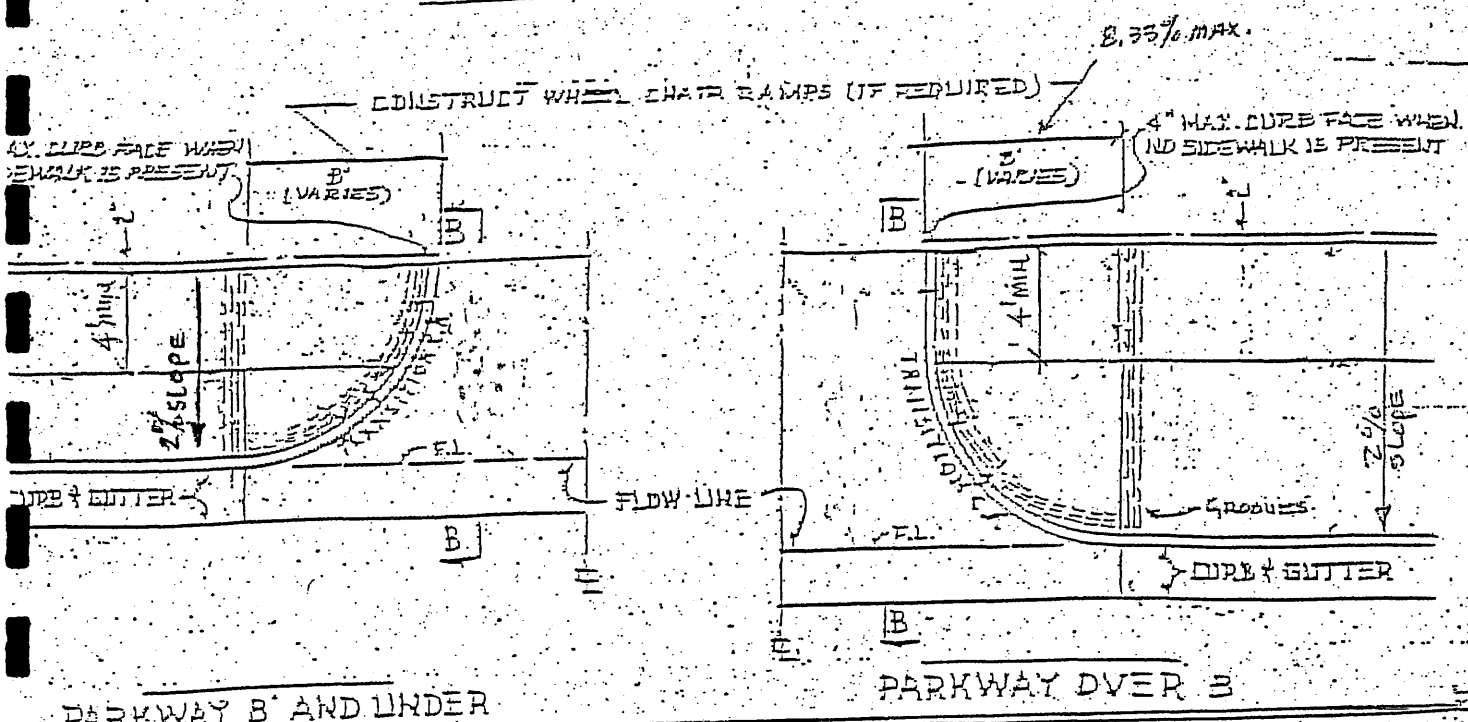
The 'CONTRACTOR' shall, upon completion of work performed, mark the extreme ends of each job, such as sidewalks, driveways, curb, gutter etc., with a stamp of the type shown below.

This is to identify the YEAR work was performed and by WHOM.



This additional space may be used to complete the CONTRACTORS name when space above is not applicable, or, when space above is sufficient, the words 'CEMENT CONTRACTOR', 'GENERAL CONTRACTOR' etc. may be used.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STE 210
CONCRETE IDENTIFICATION STAMP		



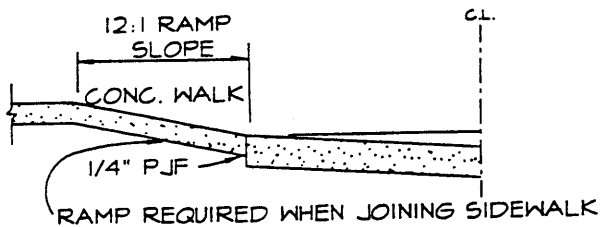
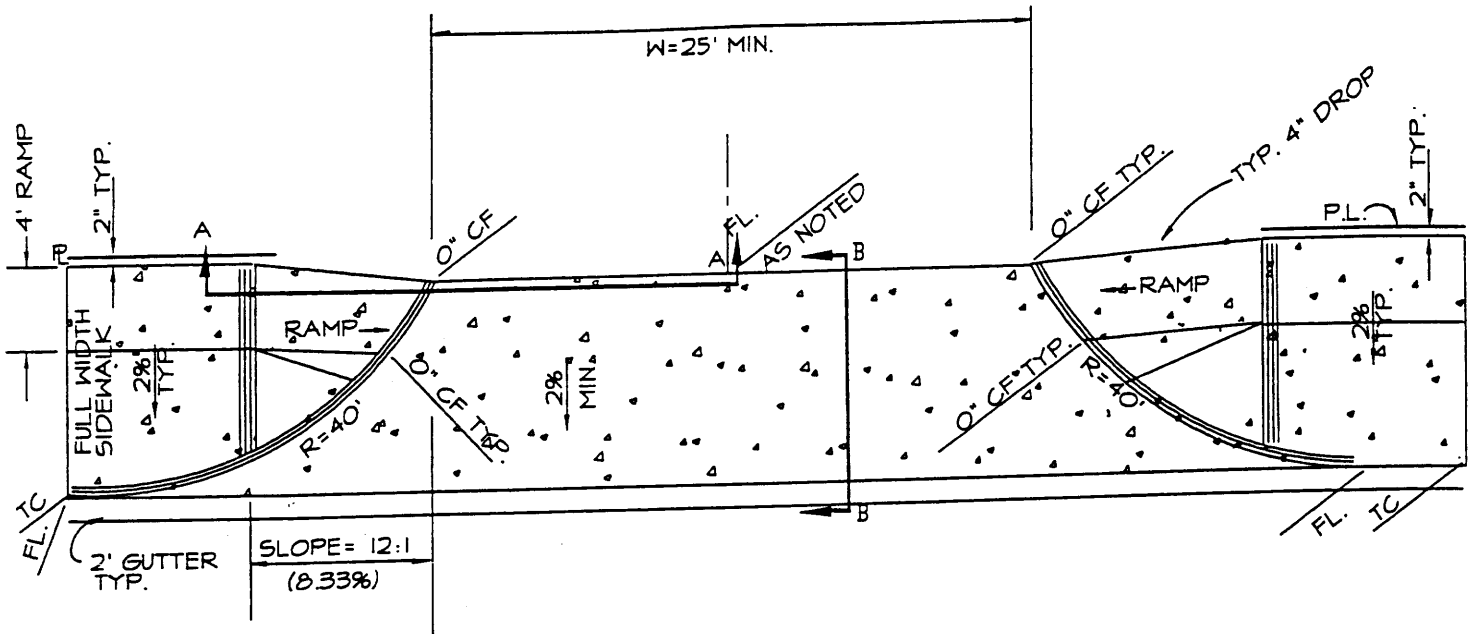
NOTES:

1. ON-SITE GRADES.
2. THIS STANDARD SHALL ONLY BE USED FOR ALLEY APPROACHES, COMMERCIAL DRIVEWAYS, AND OTHER APPROVED LOCATIONS.
3. CONCRETE SHALL BE 560-C-3,250 PSI.
4. DRIVE APPROACH THICKNESS, T, SHALL BE 6" (20.3cm) UNLESS OTHERWISE APPROVED.
5. W=20' (6.1m) FOR ALLEY APPROACHES, AND 25' (7.6m) MIN. FOR ALL COMMERCIAL DRIVE APPROACHES.
6. FOR MULTIPLE DRIVEWAYS ON A SINGLE OWNERSHIP PARCEL FRONTAGE, THE TOTAL W SHALL NOT EXCEED 60% OF THE FRONTAGE AND THE PARCEL FRONTAGE MUST BE A MIN. OF 120' (36.6m).
7. FOR NEW DRIVEWAYS, THE EXISTING CURB, GUTTER AND SIDEWALK SHALL BE REMOVED AND RECONSTRUCTED TO THE SATISFACTION OF THE CITY ENGINEER.
8. NOT LESS THAN 22' (6.7m) OF FULL HEIGHT CURB SHALL BE MAINTAINED BETWEEN DRIVEWAYS ON THE SAME PROPERTY.
9. SUBGRADE SHALL BE COMPACTED TO 95% AND VERIFIED BY SOILS ENGINEER TEST.
10. RADIUS AT APPROACH MAY NEED TO BE REDUCED IF LIGHT POLE, CABINET, OR F.H. CANNOT BE MOVED. REQUIRES CITY APPROVAL.

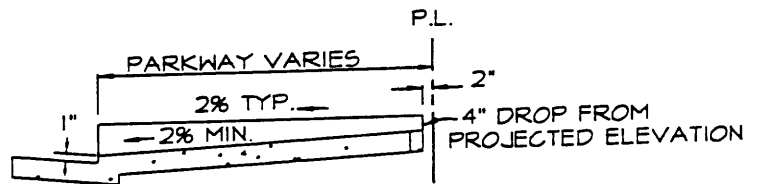
BY: WVN DATE: 09/07/00
 CHECKED: NSH SCALE: N.T.S.

CURB RETURN TYPE DRIVE APPROACH

**STD.
213**



SECTION A-A

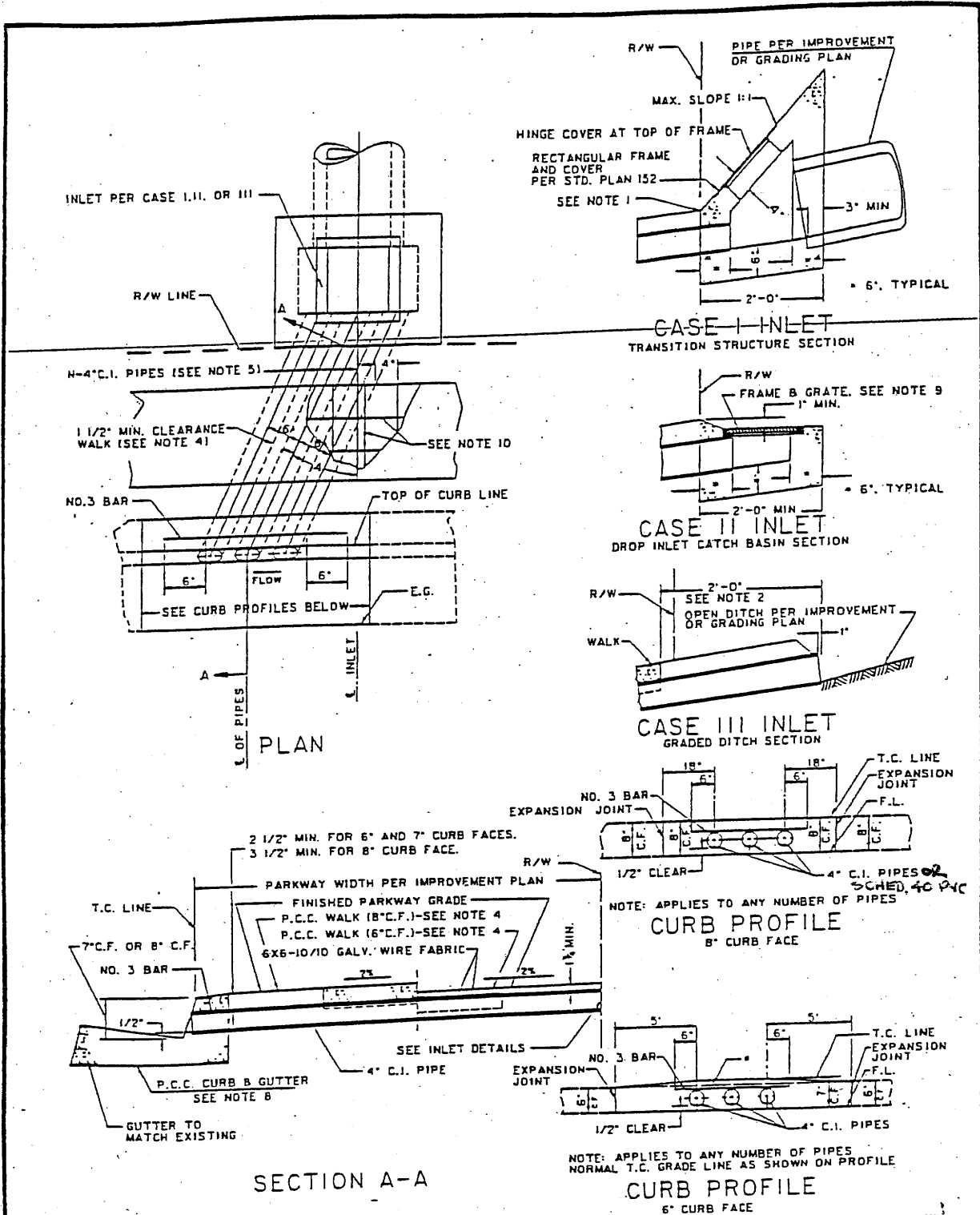


SECTION B-B

1. CURB FACE MODIFICATIONS MAY BE REQUIRED TO INSTALL RAMP (SEE STANDARD 207) OR MEET ON-SITE GRADES.
2. THIS STANDARD SHALL ONLY BE USED FOR A 40 FOOT CURB RETURN RADIUS REQUIREMENT
3. CONCRETE SHALL BE 560-C-3,250 PSI.
4. DRIVE APPROACH THICKNESS, 'T' SHALL BE 8" UNLESS OTHERWISE APPROVED.
5. MINIMUM DRIVE APPROACH WIDTH IS 25' FOR ALL COMMERCIAL DRIVE APPROACHES.
6. FOR MULTIPLE DRIVEWAYS ON A SINGLE OWNERSHIP PARCEL FRONTAGE, THE TOTAL 'W' SHALL NOT EXCEED 60% OF THE FRONTAGE AND THE PARCEL FRONTAGE MUST BE A MIN. OF 120'.
7. FOR NEW DRIVEWAYS, THE EXISTING CURB, GUTTER AND SIDEWALK SHALL BE REMOVED AND RECONSTRUCTED TO THE SATISFACTION OF THE CITY ENGINEER.
8. NOT LESS THAN 22' OF FULL HEIGHT CURB SHALL BE MAINTAINED BETWEEN DRIVEWAYS ON THE SAME PROPERTY.
9. SUBGRADE SHALL BE COMPACTED TO 95% AND VERIFIED BY SOILS ENGINEER TEST.

DRAWN: CKL	DATE: 3/16/00
CHECKED: DE	SCALE: N.T.S.
APPR: <i>Donald Jensen</i>	DATE: 3/16/00

CURB RETURN TYPE DRIVE APPROACH WITH RAMPS - TANGENT RADIUS = 40'



REF: AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

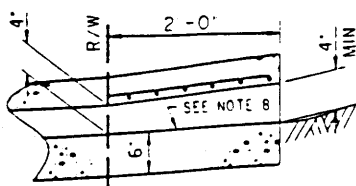
DRAWN NJG CHECKED NSH APPR. <i>Bl Jensen</i>	CURB DRAIN USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION	DATE 4/13/94 SCALE NONE REVISED 1992
DEPT. PUBLIC WORKS	CITY OF BUENA PARK	STD-214 1 OF 2

NOTES

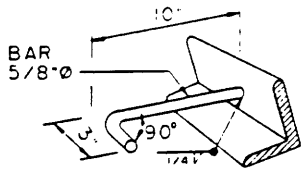
1. IF THE TOE OF SLOPE IS ALLOWED WITHIN THE R/W. INLET CASE I BEGINS AT THE TOE RATHER THAN THE R/W LINE.
2. FOR OPEN DITCH (CASE INLET III). THE 2' EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 2' OR MORE FROM THE R/W LINE. HOWEVER, PIPE SHALL EXTEND TO R/W LINE.
3. TOP OF INLET STRUCTURE (CASE I AND II) TO BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICABLE.
4. CONSTRUCT P.C.C. WALK WHEN SPECIFIED ON PLAN. THE CONTRACT PRICE PAID FOR P.C.C. WALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.
5. "N" EQUALS NUMBER OF PIPES (MAXIMUM OF THREE) AS SPECIFIED ON PLAN.
6. INLET CASE TO BE SPECIFIED ON IMPROVEMENT OR GRADING PLAN.
7. ANGLE "A" EQUALS 0°, UNLESS OTHERWISE SPECIFIED.
8. TYPE, DIMENSIONS AND ELEVATIONS OF P.C.C. CURB AND GUTTER PER IMPROVEMENT PLAN.
9. UNLESS OTHERWISE SPECIFIED, FRAME AND GRATE FOR CASE II INLET SHALL BE ALHAMBRA FOUNDRY 14"x14" A-2012 (GALVANIZED), LONG BEACH IRON WORKS, INC. X-311B (GALVANIZED) OR EQUAL.
10. AT LOCATIONS OF LESS THAN 8 INCH CURB FACE, USE 6X6-10/10 GALVANIZED WIRE FABRIC. WIRE FABRIC TO EXTEND 8 INCHES BEYOND THE EDGE OF CAST IRON PIPES.

AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

DRAWN NJG		CURB DRAIN	DATE 4/13/94
CHECKED NSH			SCALE NONE
APPR. <i>K. Jensen</i>			REVISED 1992
DEPT. PUBLIC WORKS	CITY OF BUENA PARK	STD-214	20F2

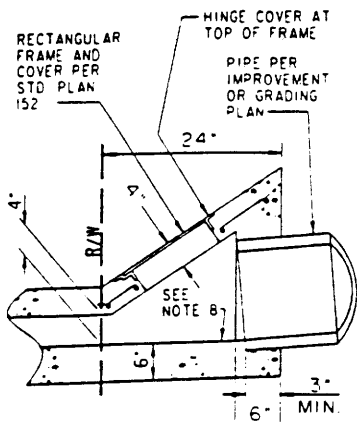


SECTION
INLET TYPE 2

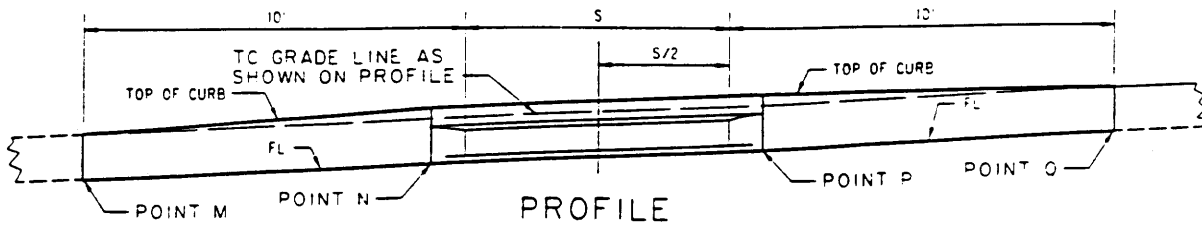
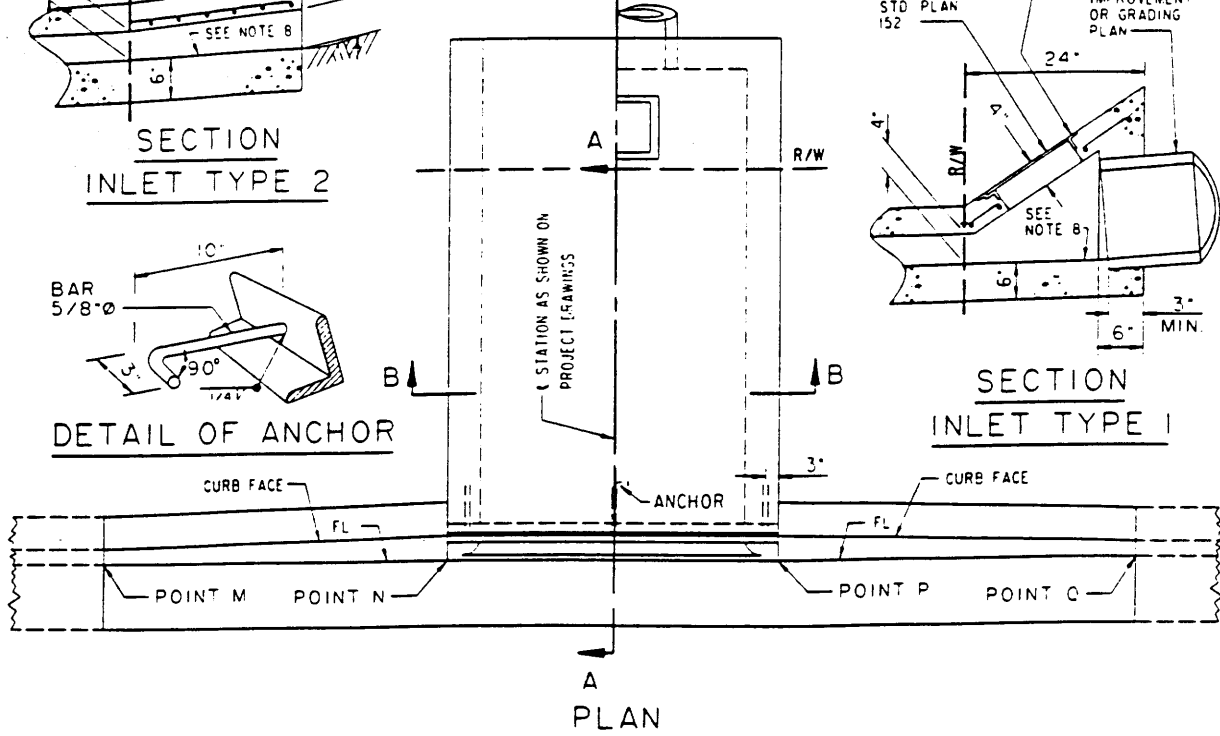


DETAIL OF ANCHOR

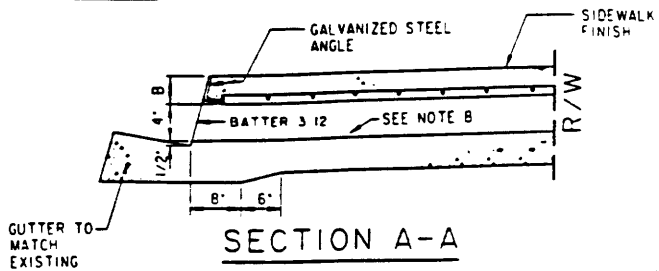
INLET TYPE 2 INLET TYPE 1



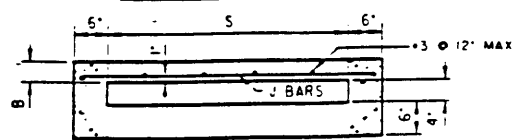
SECTION
INLET TYPE 1



S	B	GALVANIZED STEEL ANGLE	ANCHOR	J BAR	
				SIZE	SPACING
12'	3'	2 1/2"x2"x3/8"	2	#3	7'
18'	3'	2 1/2"x2"x3/8"	2	#3	7'
24'	3'	2 1/2"x2"x3/8"	2	#3	7'
2'-6"	3'	2 1/2"x2"x3/8"	2	#3	7'
3'-0"	3'	2 1/2"x2"x3/8"	3	#3	7'
3'-6"	3'	2 1/2"x2"x3/8"	3	#3	6'
4'-0"	3'	2 1/2"x2"x3/8"	3	#3	5'
4'-6"	4'	3 1/2"x3"x1/2"	3	#3	6 1/2'
5'-0"	4'	3 1/2"x3"x1/2"	3	#3	5'
5'-6"	4'	3 1/2"x3"x1/2"	3	#3	4'
6'-0"	4'	3 1/2"x3"x1/2"	3	#3	3 1/2'



SECTION A-A



SECTION B-B

REF: AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

DRAWN NJG	PARKWAY DRAIN	DATE 4/13/94
CHECKED NSH		SCALE NONE
APPR. <i>[Signature]</i>	USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION	1993
DEPT. PUBLIC WORKS	CITY OF BUENA PARK	STD-215 1 OF 2

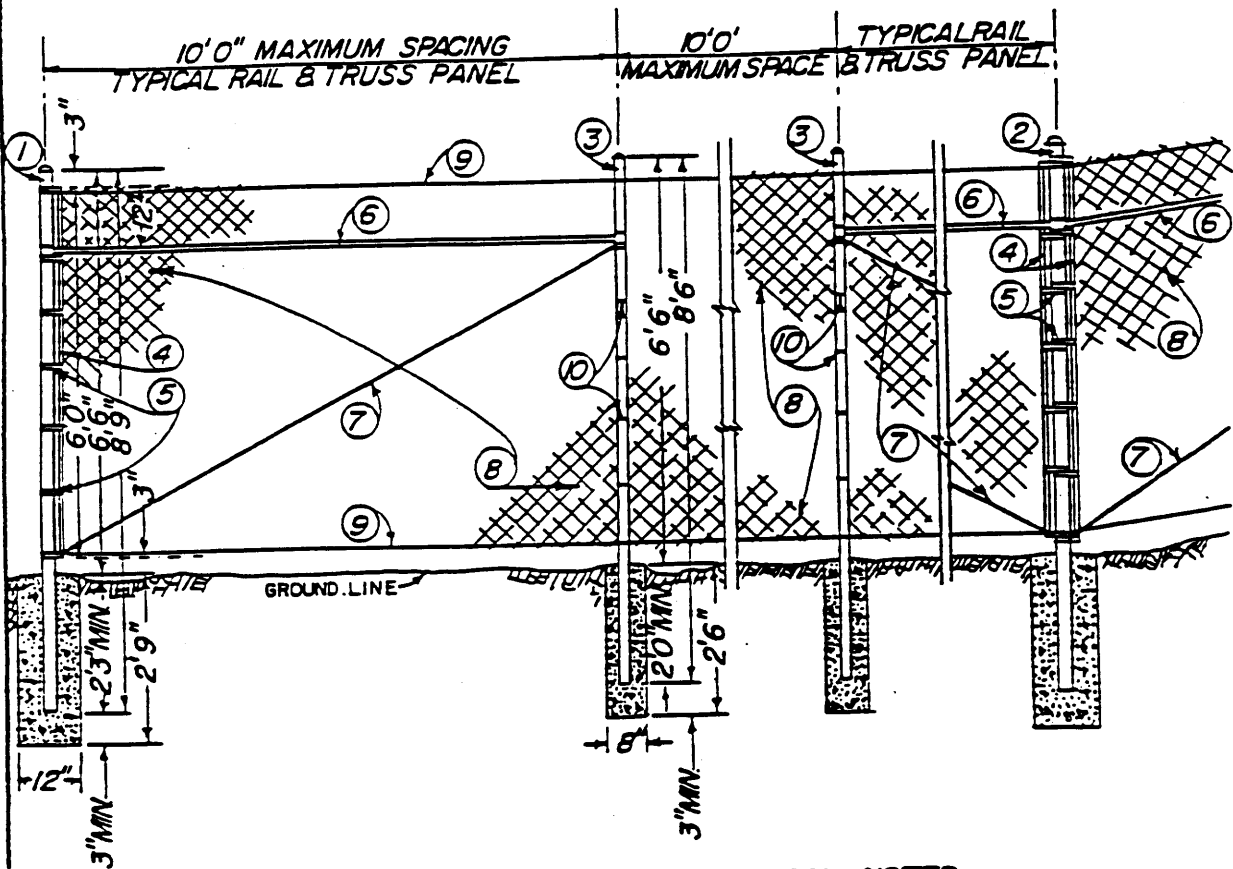
NOTES

1. FLOOR OF BOX TO BE TROWELED SMOOTH.
2. IF THE TOE OF SLOPE IS ALLOWED WITHIN THE R/W. INLET TYPE 1 BEGINS AT THE TOE RATHER THAN THE R/W LINE.
3. FOR OPEN DITCH (TYPE 2). THE 2' EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 2' OR MORE FROM THE R/W LINE. HOWEVER, PIPE SHALL EXTEND TO R/W LINE IN ANY EVENT.
4. TOP OF INLET STRUCTURE (TYPE 1 & 2) TO BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.
5. A HEADED STEEL STUD 5/8"x6 3/8" WITH 1" HEADS ATTACHED BY A FULL PENETRATION BUTT WELD MAY BE USED AS AN ALTERNATE ANCHOR.
6. NORMAL CURB FACE AT POINT M AND O. B+5' AT POINT N AND P.
7. THE 3" LEG OF THE BAR 5/8"Ø ANCHORS SHALL BE PARALLEL TO THE TOP OF SIDEWALK.
8. SLOPE = 1/4" PER FOOT.

AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

DRAWN NJG		PARKWAY DRAIN	DATE 4/13/94
CHECKED NSH			SCALE NONE
APPR. <i>NSH</i>			1993
DEPT. PUBLIC WORKS	CITY OF BUENA PARK	STD-215	2 OF 2

MISCELLANEOUS STANDARDS



DETAIL NOTES:

- 1 CORNER OR END POSTS - 2" by 8'9" standard galvanized pipe with drive fit galvanized caps.
- 2 PULL POSTS - 2" by 8'9" standard galvanized pipe with drive fit galvanized caps; to be installed at a maximum interval of 1000 feet along fence line & at abrupt changes in grade.
- 3 LINE POSTS - 1 1/2" by 8'6" standard galvanized pipe with drive fit galvanized caps.
- 4 STRETCHER BARS - 1/2 inch by 3/4 inch (minimum).
- 5 STRETCHER BAR BANDS - 3/8 inch by 1/2 inch (minimum) on 12" centers, at end, corner, and pull posts.
- 6 BRACES - 1 1/2 inch standard galvanized pipe (Compression member).
- 7 TRUSS RODS - 3/8 inch galvanized steel truss rods with turnbuckles and fittings (Tension member).
- 8 FABRIC - 11 gage, 2 mesh, 72 chain link fence fabric with knucked finish top and bottom edges. Fabric to be galv.
- 9 TENSION WIRES - 7 gage galvanized coil spring steel.
- 10 TIE WIRES - 9 gage, galvanized wire on 18" centers on tension wires, & 12" centers on line posts & braces.

GENERAL NOTES:

For corners, typical rail and truss panel to join posts in both directions. Corner posts shall be installed at changes in line with deflection angle greater than 30°.

All concrete footings shall be crowned above ground line. In no case shall the top of the footing be more than 3" below chain link fabric.

For concrete see STD-100

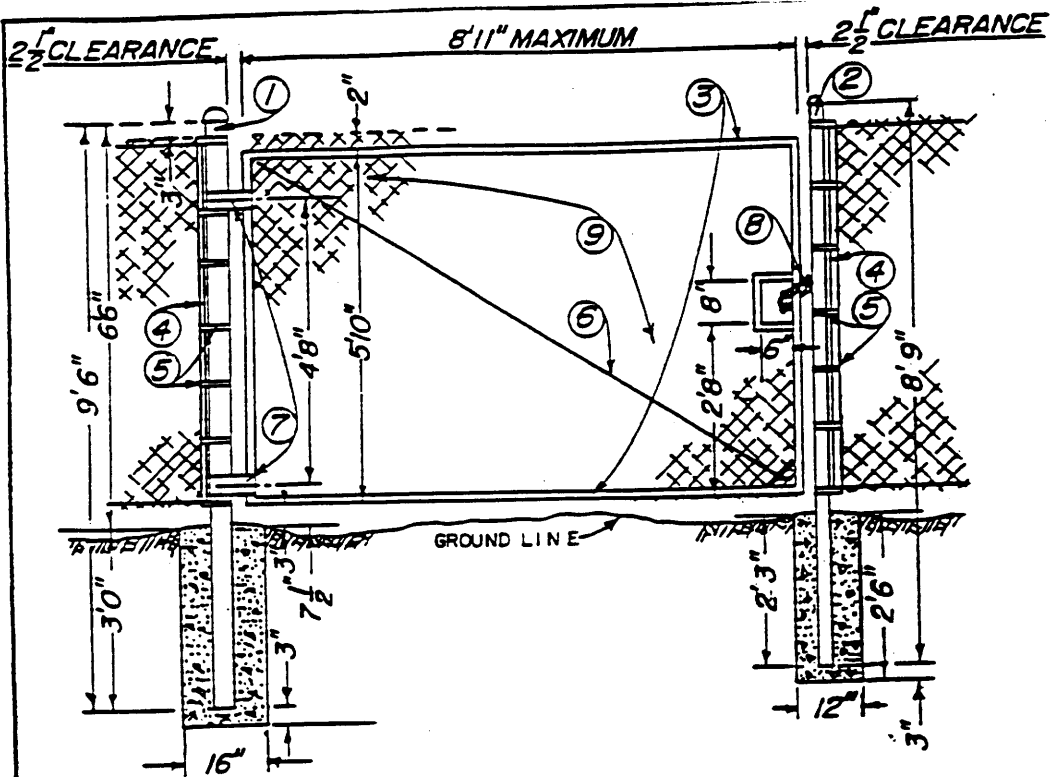
Tension wires shall be stretched tight with turnbuckles spaced at not more than 1000-foot intervals.

The bottom tension wire shall be installed on a straight grade between posts by excavating the high points of ground and in no case will filling of depressions be permitted.

Post tops, extension arms, stretcher bars, and other required fittings and hardware shall be steel, or malleable iron, or wrought iron and shall be galvanized.

STATE STANDARD CHAIN LINK FENCE, TYPE CL-6, SECTION BQ, STANDARD SPECIFICATIONS

DRAWN EER	STANDARD CHAIN LINK FENCE	DATE 3-21-79
CHECKED DDB		SCALE NONE
APPR. <i>DKJ</i> 5-15-87		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-301



DETAIL NOTES

- 1 GATE POSTS-4" by 9'6" standard galvanized pipe with drive fit galvanized caps.
- 2 LATCH POSTS-2 1/2 inch by 8'9" standard galvanized pipe with drive fit galvanized caps.
- 3 GATE FRAMES- 1/2 inch standard weight galvanized pipe; corners of gate frame shall be fastened together and reinforced with malleable iron fitting designed for the purpose or by welding.
- 4 STRETCHER BARS- 3/4 inch by 3/4 inch (minimum).
- 5 STRETCHER BAR BANDS- 1/2 inch by 2 inch (minimum) on 12" centers.
- 6 TRUSS RODS- 3/8 inch galvanized steel truss rods with turnbuckles and fitting (Tension member).
- 7 GATE HINGES- 2 steel or malleable iron 3" hinges, so designed to clamp securely to the gate post and permit the gate to swing back against the fence.
- 8 GATE LATCH- weld center of a 1/8 inch Ø by 1 1/8 inch chain to the latchpost at approximately 3" from the top of the post.
- 9 FABRIC- 11 gage, 2" mesh, 72" chain link fabric with knuckled finish top and bottom edges. Fabric to be galv.

GENERAL NOTES

- All abraded and damaged galvanized surfaces shall be regalvanized.
- All welds shall be ground smooth and cleaned and all traces of welding flux or loose or cracked spelter must be removed.
- All concrete footings shall be crowned above ground line. In no case shall the top of the footing be more than 3" below chain link fabric.
- For concrete see STD-1070
- Walk gates shall be 4 feet wide with 2 1/2 inch by 8'9" standard galvanized pipe gate posts and a footing of 12" by 2'6" concrete. All other material and hardware shall be as shown in above sketch.
- Post tops, extension or s, stretcher bars, and other required fittings and hardware shall be steel or malleable iron or wrought iron and shall be galvanized.

STATE STANDARD CHAIN LINK FENCE GATE, TYPE CL-6, SECTION 80, STANDARD SPECIFICATIONS

DRAWN EER	STANDARD CHAIN LINK FENCE GATE	DATE 3-21-79
CHECKED DDB		SCALE NONE
APPR. <i>JG</i> 5-15-87		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD.-301-A

----- Guy Wire

- Telephone Pole
- ♂ Traffic Signal
- ☀ Street Light
- Water Valve
- Power Pole
- ⊕ Gas Valve
- Sprinkler
- Irrigation Standpipe
- ⊙ Monument
- Ⓜ Fire Hydrant
- ⓓ Storm Drain Manhole
- Ⓣ Telephone Vault
- Ⓢ Sewer Manhole
- ⓔ Edison Vault
- Ⓦ Water Vault
- ⓖ Gas Vault
- Ⓛ Lamp Hole
- Ⓟ Blow-Off

Electrical, Lighting,
Signal or Alarm Conduit.
Telephone Conduit.

Irrigation Line.

Sanitary Sewer.

Storm Drain.

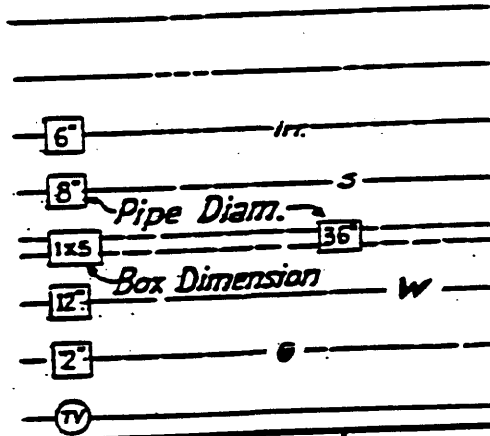
Water Line.

Gas.

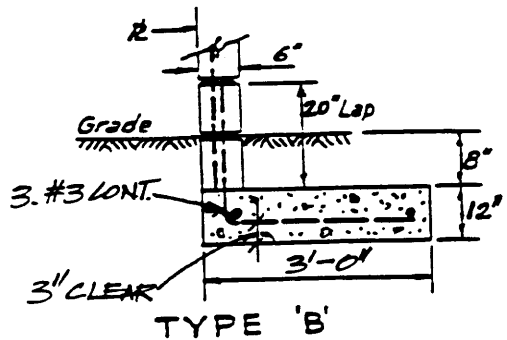
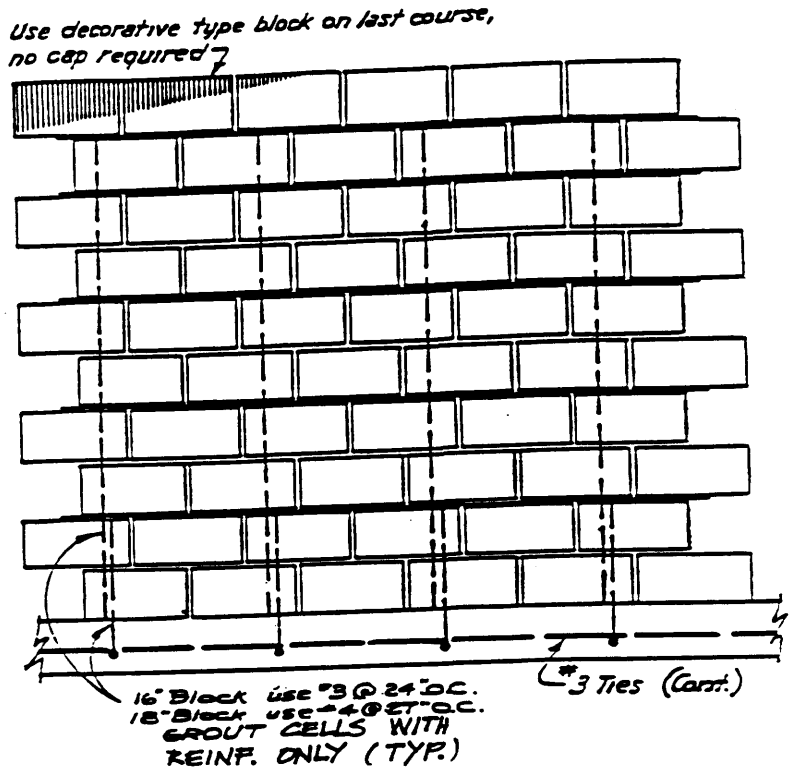
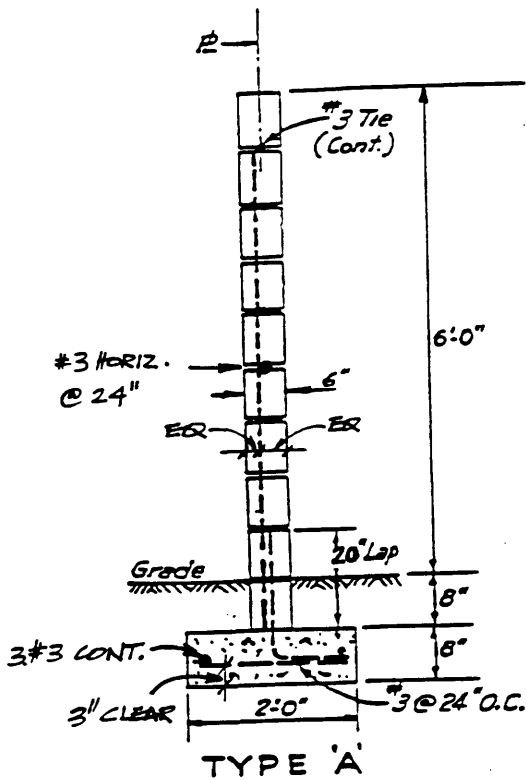
Cable Television

* □ Traffic-Signal Pull Box
 ≡≡≡ R.R.Track

- ⊗ R.R. Xing Sign
- ⊗→ R.R. Xing Signal
- ⓐ Storm Drain Catch Basin
- Signal Control Box
- ⊙ Tree, Deciduous & Misc.
- ★ Tree, Evergreen
- ⊠ Water Meter
- RD Roof Drain
- ⊠ Gas Meter
- Ⓜ Sign Post
- 🌴 Palm Tree
- Ⓜ Barricade
- 🌳 Shrub
- 🌿 Hedge
- ⚡ Fence (Type)
- ⓧ Well
- Ⓜ Hose Bibb
- Ⓜ Air Vacuum Release



DRAWN I.H.S.	TOPOGRAPHIC SYMBOLS	DATE 3-21-79
CHECKED D.D.B.		SCALE NONE
APPR. <i>AK</i> 5-15-87		REVISED 10-25-83
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-302



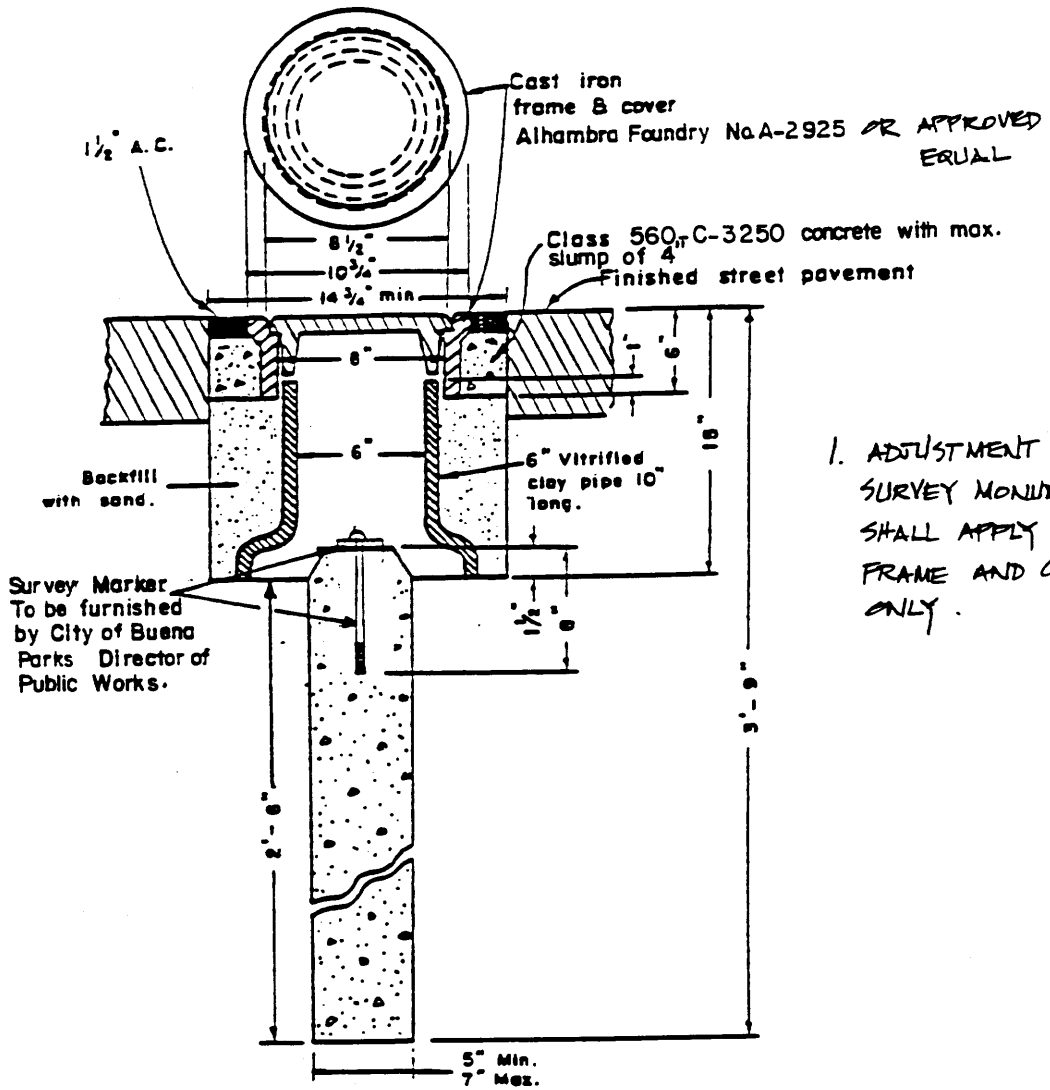
- 1- Use TYPE 'A' Foundation for all split property line walls.
- 2- Use TYPE 'B' Foundation for all perimeter walls.
- 3- Design soil bearing pressure is 1,000 psf, plus 1/3 increase for seismic or wind loads.
- 4- Wall height shall be measured from the highest point of finished grade. If wall is to be used for retaining more than 12" above finished grade, it shall be designed by a registered engineer.
- 5- Wind load and seismic load shall be per current U.B.C. (Design wind load shall be 15 psf.)
- 6- Mortar and grout shall have an ultimate compressive strength of 2000 psi.
- 7- Install expansion joints at 60' intervals

8- Reinforcing steel shall be intermediate grade deformed bars conforming to ASTM A-615 Gr. 40. Splice horizontal reinforcing by lapping 20" minimum.

9- For concrete see Std. 100.

(STD-303A CHANGED TO STD-303 AS OF 6-3-92)

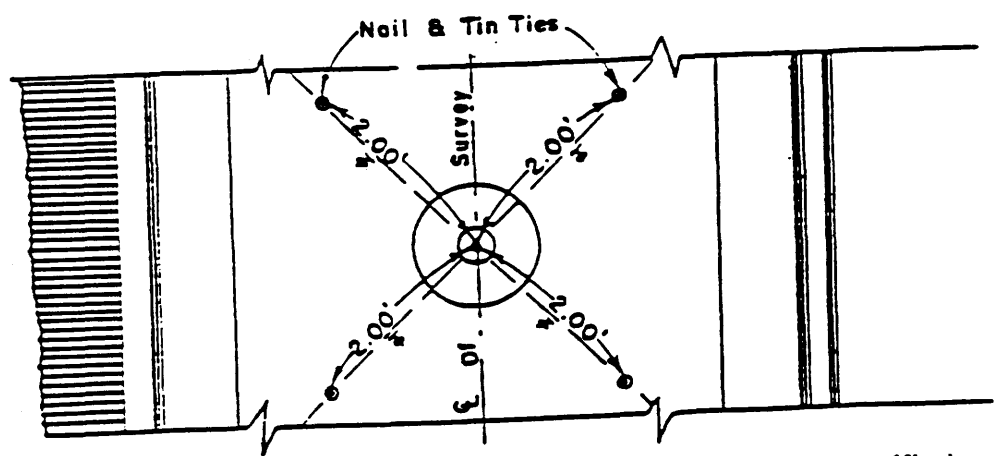
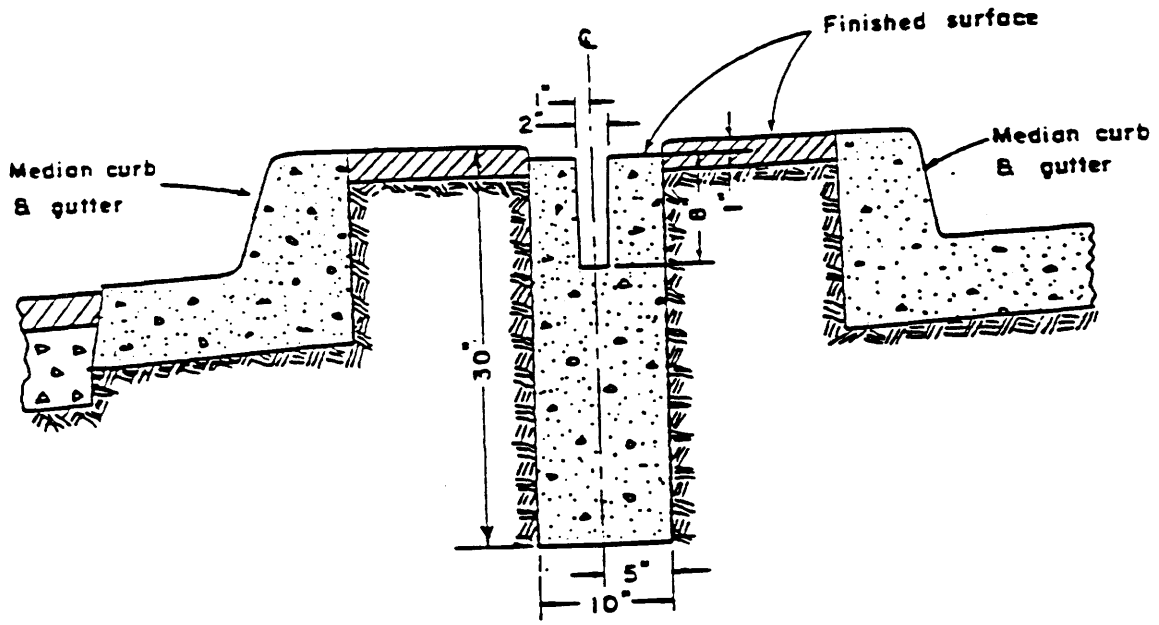
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Ronald K. Jensen</u> 5/15/87	STD 303
	City Engineer Date	
CONCRETE BLOCK WALL - 6" x 8" x 16" & 6" x 8" x 18"		



1. ADJUSTMENT OF SURVEY MONUMENT SHALL APPLY TO FRAME AND COVER ONLY.

SURVEY MONUMENT
TYPE "A"

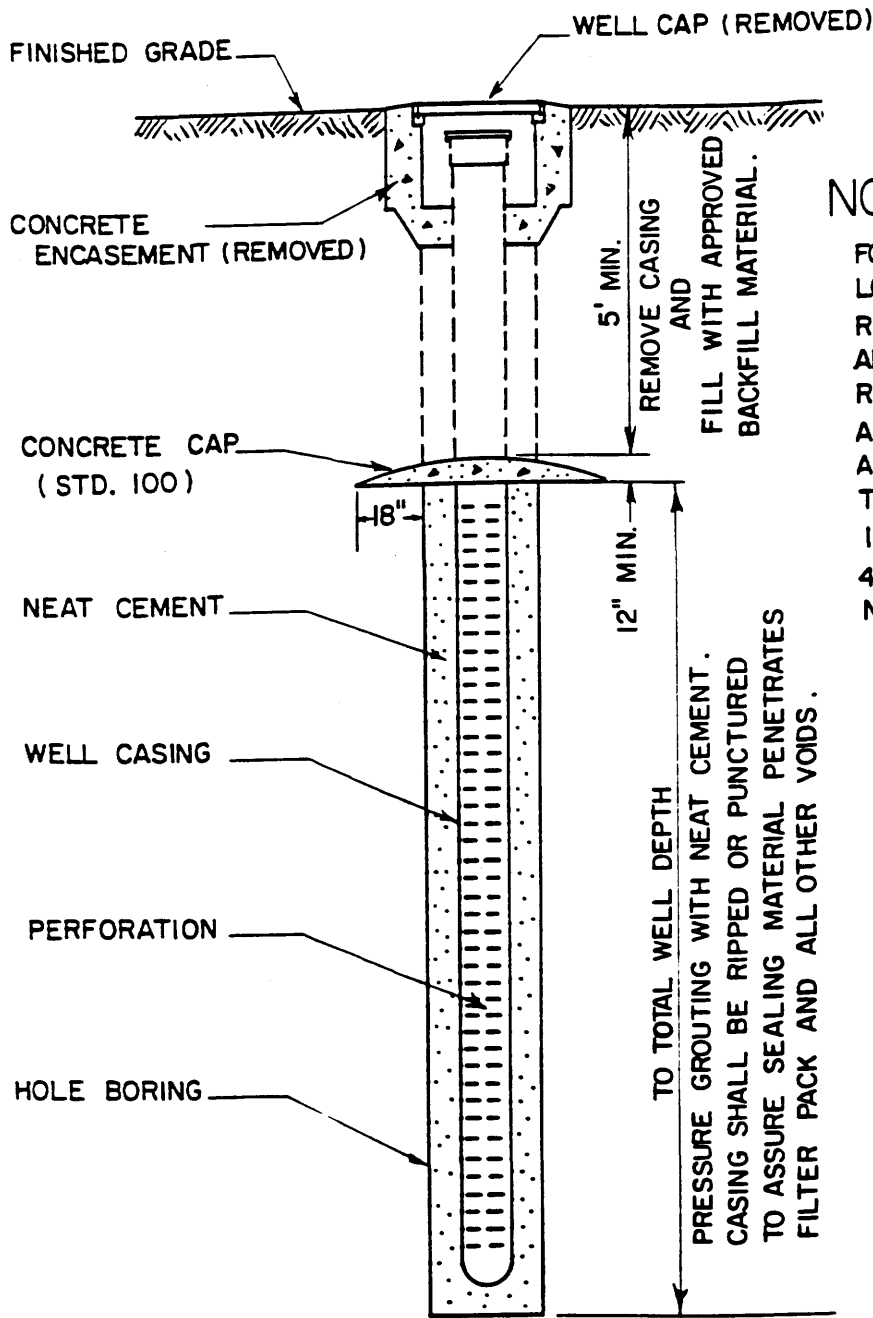
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Ronald Jensen</i> 4/9/87 City Engineer	STD 307
SURVEY MONUMENT TYPE "A"		Date REV. 4/13/94



This type of marker to be installed only in situations where no vehicular traffic is anticipated

**SURVEY MONUMENT
TYPE "B"**

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 308
SURVEY MONUMENT TYPE "B"		

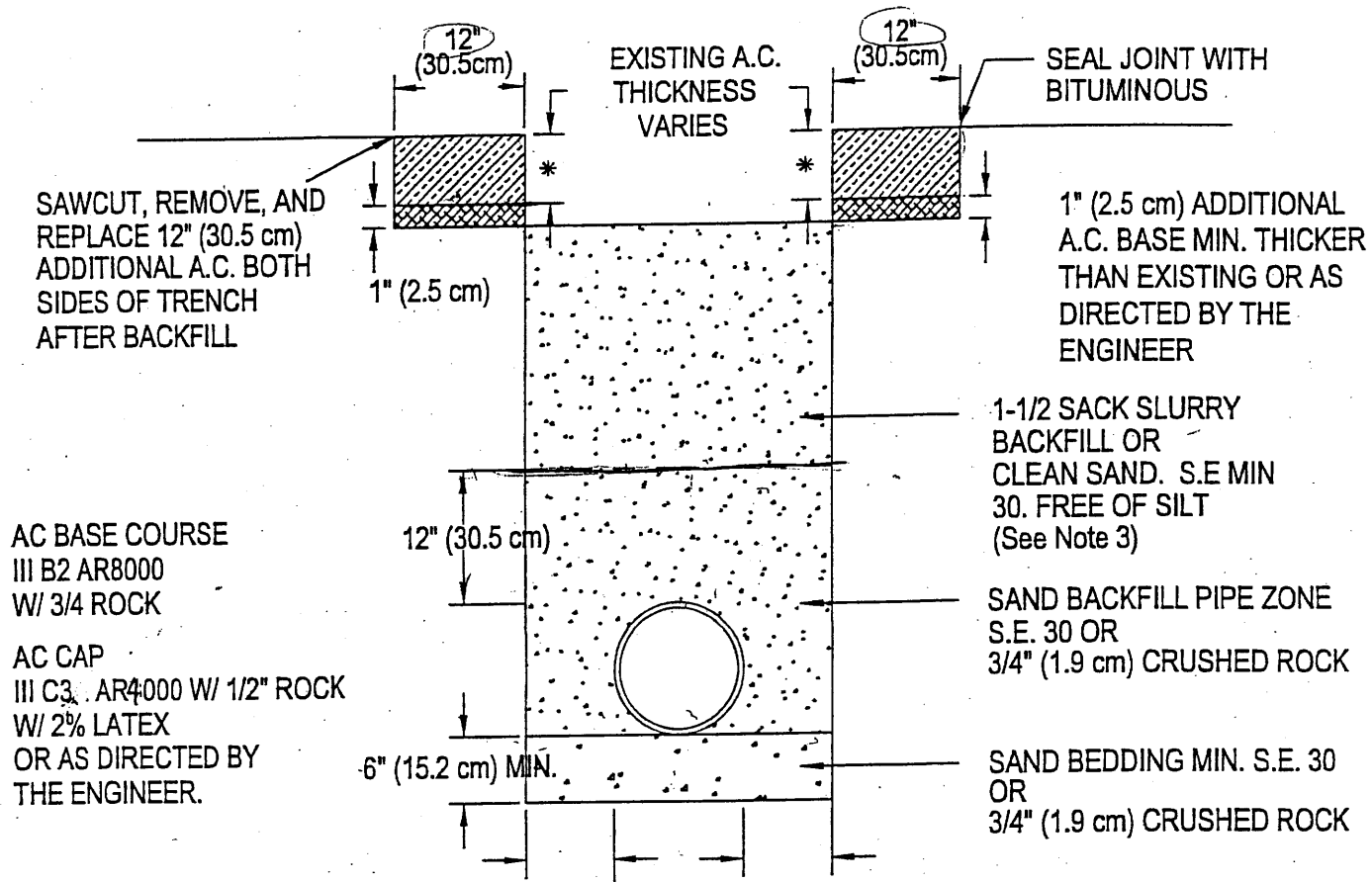


NOTE:

FOR MONITORING WELL LOCATED IN THE CITY RIGHT-OF-WAY, SAWCUT AROUND THE WELL AND REMOVE THE PAVEMENT AND REPLACE WITH A SECTION EQUAL TO THAT REMOVED, PLUS 1" BUT NOT LESS THAN 4" A.C. OVER CLEAN NATIVE SOIL.

N.T.S.
(TYPICAL MONITORING WELL)

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> City Engineer / DATE: 6/3/92	STD 309
DESTRUCTION OF MONITORING WELLS		



SAWCUT, REMOVE, AND REPLACE 12" (30.5 cm) ADDITIONAL A.C. BOTH SIDES OF TRENCH AFTER BACKFILL

AC BASE COURSE
III B2 AR8000
W/ 3/4 ROCK

AC CAP
III C3 AR4000 W/ 1/2" ROCK
W/ 2% LATEX
OR AS DIRECTED BY THE ENGINEER.

SEAL JOINT WITH BITUMINOUS

1" (2.5 cm) ADDITIONAL A.C. BASE MIN. THICKER THAN EXISTING OR AS DIRECTED BY THE ENGINEER

1-1/2 SACK SLURRY BACKFILL OR CLEAN SAND. S.E. MIN 30. FREE OF SILT (See Note 3)

SAND BACKFILL PIPE ZONE S.E. 30 OR 3/4" (1.9 cm) CRUSHED ROCK

SAND BEDDING MIN. S.E. 30 OR 3/4" (1.9 cm) CRUSHED ROCK

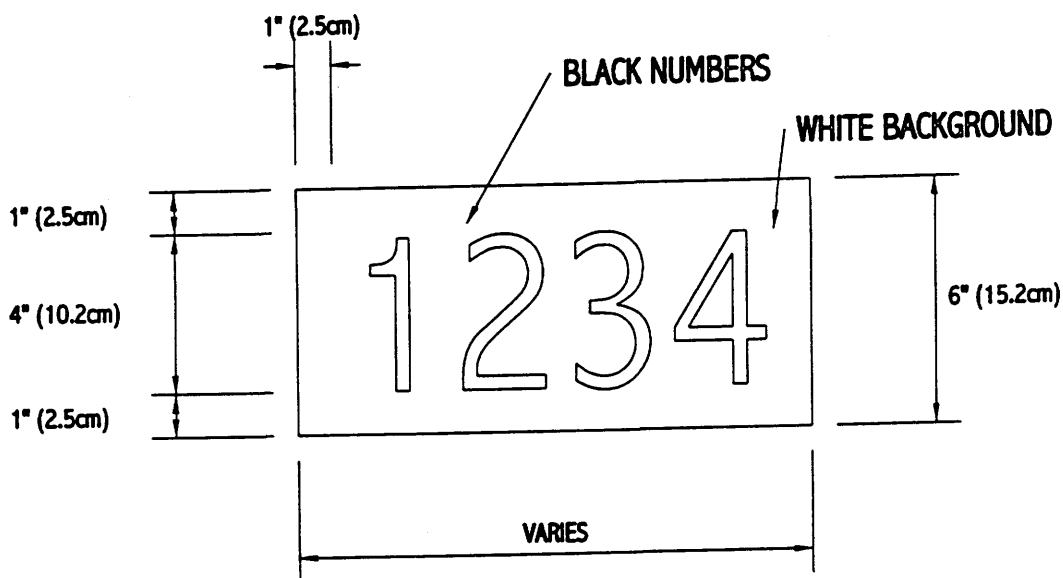
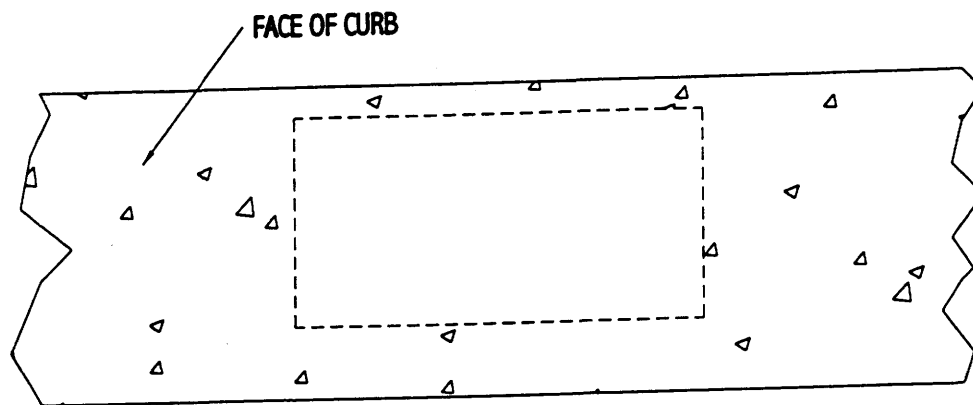
NOTES:

1. A STATE OF CALIFORNIA EXCAVATION PERMIT IS REQUIRED FOR ALL EXCAVATIONS.
2. A DETAILED SHORING AND EXCAVATION PLAN PREPARED BY A CIVIL ENGINEER SHALL BE SUBMITTED TO THE CITY ENGINEER FIVE (5) DAYS PRIOR TO BEGINNING WORK, SHOULD EXCAVATION BE 5' (1.5 m) OR GREATER IN DEPTH.
3. BACKFILL ON ALL STREETS SHALL BE 1-1/2 SACK CEMENT SLURRY.
4. ALL EXCAVATIONS SHALL BE BACKFILLED OR PROTECTED BY COVERING WITH NONSKID 1" (2.5 cm) THICK TRAFFIC STEEL PLATES AT THE END OF EACH WORKING DAY.
5. BACKFILL IN PIPE ZONE AND BEDDING SHALL BE CLEAN MIN S.E. 30 SAND OR 3/4" (1.9 cm) CRUSHED ROCK AS DETERMINED BY THE ENGINEER.
6. CLEARANCE AT EACH SIDE OF PIPE OR UTILITY FROM TRENCH WALL SHALL BE 6" (15.2 cm) MINIMUM AND 8" (20.3 cm) MAXIMUM.
7. BACKFILL MATERIALS SHALL BE COMPACTED TO 95% RELATIVE TO COMPACTION AND OPTIMUM MOISTURE CONTENT OF 2%.
8. PRIOR TO START OF CONSTRUCTION AND NOT LESS THAN 72 HOURS, THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND SERVICE ALERT (USA) AT (800) 422-4133.
9. A.C. REPLACEMENT FOR RESIDENTIAL STREETS, 4" (10.2 cm) MINIMUM OR AS DIRECTED BY THE ENGINEER. A.C. REPLACEMENT FOR ARTERIAL STREETS, 6" (15.2 cm) MINIMUM OR AS DIRECTED BY THE ENGINEER.
10. "FLOATERS" OF 2' (0.6 m) IN WIDTH OR LESS SHALL BE REMOVED AND REPLACED WITH NEW A.C..
11. USE THIS DETAIL IN ALL AREAS, INCLUDING ONSITE.
12. THIS DETAIL ALSO APPLIES TO AREAS NOT PAVED WITH REGARDS TO EXCAVATION, BEDDING BACKFILL AND COMPACTION.
13. ALL UTILITY ELEVATIONS INCLUDING INVERTS SHALL BE CERTIFIED IN WRITING BY THE DEVELOPER'S / CONTRACTOR'S CIVIL ENGINEER.
14. BACKFILL, BEDDING AND COMPACTION SHALL BE CERTIFIED IN WRITING BY THE DEVELOPER'S / OWNER'S SOILS ENGINEER.
15. THE USE OF NATIVE BACKFILL WILL NOT BE ALLOWED.

STD #310

IN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.
APPR.:	

**TRENCH EXCAVATION AND BACKFILL
DETAILS**



CURB PAINTING DETAIL

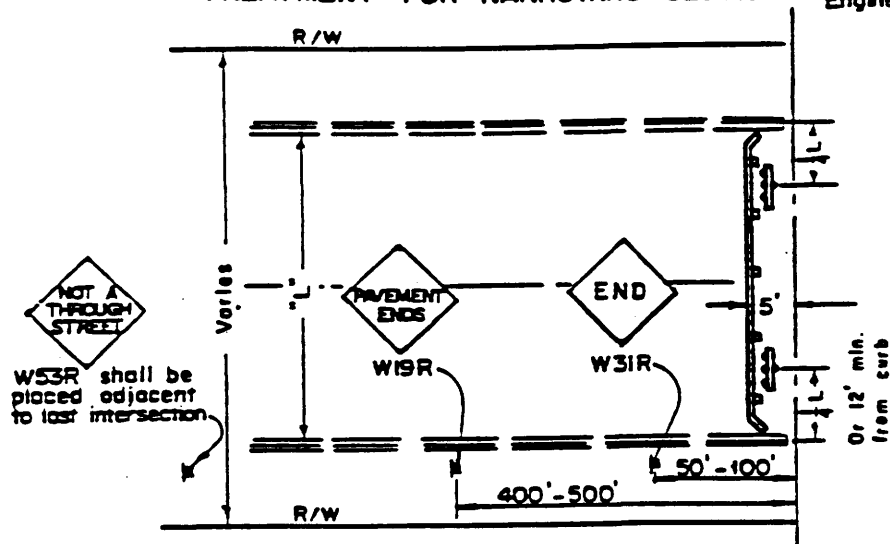
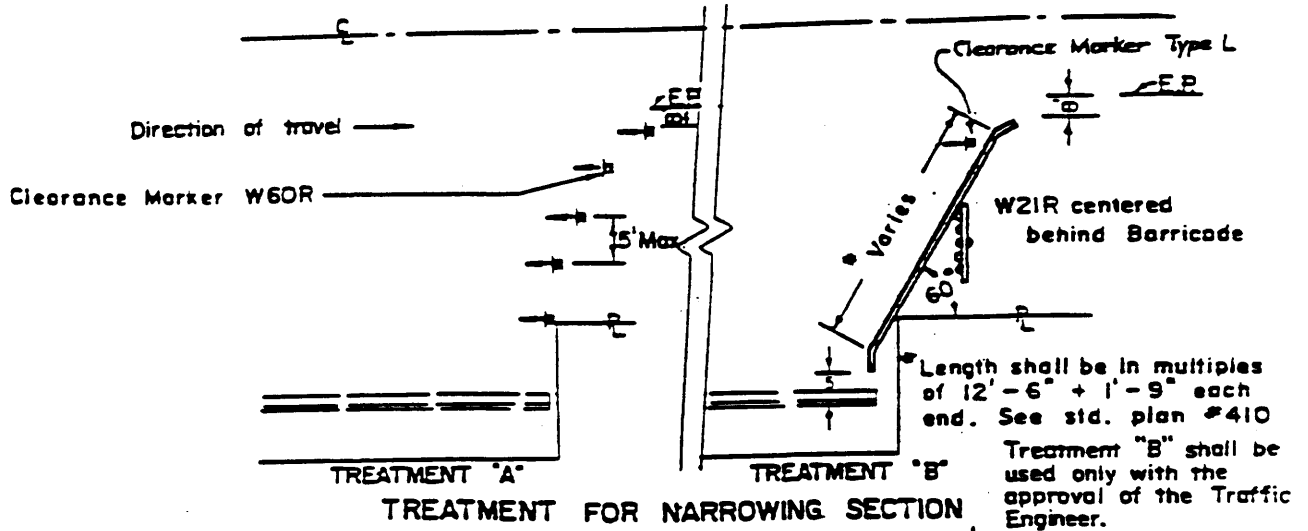
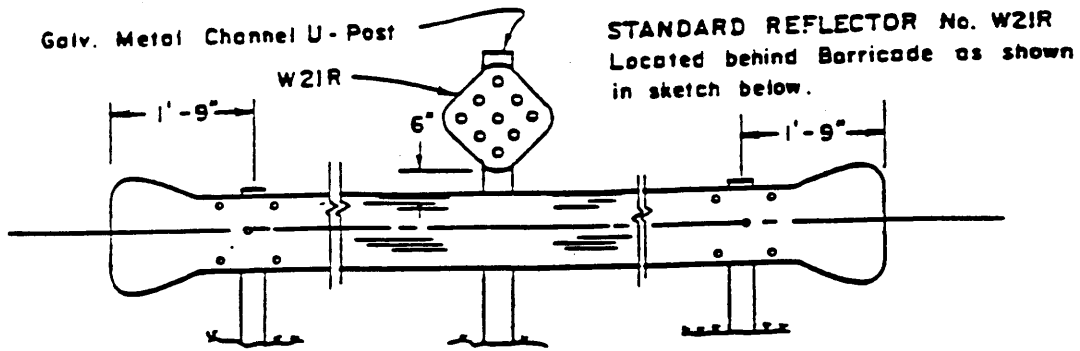
NOTES:

1. NUMBERS SHALL BE 4" (10.2cm) ROMAN GOTHIC TO MATCH CITY STENCILS AND SHALL BE BLACK ON WHITE BACKGROUND.
2. PAINT SHALL BE WATER BASED WITH LOW V.O.C. CONTENT.

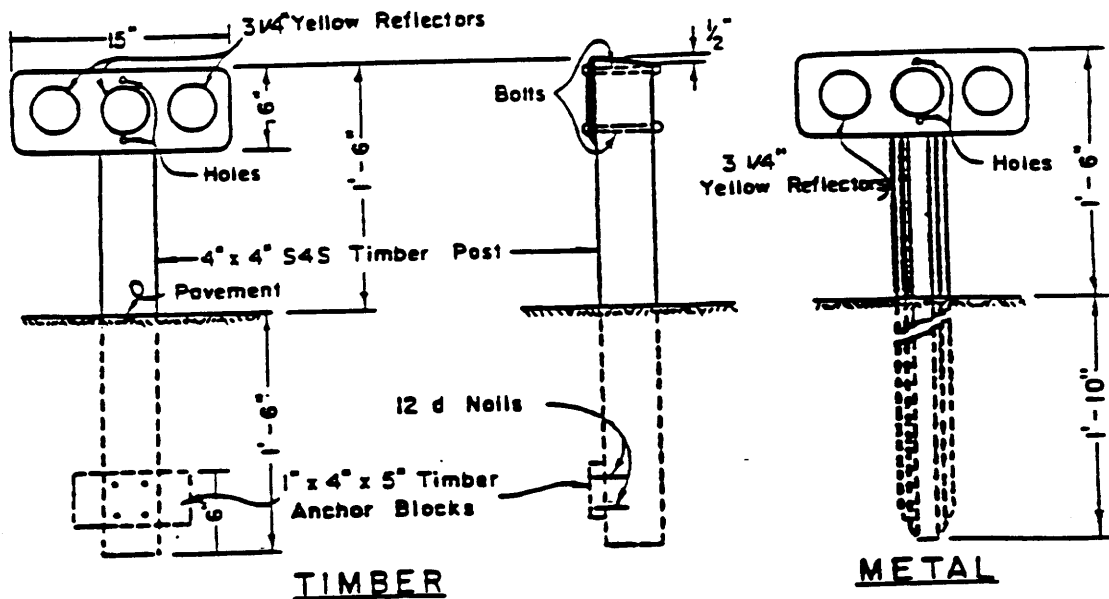
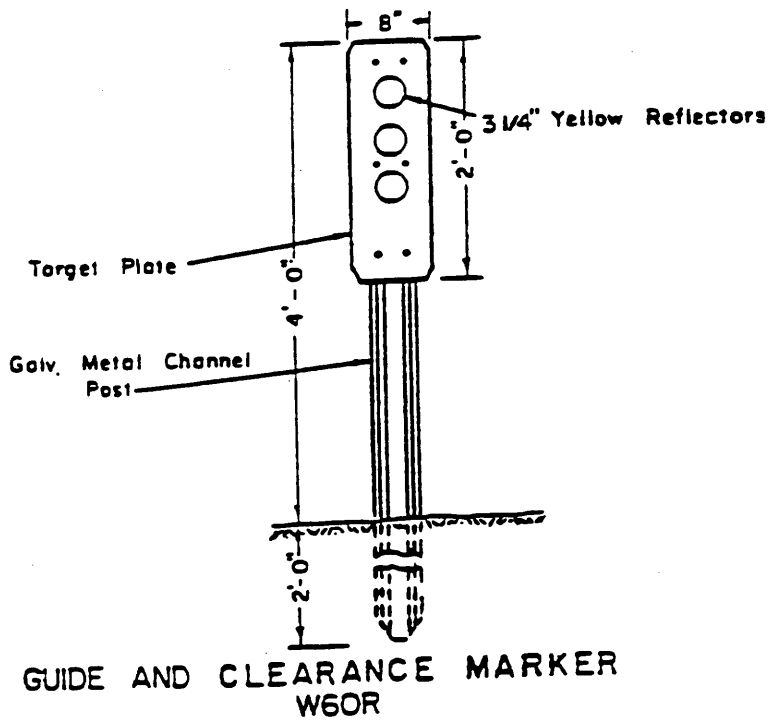
DRAWN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.
APPR.: <i>Donald K. Jensen</i>	DATE: 11/1/00
<small>DIRECTOR OF PUBLIC WORKS</small>	<small>DATE</small>

CURB ADDRESS PAINTING

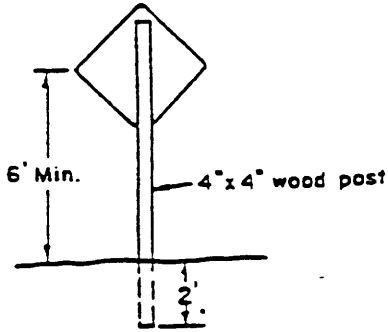
TRAFFIC STANDARDS



CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 401
DEAD END & NARROWING SECTION SIGNING		



CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Ronald K. Green</i> 5/15/87	STD 402
	City Engineer	
GUIDE & CLEARANCE MARKERS		



Typical of: W1R, W2R, AR, FR if sign is to remain in place in excess of 30 days.

Refer to City of Buena Park manual of temporary traffic control for all types of detours.

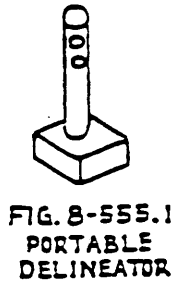
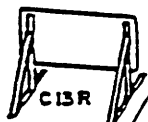


FIG. 8-555.1 PORTABLE DELINEATOR

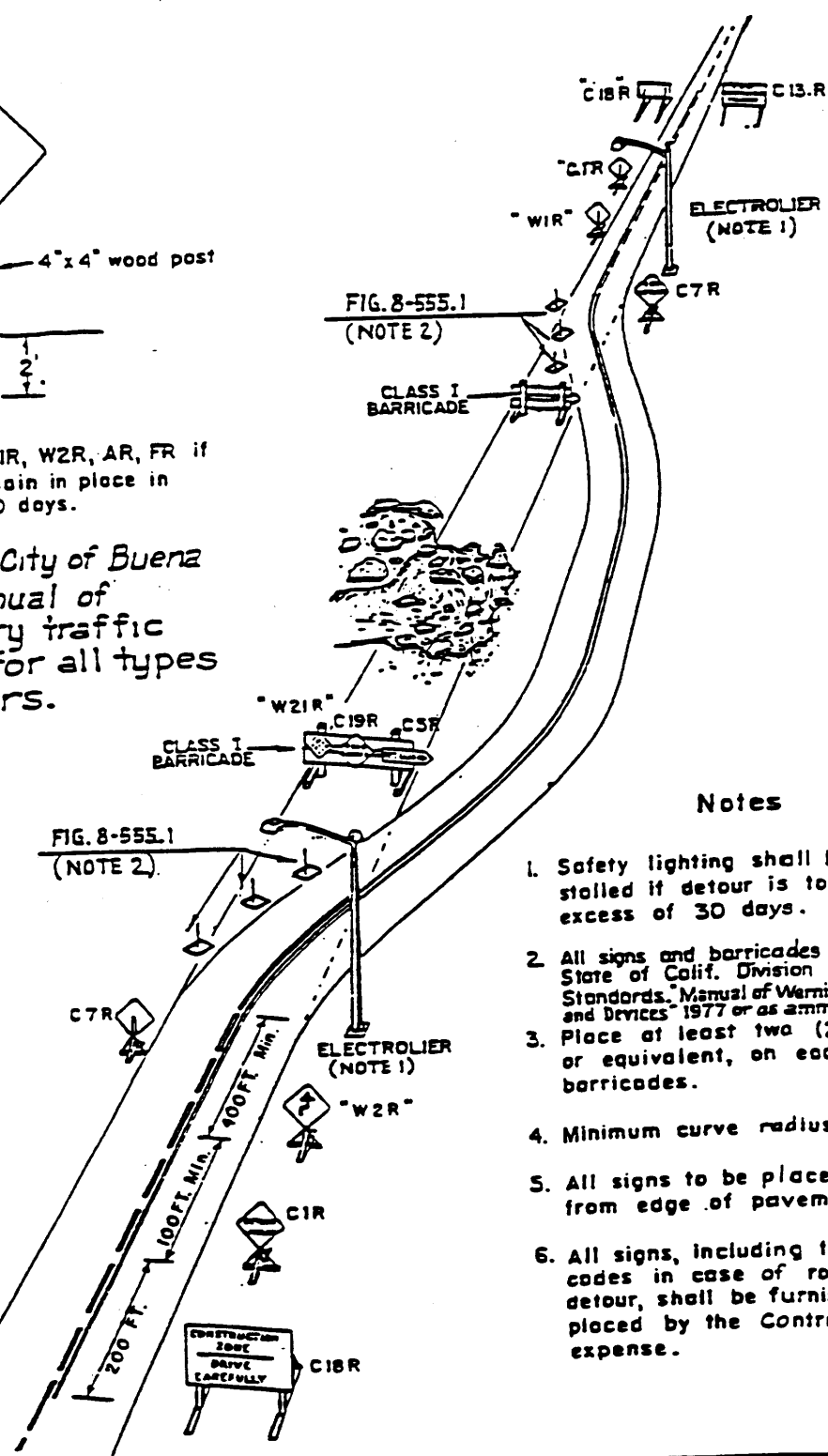


CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

Approved: *Donald K. Jensen* 5/15/87
City Engineer Date

CONSTRUCTION ZONE & DETOUR SIGNING

STD
403

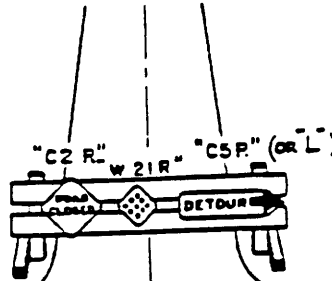


Notes

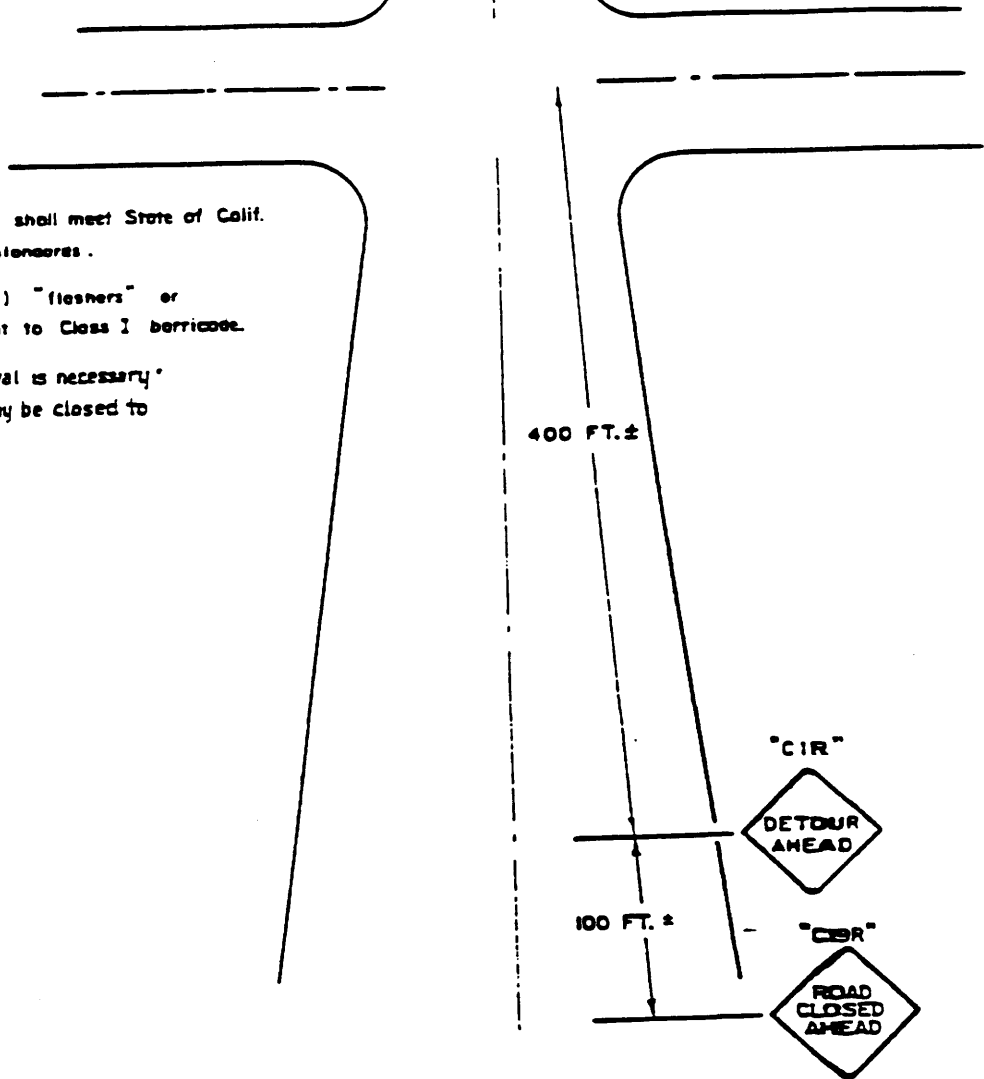
1. Safety lighting shall be installed if detour is to remain in excess of 30 days.
2. All signs and barricades shall meet State of Calif. Division of Highway Standards, Manual of Warning Signs, Lights and Devices, 1977 or as amended.
3. Place at least two (2) "Flashers" or equivalent, on each CLASS I barricades.
4. Minimum curve radius 500'.
5. All signs to be placed 4'-12' from edge of pavement.
6. All signs, including timber barricades in case of road closure or detour, shall be furnished and placed by the Contractor at his expense.

NOTES

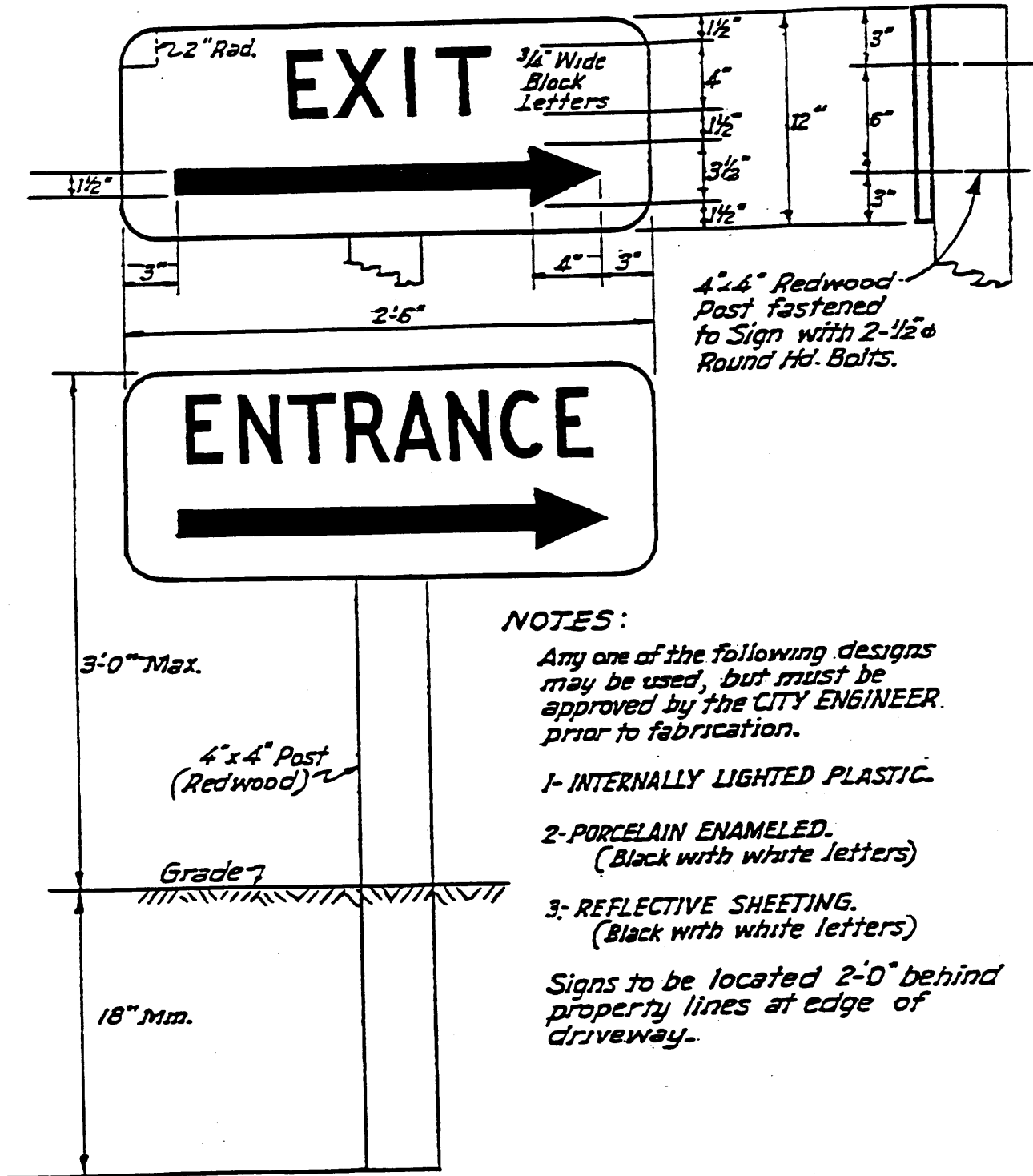
1. Place signs on a Class I timber barricade.
2. At least one "Detour" arrow shall be placed at the closed road.
3. The "Detour Ahead" sign shall be used where no "Stop" sign exists.
4. The Fire Department and law enforcement agencies shall be notified upon closure by the contractor.



5. All signs and barricades shall meet State of Calif. Division of Highways Standards.
6. Place at least two (2) "flashers" or equivalent on or adjacent to Class I barricade.
7. The City Engineers approval is necessary before any City Street may be closed to traffic.



CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Ronald K. Jensen</u> 5/15/87 City Engineer Date	STD 404
ROAD CLOSURE SIGNING		



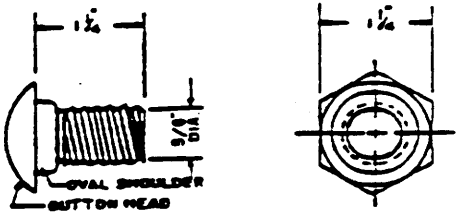
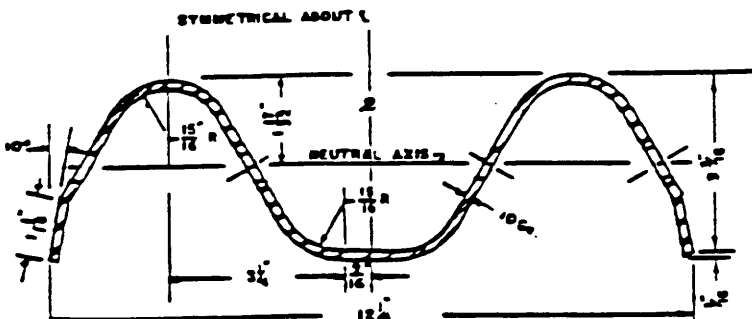
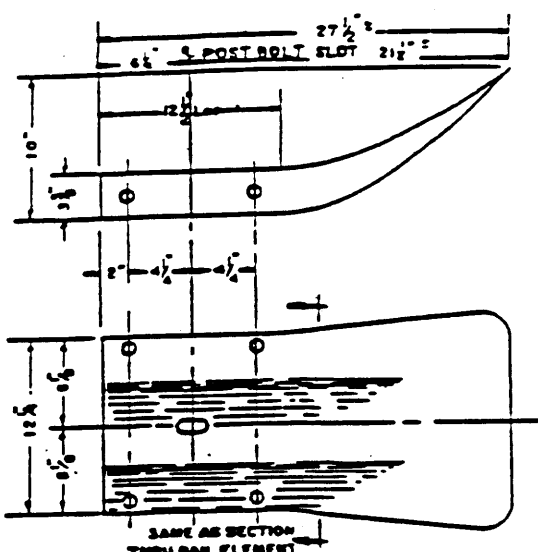
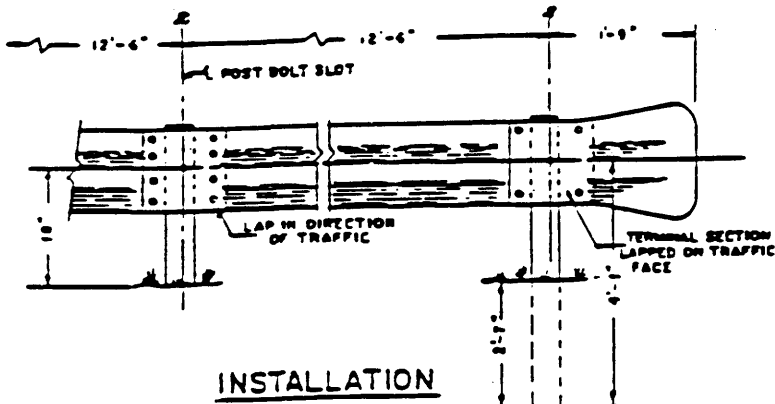
NOTES:

Any one of the following designs may be used, but must be approved by the CITY ENGINEER prior to fabrication.

- 1- INTERNALLY LIGHTED PLASTIC.
- 2- PORCELAIN ENAMELED.
(Black with white letters)
- 3- REFLECTIVE SHEETING.
(Black with white letters)

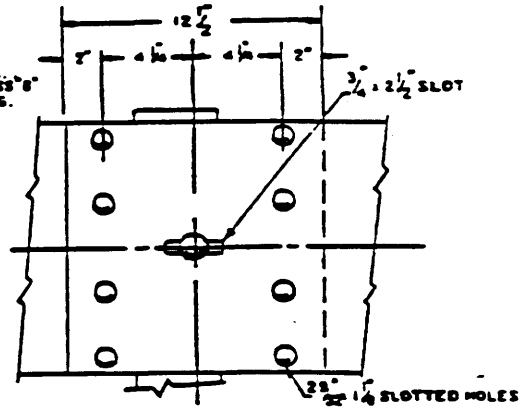
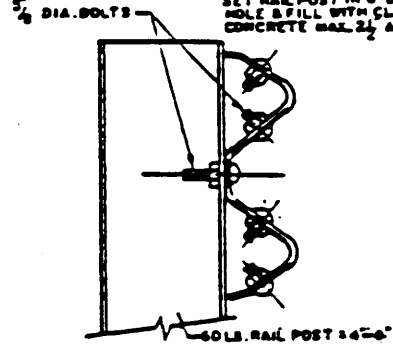
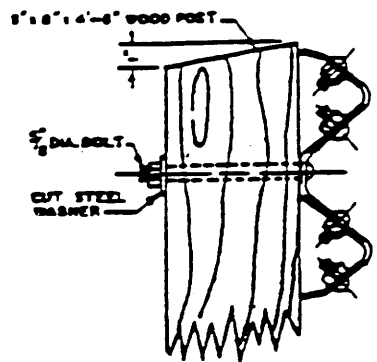
Signs to be located 2'-0" behind property lines at edge of driveway.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Ronald K. Jensen</u> 5/19/87 City Engineer Date	STD 407
EXIT AND ENTRANCE SIGNS		

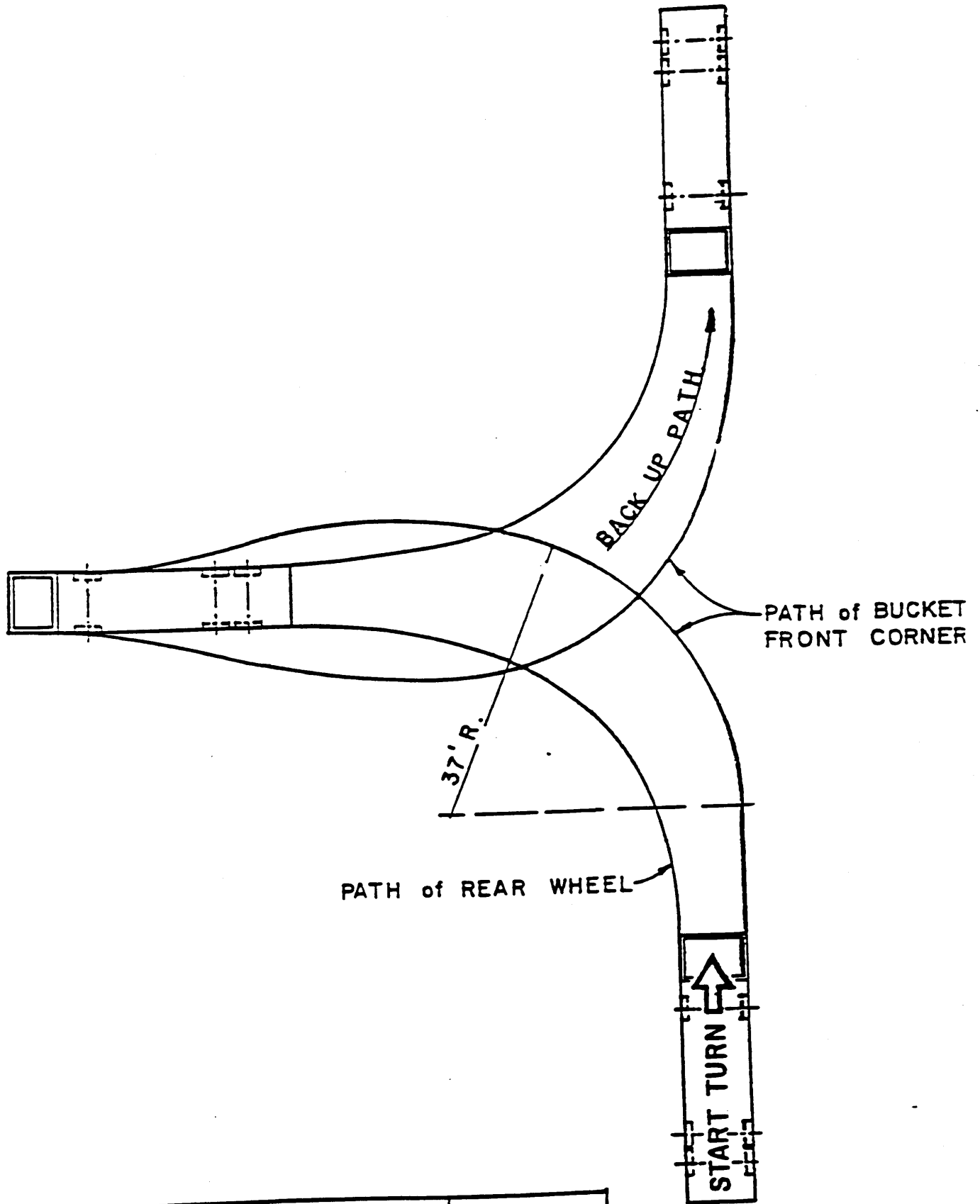


POST BOLT: SIMILAR EXCEPT LENGTH

NOTE: ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES ALL METAL PARTS SHALL BE HOT DIPPED GALVANIZED

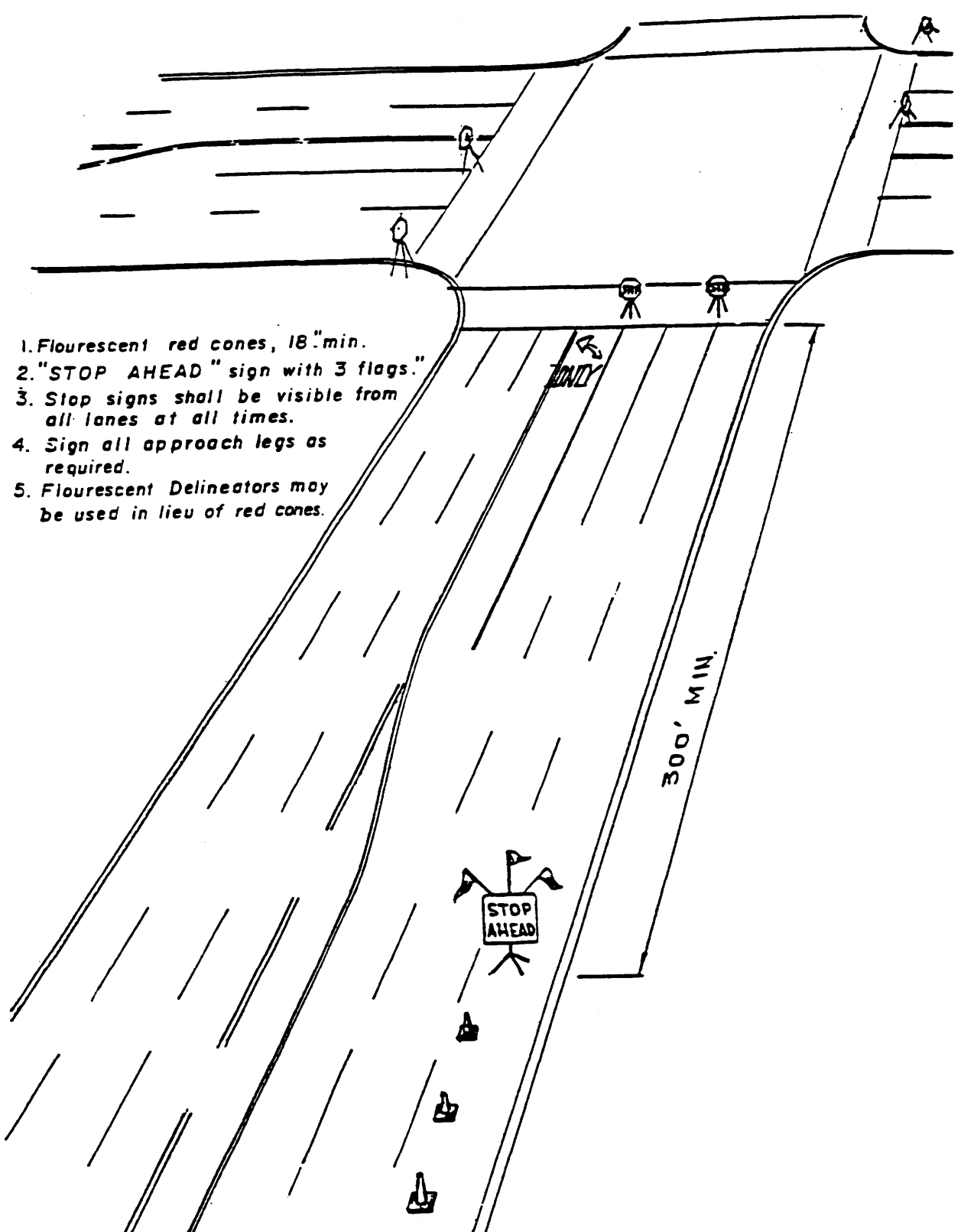


CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 410
METAL BEAM GUARD RAILING		



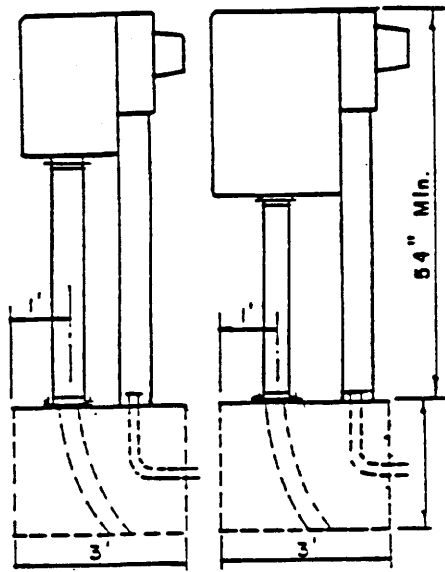
DRAWN T. K.	TRUCK TURNING RADIUS 35' LONG TRASH TRUCK	DATE
CHECKED JFF		SCALE 1" = 16'
APP'D DKJ 5/13/87		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DOC. NO. STD. 416

STD-416

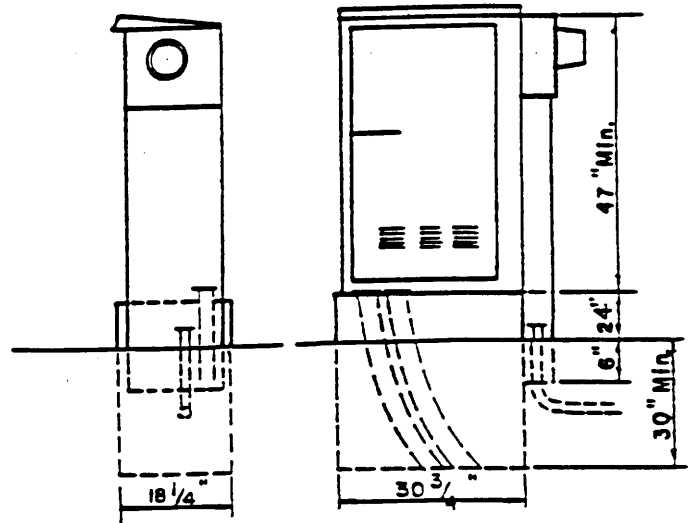


1. Flourescent red cones, 18" min.
2. "STOP AHEAD" sign with 3 flags."
3. Stop signs shall be visible from all lanes at all times.
4. Sign all approach legs as required.
5. Flourescent Delineators may be used in lieu of red cones.

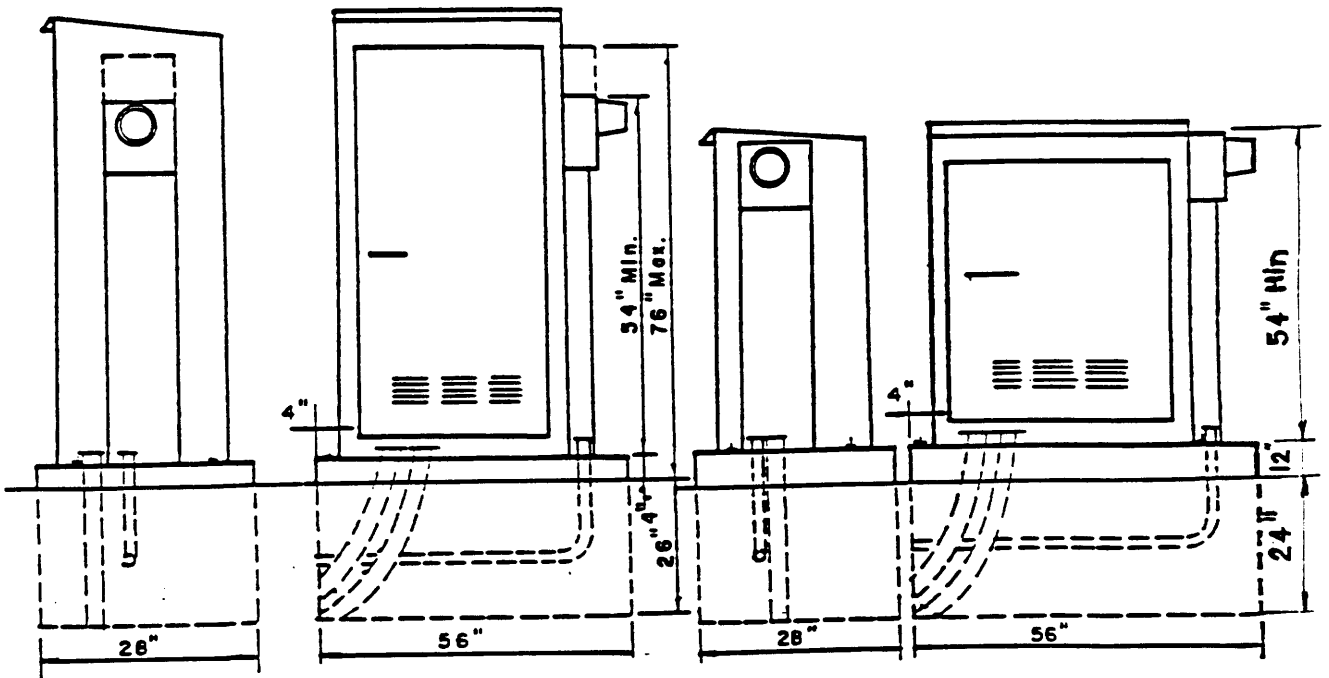
DRAWN T.K. /C.T.	TEMPORARY STOP SIGN INSTALLATION	DATE 3-21-79
CHECKED J.F.F.		SCALE NONE
ADD. DKJ 5/15/87		REVISED 1-18-82
DEPARTMENT OF PUBLIC WORKS	CITY OF BUENA PARK	DWG NO STD 417



TYPE "C" TYPE "G"



TYPE "M-1"

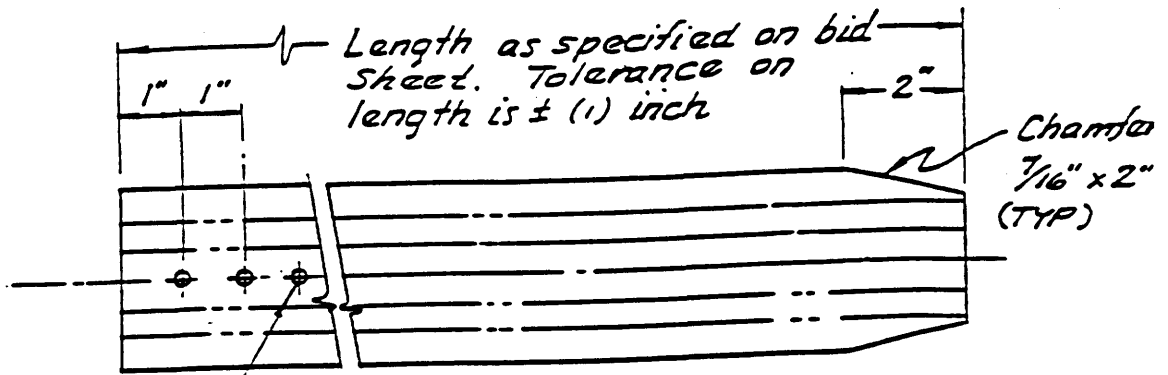


TYPE "R-1"

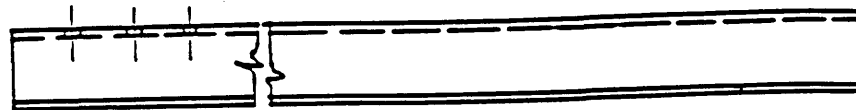
TYPE "P"

TRAFFIC SIGNAL CONTROLLERS

DRAWN G. L.	ELECT. SERVICE PEDESTAL AND CABINET FOUNDATIONS	DATE 5/15/87
CHECKED <i>[Signature]</i>		SCALE NONE
APPR. <i>[Signature]</i>		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-418

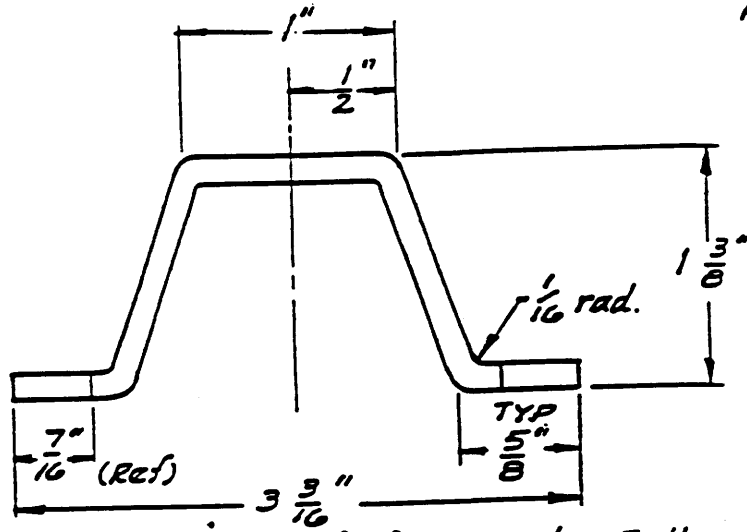


$\frac{13}{32}''$ dia. holes punched approx $\frac{1}{2}$ its length



Scale 1" = 3"

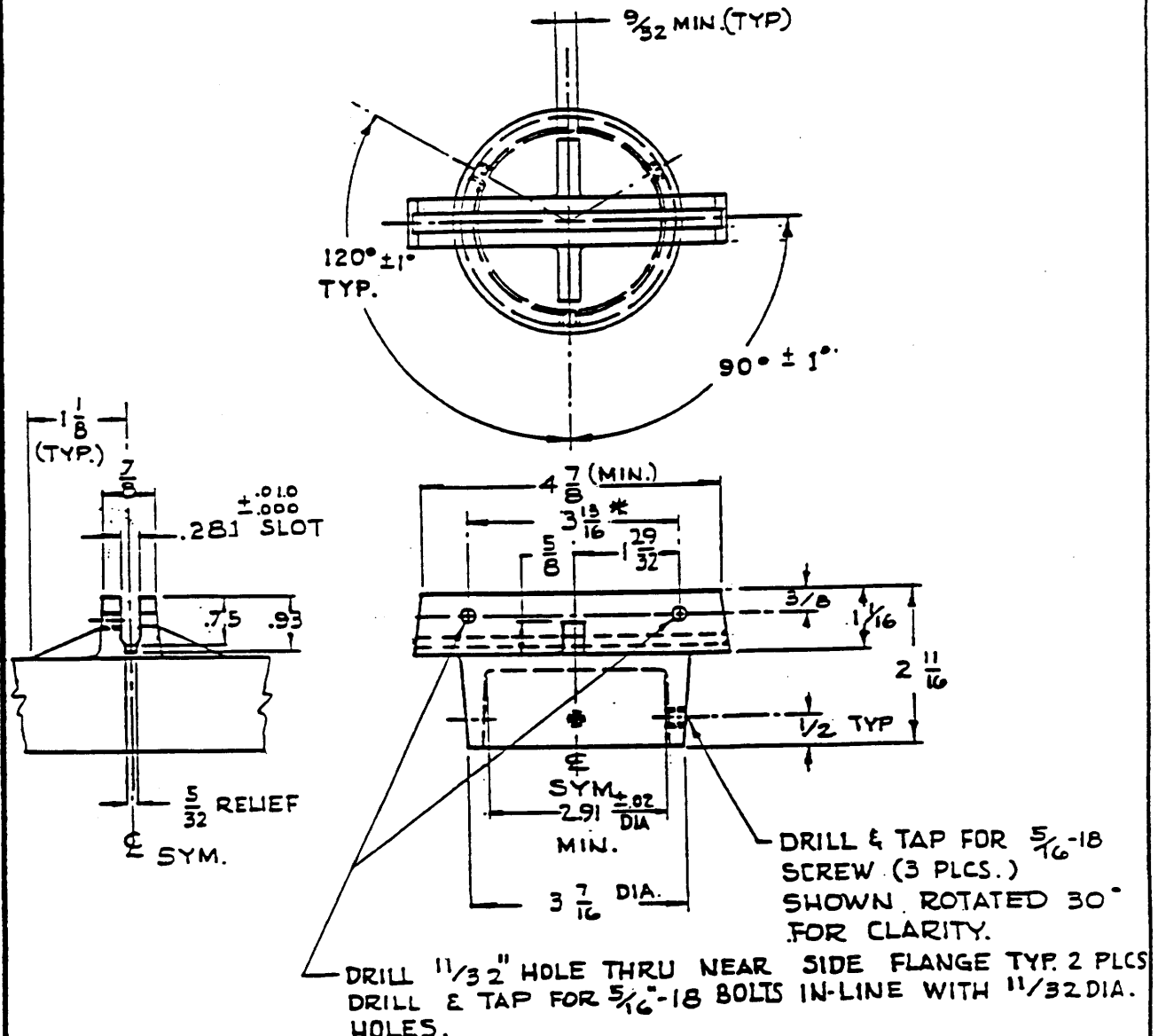
A
A



View A-A scale = Full

Material 11 gauge, Low Carbon steel. Hot formed, and hot dipped galvanized.
 Fractional tolerances is $\pm \frac{1}{32}''$

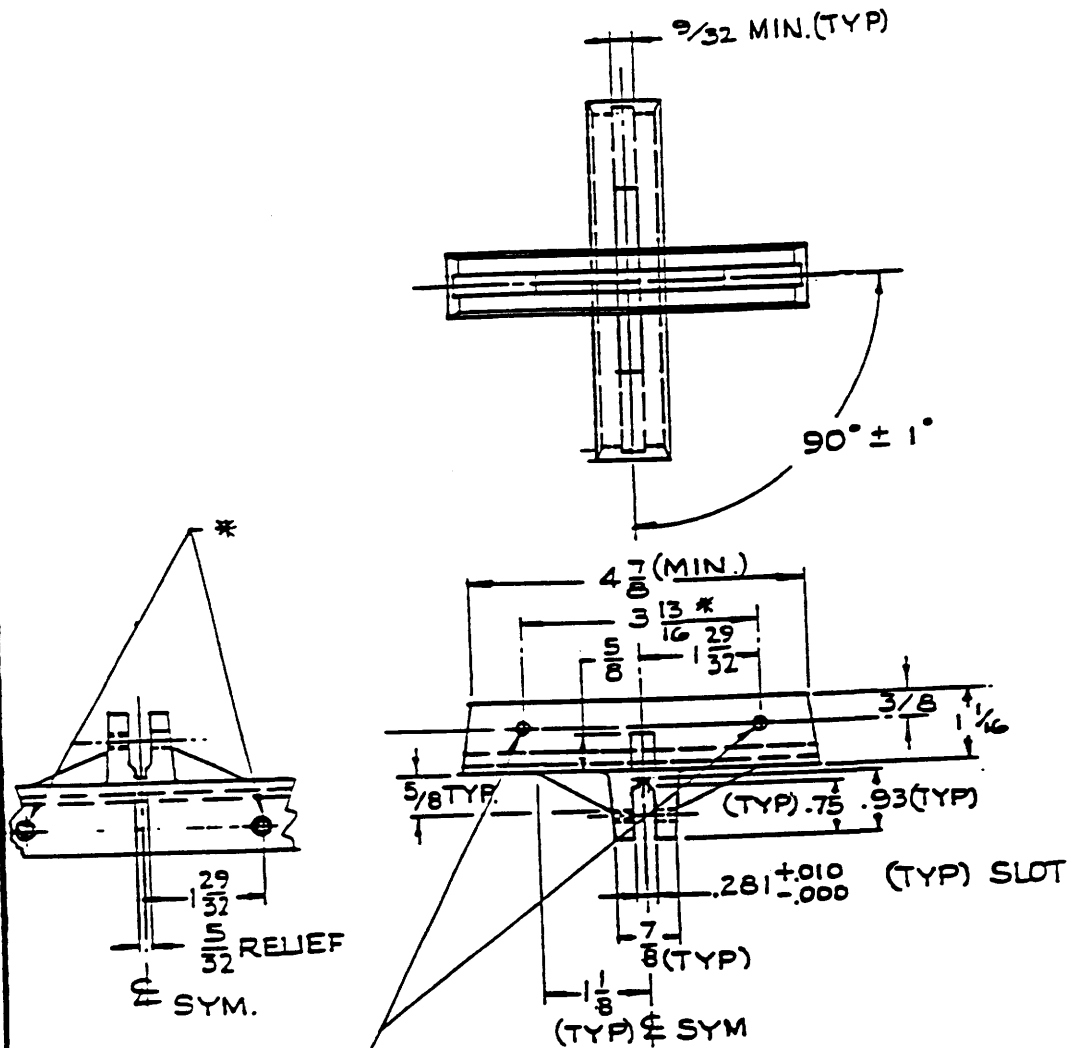
DRAWN T.K.	"U" Channel Sign Post	DATE 5/15/87
CHECKED J.F.F.		SCALE noted
APPR. W.K. Jensen		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-431



NOTES:

1. DRAFT ANGLE 3° MAXIMUM.
2. PROVIDE 5/16-18 x 1" LONG HEX. HEAD BOLT, 2 REQ'D. (CADMIUM PLATED)
3. PROVIDE 5/16-18 x 5/16" LONG SERRATED CUP POINT (CADMIUM PLATED) ALLEN HEAD SET SCREWS. 3 REQ'D.
4. * DENOTES 3 13/16" SPACING SHALL MATCH THE HOLES IN THE METRO SIGN
5. POST CAPS TO BE DIE-CAST ALUMINUM.
6. FRACTIONAL TOLERANCE ± 1/32"

DRAWN T.K.	SIGN BRACKET ASS'Y POST CAP MOUNT	DATE 5/15/87
CHECKED J.F.F.		SCALE NONE
APPR. <i>W. Jensen</i>		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK.	DWG NO. STD 433

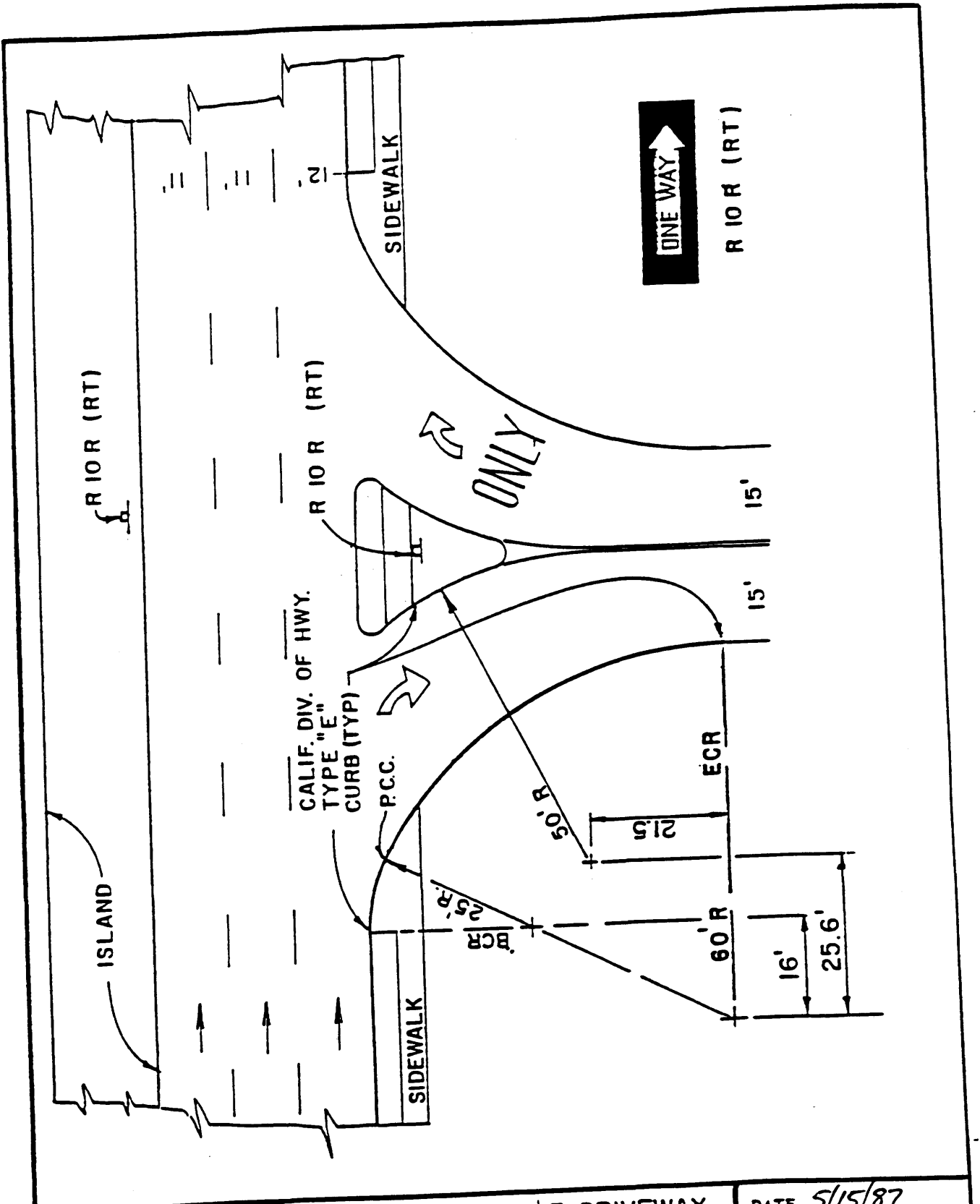


-DRILL 1 1/32 HOLE THRU NEAR SIDE FLANGE TYP. 4 PLCS
 DRILL & TAP FOR 5/16-18 BOLTS IN-LINE WITH 1/32 DIA
 HOLES.

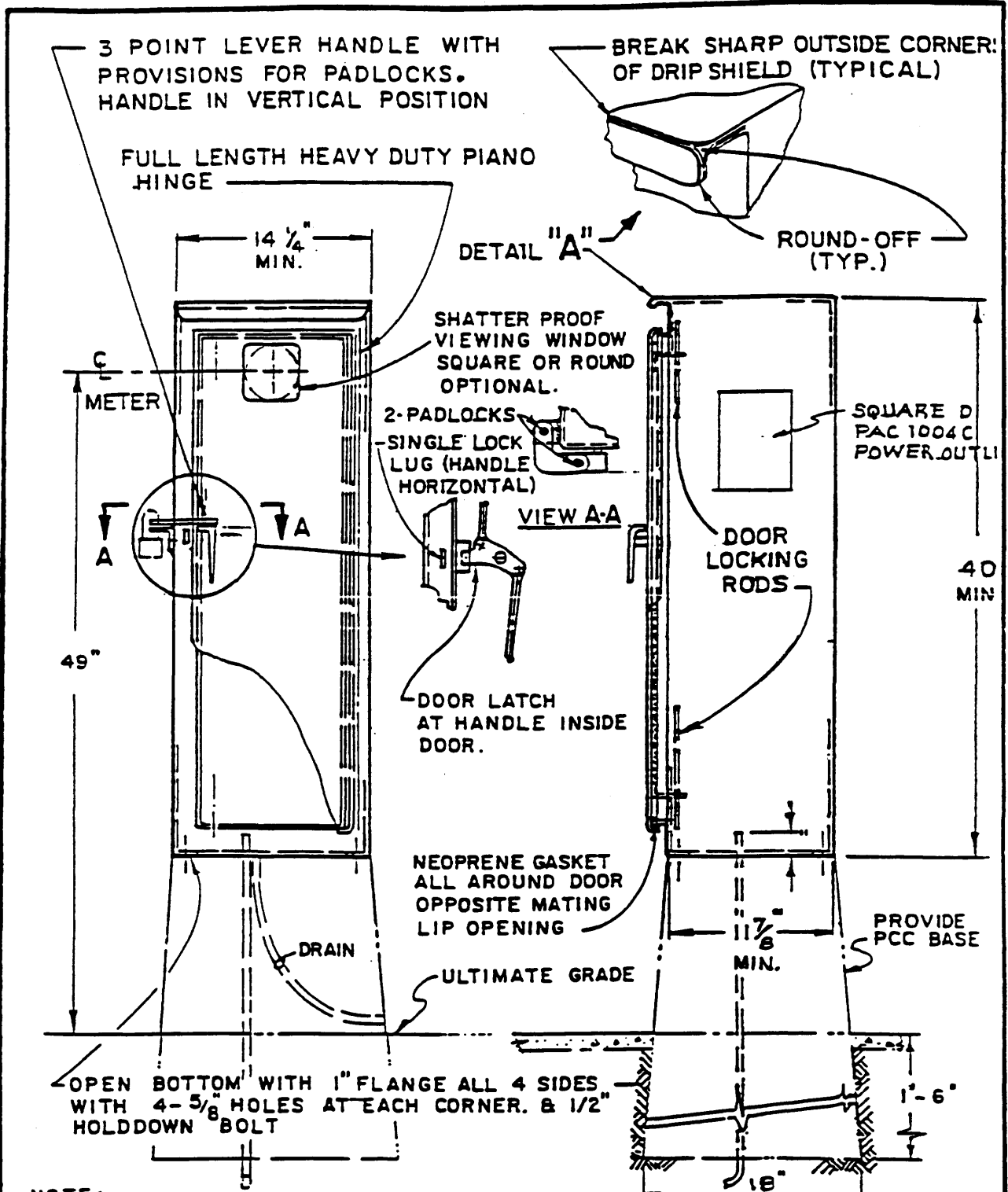
NOTES:

1. DRAFT ANGLE 3° MAXIMUM.
2. PROVIDE 5/16-18 x 1" LONG HEXAGON HEAD CADMIUM-PLATED BOLT (4) REQUIRED.
3. * DENOTES 3 13/16" SPACING SHALL MATCH THE HOLES IN THE METRO SIGN
4. SIGN TO SIGN 90° BRACKET TO BE DIE-CAST ALUMINUM.
5. FRACTIONAL TOLERANCE ± 1/32"

DRAWN T.K. CHECKED JFF APPR. <i>A.K. Jensen</i>	SIGN TO SIGN BRACKET ASSEMBLY	DATE 5/15/87
		SCALE none
		REVISED
CITY OF BUENA PARK		DWG NO. STD 434



DRAWN T. K.	COMPOUND CURVE DRIVEWAY ON TYPICAL PRIMARY HWY.	DATE 5/15/87
CHECKED J.F.F.		SCALE 1" = 20
APPR <i>Al. L. Jensen</i>		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-435

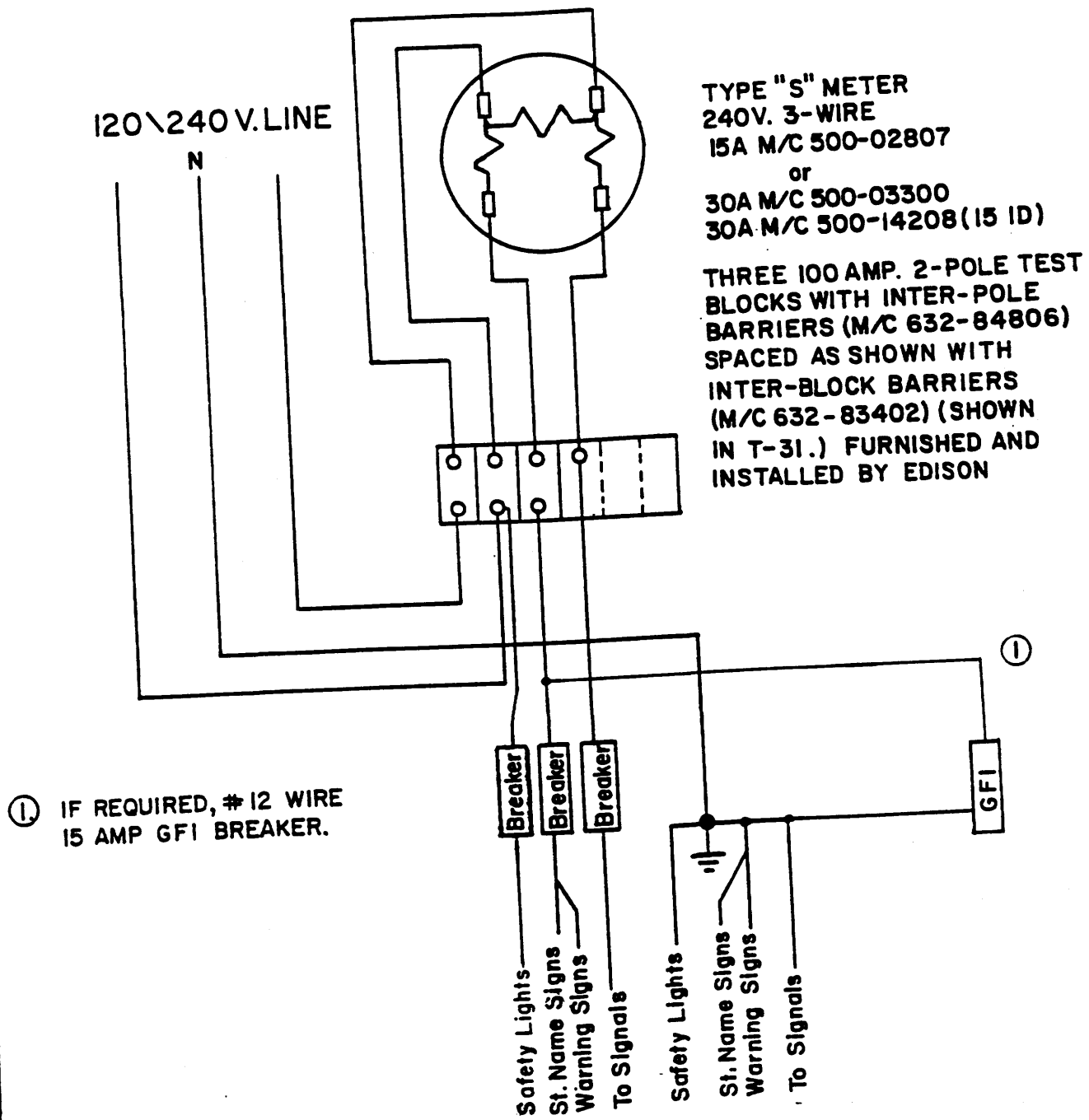


NOTE: FABRICATE WITH 10 GAGE STEEL. ALL SEAMS WELDED & GROUND SMOOTH CONTRACTOR TO CLEAN, PRIME, & PAINT WITH WHITE ALKYD PAINT. CLEANER PRIMER, AND FINISH PAINT SHALL BE COMPATIBLE TO EACH OTHER.

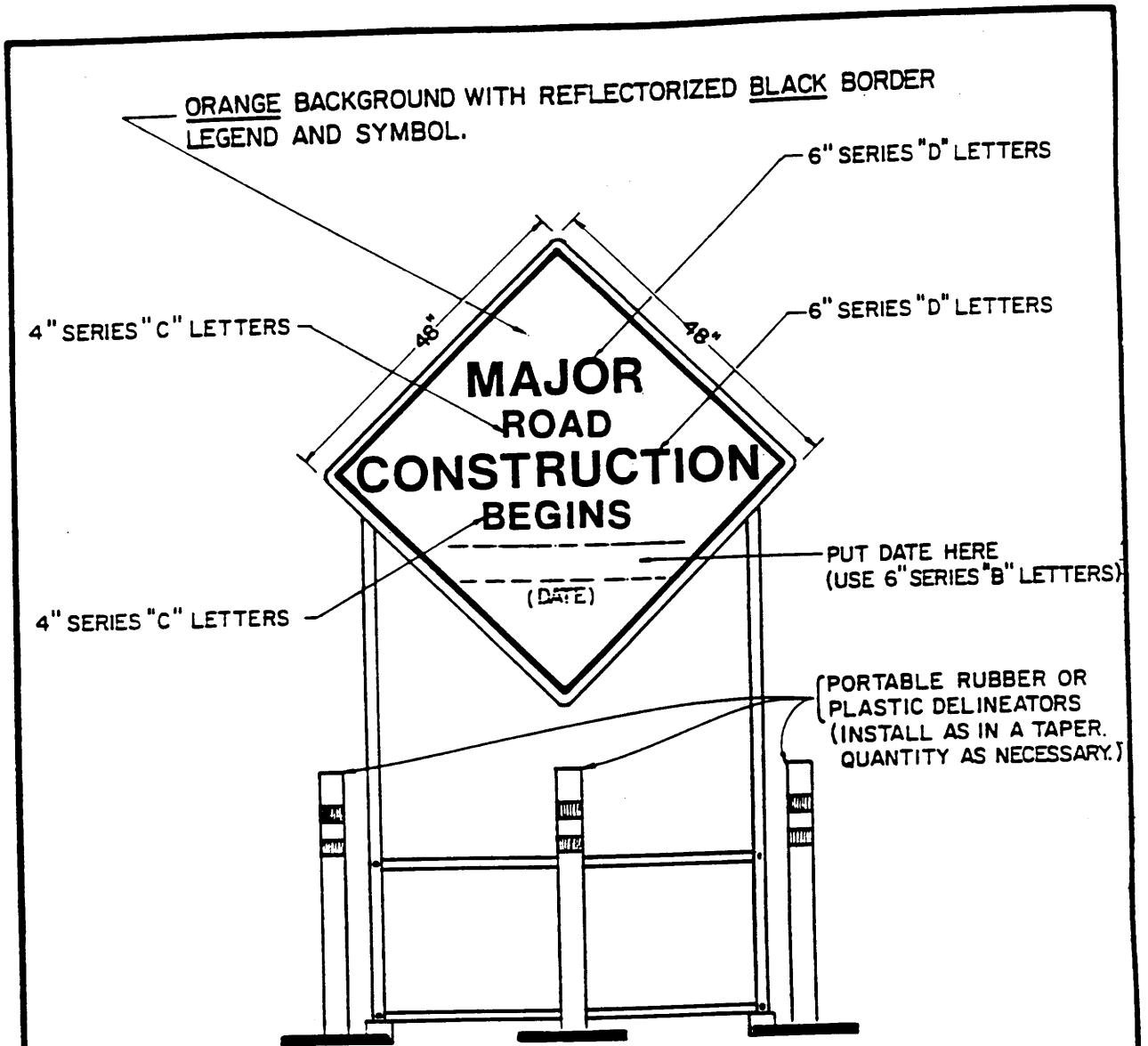
DRAWN T. K	ELECTRICAL SERVICE CABINET FOR TRAFFIC SIGNAL INSTALLATON	DATE 5/15/87
CHECKED J.F.F.		SCALE NONE
APPR. <i>A. K. Jensen</i>		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG NO. STD - 437

METHOD OF SERVING MULTIPLE UNMETERED STREET LIGHTS AND METERED TRAFFIC SIGNALS, FLASHERS, ILLUMINATED SIGNS, ETC., WITH ONE 3-WIRE METER.

FRONT VIEW



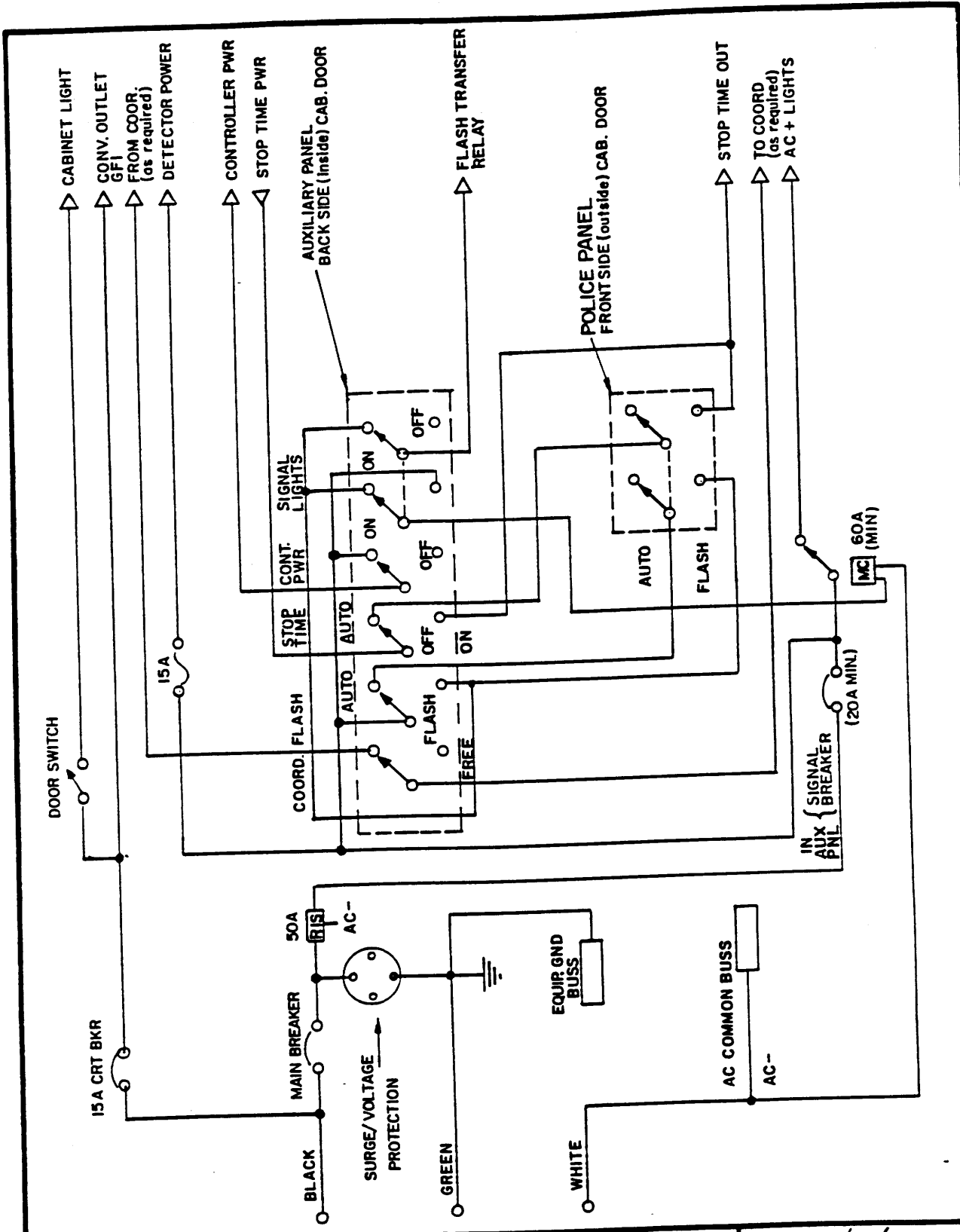
DRAWN ALLEN JONES CHECKED C.S.H. APPR. T.K. 10-15-79	STANDARD Traffic Signal Service Diagram	DATE 3-6-79 SCALE NONE REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-438



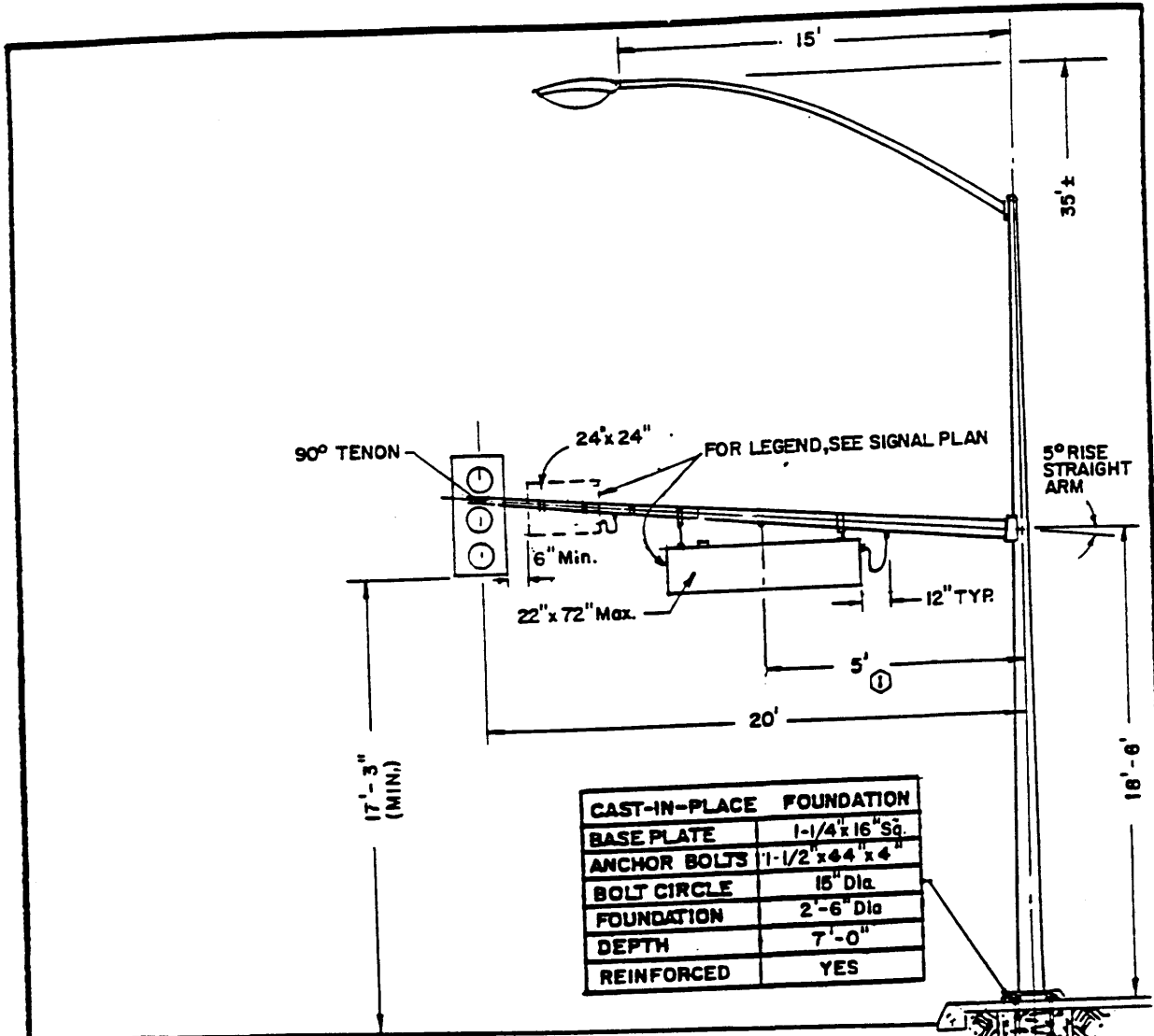
CONTRACTOR SHALL PROVIDE TWO (2) PORTABLE SIGNS TO BE PLACED IN THE PARKWAY OR PARKING LANE OF THE CONSTRUCTION ZONE FACING EASTBOUND AND WESTBOUND OR NORTHBOUND AND SOUTHBOUND TRAFFIC ON STREET UNDER CONSTRUCTION. SIGNS SHALL BE PLACED AS DIRECTED BY THE ENGINEER AT LEAST TEN (10) DAYS PRIOR TO BEGINNING OF CONSTRUCTION DATE. SIGNS MAY BE RELOCATED AS THE WORK PROGRESSES.

PLACEMENT OF DELINEATORS TO PROTECT SIGNS SHALL BE AS PROVIDED IN THE SPECIFICATION.

DRAWN C.G.TANZO	PRE-CONSTRUCTION INFORMATION SIGN	DATE 5/15/87
CHECKED <i>L. Kula</i>		SCALE NO SCALE
APPR <i>W.K. Jensen</i>		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG NO STD-439



DRAWN C. TANZO		WIRING FOR SOLID-STATE CONTROLLER CABINET	DATE 5/15/87
CHECKED			SCALE NONE
APPR. <i>K. K. Jensen</i>			REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD 442	



CAST-IN-PLACE FOUNDATION	
BASE PLATE	1-1/4" x 16" Sq.
ANCHOR BOLTS	1-1/2" x 64" x 4"
BOLT CIRCLE	15" Dia.
FOUNDATION	2'-6" Dia.
DEPTH	7'-0"
REINFORCED	YES

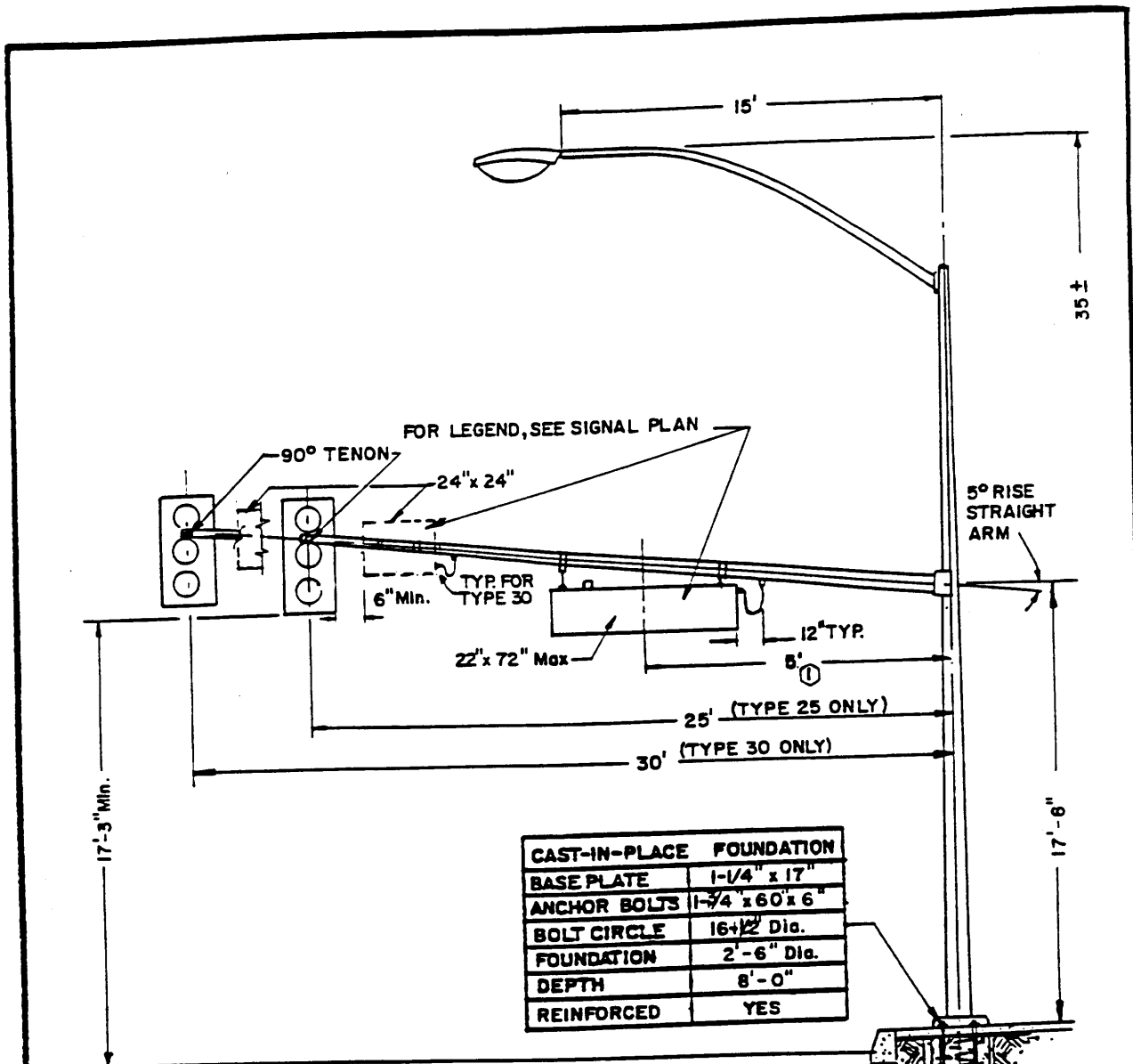
TYPE 20

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 MPH, MIN. YIELD STRENGTH = 40,000 PSI.
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & P.P.B. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. CAST IN PLACE CONCRETE BASE PER STATE SPECIFICATIONS FOR COMPARABLE POLE SIZE.
8. 10' MOUNT VEHICULAR INDICATION AND 7' PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 20

DRAWN <i>C. Tang</i> CHECKED <i>T. Kuba</i> APPR. <i>B.K. Jensen</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS & ILLUMINATED SIGN MOUNTING LOCATION.	DATE <i>5/15/87</i>
		SCALE <i>1" = 6'</i>
DEPT. OF PUBLIC WORKS CITY OF BUENA PARK DWG. NO. STD-443		REVISED 4-14-87 C.T. ① FORM # PW/157/55



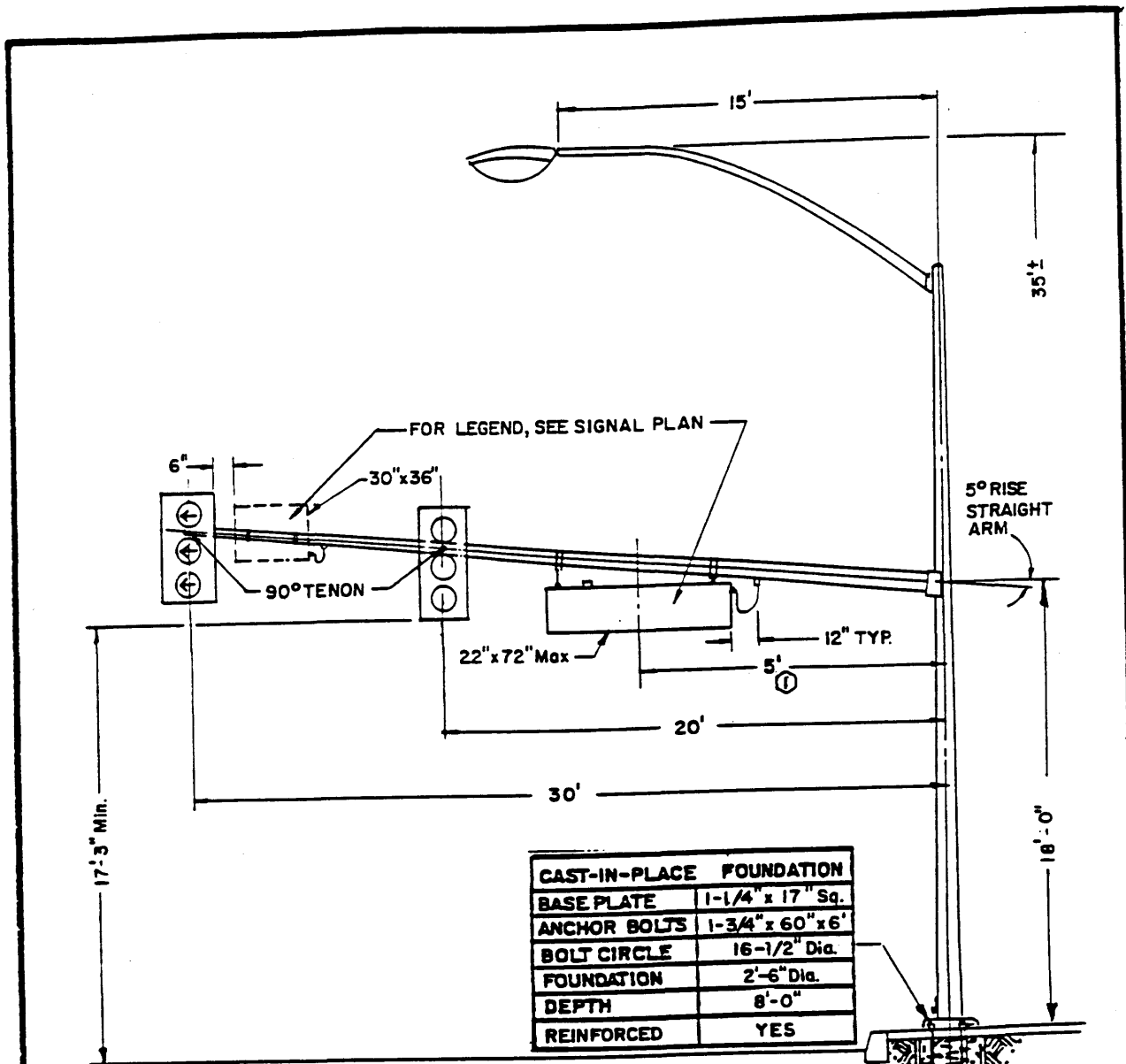
TYPE 25 & 30

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 M.P.H., MIN. YIELD STRENGTH = 40,000 PSI.
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & P.P.B. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. CAST IN PLACE CONCRETE BASE PER STATE SPECIFICATIONS FOR COMPARABLE POLE SIZE.
8. 10' MOUNT VEHICULAR INDICATION AND 7' PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 25 & 30

DRAWN <i>C. Tongo</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS & ILLUMINATED- SIGN MOUNTING LOCATIONS	DATE <i>5/15/87</i>
		SCALE 1" = 6'
CHECKED <i>T. Kuba</i>	CITY OF BUENA PARK	REVISED 4-14-87 C.T.
APPR <i>D. R. Jensen</i>		DWG NO. STD-444
DEPT. OF PUBLIC WORKS		FORM # PW/157



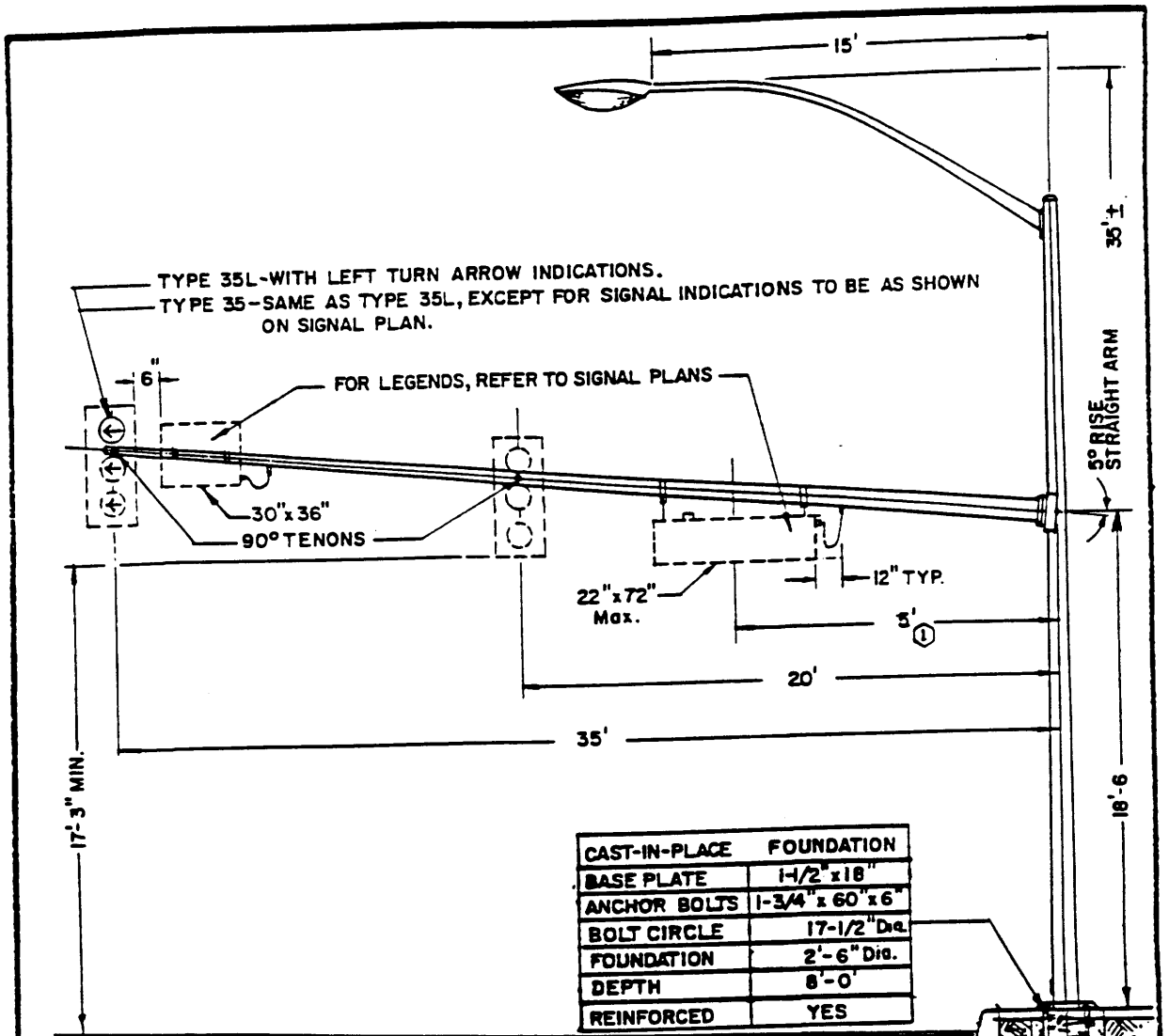
TYPE 30L

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 MPH., MIN. YIELD STRENGTH = 40,000 PSI,
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & P.P.B. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. CAST IN PLACE CONCRETE BASE PER STATE SPECIFICATIONS FOR COMPARABLE POLE SIZE.
8. 10' MOUNT VEHICULAR INDICATION AND 7' PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 30L

DRAWN <i>C. Tamm</i> CHECKED <i>T. Kuba</i> APPR. <i>M. K. Jensen</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS & ILLUMINATED SIGN MOUNTING LOCATIONS	DATE <i>5/15/87</i> SCALE <i>1" = 6'</i> REVISED 4-14-87 C.T.
DEPT. OF PUBLIC WORKS		CITY OF BUENA PARK DWG NO. STD. - 445



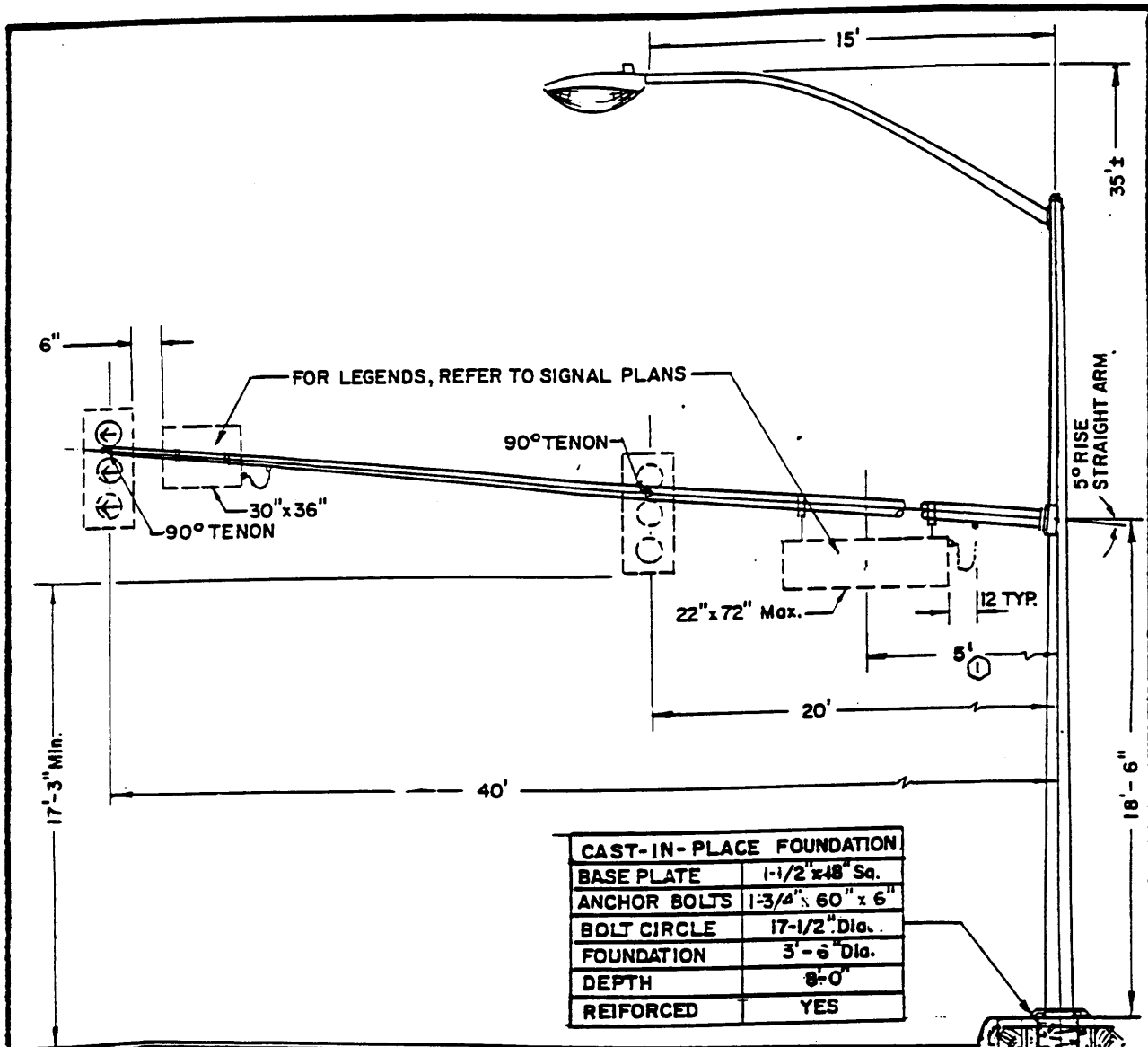
TYPE 35 & 35L

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 MPH, MIN. YIELD STRENGTH = 40,000 PSI
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & R.P.B. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. CAST IN PLACE CONCRETE BASE PER STATE SPECIFICATIONS FOR COMPARABLE POLE SIZE.
8. 10' MOUNT VEHICULAR INDICATION AND 7' PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 35 & 35L

DRAWN <i>C. Tambo</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS & ILLUMINATED SIGN MOUNTING LOCATIONS	DATE <i>5/15/87</i>
		SCALE 1" = 6'
CHECKED <i>P. Kuba</i>	DEPT. OF PUBLIC WORKS	REVISED 4-14-87 CT. ①
APPROVED <i>D. K. Jensen</i>		CITY OF BUENA PARK
DWG NO. STD-446		FORM # PW/157/55



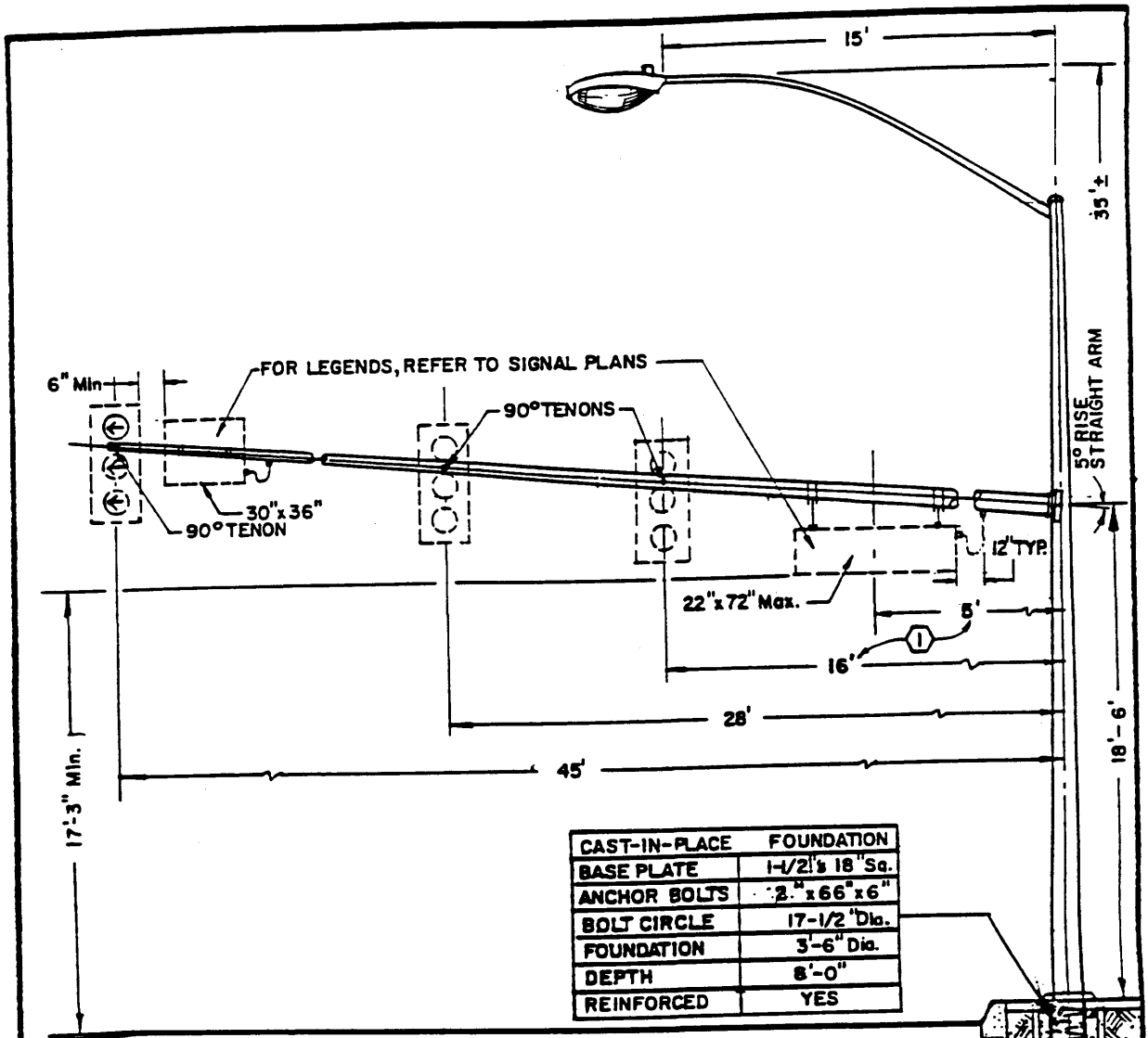
TYPE 40L

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 M.P.H., MIN. YIELD STRENGTH = 40,000 PSI.
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & P.P.B. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. CAST IN PLACE CONCRETE BASE PER STATE SPECIFICATIONS FOR COMPARABLE POLE SIZE.
8. 10' MOUNT VEHICULAR INDICATION AND PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 40L

DRAWN <i>C. Tamm</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS & ILLUMINATED SIGNAL MOUNTING LOCATIONS	DATE <i>5/15/87</i>
CHECKED <i>F. Kuba</i>		SCALE 1" = 6'
APPR. <i>D.K. Jensen</i>		REVISED 4-14-87 C.T. ①
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD-447



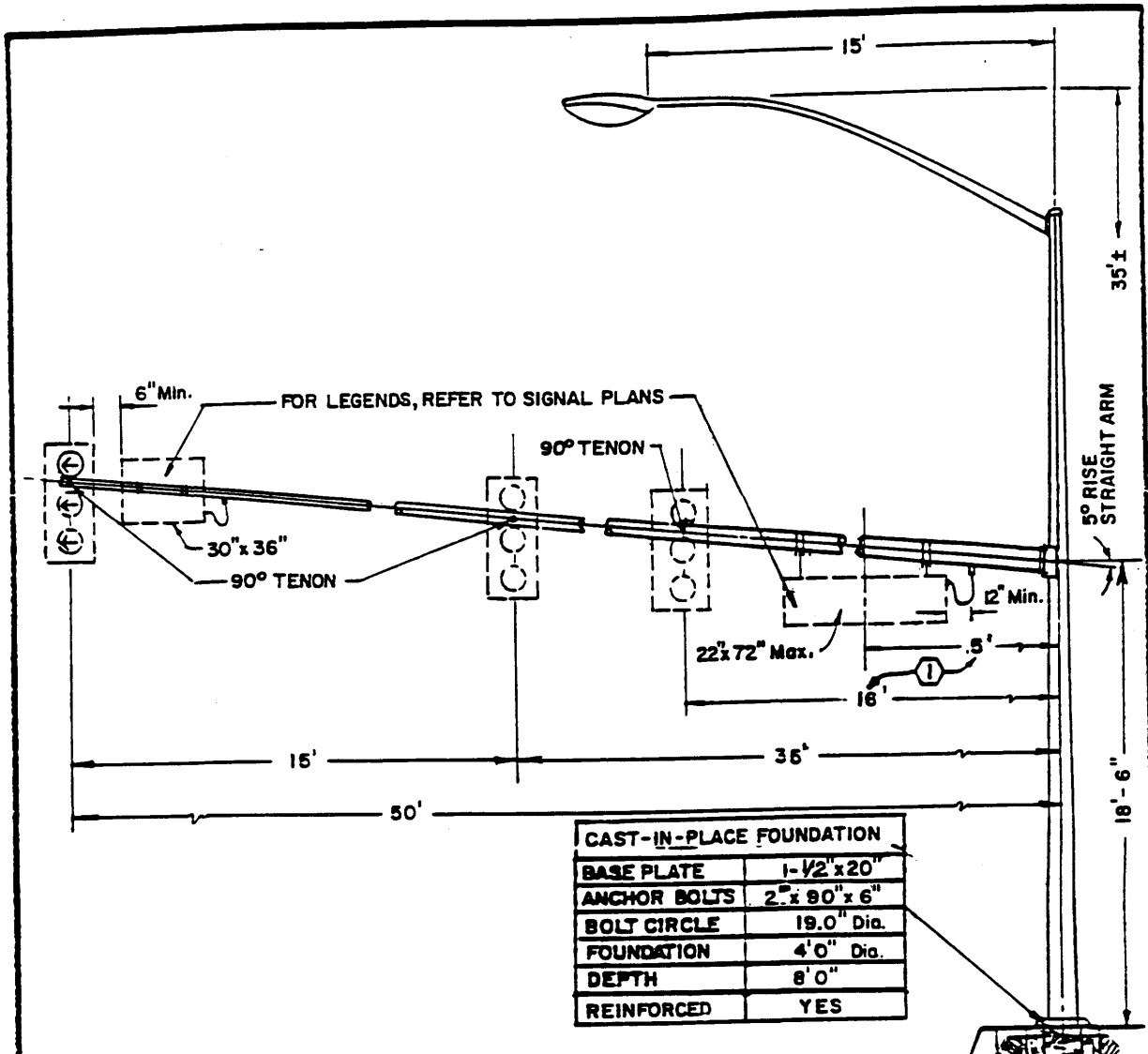
TYPE 45L

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 MPH, MIN. YIELD STRENGTH = 40,000 PSI.
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & P.P.S. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. CAST IN PLACE CONCRETE BASE PER STATE SPECIFICATIONS FOR COMPARABLE POLE SIZE.
8. 10' MOUNT VEHICULAR INDICATION AND PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 45L

DRAWN <i>C. Tansky</i> CHECKED <i>T. Kuba</i> APPR <i>D. K. Jensen</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS & ILLUMINATED SIGN MOUNTING LOCATIONS	DATE <i>5/15/87</i>
		SCALE 1" = 6'
		REVISED 4-14-87 <i>CT</i>
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG NO STD.-448

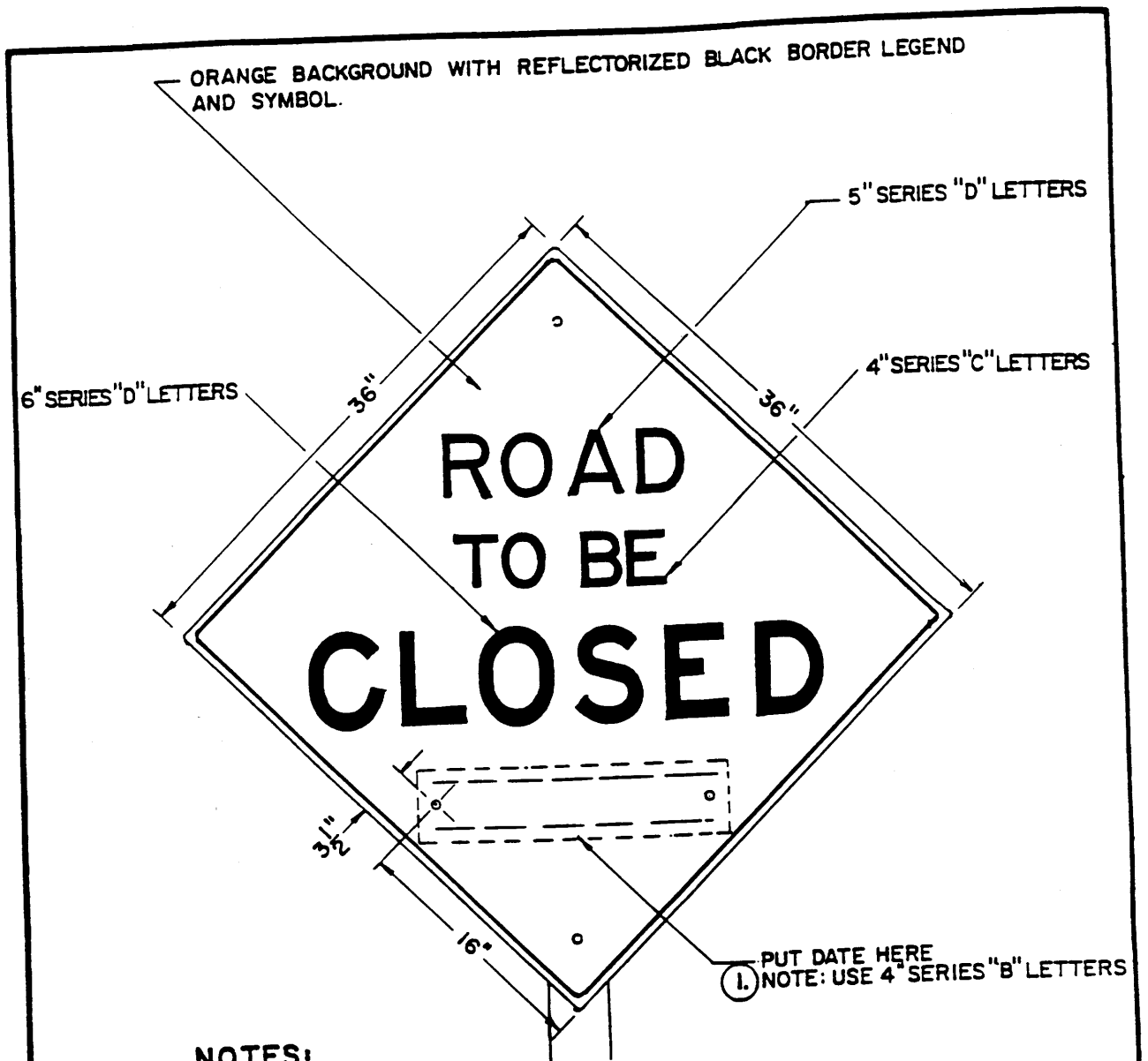


TYPE 50L

NOTES:

1. SIGN MANUFACTURER TO FURNISH ALL SIGNS & BRACKETS
2. PROVIDE ANCHOR BOLT COVERS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 M.P.H., MIN. YIELD STRENGTH = 40,000 PSI.
4. ALL MAST ARM HEADS ARE 12" 3-SECTION WITH BACKPLATES.
5. PENETRATIONS FOR MAST ARM SIGNAL HEADS SHALL BE PERFORMED AT POINT OF MANUFACTURE, ALL OTHER PENETRATIONS TO BE DONE IN THE FIELD INCLUDING I-A, LUMINAIRES & P.R.B. POLES
6. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECS.
7. 10' MOUNT VEHICULAR INDICATION AND 7' PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

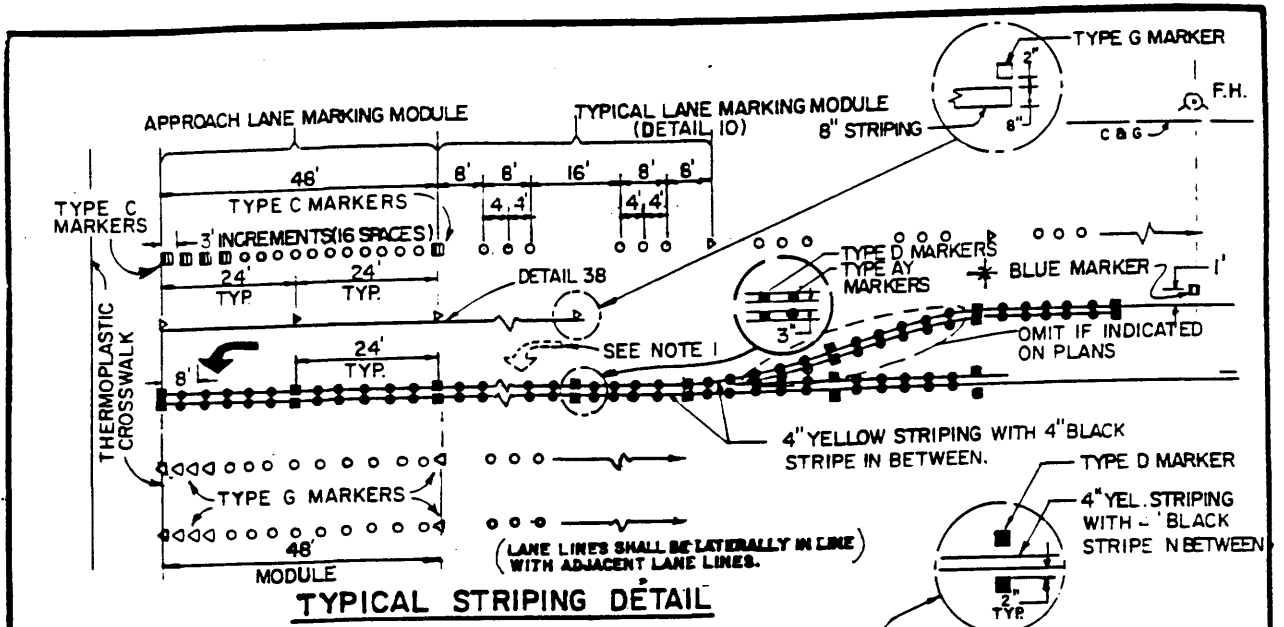
DRAWN <i>C. Tamm</i> CHECKED <i>S. Kieba</i> APPR. <i>W. K. Jensen</i>	MAST ARM SIGNAL STANDARDS SIGNAL HEADS & ILLUMINATED SIGN MOUNTING LOCATIONS	DATE <i>5/15/87</i> SCALE <i>1" = 6'</i> REVISED <i>4-14-87</i> 07
DEPT. OF PUBLIC WORKS CITY OF BUENA PARK DWG NO.		STD-449



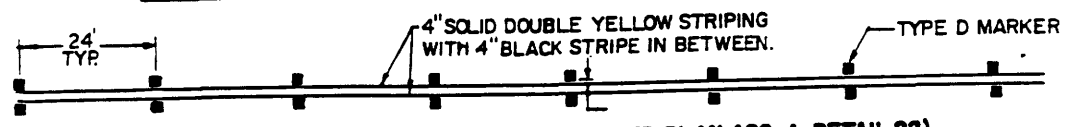
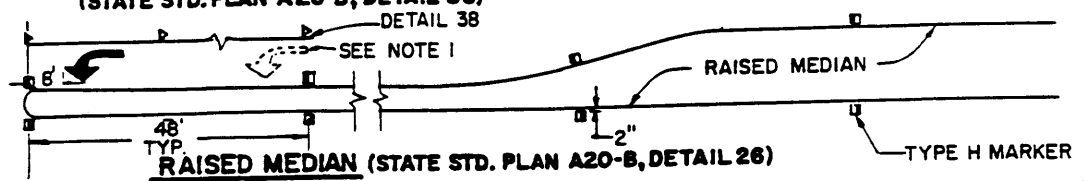
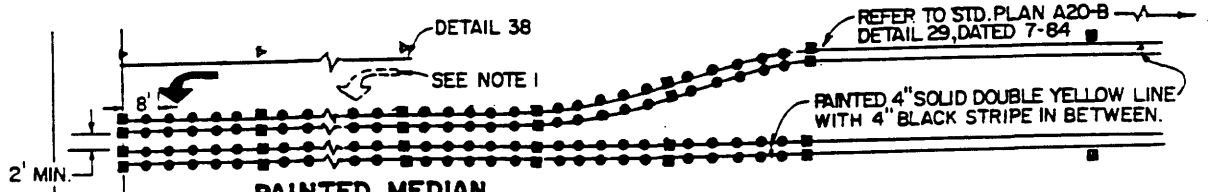
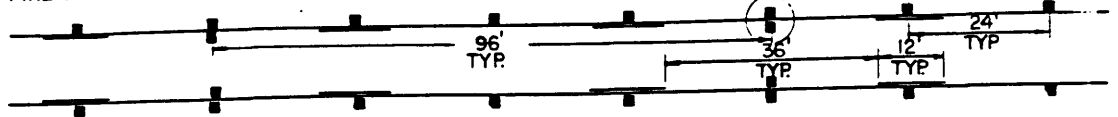
NOTES:

- ①. SEPARATE PLATE FOR DATE OF CLOSURE SHALL BE OF ORANGE BACKGROUND WITH REFLECTORIZED BLACK LETTERS.
- ②. CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 7 FEET.
- ③. SIGN SHALL BE PLACED ON THE PARKWAY FACING THE DIRECTION OF TRAVEL AND MAY ALSO BE PLACED ON THE PARKING LANE BUT MUST BE INSTALLED WITH STANDARD PLASTIC OR RUBBER DELINEATORS IN A TAPER, QUANTITY AS NECESSARY.
- ④. SIGN SHALL BE PLACED AS DIRECTED BY THE ENGINEER AT LEAST 10 DAYS PRIOR TO BEGINNING OF CLOSURE DATE AND SHALL BE REMOVED IMMEDIATELY AT THE CONCLUSION OF THE PROJECT.

DRAWN C. TANZO CHECKED <i>T. Kuba</i> APPR. <i>D. K. Jensen</i>	PRE-CONSTRUCTION INFORMATION SIGN	DATE 5/15/87 SCALE NO SCALE REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG NO. STD. - 450



* BLUE REFLECTIVE MARKERS SHALL BE PLACED 90° IN LINE WITH FIRE HYDRANT AND 1-FOOT AWAY FROM THE CENTERLINE.



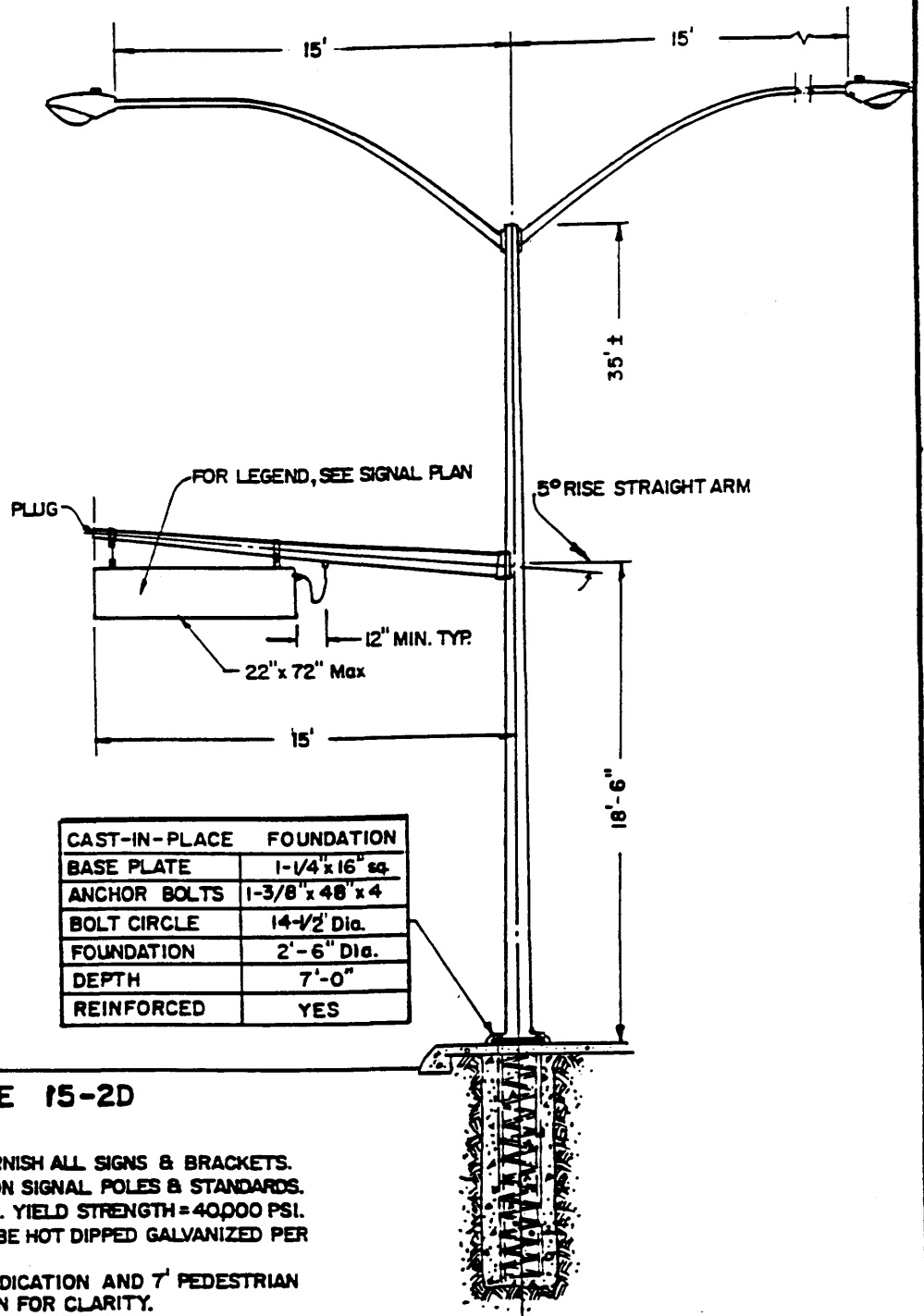
NOTES:

1. TURN LANES $\geq 96'$ SHALL BE PROVIDED WITH LEAD ARROW.
2. ALL WORKS AND MATERIALS SHALL CONFORM TO THE CURRENT CALTRAN STD. PLANS & SPECS. DATE JULY 1992.
3. TRAFFIC PAINTS AND BEADS SHALL BE EQUIVALENT TO LOS ANGELES COUNTY SPECS.
4. ENDS OF THERMOPLASTIC CROSSWALK SHALL TERMINATE AT THE EDGE OF GUTTER AND ASPHALTIC PAVEMENT.

LEGEND

- - TYPE C - 4" SQ. RED-CLEAR REFLECTIVE MARKER.
- - TYPE A - 4" DIA. WHITE NON-REFLECTIVE MARKER.
- - TYPE AY - 4" DIA. YELLOW NON-REFLECTIVE MARKER.
- ▷ - TYPE G - 4" SQ. ONE WAY CLEAR REFLECTIVE MARKER.
- - TYPE B - 4" SQ. TWO WAY BLUE REFLECTIVE MARKER.
- ◻ - TYPE H - 4" SQ. ONE WAY YELLOW REFLECTIVE MARKER.
- - TYPE D - 4" SQ. TWO WAY YELLOW REFLECTIVE MARKER.

DRAWN C. TANZO CHECKED <i>T. Kuba</i> APPR. <i>D. Sauer</i>	STANDARD PLAN INSTALLATION, RAISED PAVEMENT MARKERS	DATE 2-20-85 SCALE 1" = 30' REVISED 12-14-93 <i>INT.</i>
DEPT. ENG'G SERVICES	CITY OF BUENA PARK	DWG. NO. STD-451



CAST-IN-PLACE FOUNDATION	
BASE PLATE	1-1/4" x 16" sq.
ANCHOR BOLTS	1-3/8" x 48" x 4
BOLT CIRCLE	14-1/2" Dia.
FOUNDATION	2'-6" Dia.
DEPTH	7'-0"
REINFORCED	YES

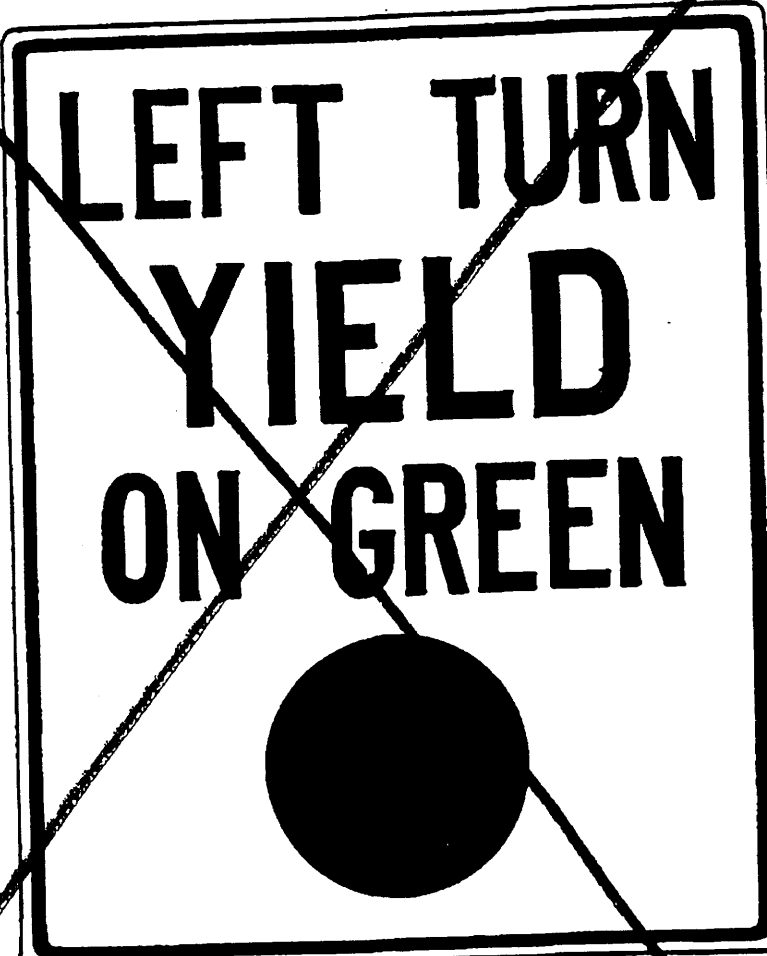
TYPE 15-2D

NOTES:

1. SIGN MANUFACTURE TO FURNISH ALL SIGNS & BRACKETS.
2. PROVIDE ANCHOR BOLTS ON SIGNAL POLES & STANDARDS.
3. WIND VELOCITY = 70 MPH. YIELD STRENGTH = 40,000 PSI.
4. POLE ASSEMBLY SHALL BE HOT DIPPED GALVANIZED PER STATE SPECIFICATIONS.
5. 10' MOUNT VEHICULAR INDICATION AND 7' PEDESTRIAN SIGNALS ARE NOT SHOWN FOR CLARITY.

TYPE 15-2D

DRAWN <i>C. Tang</i>	MAST ARM SIGNAL STANDARD SIGNAL HEADS OR ILLUMINATED SIGN MOUNTING LOCATION	DATE 5-16-85
		SCALE 1" = 6'
CHECKED <i>L.K.</i>	CITY OF BUENA PARK	REVISED
APPR. <i>A.F.D.</i> 5/16/85		DWG. NO. STD. 452
DEPT. OF PUBLIC WORKS		



30"

24"

4" C SERIES

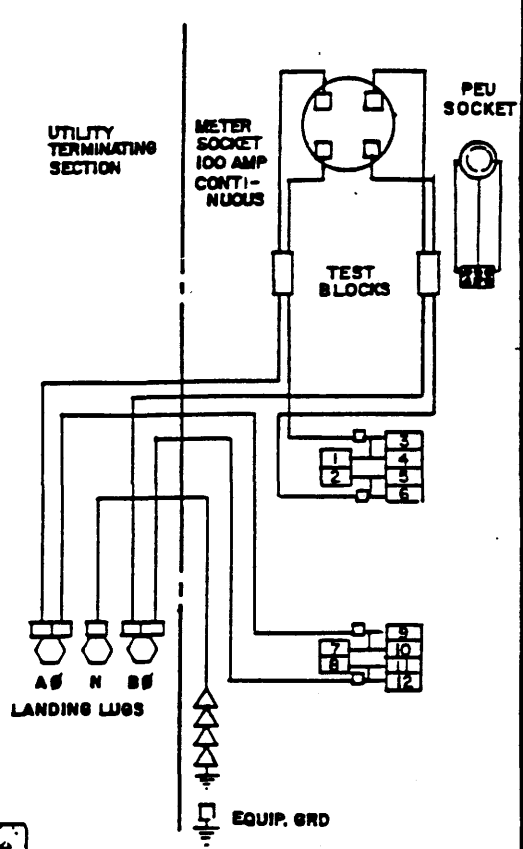
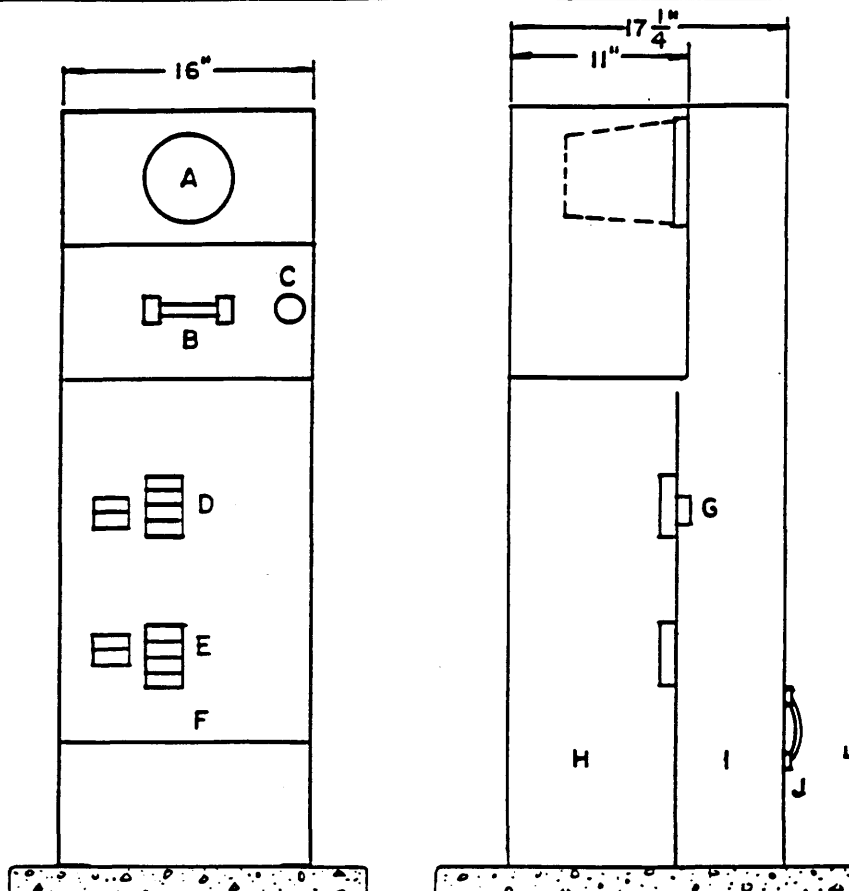
5" D SERIES

4" C SERIES

8" GREEN BALL

USE STATE STD. R73-7

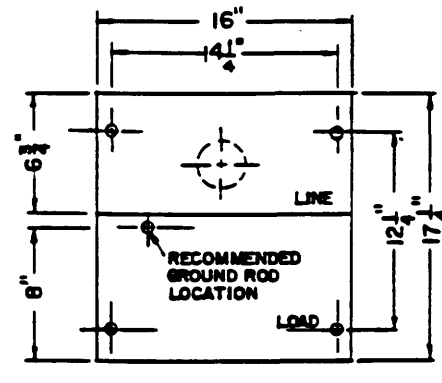
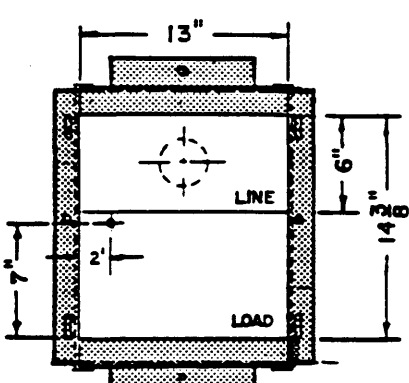
DRAWN C. TANZO	PERMITTED / PROTECTED LEFT TURN SIGN	DATE MAY 15, 1985
CHECKED T.K. 5/15/85		SCALE 1" = 6"
APPR. DJG 5/16/85		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD. 453



**CABINET
(FRONT VIEW)**

**CABINET
(SIDE VIEW)**

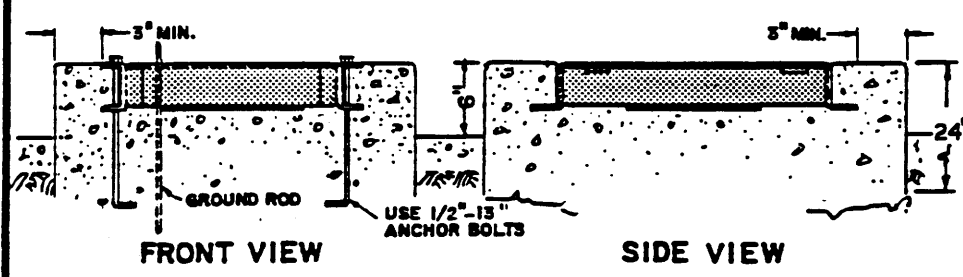
WIRING DIAGRAM



- A. Meter socket 100 Amp rated
- B. Utility test section
- C. Photocell socket
- D. 6 circuit interior (metered)
- E. 6 circuit interior (unmetered)
- F. Hinged deadfront
- G. Utility landing lugs
- H. Load conduit area
- I. Line conduit area
- J. Line access cover

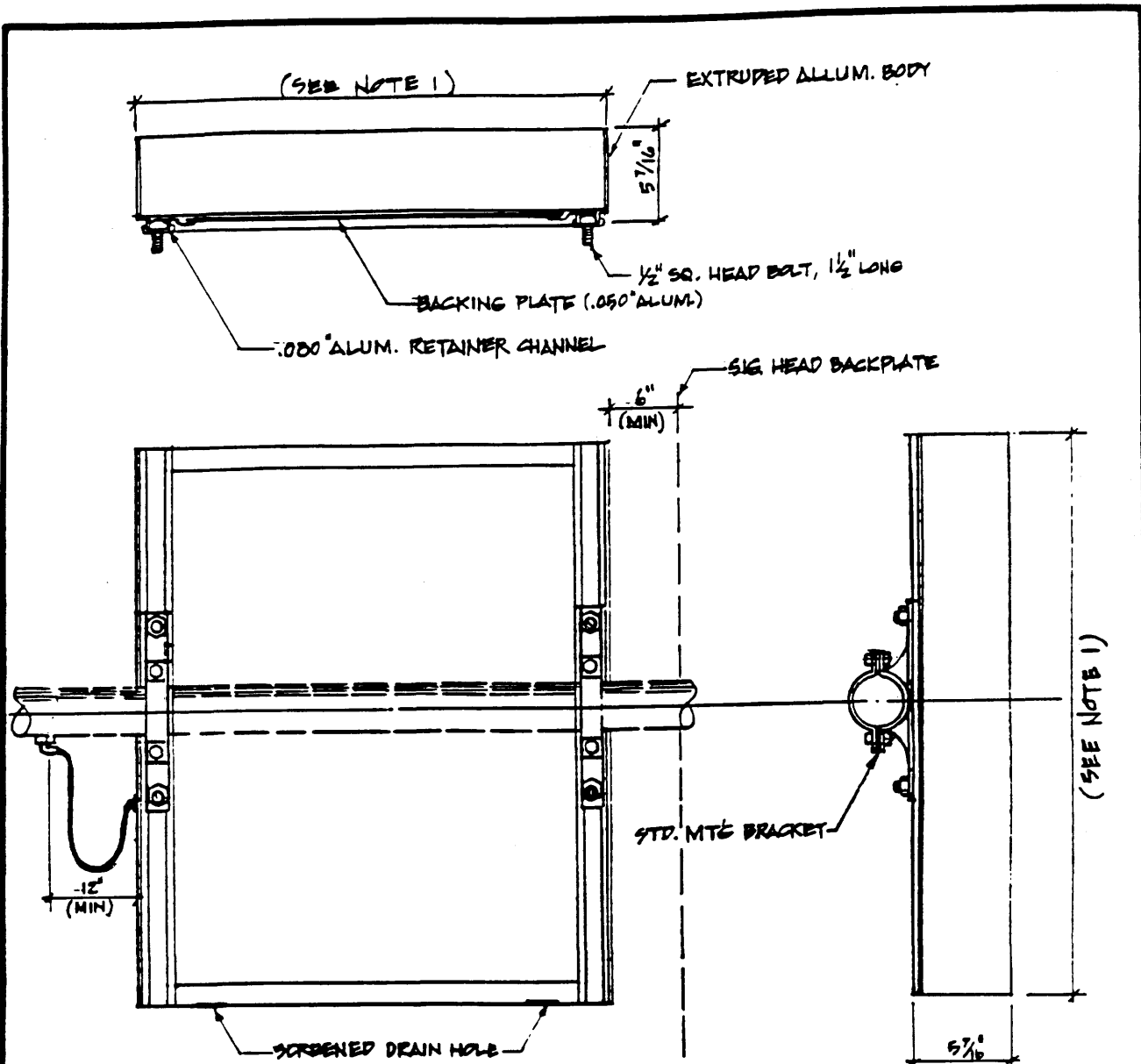
PLAN VIEW

FLOOR PLAN



NOTE: THIS IS A TYPE III BF SERVICE ENCLOSURE PER CALTRAN STD. PLAN ES-2C AND ES-2D, DATED 7- 92 WITH MODIFICATIONS SHOWN ON THIS PLAN.

DRAWN <i>C. Tamm</i> CHECKED <i>L.K.</i> APPR. <i>AK</i>	TRAFFIC SIGNAL & LIGHTING SERVICE EQUIPMENT ENCLOSURE	DATE July 29, 1986 SCALE NO SCALE REVISED 4/13/94
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD. 454

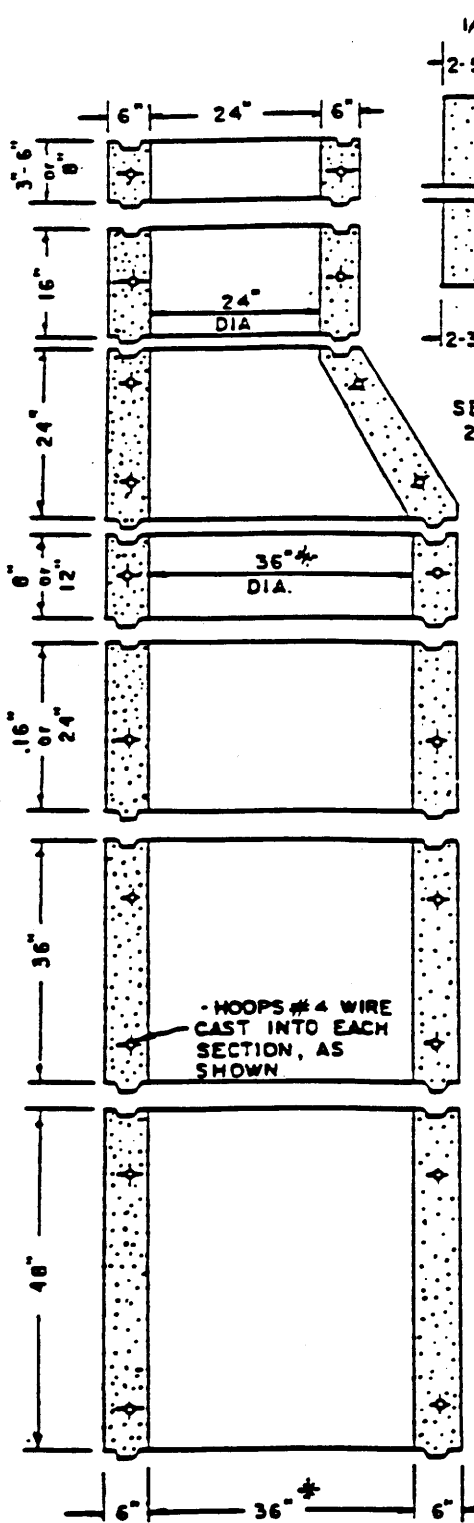


NOTES:

1. SIGN MESSAGE AND SIZE SHALL BE PER EACH INDIVIDUAL TRAFFIC SIGNAL PLAN.
2. PHOTO-ELECTRIC CELL SHALL BE LOCATED ON TOP OF SIGN FRAME.

DRAWN <i>C. Tando</i>	STANDARD MAST ARM SIGN MOUNTING and INSTALLATION	DATE FEB. 9, 1989
CHECKED <i>C. H. LL</i>		SCALE NOT TO SCALE
APPR. <i>HEU DR</i> 3/15/90		REVISED
DEPT. OF PUBLIC WORKS	CITY OF BUENA PARK	DWG. NO. STD.-455

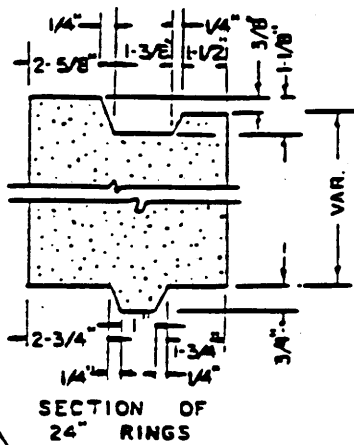
SEWER AND WATER STANDARDS



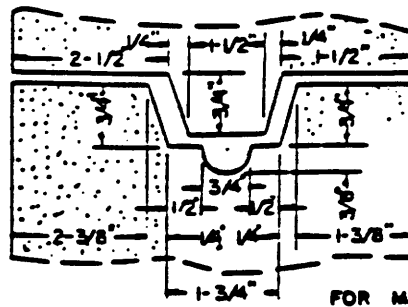
TYPICAL SECTION 36" L.D. ECCENTRIC CONE MANHOLE

MANHOLE FRAME & COVER TO BE RAISED 18" ABOVE NATURAL GROUND WHEN LOCATED OUTSIDE AN IMPROVED AREA.

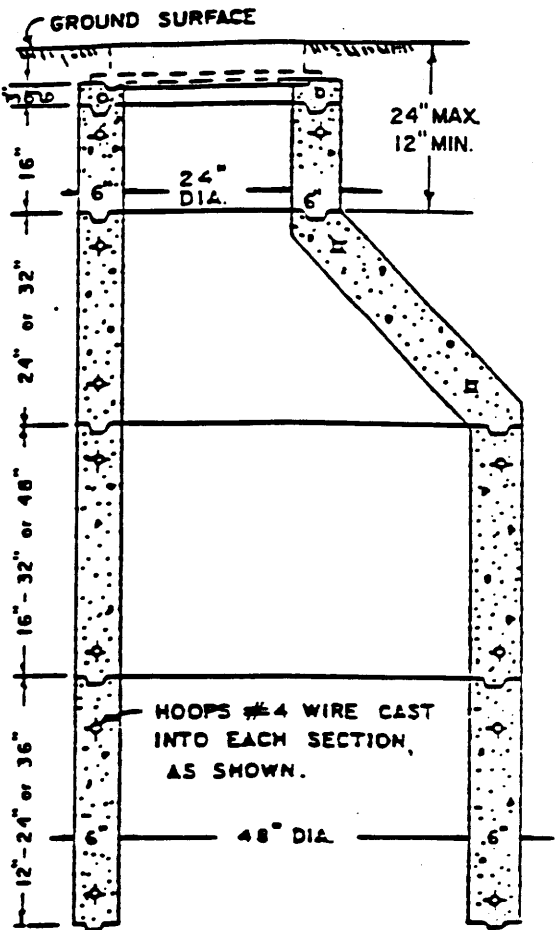
⊗ unless otherwise approved



SECTION OF 24" RINGS



SECTION OF 36" OR 48" MANHOLE PIPE



TYPICAL SECTION 48" I.D. ECCENTRIC CONE MANHOLE

FOR MANHOLE BASE SEE STD. PLAN # 506 & 507

FOR MANHOLE FRAME & COVER SEE STD. PLAN # 510

FOR USE IN NON-TRAFFIC AREAS

⊗ TO BE USED ONLY WITH PERMISSION OF THE CITY ENGINEER.

REQUIRED BACKFILL COMPACTION:
CITY STREETS 95% ⊗
STATE HIGHWAYS 95%

CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

Approved *Donald K. Jensen* 5/15/87
REV. 4/13/94 City Engineer Date

STD
502

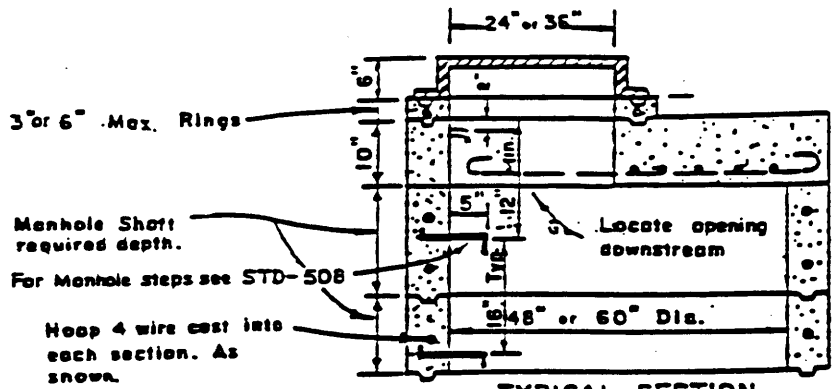
NON-REINF. CONC. ECCENTRIC CONE SANITARY SEWER MANHOLE

NOTES

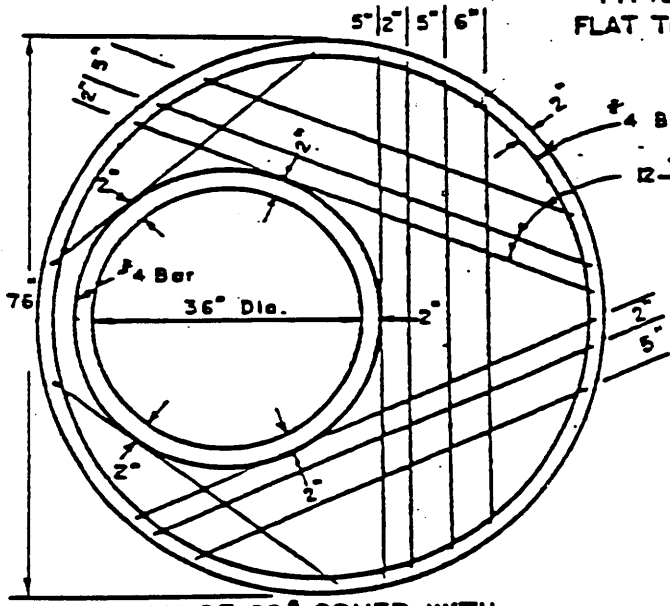
For Manhole base & Junction chamber, see STD. 506 & 507

For Manhole frame & cover see STD. PLAN 510

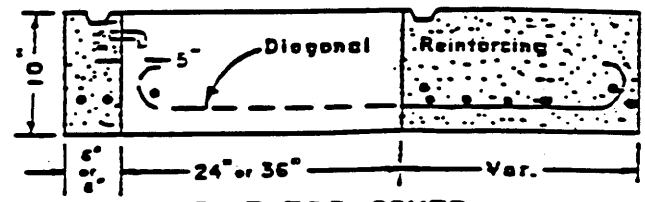
USE THIS STANDARD ONLY WHEN MANHOLE IS 4 FT. OR LESS IN DEPTH.



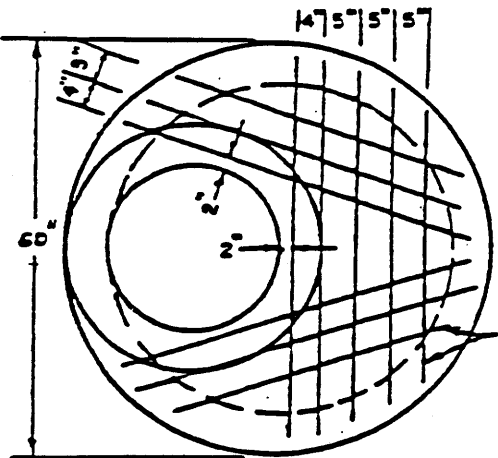
TYPICAL SECTION
FLAT TOP MANHOLE



PLAN OF 60° COVER WITH
36° ACCESS

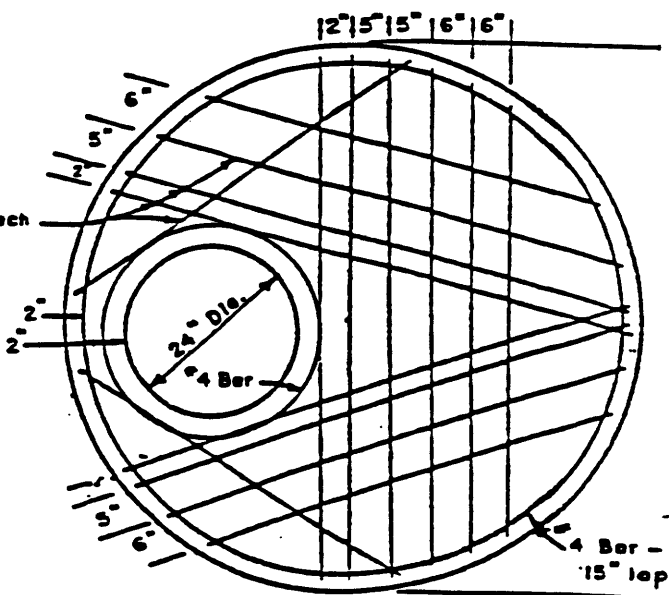


FLAT TOP COVER



PLAN OF 48° COVER
WITH 24° ACCESS

16-#4 Bars hooked at each end.
11-#5 Bars hooked at each end



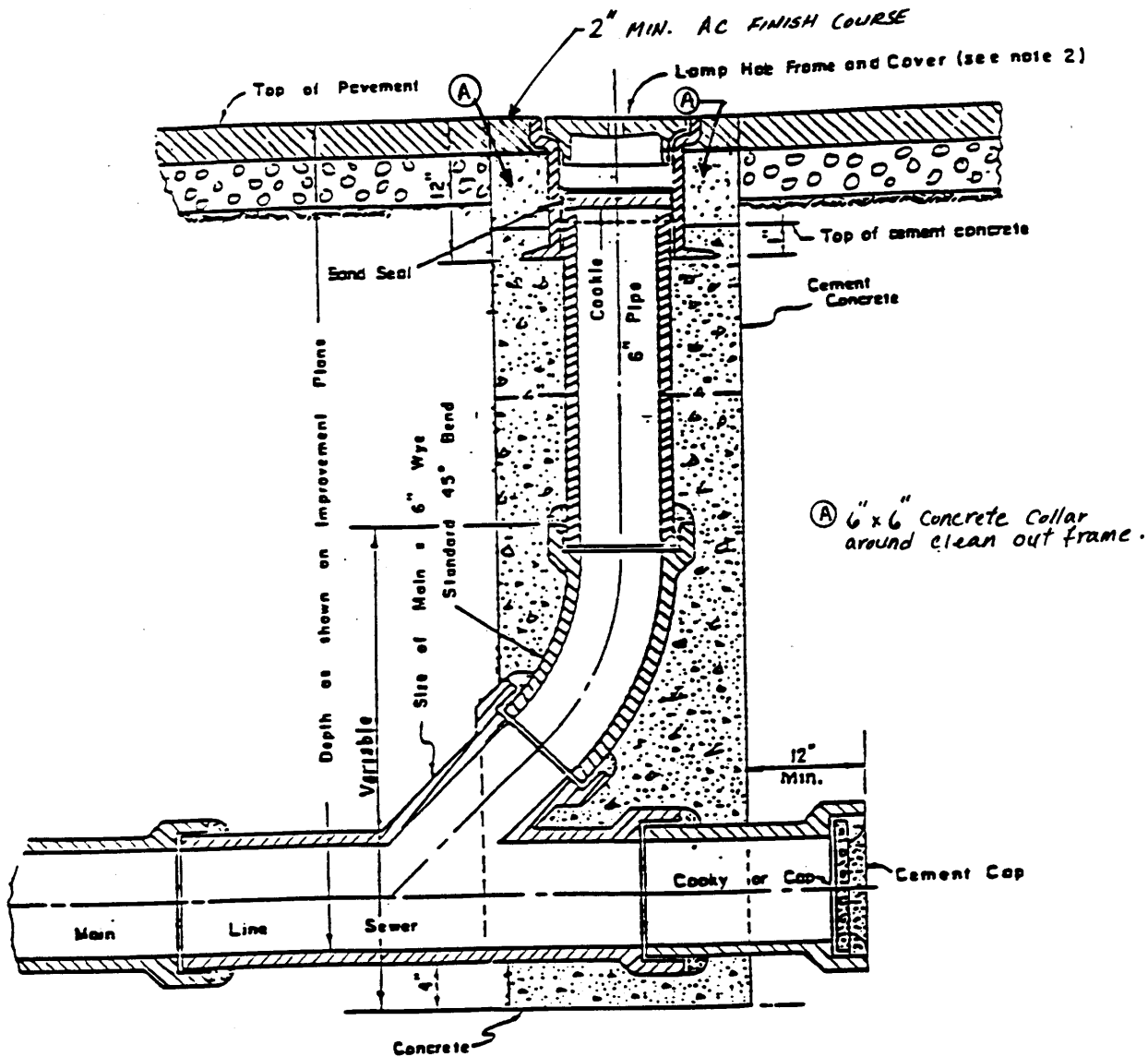
PLAN OF 60° COVER WITH
24° ACCESS

CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

Approved *Donald K. Jensen* 5/15/87
City Engineer Date

**STD
503**

FLAT TOP SANITARY SEWER MANHOLE COVERS



Ⓐ 6" x 6" Concrete Collar around clean out frame.

Required backfill compaction:

- ⊗ City streets 95%
- State highways 95%

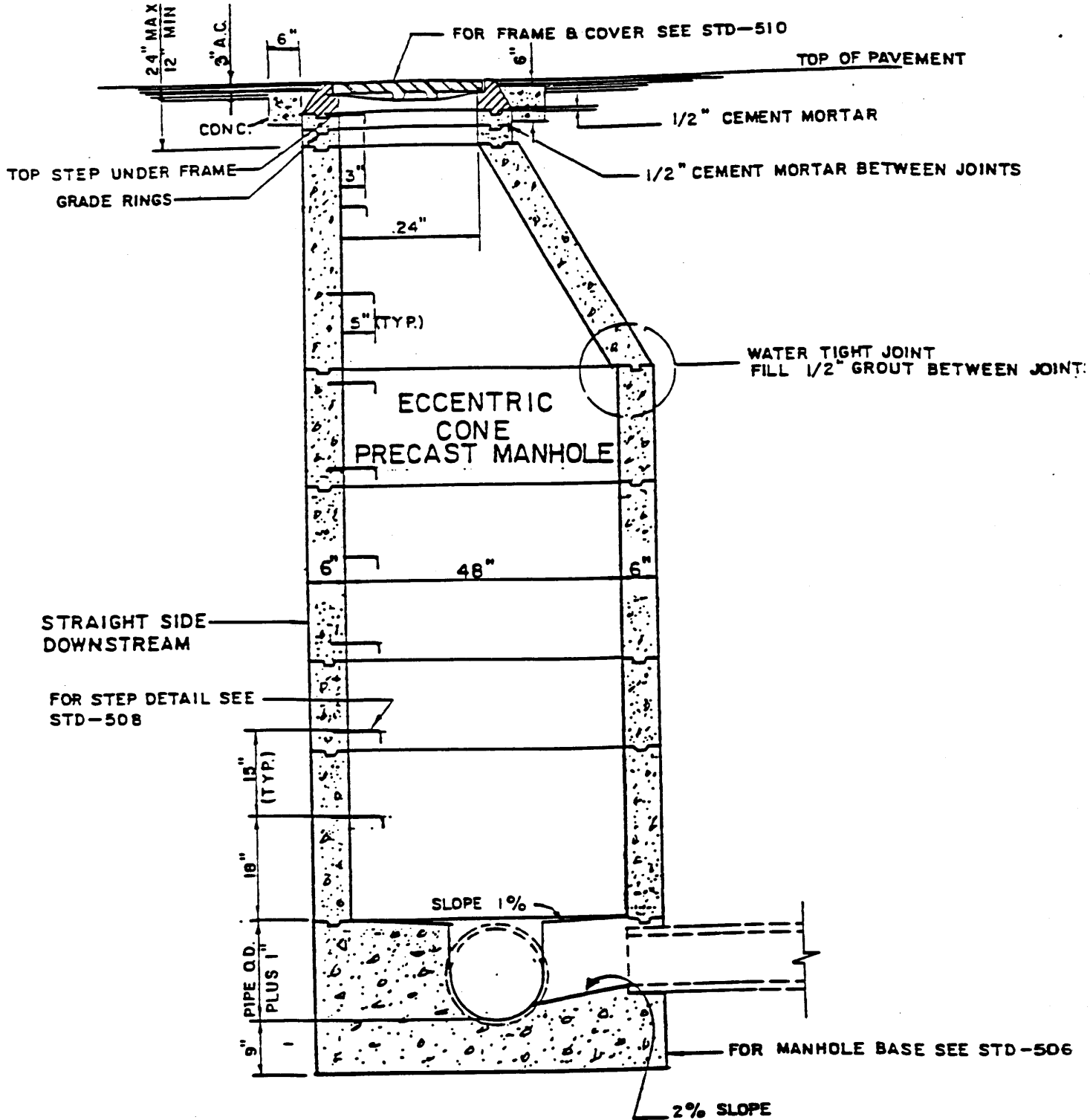
⊗ unless otherwise approved

NOTE

1. All materials in Lamp Hole construction shall conform to the specifications of the sewer main.
2. Lamp hole frame and cover shall be LONG BEACH IRON WORKS INC. No. X-510, ALHAMBRA FOUNDRY CO. No. A-1240 or equal. The word "SEWER" shall be embossed on cover

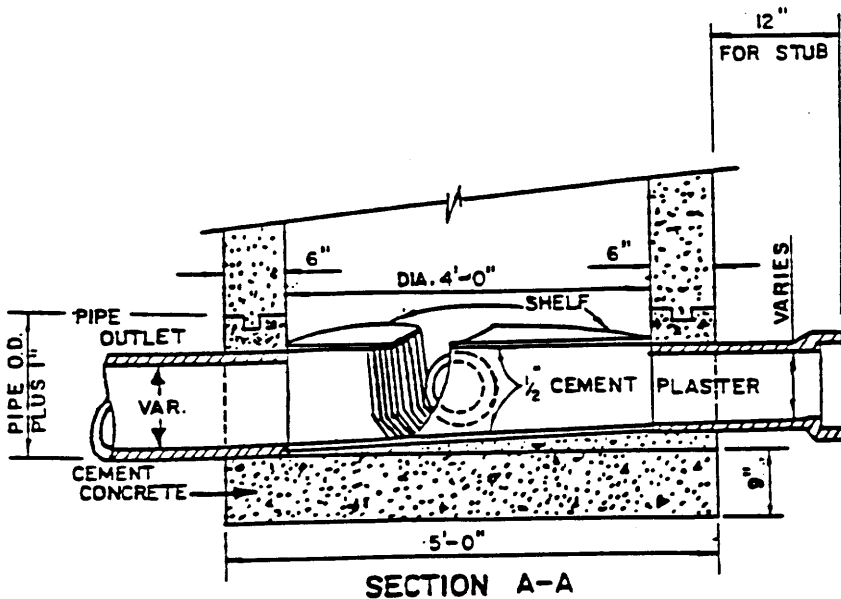
REV. (2) 1/25/95

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Ronald K. Jensen</i> 5/15/87 City Engineer Date	STD 504
SANITARY SEWER LAMP HOLE		REV. 4/13/94



NOTE:
 MANHOLE FRAME & COVER TO BE RAISED 18" ABOVE NATURAL
 GROUND WHEN LOCATED OUTSIDE OF IMPROVED AREA
 FOR MANHOLES 4 FT. OR LESS IN DEPTH SEE STD-503

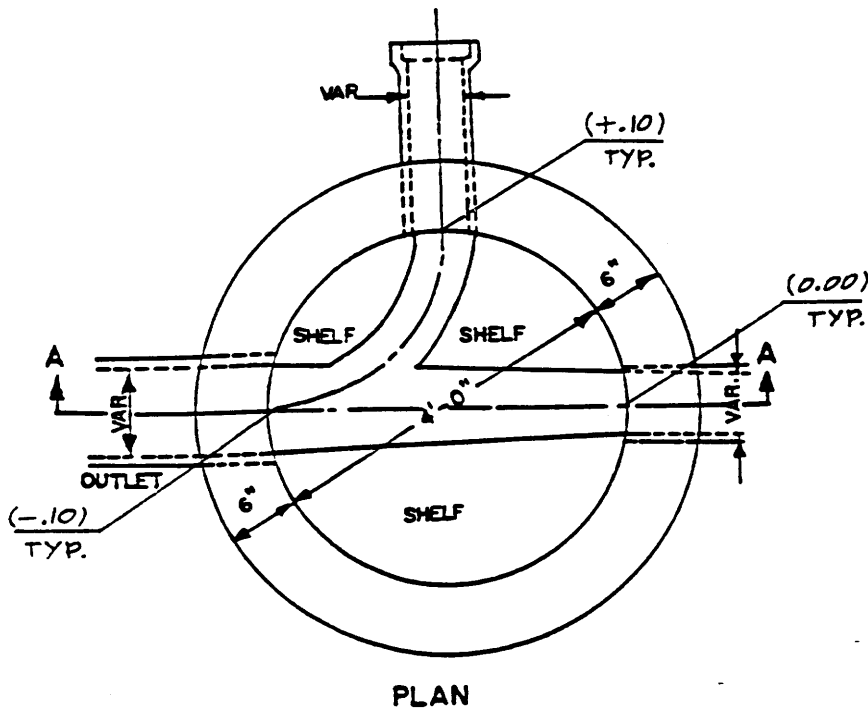
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD 505
SANITARY SEWER MANHOLE		



SECTION A-A

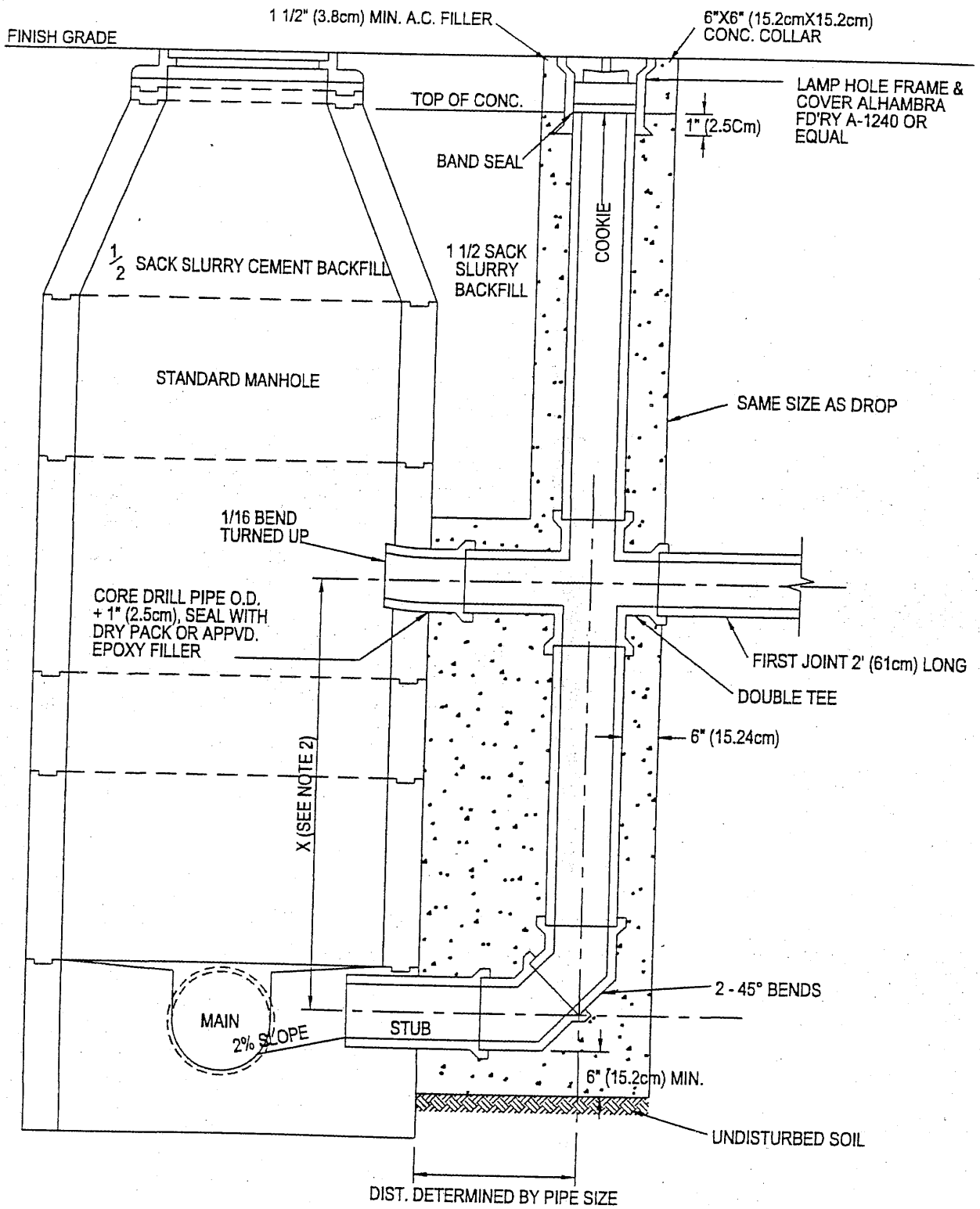
GENERAL NOTES

1. FOR MANHOLE SEE STD-505
2. ELEVATIONS OF SEWER LINES ARE AS SHOWN ON THE CONSTRUCTION PLANS.
3. THE TOP SURFACE OF SHELF SHALL SLOPE 2% TOWARD CENTER OF MANHOLE.
4. STEEL TROWEL FINISH ON SHELF.
5. MANHOLE BASE SHALL BE CENTERED ON INTERSECTING SEWER MAINS.



PLAN

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved: <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 506
SANITARY SEWER MANHOLE BASE		



NOTES:

1. FOR STANDARD MANHOLE SEE STD. 505.
2. "X" VARIES BUT SHALL NOT BE LESS THAN 2' (61cm).
3. CONCRETE SHALL BE 560-C-3,2500 P.S.I., 4" (10.2cm) MAX. SLUMP.
4. ALL PIPES SHALL BE V.C.P..
5. THIS CONSTRUCTION METHOD REQUIRES CITY ENGINEER APPROVAL ON INDIVIDUAL BASIS.
6. ALL CONCRETE WORK SHALL BE FORMED.

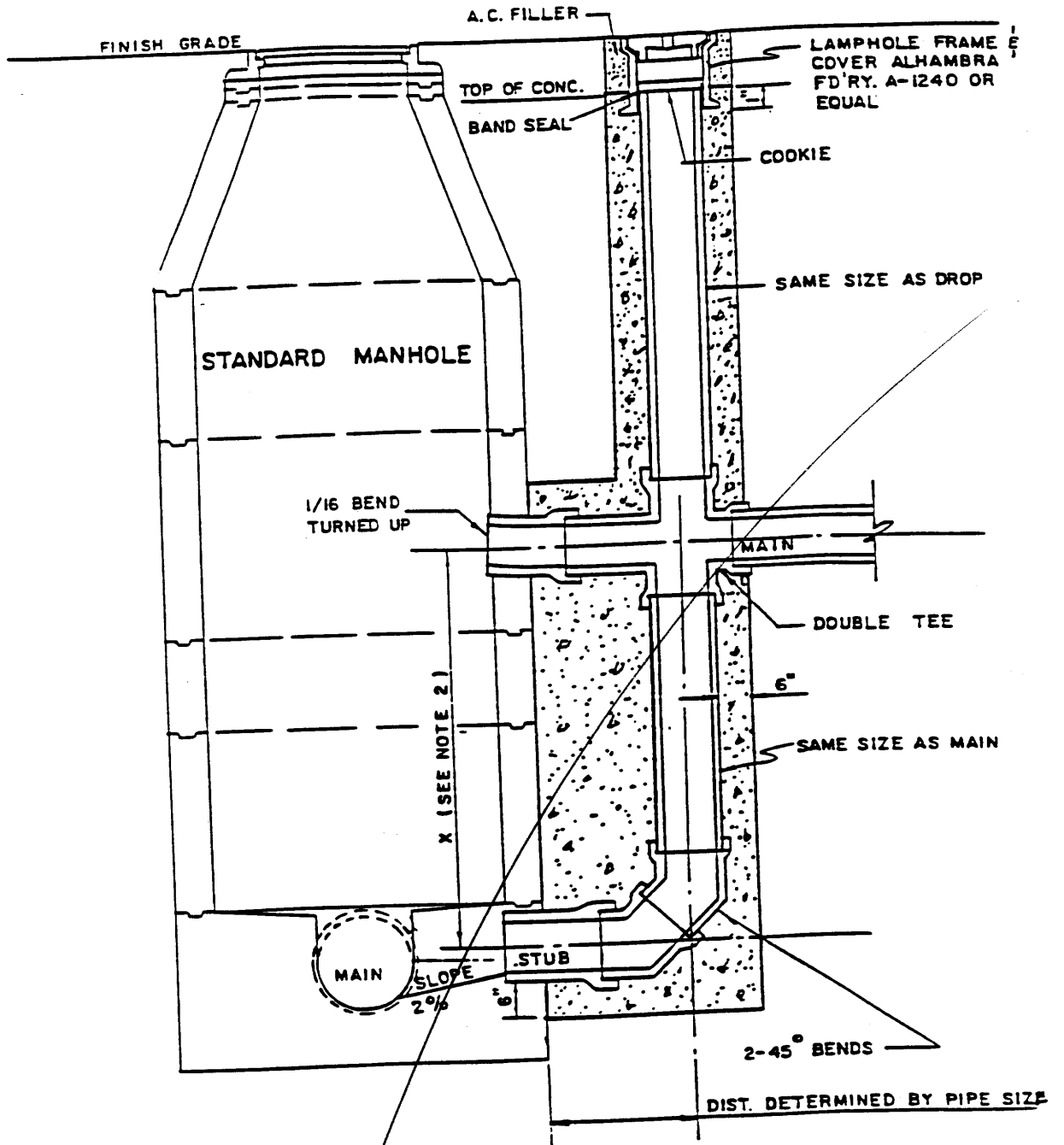
DRAWN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.
APPR.:	DATE:
DIRECTOR OF PUBLIC WORKS	DATE

DROP MANHOLE CONNECTION

DEPARTMENT OF PUBLIC WORKS

CITY OF BUENA PARK

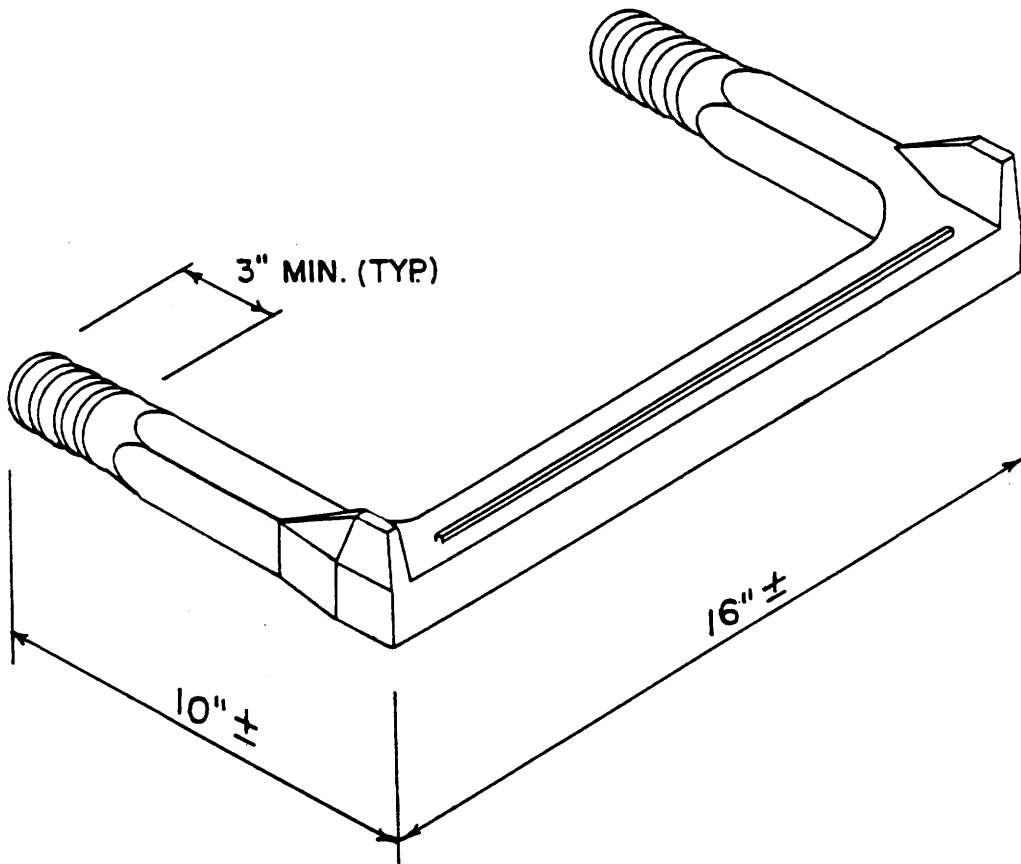
DWG. NO.: STD. 507



NOTE
 L FOR STANDARD MANHOLE SEE STD-505
 2."X" VARIES BUT SHALL NOT BE LESS THAN 2 FEET

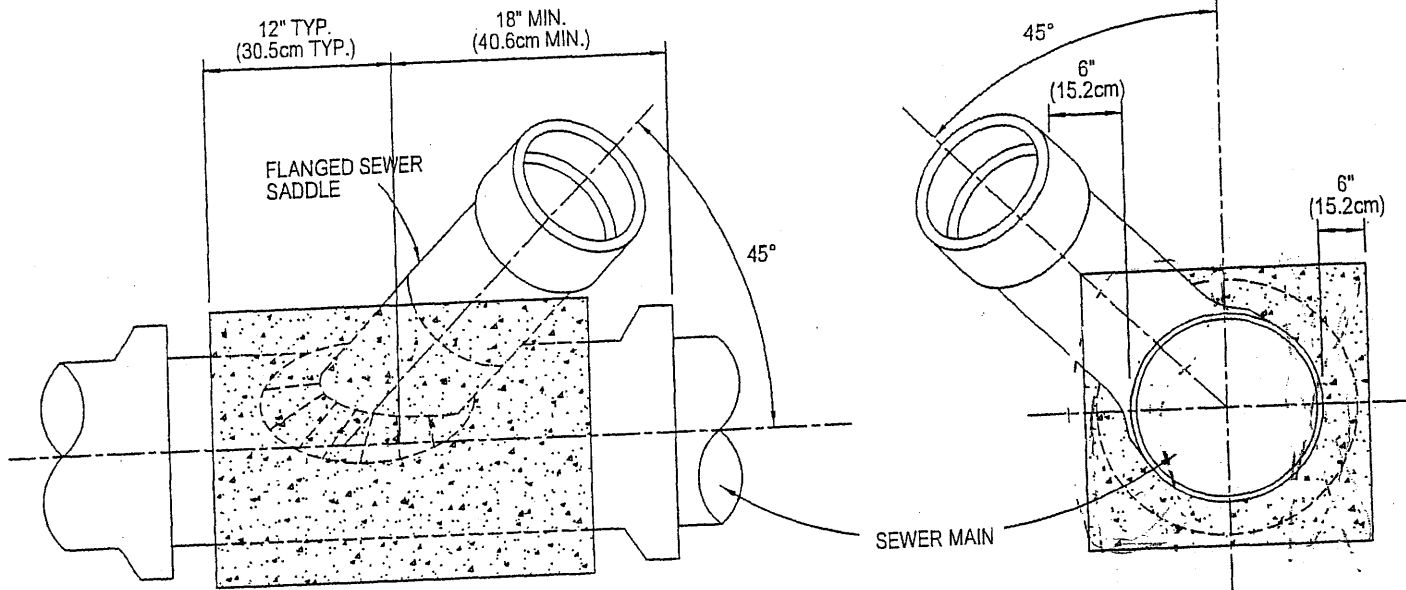
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Ronald K. Jensen</u> 5/15/87 City Engineer Date	STD 507
DROP MANHOLE CONNECTION		

*See Revised
 copy 9/11/00*

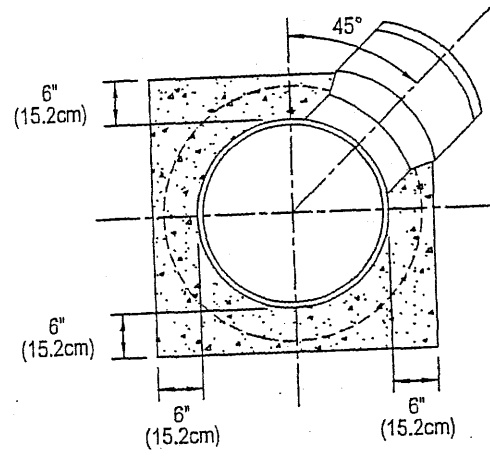
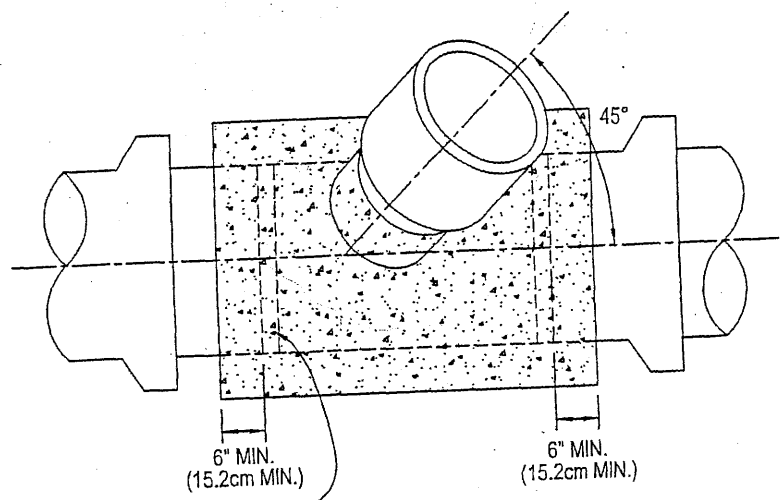


THE MANHOLE STEP SHALL BE INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH A CENTER CORE OF 1/2" STEEL REINFORCEMENT. THE STEP SHALL COMPLY WITH ASTM C-478.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <u>Donald K. Jensen</u> CITY ENGINEER DATE <u>5/15/87</u> REVISED _____ NO. _____	STD. 508
SEWER MANHOLE STEP		



CORE DRILL FLANGED SADDLE
TEE



CUT IN WYE

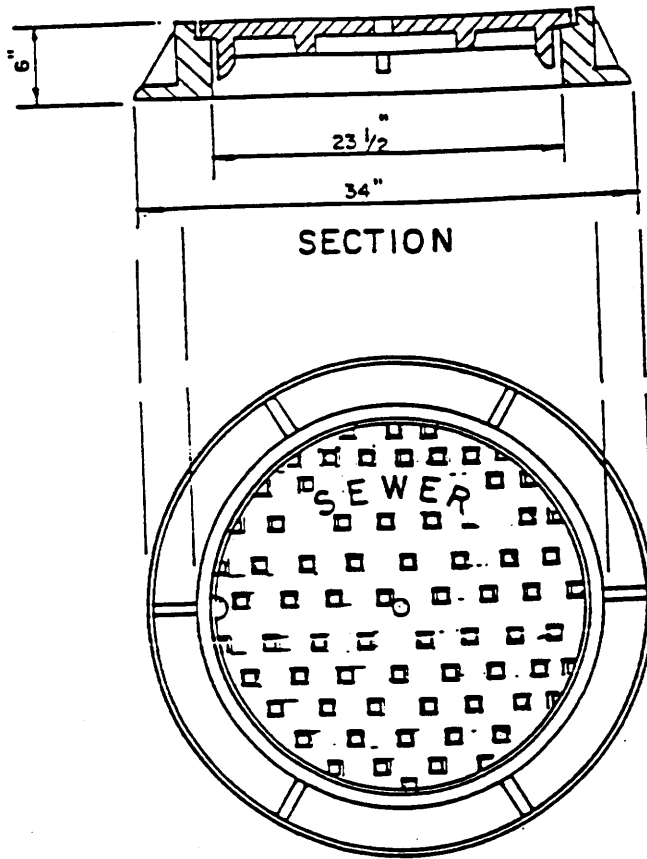
NOTES:

1. OPENING IN MAIN SEWER SHALL BE CORE DRILLED TO FIT THE SADDLE WHICH SHALL BE PROPERLY BEDDED AND ENVELOPED WITH PIPE EPOXY AS SHOWN.
2. AFTER SADDLE HAS BEEN EPOXYED IN PLACE, INSIDE IS TO BE EPOXYED TO MAKE A SMOOTH JOIN.
3. IF THE SEWER LATERAL IS THE SAME SIZE AS THE SEWER MAIN, A WYE SHALL BE USED.
4. ~~WYE MAY BE USED AS ALTERNATE TO CORE DRILLING.~~
5. CONCRETE SHALL BE 560-C-3, 250 P.S.I., 4" (10.2cm) MAX SLUMP.
6. ALL PIPE SHALL BE V.C.P..
7. INSTALLATION OF SEWER MAIN/LATERAL 8" OR LARGER SHALL CONSTRUCT A NEW MANHOLE STD#505 OR CORE INTO AN EXISTING MANHOLE.

DRAWN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.
APPR.: _____	DATE _____
DIRECTOR OF PUBLIC WORKS	
DEPARTMENT OF PUBLIC WORKS	

SEWER LATERAL CONNECTIONS

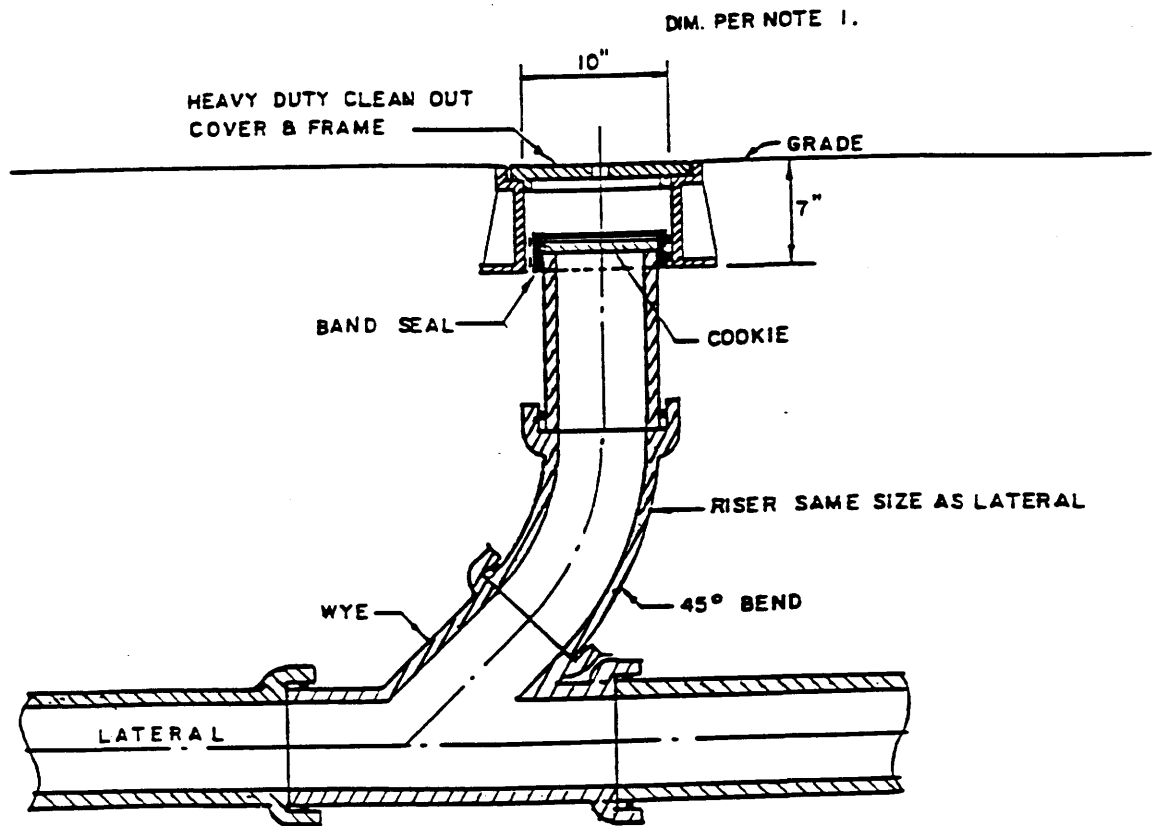
HEAVY DUTY TRAFFIC TYPE



PLAN

NOTE
MANHOLE FRAME AND COVER SHALL BE
ALHAMBRA FOUNDRY NO. A-1270, LONG
BEACH IRON WORKS INC. X-108, OR
APPROVED EQUAL.

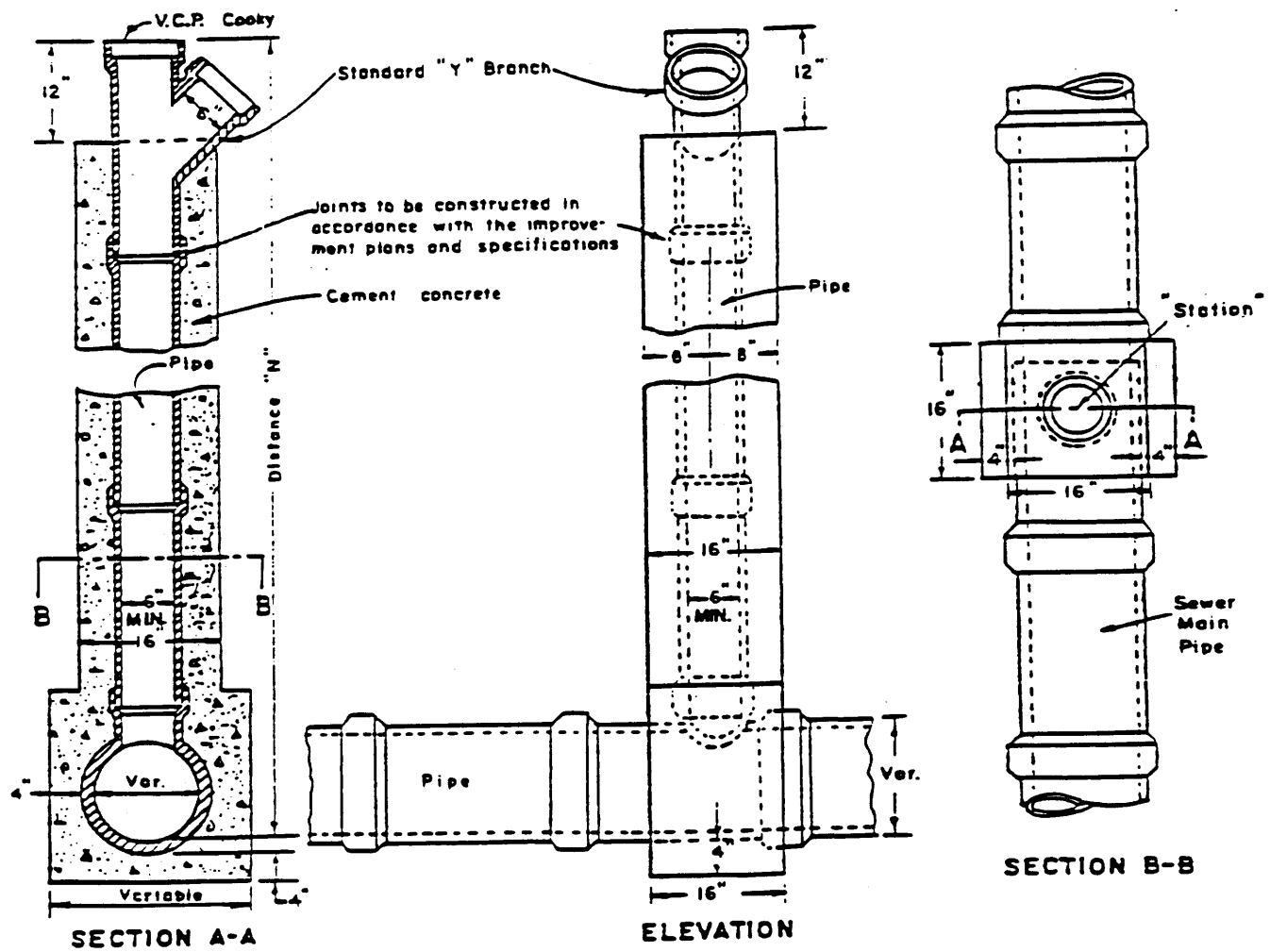
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 510
SANITARY SEWER MANHOLE FRAME AND COVER		



NOTE :

1. CLEAN OUT FRAME AND COVER SHALL BE LONG BEACH IRON WORKS NO. X-508A, ALHAMBRA FOUNDRY A-1242, OR APPROVED EQUAL.
2. CLEAN OUT SHALL HAVE "SEWER" EMBOSSED ON COVER.
3. FOR LATERALS LARGER THAN 6" USE ALHAMBRA FOUNDRY NO. A-1244 OR EQUAL.
4. LATERAL- 6" MIN. COMMERCIAL, 4" MIN. RESIDENTIAL
5. CLEAN OUT IN PAVED AREAS - ENCASE RISER PER STD-504
6. CENTER LINE OF CLEAN OUT SHALL BE 12" BEHIND R/W LINE, UNLESS DIRECTED OTHER WISE.
7. RESIDENTAL CLEAN OUTS WILL USE CONCRETE FRAME W/ C.I. COVER.

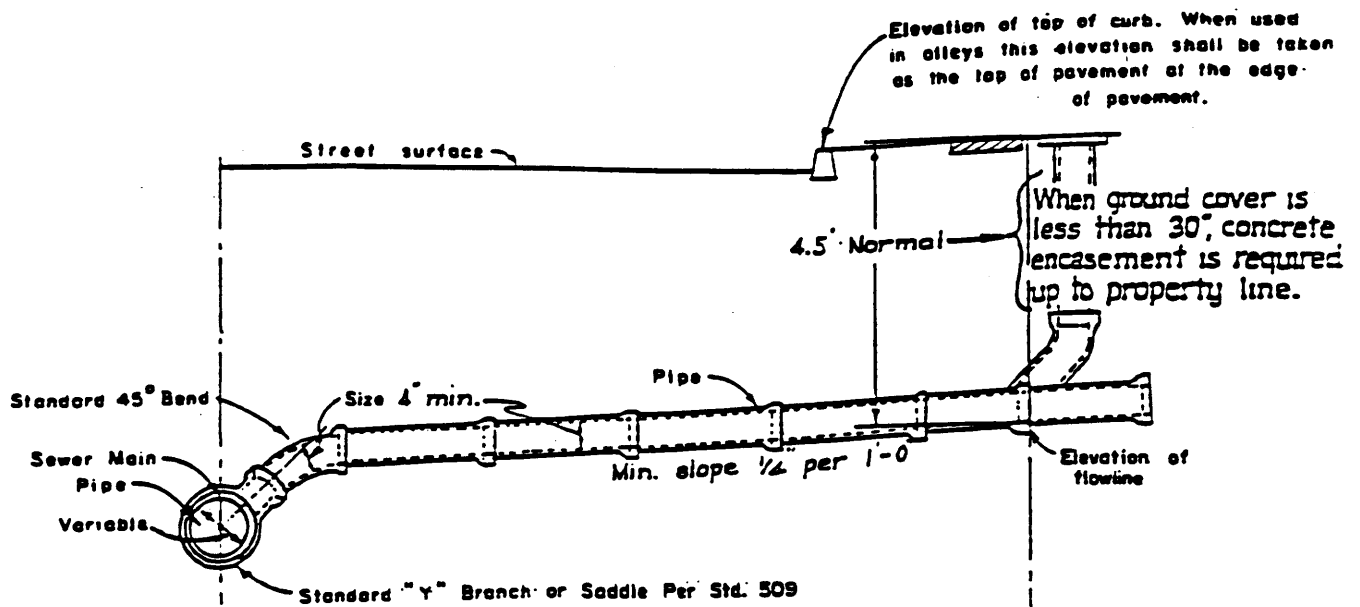
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald Jensen</i> 7/29/89 City Engineer Date	STD 511
SEWER LATERAL CLEAN OUT		



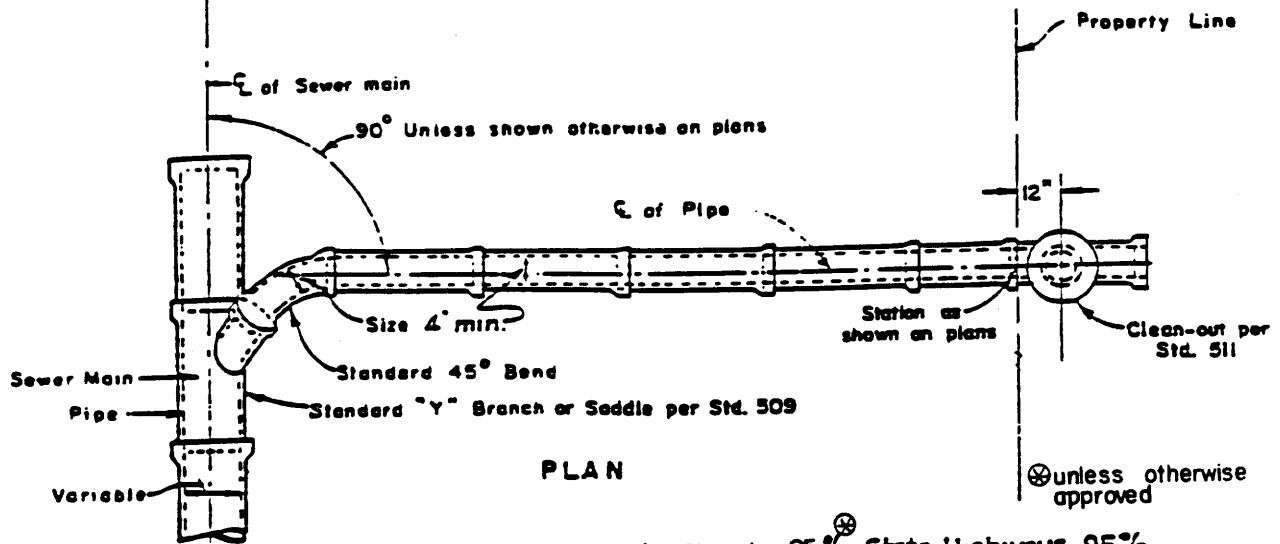
GENERAL NOTES

1. The distance "N" is shown on the improvement plans. The Station is shown on the improvement plans. When the Sewer Chimney Pipe is used with a sewer connection the Station will be the same as the station of the Sewer connection, unless shown otherwise.
2. When the Sewer Chimney Pipe is used with a sewer connection on both sides of the sewer main, looking-up grade, the sewer connection on the right side of the sewer main shall be connected with the "Y" branch by a 6" eighth bend and the sewer connection on the left shall be connected with the upper end of the chimney by a 6" quarter bend, unless otherwise specified. No more than 2 laterals to a chimney.
3. When the Sewer Chimney Pipe is used with a sewer connection on one side only, the Sewer Chimney Pipe shall be constructed as shown hereon, but with the "Y" facing the side with the sewer connection. The top of the chimney shall be closed with a cap made for that purpose. The remaining space in the socket shall be filled with wet sand and the sand covered with a thin coating of neat cement mortar.
4. The pipe shown hereon shall be V.C.P. (Wedglock - Mortar Joint - or Appr. Equal)
5. All concrete shall be per std. 100.
6. Required backfill compaction: City Streets 95%, State Highways 95%
* UNLESS OTHERWISE APPROVED

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donner Jensen</i> 5/15/87 City Engineer Date	STD 512
SEWER CHIMNEY PIPE		REV. 4/13/94



ELEVATION



PLAN

1. Required backfill compaction: City Streets 95%, State Highways 95%
2. Depth at \pm other than 4.5' shall be noted on the improvement plans.
3. The station of the point of intersection of the centerline of the sewer connection pipe and the property line is shown on the improvement plans.
4. Clean-out shall be installed at property line per Std. # 511.
5. The inlet end of the sewer connection pipe shall be closed by a cap made for that purpose. The remaining space in the socket shall be filled with wet sand covered with a thin coating of neat cement mortar.
6. The pipe shown hereon shall be V.C.P. (Wedgelock, Mortar Joint, or Approved Equal.)

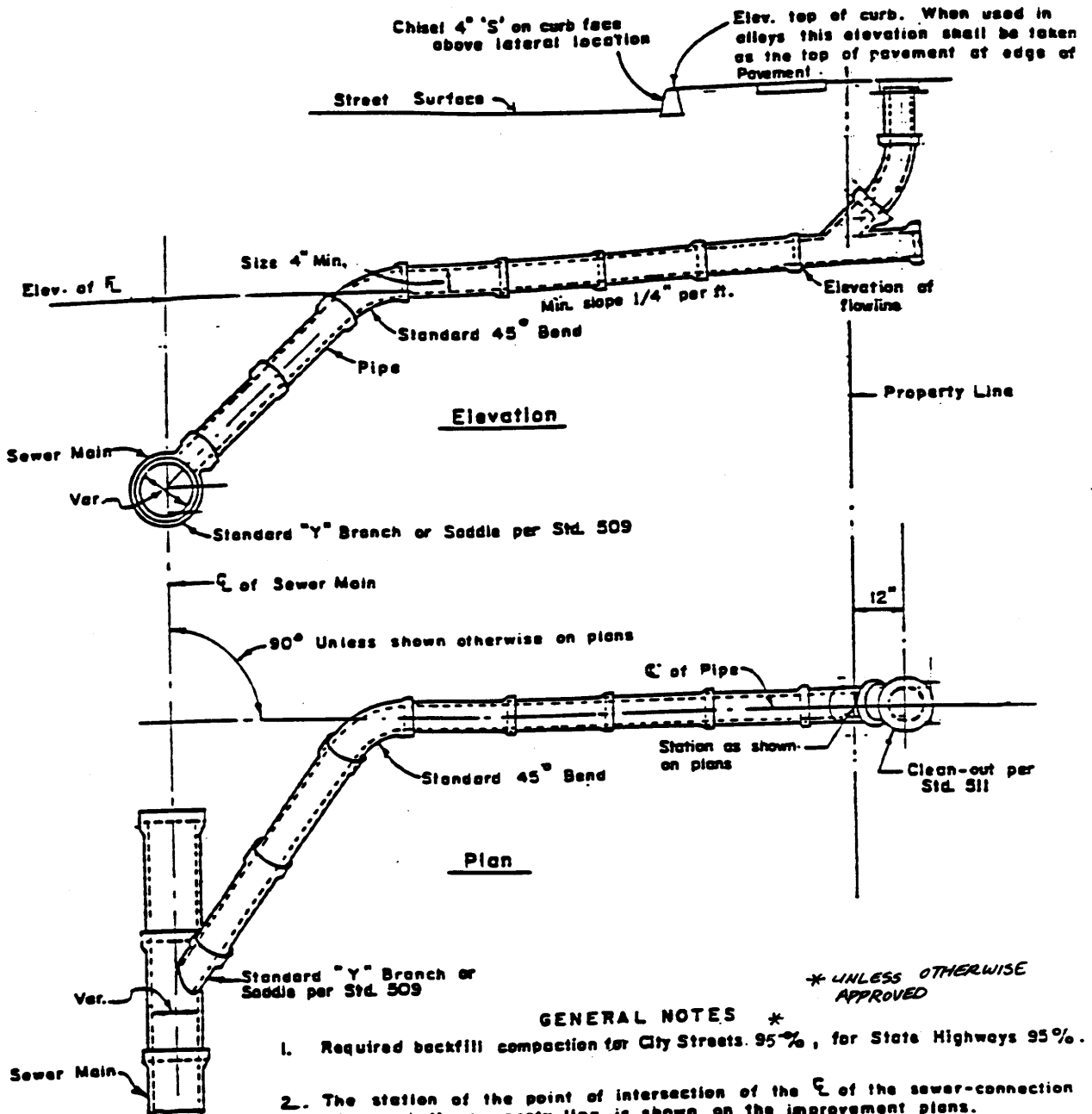
CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

Approved Donald K. Jensen 5/15/87
City Engineer Date

STD
513

SEWER CONNECTION TYPE "A"

REV. 4/13/94



GENERAL NOTES *

1. Required backfill compaction for City Streets 95%, for State Highways 95%.
2. The station of the point of intersection of the \bar{C} of the sewer-connection pipe and the property line is shown on the improvement plans.
3. The inlet end of the sewer-connection pipe shall be closed by a cap made for that purpose. The remaining space in the socket shall be filled with wet sand, covered with a thin coating of neat cement mortar.
4. The pipe shown herein shall be vitrified clay pipe, Wedglock, Mortar Joint, or approved equal.
5. Clean-out shall be installed at property line per Std. 511.

* UNLESS OTHERWISE APPROVED

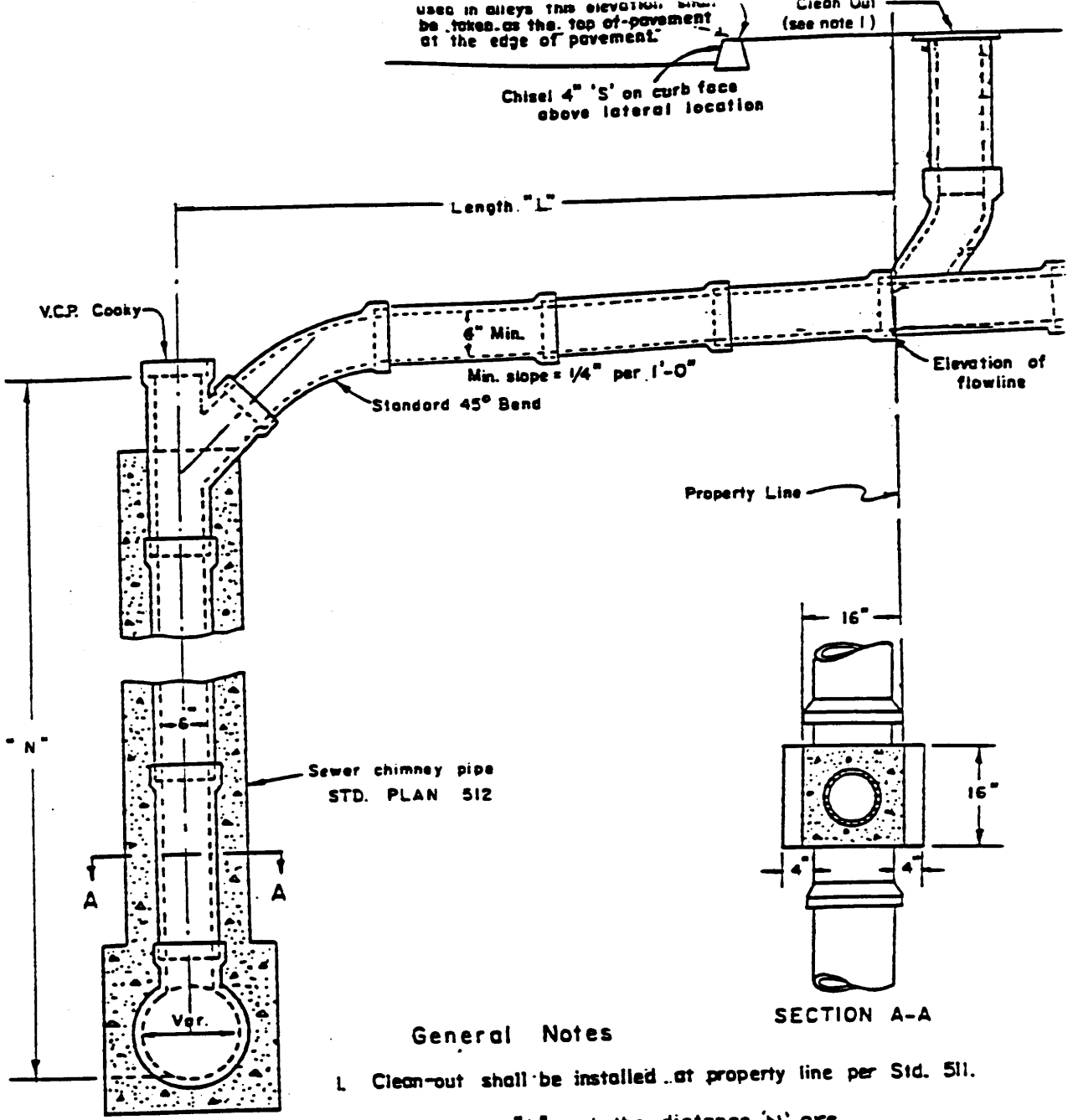
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved: <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD 514
SEWER CONNECTION TYPE "B"		

REV. 4/13/94

Use in alleys this elevation shall be taken as the top of pavement at the edge of pavement.

Clean Out (see note 1)

Chisel 4" 'S' on curb face above lateral location



General Notes

1. Clean-out shall be installed at property line per Std. 511.
2. The length "L" and the distance "N" are shown on the improvement plans.
3. Sewer connection will include Sewer Chimney Pipe.
4. Required Backfill Compaction: City Streets 95%,
State Highways 95%

⊕ unless otherwise approved

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 515
SEWER CONNECTION TYPE "C"		REV. 4/13/94

METER SIZE	METER BOX SPECIFICATIONS
5/8" & 3/4"	BROOKS PRODUCTS INC. NO. 3-STD., 3-T, "QUIKSET" (ASSOC. CONC. PRODUCTS INC.) NO. WZ-16, WS-16 OR APPROVED EQUAL
1"	BROOKS NO. 37-S OR 37-T, "QUIKSET" NO. WA-20 OR WS-20 OR APPROVED EQUAL
1 1/2" & 2"	BROOKS NO. 66-S OR 66-TR, "QUIKSET" NO. WI-30 OR WP-30 OR APPROVED EQUAL
3" & 4"	BROOKS NO. 68-2PC WITH CAST IRON READING LID OR 68-TR WITH TWO PIECE COVER AND READING LID
6" & LARGER	CONCRETE VAULT AS SPECIFIED BELOW

1. Cast iron or steel traffic covers shall be used on meters where there is rolled curb and gutter, and other traffic areas.
2. The reading lid shall be placed directly over the meter register.
3. A minimum of 18" of 1" rock shall be placed below the bottom of the meter, for 3" and larger meters only.
4. Lid shall be equipped with special part for sensus touch read.

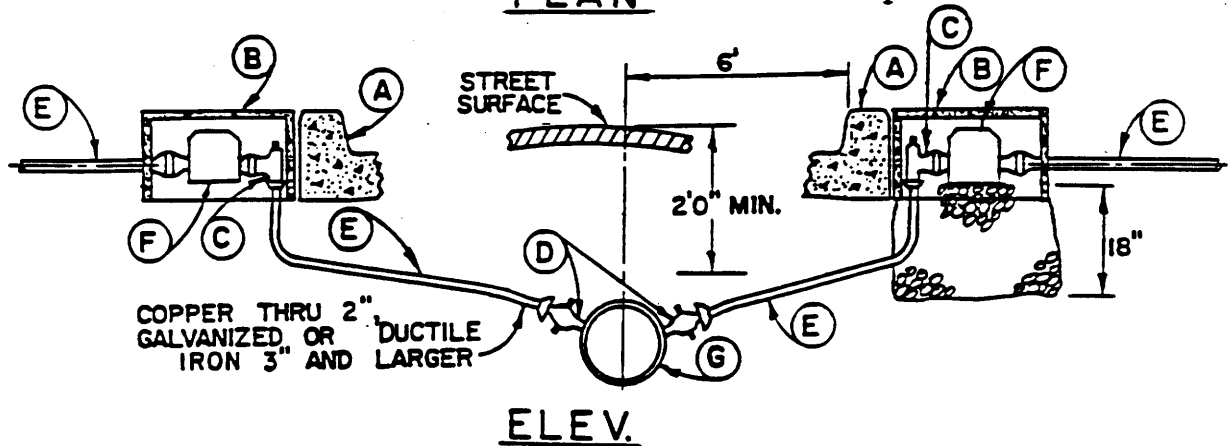
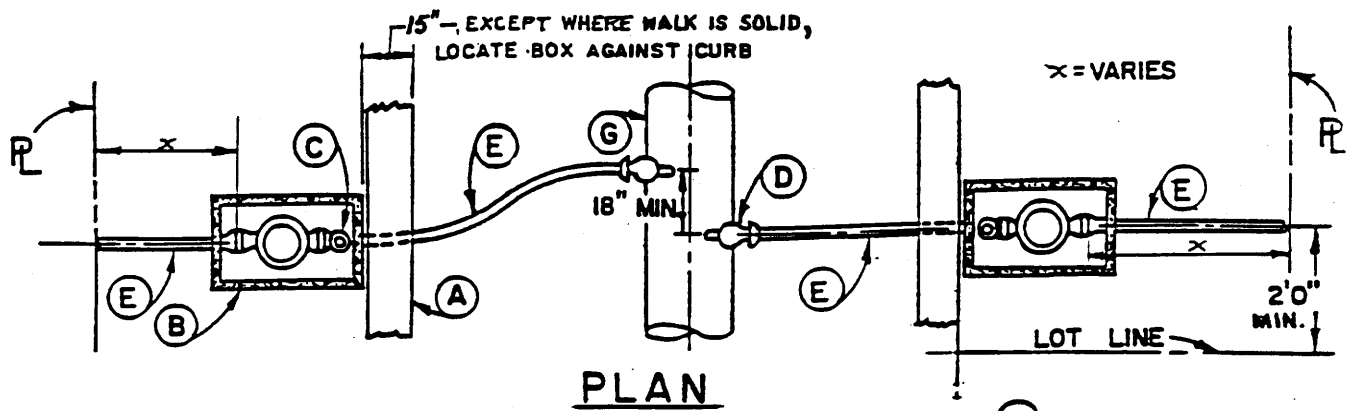
SPECIFICATIONS

VAULT AND COVER FOR METERS 6" AND LARGER, & ALL FIRE PROTECTION SERVICES

1. VAULT SHALL BE BROOKS NO. 700 OR 800 SERIES, QUIKSET SERIES NO. TPV-200 WITH SD OR CLA-200 COVER, BEST CONCRETE PROD. WITH GALVANIZED STEEL COVER OR APPROVED EQUAL.
2. VAULT SHALL BE OF A SIZE LARGE ENOUGH TO ACCOMMODATE ALL EQUIPMENT PER STD. 528 & 529 WHEN USED FOR FIRE PROTECTION EQUIPMENT.
3. COVER SHALL BE OF BOLT DOWN TYPE PER MANUFACTURERS RECOMMENDATIONS FOR THE ABOVE SPECIFIED VAULTS AND THESE SPECIFICATIONS, COVER SHALL BE EQUIPPED WITH SPECIAL PART FOR SENSUS TOUCH READ.
 - A. AN 8" DIA. METER READING LID SHALL BE PROVIDED IN COVER DIRECTLY OVER METER REGISTER.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD 516
WATER METER BOXES AND VAULTS		REV. 4-13-94

REVISED 1-29-85

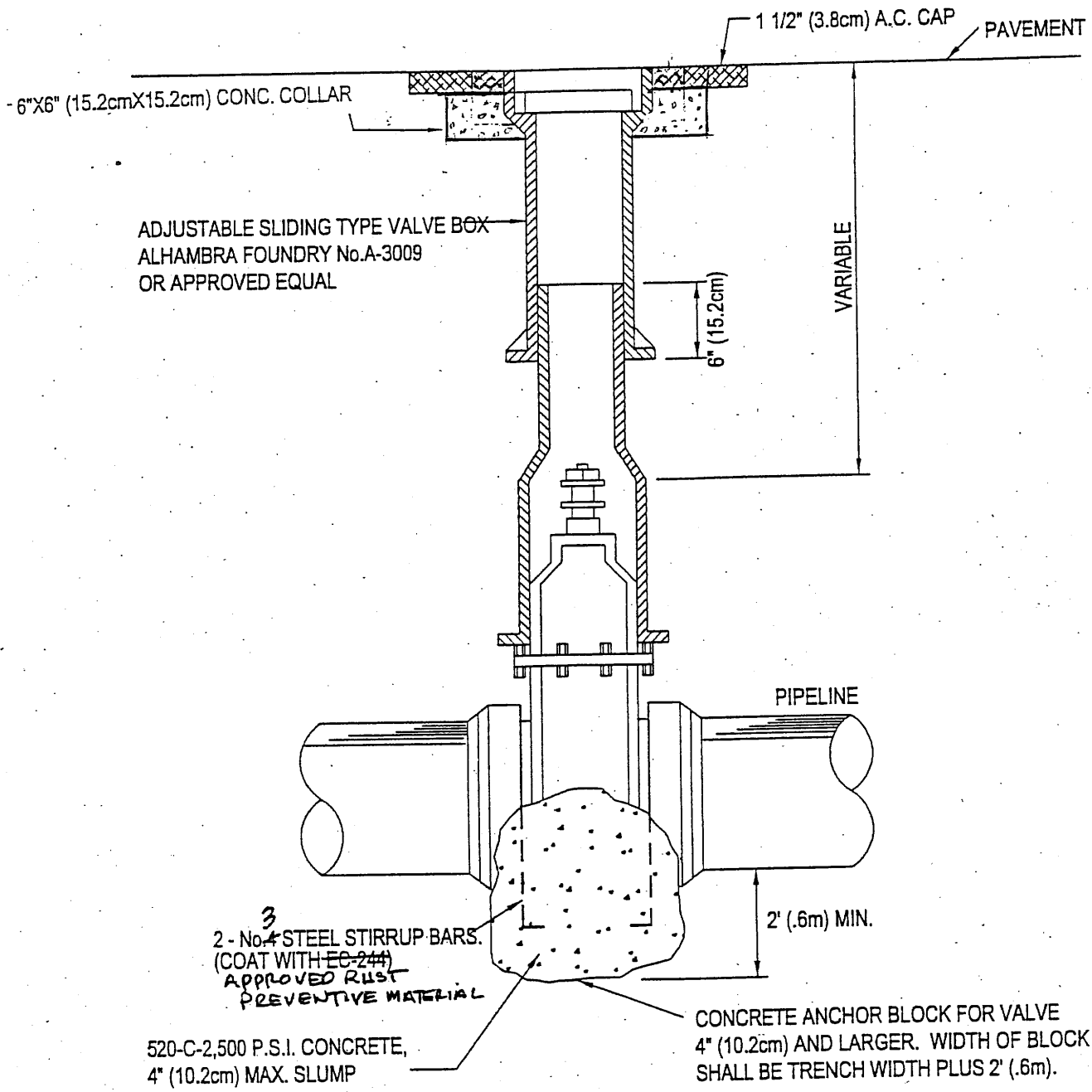


- A STANDARD CURB AND GUTTER.
 - B CONCRETE METER BOX PER STD. 516.
 - C ANGLE METER STOP - JAMES JONES NO. J-1525 OR APPROVED EQUAL.
 - D CORPORATION COCK - JAMES JONES NO. J-1500 OR APPROVED EQUAL.
 - E SERVICE LINE - TYPE "K" COPPER
 - F WATER METER - SENSUS TOUCH READ METER ONLY 5/8"-1" (SR) MODEL 1-1/2"-10" (SERIES-W)
 - G TURBINE METER.
- GENERAL.

- 1 DO NOT CRIMP COPPER WHEN FORMING BENDS.
- 2 ELBOWS MAY BE USED ON ALL PIPE SIZES.
- 3 ELBOWS MUST BE USED FOR PIPE SIZES 2" AND LARGER.
- 4 SADDLES SHALL BE USED ON ALL TAPS INTO MAINS 4" OR SMALLER.
- 5 3/4" AND 1" TAPS DIRECTLY INTO MAINS 6" OR LARGER WILL BE ACCEPTABLE.
- 6 TAPS LARGER THAN 1" SHALL BE DOUBLE STRAP SADDLE IN ALL MAINS.
- 7 METERS SHALL NOT BE LESS THAN 3" OR GREATER THAN 18" BELOW LID OF METER BOX.
- 8 METER BOXES SHALL BE SET IN SUCH A MANNER THAT ALL CURB STOPS AND METER SPUD NUTS ARE ACCESSIBLE WITHOUT REMOVING THE METER BOX.
- 9 DUAL METER INSTALLATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER. BACK TO BACK METER INSTALLATIONS WILL NOT BE ALLOWED.
- 10 THE ABOVE APPLIES ONLY WHEN CONNECTIONS ARE MADE TO DUCTILE IRON WATER MAINS. CONNECTIONS MADE TO CAST IRON AND M.L. & C. WATER MAINS SHALL BE APPROVED BY THE CITY ENGINEER.
- 11 METER SHALL HAVE BRONZE COVER, BOTTOM PLATE, LID AND BODY.
- 12 METER SHALL BE CALIBRATED AND EQUIPPED TO READ IN GALLONS

REV. 4-13-94

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 7/28/99 City Engineer Date	STD. 517
TYPICAL WATER SERVICE CONNECTIONS		

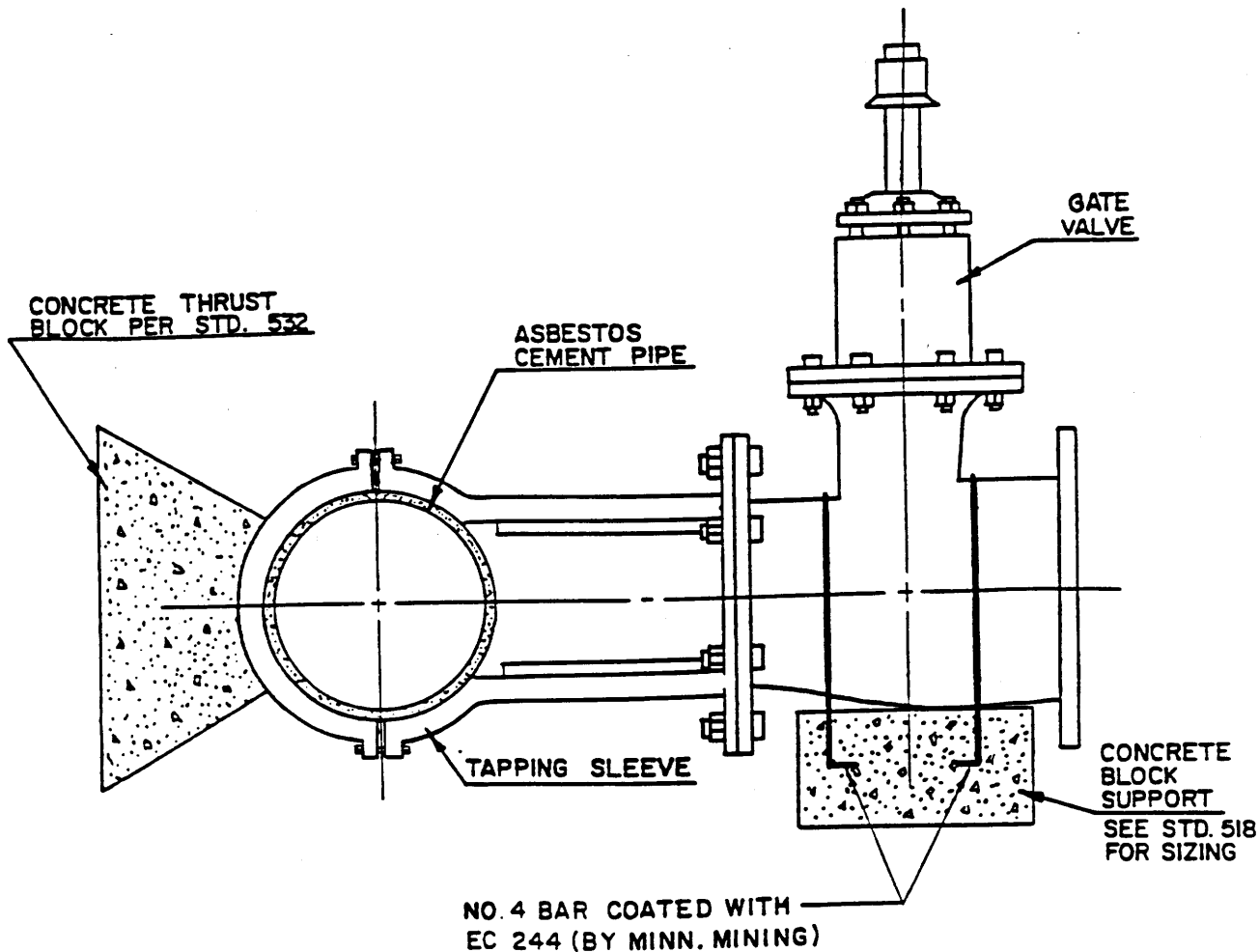


NOTE:

GATE VALVE SHALL BE CLOW RESILIENT WEDGE TYPE OR APPROVED EQUAL. VALVE SHALL BE MANUFACTURED TO MEET ALL APPLICABLE REQUIREMENTS OF AWWA STANDARDS FOR RESILIENT SEATED GATE VALVE. VALVE 12" (30.5cm) AND SMALLER SHALL BE BUBBLE-TIGHT AT 200 P.S.I. WATER WORKING PRESSURE. VALVES SHALL HAVE NON-RISING STEMS. THE VALVE SHALL OPEN BY TURNING LEFT AND SHALL BE PROVIDED WITH A 2" (5.1cm) SQUARE NUT WITH ARROW CAST IN METAL TO INDICATE DIRECTION OF OPENING. VALVE SHALL COMPLY TO AWWA STD. No. C 509-80.

DRAWN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.
APPR.: _____	DATE _____
DIRECTOR OF PUBLIC WORKS	

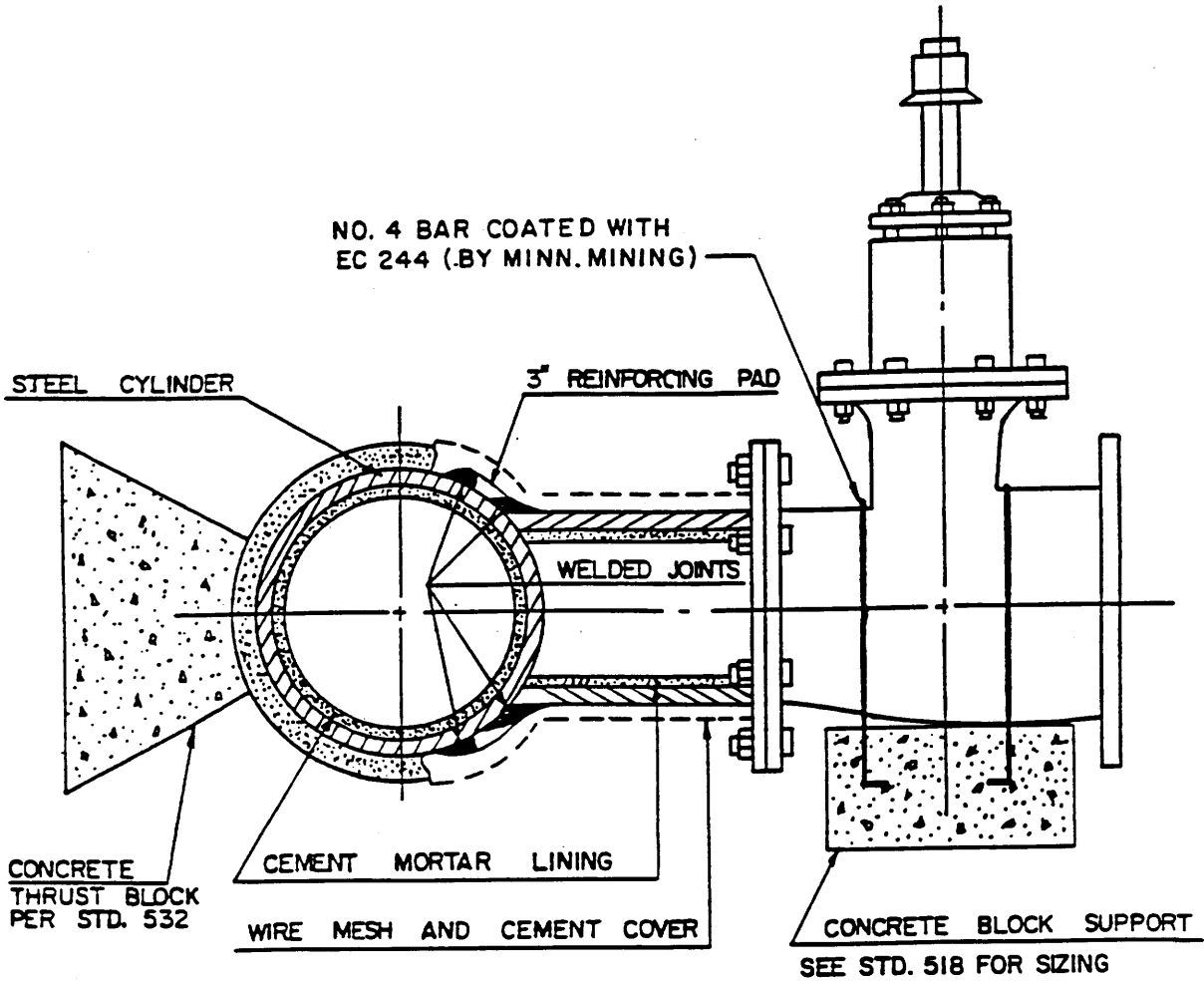
GATE VALVE WITH ADJUSTABLE VALVE BOX



GENERAL NOTES

- 1 THIS STANDARD SHALL BE USED ON 3 INCH TAPS AND LARGER ONLY. FOR TAPPING SIZES LESS THAN 3 INCHES SEE STD. 517.
- 2 TAPPING SLEEVE SHALL BE STAINLESS STEEL WITH STAINLESS STEEL BOLTS AND FULL CIRCLE DESIGN SUCH AS ROMAC, CLOW OR APPROVED EQUAL.
- 3 GATE VALVE SHALL BE CLOW RESILIENT WEDGE TYPE OR APPROVED EQUAL AS PER STD. 518.
- 4 VALVE BOX FOR TAPPING VALVE SHALL BE PER STD. 518.

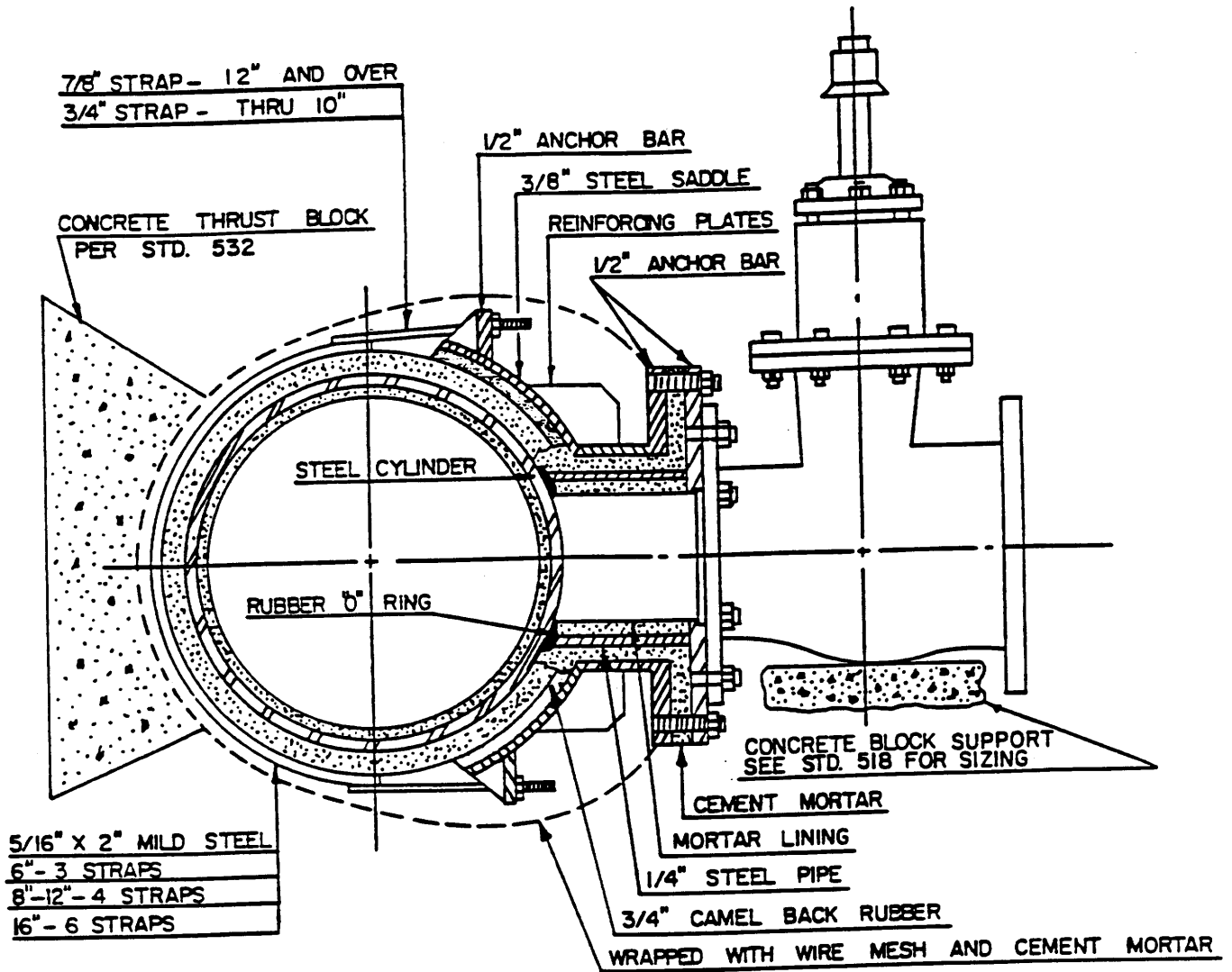
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald Jensen</i> 5/15/87 City Engineer Date	STD 524
TAPPING INTO EXISTING ASBESTOS CEMENT WATER MAIN		



NOTE

1. CEMENT LINED NOZZEL WITH PAD BY KOPPL OR APPROVED EQUAL.
2. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER.
3. GATE VALVE SHALL BE CLOW RESILIENT WEDGE TYPE OR APPROVED EQUAL AS PER STD. 518.
4. VALVE BOX TO BE PER STD. 518.

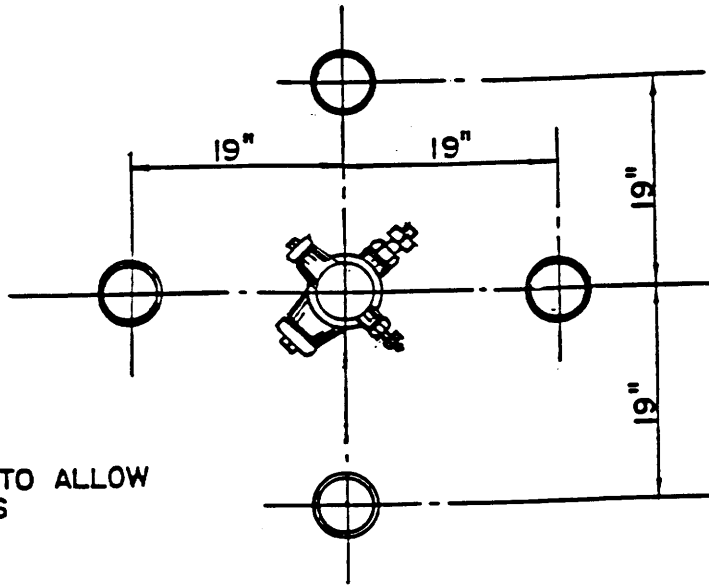
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD 525
WELDED TAPPING NOZZLE & VALVE 10, 12 GAGE OR THICKER		



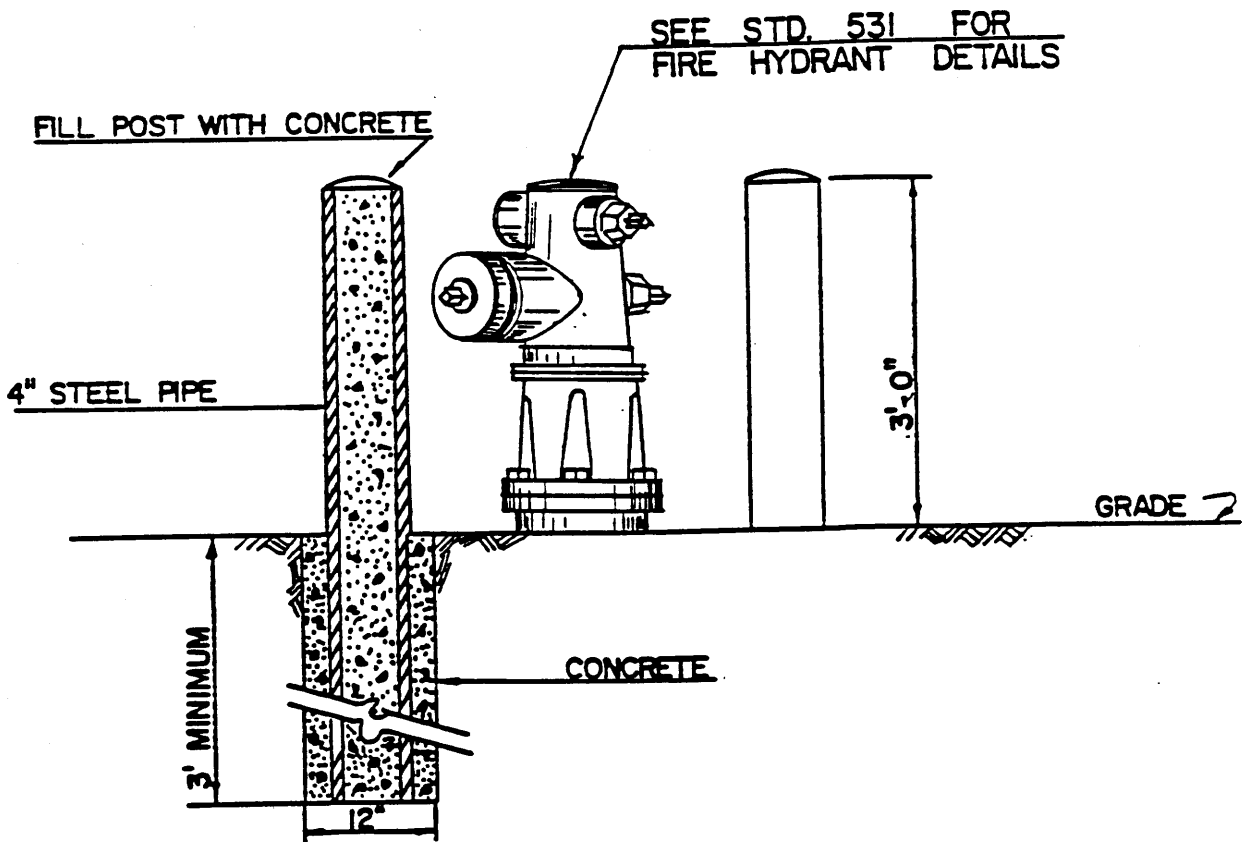
NOTE

1. SADDLE BY KOPPL, SMITH-BLAIR OR APPROVED EQUAL.
2. GATE VALVE SHALL BE CLOW RESILIENT WEDGE TYPE OR APPROVED EQUAL AS PER STD. 518.
3. VALVE BOX TO BE PER STD. 518.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD 526
SADDLE FOR 14 GAGE OR THINNER CONCRETE CYLINDER PIPE		

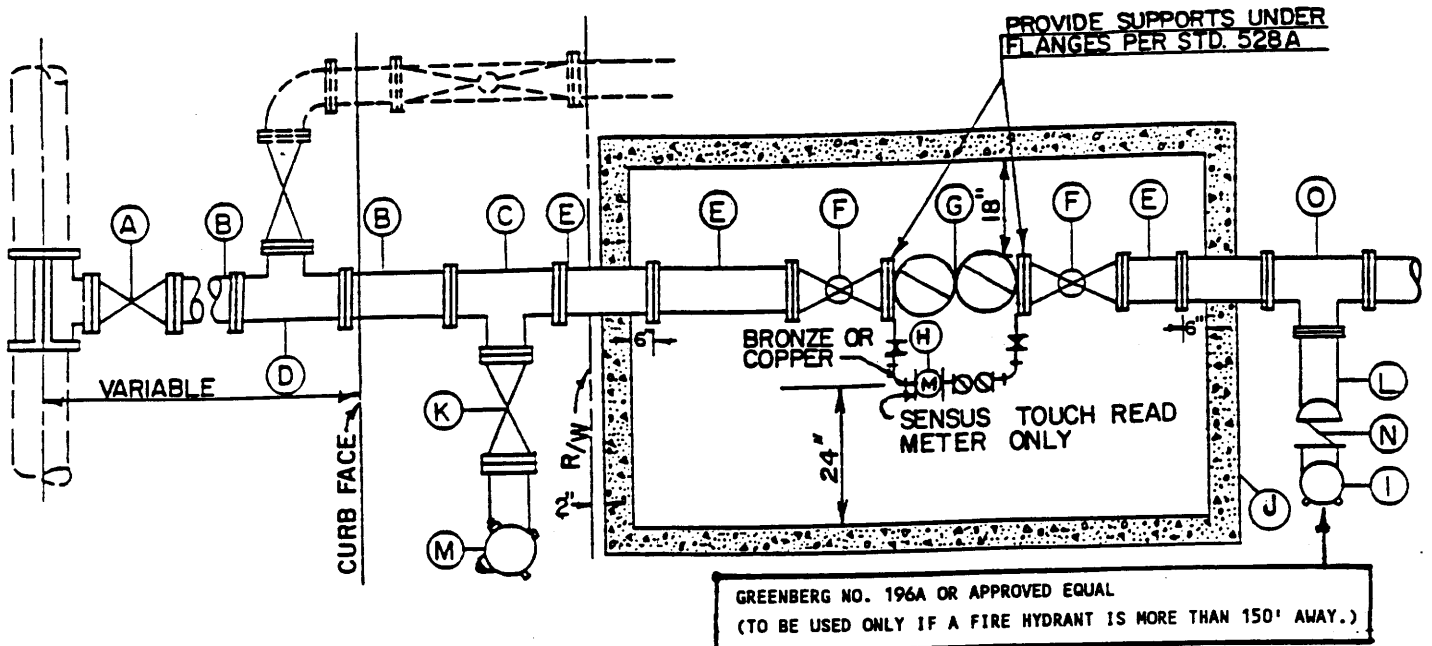


NOTE:
POST LOCATED TO ALLOW
NOZZLE ACCESS



THE FIRE HYDRANT GUARD POST SHALL RECEIVE ONE PRIMER COATING OF NO. 5210 YELLOW CHROMATE PRIMER FOLLOWED BY ONE COAT OF NO. 5176 CORROSION INHIBITIVE RED PRIMER AS MANUFACTURED BY GILMORE NOLAN OR APPROVED EQUAL. FINISH PAINT SHALL BE TWO COATS RUSTLESS INDUSTRIAL NO. 2420 FIRE HYDRANT CHROME YELLOW PAINT OR APPROVED EQUAL.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u><i>Donald K. Jensen</i></u> 5/27/87 City Engineer Date	STD 527
FIRE HYDRANT GUARD POST INSTALLATION		

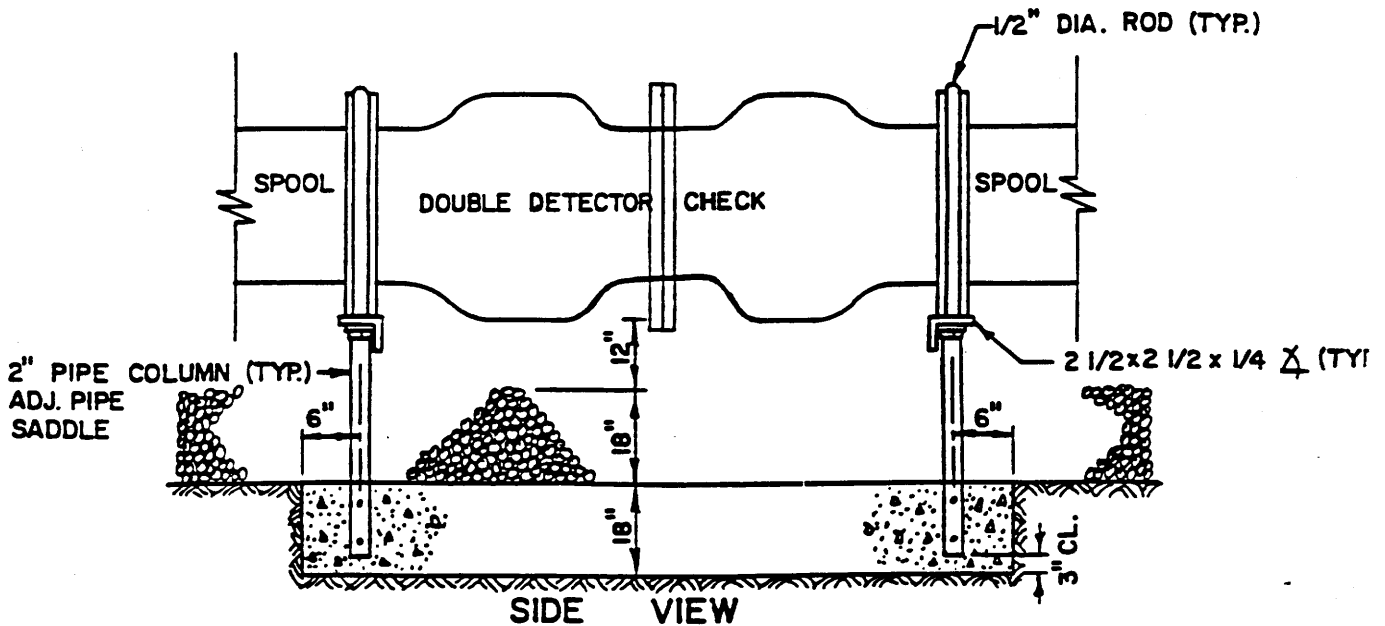
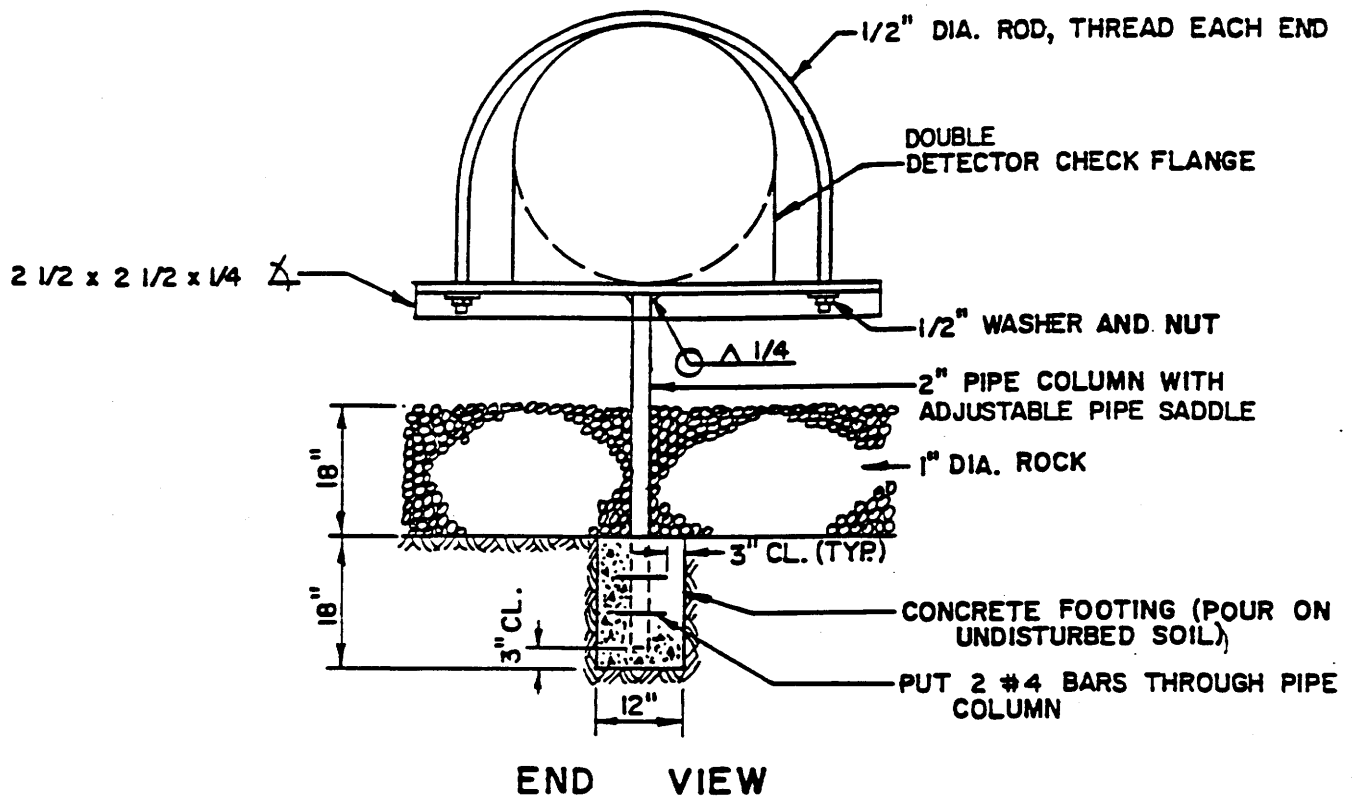


NOTES.

1. DOMESTIC WATER SERVICE GATE VALVE IS TO BE INSTALLED ON 3" OR LARGER LINE IF THE DOMESTIC WATER SERVICE IS TO BE INSTALLED WITH THIS ARRANGEMENT.
2. FIRE DEPARTMENT CONNECTION WILL BE OMITTED ON SYSTEMS WITHOUT AUTOMATIC FIRE SPRINKLERS.
3. VAULT BOTTOM SHALL BE A MINIMUM OF 18" DEPTH OF 1" ROCK. ROCK SHALL BE KEPT 12" BELOW THE BOTTOM OF THE DETECTOR CHECK.
4. THE VAULT COVER SHALL BE PER CITY STD. 516.
5. IF THE PARKWAY WILL NOT ACCOMMODATE THE FIRE HYDRANT, THEN THE LATERAL MUST BE TIED INTO THE MAIN LATERAL BEFORE THE PROPERTY LINE AND AN ELBOW PLACED AS TO POSITION THE FIRE HYDRANT IN THE PARKWAY.
6. TAPS TO EXISTING WATER MAINS SHALL BE PER STD. 524, 525 & 526
7. FIRE HYDRANT MAY BE OMITTED WHEN THERE IS AN EXISTING FIRE HYDRANT WITHIN 150 FT.
8. METER SHALL BE CALIBRATED AND EQUIPPED TO READ IN GALLONS.

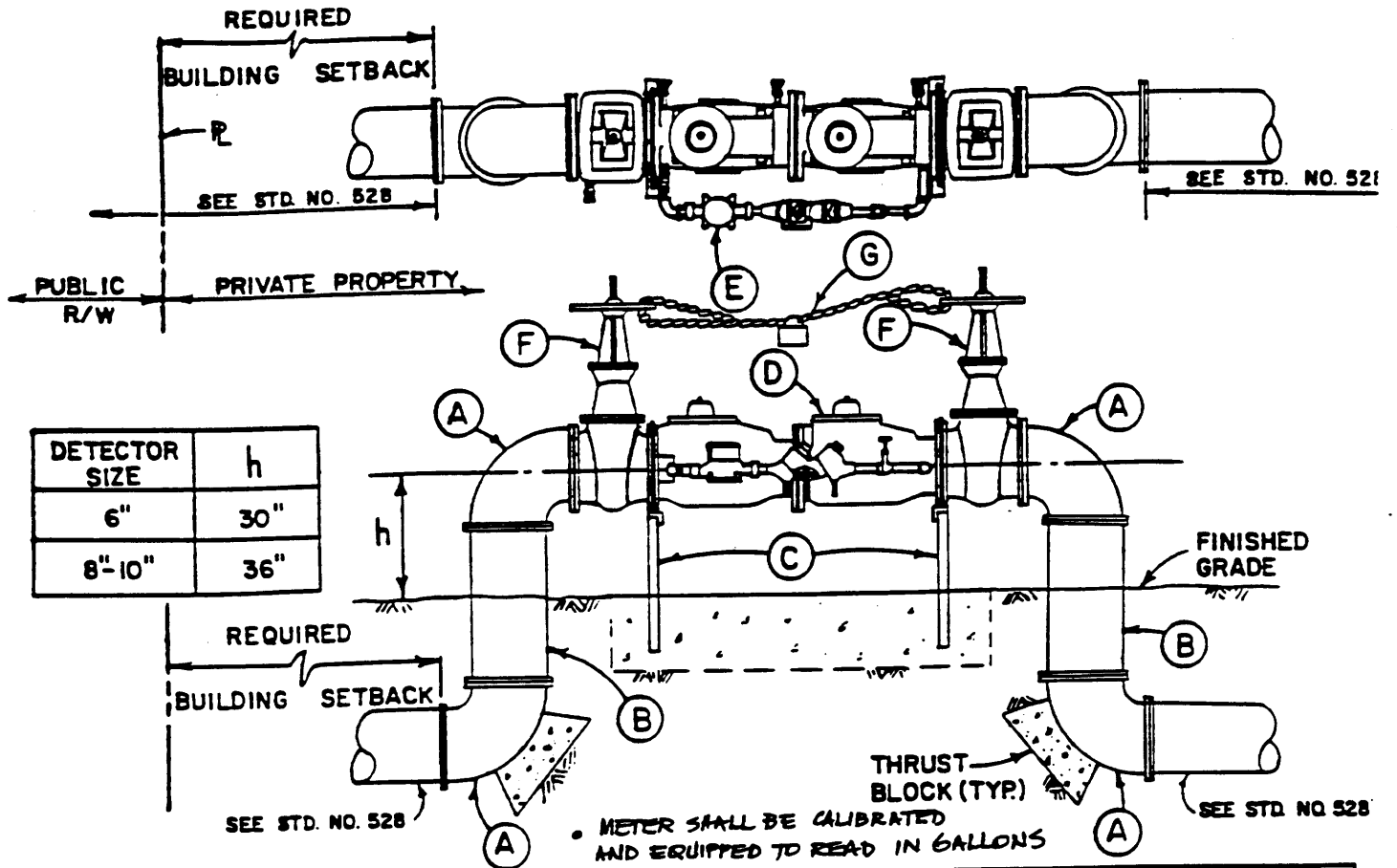
LIST OF MATERIALS				
ITEM	DESCRIPTION	SIZE		
		6"	8"	10"
A	FLGD. GATE VALVE	6"	8"	10"
B	FLGD. OR M.J. SPOOL	6"	8"	10"
C	FLGD. OR M.J. TO FLGD. TEE	6"X6"X6"	8"X8"X6"	10"X10"X6"
D	FLGD. TEE FOR DOMESTIC SERVICE	6"X6"X4"	8"X8"X4"	10"X10"X4"
E	FLGD. SPOOL	6"	8"	10"
F	FLGD. RESILIENT O.S. & Y.	6"	8"	10"
G	FLGD. DOUBLE DETECTOR CHECK ASSEMBLY (HERSEY OR APPROVED EQ)	6"	8"	10"
H	METER BY-PASS (SENSUS TOUCH READ)	5/8" X 3/4"	3/4"	1"
I	FIRE DEPT. CONNECTION	4"	4"	4"
J	POURED OR PREFAB. CONCRETE VAULT PER STANDARD 516	VARIES	VARIES	VARIES
K	FLGD. GATE VALVE	6"	6"	6"
L	FLGD. X IRON SPOOL	4"	4"	4"
M	FIRE HYDRANT AS PER STD. 531	1-2" OUTLET AND 4" STEAMER		
N	CHECK VALVE ABOVE GROUND	4"	4"	4"
O	FLGD. TEE FOR FIRE DEPT. CONNECT.	6"X6"X4"	8"X8"X4"	10"X10"X4"

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS REV. 4-13-94	APPROVED <i>Donald L. Jensen</i> CITY ENGINEER	STD. 528
	DATE <i>7/29/09</i>	
PRIVATE FIRE SERVICE		



1. HOT DIP GALVANIZE ALL METAL PARTS AFTER FABRICATION.
2. CONCRETE SHALL BE PER STD. 100.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD. 528A
PRIVATE FIRE SERVICE (SUPPORT DETAIL)		



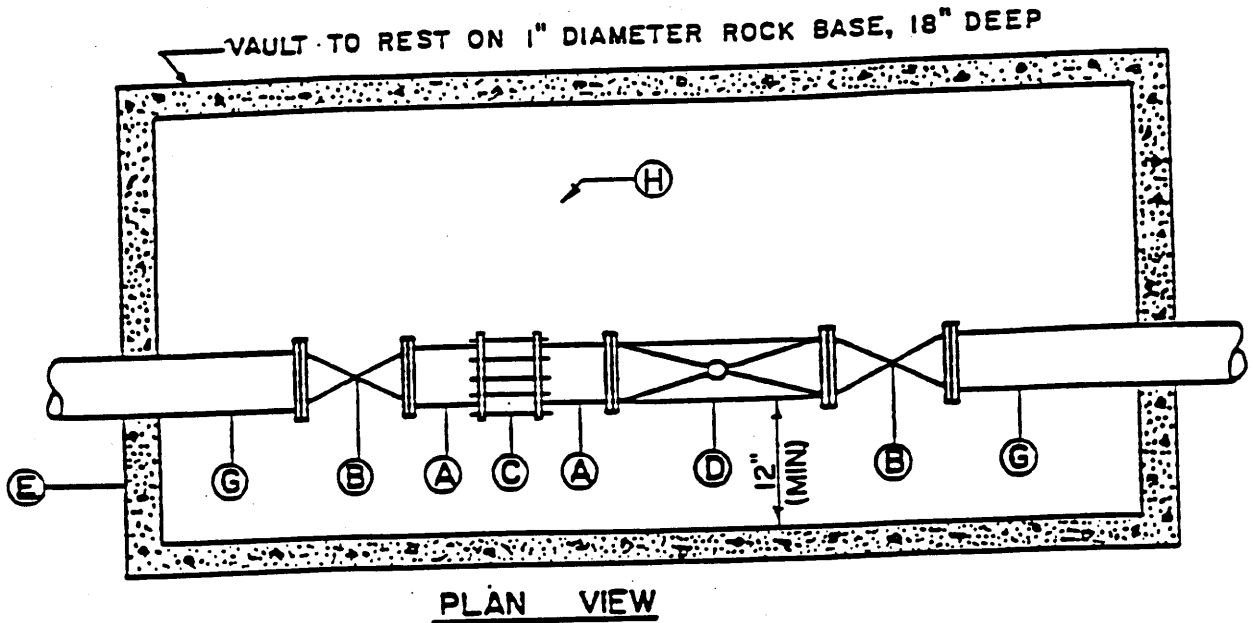
DETECTOR SIZE	h
6"	30"
8"-10"	36"

LIST OF MATERIALS				
ITEM	DESCRIPTION	SIZE		
		6"	8"	10"
A	FLGD. OR RT. 90° ELBOW	6"	8"	10"
B	FLGD. SPOOL	6"	8"	10"
C	PIPE SUPPORT	PER STD. NO. 528-A		
D	DOUBLE CHECK- DETECTOR CHECK ASSEMBLY (HERSEY OR APPROVED EQUAL)	6"	8"	10"
E	METER BY-PASS (SENSUS TOUCH READ METER ONLY)	PER U.S.C. "LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES"		
F	FLGD. RESILIENT O.S. & Y.	6"	8"	10"
G	GENERAL UTILITY CHAIN WITH LOCK	CHAIN/LOCK ASSEMBLY SHALL ALLOW ONLY A 1/4 TURN MAXIMUM FOR EITHER VALVE HANDLE		

NOTE:

1. INSTALLATION WITHIN THE REQUIRED BUILDING SETBACK SHALL BE BELOW GRADE. ALL OTHER ABOVE- GRADE INSTALLATIONS SHALL BE PER TITLE 19 OF THE CITY CODE (ZONING ORDINANCE)
2. THE FIRE DEPARTMENT CONNECTION SHALL BE LOCATED IN ACCORDANCE WITH FIRE DEPARTMENT REQUIREMENTS.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald K. Jensen</i>	STD. 528B
	DATE <i>5/27/87</i> CITY ENGINEER REVISED 4-13-94 NO. 1	
PRIVATE FIRE SERVICE / ABOVE GROUND INSTALLATION		

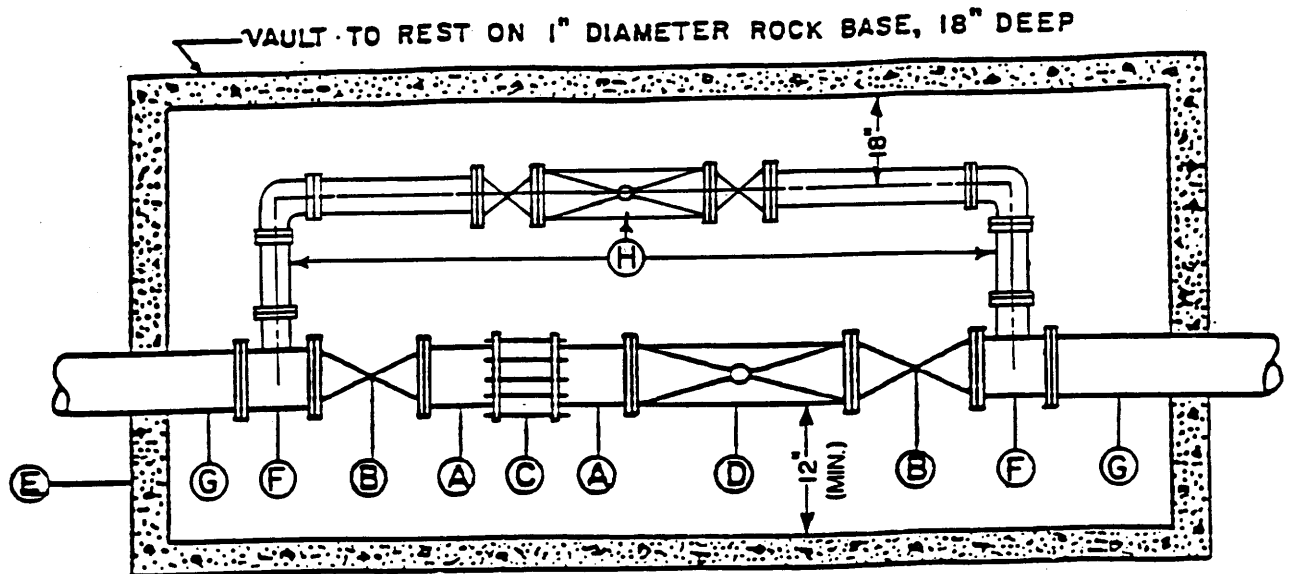


LIST OF MATERIALS			
ITEM	DESCRIPTION	SIZE OF METER	
		3"	4"
A	FLGD. SPOOL	3" X 8' L.G.	4" X 8' L.G.
B	FLGD. GATE VALVE	3"	4"
C	FLEXIBLE OR VICTAULIC COUPLING (SMITH, BLAIR OR APPROVED EQUAL)	3"	4"
D	TURBINE METER (SENSUS TOUCH READ METER ONLY)	3"	4"
E	POURED OR PREFAB. CONC. VAULT PER STD. 516		
F	DELETED		
G	FLGD. SPOOL	3"	4"
H	COVER SHALL BE GALVANIZED STEEL		

NOTE : METER SHALL BE CALIBRATED AND EQUIPPED TO READ IN GALLONS

REV. 4-13-94

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer	Date	STD 529
	3" AND 4" DOMESTIC WATER METER INSTALLATION		



PLAN VIEW

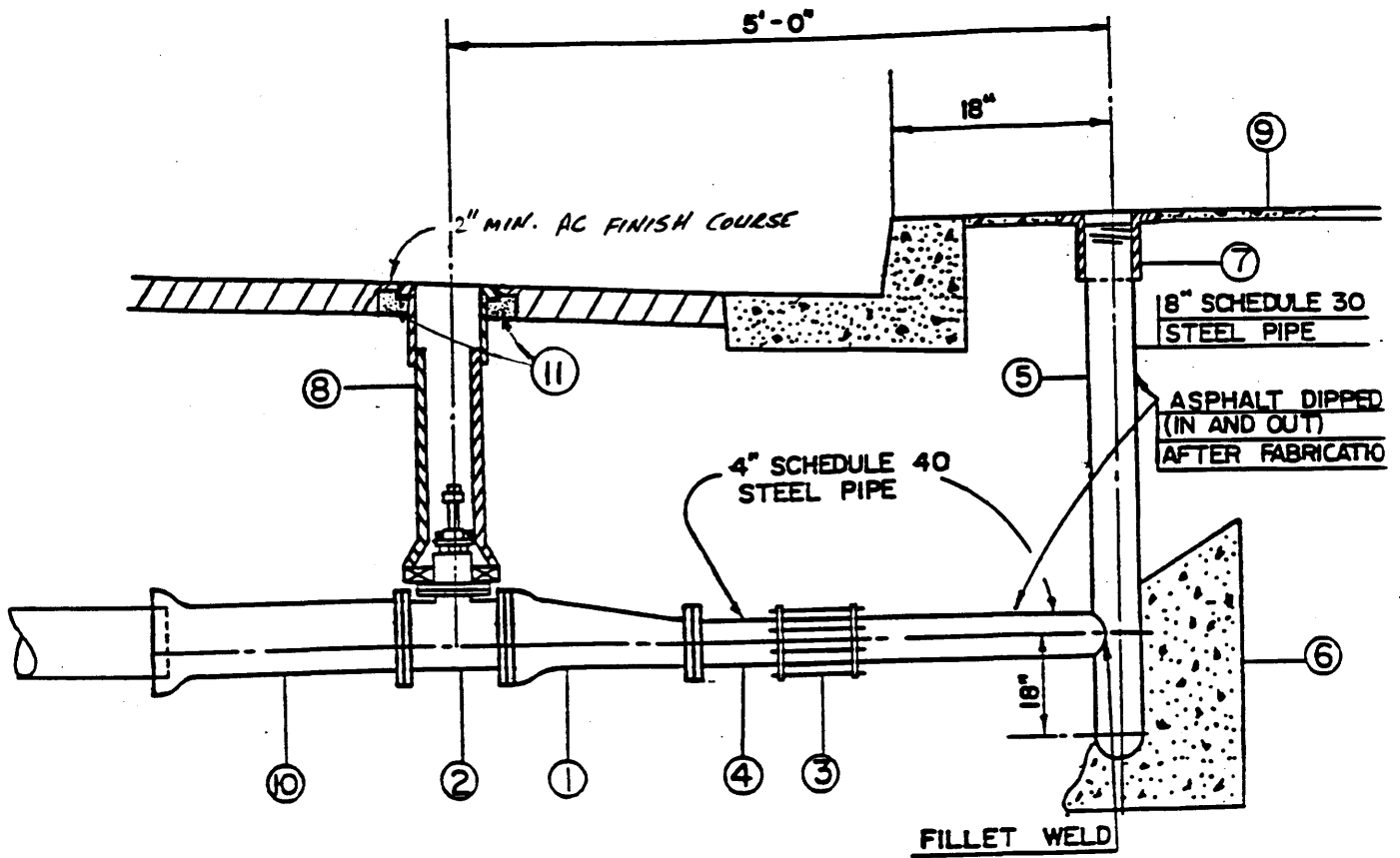
LIST OF MATERIALS

ITEM	DESCRIPTION	SIZE OF METER		
		6"	8"	LARGER
A	FLGD. SPOOL	6" X 8"	8" X 8"	"
B	FLGD. GATE VALVE	6"	8"	"
C	FLEXIBLE OR VICTAULIC COUPLING (SMITH, BLAIR OR APPROVED EQUAL)	6"	8"	"
D	TURBINE METER (SENSUS TOUCH READ METER ONLY)	6"	8"	"
E	POURED OR PREFAB. CONC. VAULT PER STD. 516			
F	FLGD. TEE FOR 3" BY-PASS METER	8" X 6" X 3"	8" X 8" X 3"	"
G	FLGD. SPOOL	6"	8"	"
H	EMERGENCY BY-PASS METER (3") INCL: 3" SENSUS TOUCH READ TURBINE METER W/RESILIENT GATE VALVE	3"	3"	3"
I	COVER SHALL BE GALVANIZED STEEL	CAST IRON READING LID AS PER STD. 516		

- NOTES: 1. BY-PASS METER WILL BE USED DURING EMERGENCIES OR METER REPAIRS.
 2. METER SHALL BE CALIBRATED AND EQUIPPED TO READ IN GALLONS

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald K. Jensen</i> CITY ENGINEER	STD. 529A
	DATE <u>5/15/87</u> REVISED 4-13-94 NO. <u>1</u>	
6" AND LARGER DOMESTIC WATER METER INSTALLATION		

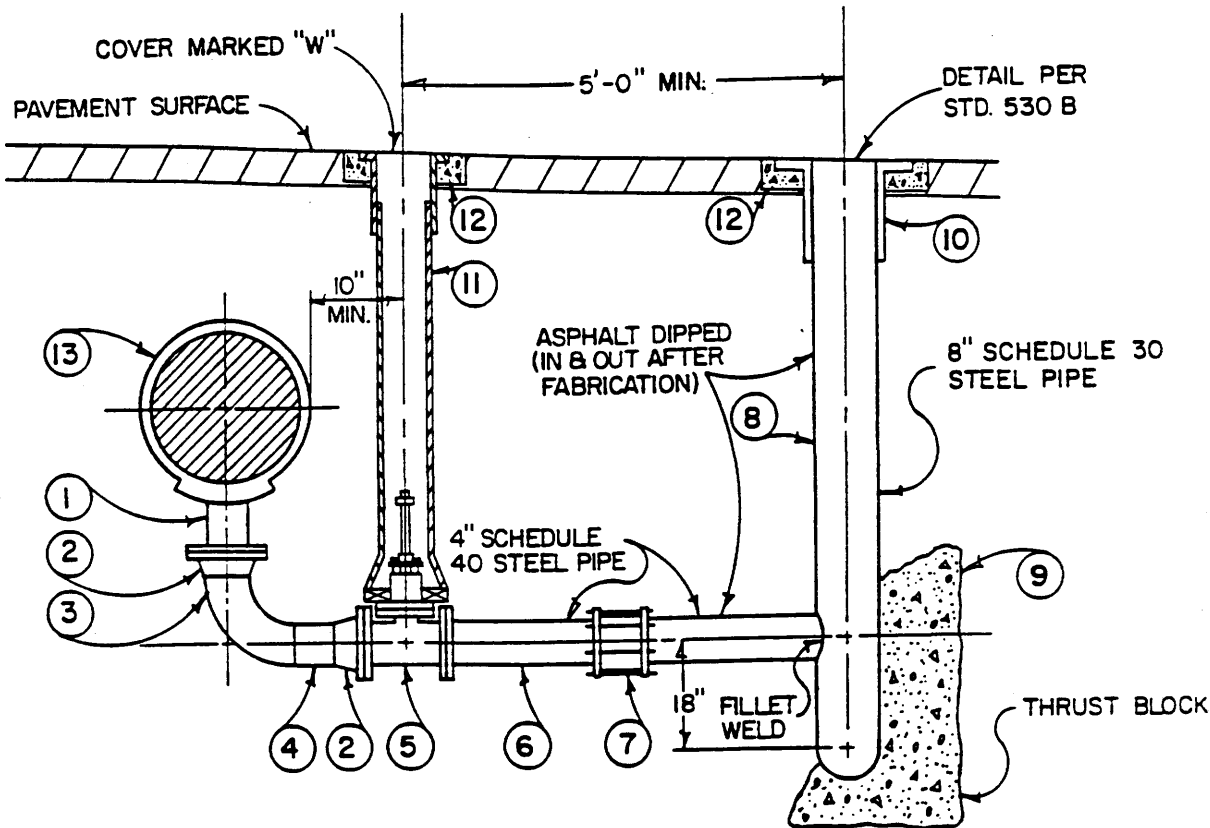
ES/324/SP



LIST OF MATERIALS		SIZE OF WATER MAIN			
		6"	8"	10"	12"
ITEM	DESCRIPTION	6"	8"	10"	12"
1	FLGD. X FLGD. ECCENTRIC REDUCER	6" X 4"	8" X 4"	10" X 4"	12" X 4"
2	FLGD. GATE VALVE TO BE IOWA, MUELLER, RICH, OR APPROVED EQUAL PER STD. 518	6"	8"	10"	12"
3	FLEXIBLE COUPLING SMITH, BLAIR OR APPROVED EQUAL	4"	4"	4"	4"
4	FLGD. WELDED STEEL PIPE	4"	4"	4"	4"
5	STEEL PIPE W/FILLET WELD	8"	8"	8"	8"
6	CONCRETE THRUST BLOCK	PER	STD.	532	
7	BLOW OFF W/EXTENSION BOX & CAP	PER	STD.	530B	
8	ADJUSTABLE SLIDING VALVE BOX & COVER	PER	STD.	518	
9	36" X 36" X 4" CONCRETE PAD SLOPED TO CURB				
10	FLGD. x ML. ADAPTER	6"	8"	10"	12"
11	CONC. COLLAR 6" DEPTH & 6" WIDTH ARND. EDGE				

REV. 1/25/95

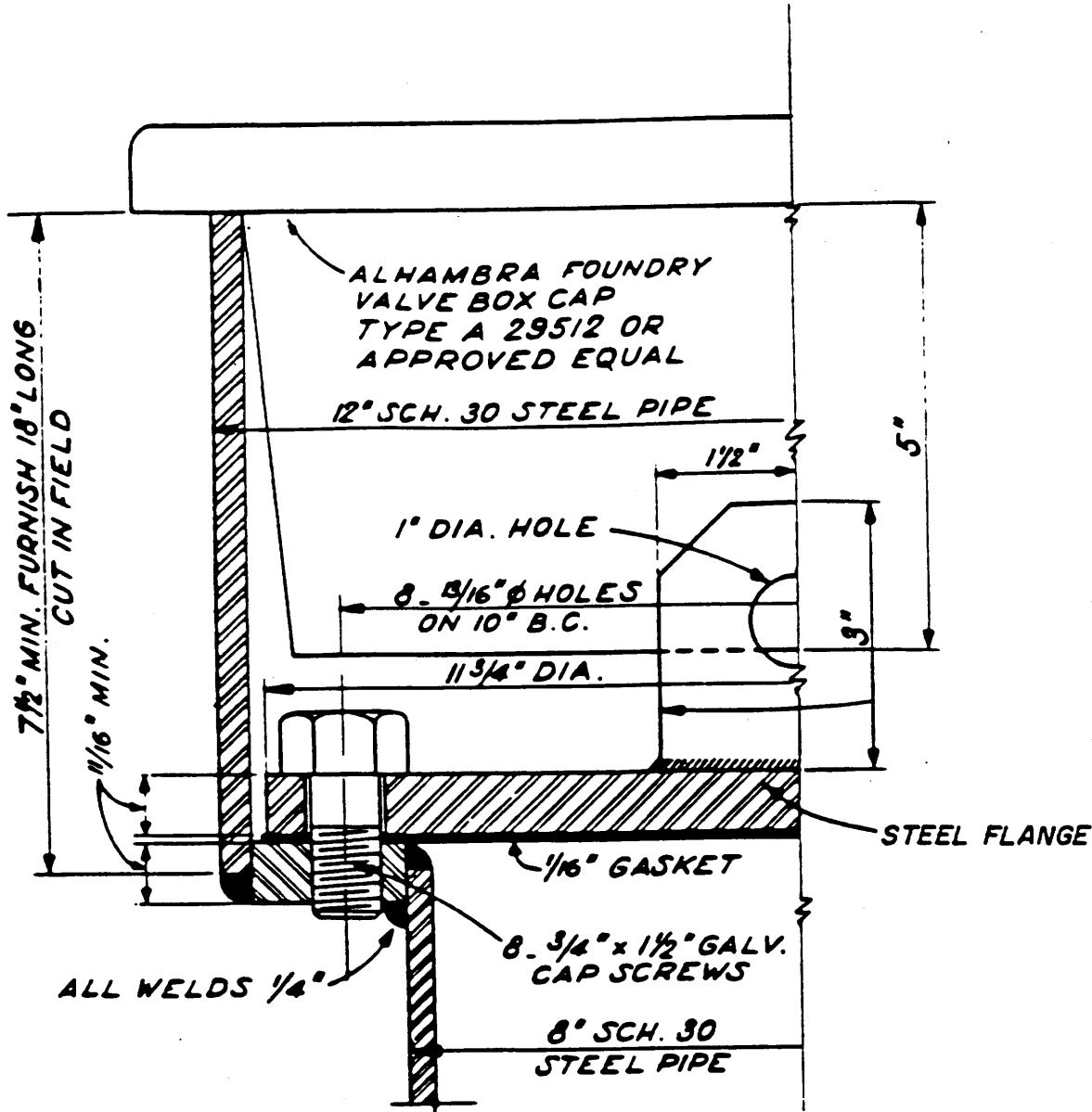
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 7/20/89 City Engineer	Date	STD 530
	BLOW OFF ASSEMBLY FOR DEAD END LINES		



LIST OF MATERIALS		
ITEM	DESCRIPTION	SIZE
1	FLANGED OUTLET	4"
2	WELDING NECK FLANGE	4"
3	90° WELDING ELL	4"
4	WELDING NIPPLE	4"
5	FLDG. GATE VALVE TO BE CLOW RESILIENT WEDGE OR APPROVED EQUAL PER STD. 518	4"
6	FLDG. WELDED STEEL PIPE	4"
7	FLEXIBLE COUPLING SHALL BE SMITH, BLAIR OR APPROVED EQUAL	4"
8	STEEL PIPE WITH FILLET WELD	
9	CONCRETE THRUST BLOCK PER STD. 532	
10	BLOW OFF WITH EXTENSION BOX AND CAP	
11	ADJUSTABLE SLIDING VALVE BOX & COVER	STD. 518
12	CONCRETE COLLAR 2" DEPTH & 6" WIDTH AROUND EDGE OF COVER	
13	MAIN WATER LINE	

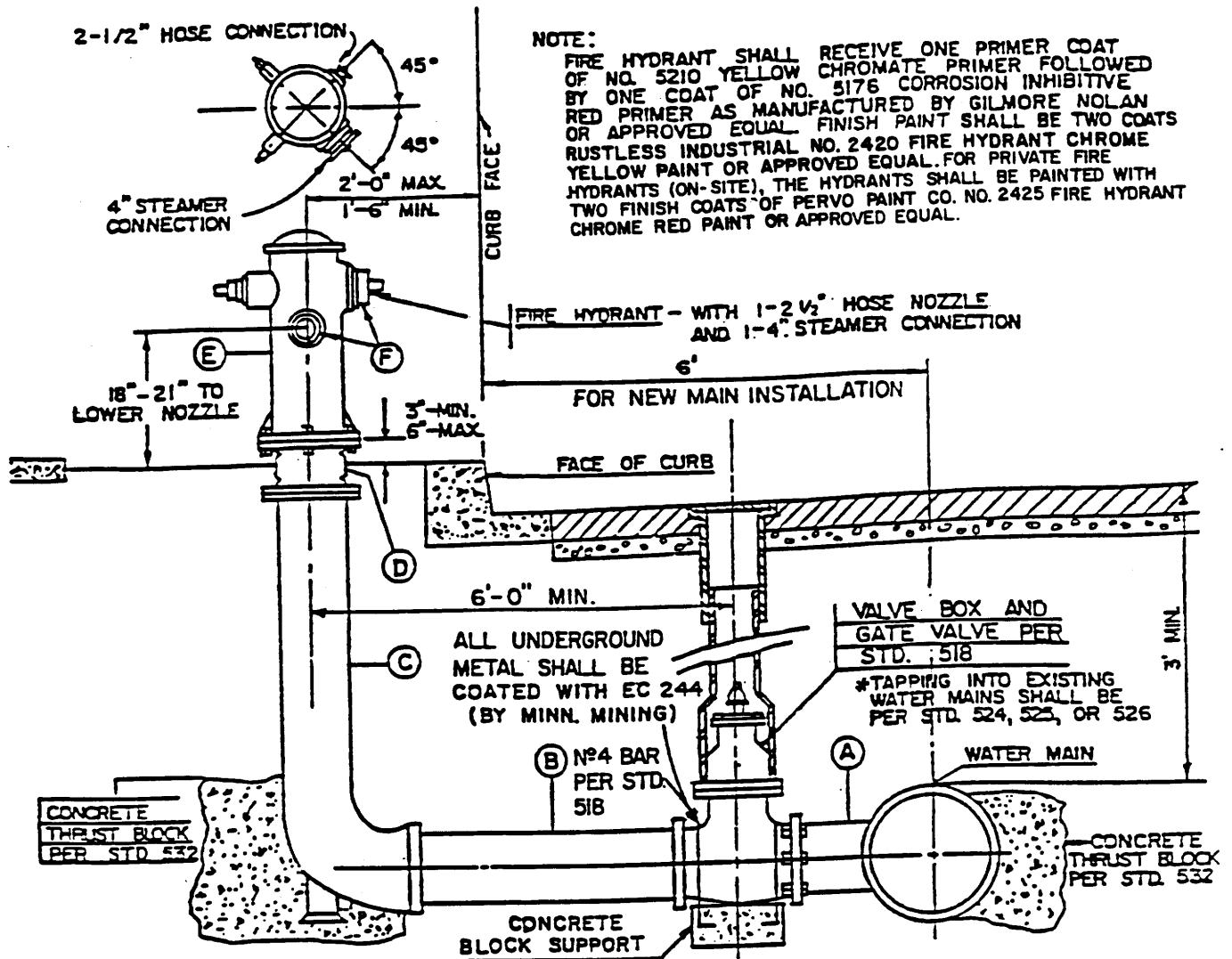
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <u>Ronald K. Jensen</u> CITY ENGINEER	STD. 530A
	DATE <u>5/15/87</u> REVISED _____ NO. _____	
BLOWOFF ASSEMBLY FOR WATER LINES		

5/15/87/EP



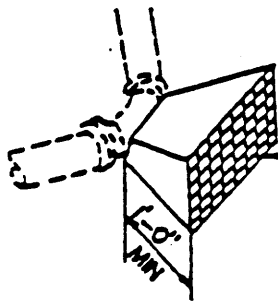
1/2 SCALE

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <u>Donald K. Jensen</u> CITY ENGINEER DATE <u>5/15/87</u> REVISED _____ NO. _____	STD. 530 B
BLOWOFF ASSEMBLY DETAIL		

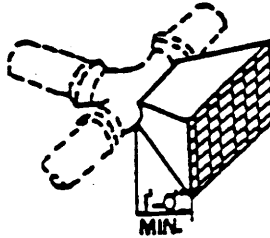


LIST OF MATERIALS		
ITEM	DESCRIPTION	SIZE
A*	M.J. X FLGD. TEE	6"
B	M.J. OR FLGD. SPOOL	6"
C	FLGD. OR FLGD. X M.J. HYDRANT BURY	6"
D	BREAK-OFF RISER SPOOL - 6" MIN. LENGTH	6"
E	WET BARREL FIRE HYDRANT - JAMES JONES NO. J-3700, 3710 OR LONG BEACH NO. B-125 OR CLOW-2050	
F	PLASTIC CAP WITH NATIONAL STANDARD THREAD	2-1/2" AND 4"

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	APPROVED <i>Donald K. Jensen</i>	CITY ENGINEER	STD. 531
	DATE <i>7/22/89</i>		
STANDARD FIRE HYDRANT ASSEMBLY			

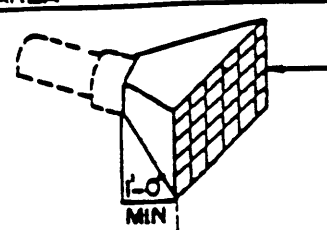


TYPICAL ANCHOR BLOCK C.I. BEND



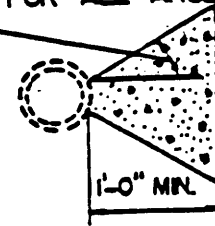
TYPICAL ANCHOR BLOCK-TEE OUTLET

REQUIRED ANCHOR BLOCK AREA



TYPICAL ANCHOR BLOCK DEAD END

45° MAX. (TYP. FOR ALL ANGLES)



TYPICAL SECTION THRU ANCHOR BLOCK

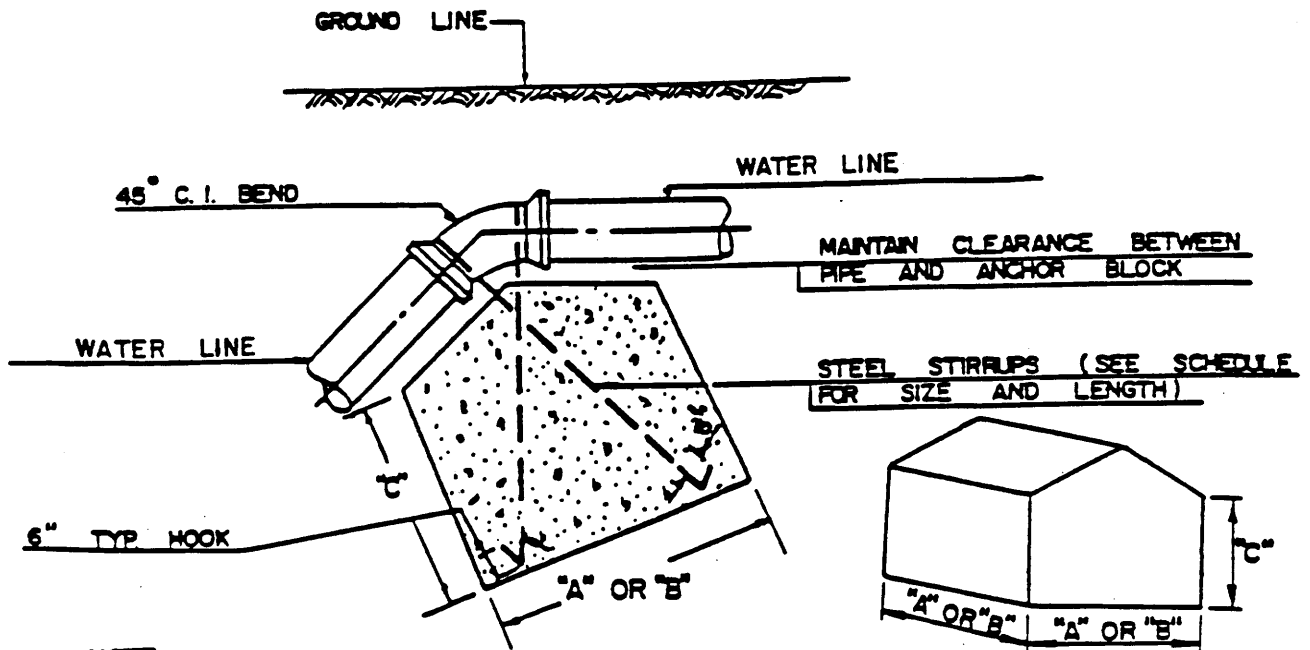
NOTE

ANCHOR BLOCKS CONCRETE SHALL BE PER STD. 100 AND POURED AGAINST UNDISTURBED SOIL

ANCHOR BLOCK AREA REQUIRED (SQ. FT.)							
FITTING	ALLOWABLE SOIL BEARING VALUE #/SQ. FT.			FITTING	ALLOWABLE SOIL BEARING VALUE #/SQ. FT.		
	*2000	*1500	1000		*2000	*1500	1000
6"-11¼° BEND	1.0	1.5	2.0	10"-11¼° BEND	2.5	3.8	5.0
6"-22½°	1.5	2.3	3.0	10"-22½°	4.5	6.8	9.0
6"-45°	3.0	4.5	6.0	10"-45°	8.5	12.8	17.0
6"-90°	5.5	7.8	11.0	10"-90°	15.5	23.3	31.0
6"-TEE OUTLET	4.0	6.0	8.0	10"-TEE OUTLET	11.0	16.5	22.0
6"-DEAD END	4.0	6.0	8.0	10"-DEAD END	11.0	16.5	22.0
8"-11¼° BEND	1.5	2.3	3.0	12"-11¼° BEND	3.0	4.5	6.0
8"-22½°	3.0	4.5	6.0	12"-22½°	6.0	9.0	12.0
8"-45°	5.0	7.5	10.0	12"-45°	12.0	18.0	24.0
8"-90°	9.5	14.3	19.0	12"-90°	22.0	33.0	44.0
8"-TEE OUTLET	6.5	9.8	13.0	12"-TEE OUTLET	15.5	23.3	31.0
8"-DEAD END	6.5	9.8	13.0	12"-DEAD END	15.5	23.3	31.0

* TO BE USED WITH PERMISSION OF CITY ENGINEER ONLY

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87	STD 532
	City Engineer Date	
ANCHOR BLOCK FOR 6", 8", 10", & 12" CAST IRON FITTINGS		



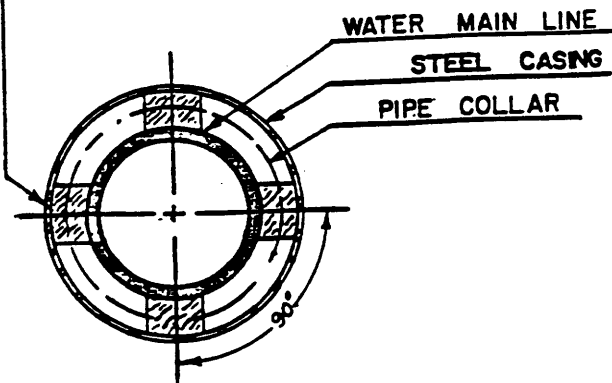
NOTE

- 1 ANCHOR BLOCK CONCRETE SHALL BE PER STD. 100
POURED AGAINST UNDISTURBED EARTH.
- 2 ALL STEEL STIRRUPS NOT EMBEDDED IN CONCRETE SHALL BE
COATED WITH HOT TAR OR EC-244 MANUFACTURED BY MINNESOTA MINING
AND MANUFACTURING COMPANY OR APPROVED EQUAL.

SCHEDULE						
CONCRETE ANCHOR BLOCK FOR 45° UPPER BEND AT VERTICAL OFFSET						
FITTING	CONCRETE ANCHOR BLOCK			STEEL STIRRUPS		
	"A"	"B"	"C"	SIZE	QUANTITY	LENGTH
6" X 45° BEND	2.0'	2.0'	2.5'	#4	2	8.5'
8" X 45° BEND	2.5'	2.0'	2.5'	#4	2	9.0'
10" X 45° BEND	3.0'	3.0'	3.5'	#4	2	11.5'
12" X 45° BEND	4.0'	4.0'	4.0'	#4	2	12.0'

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Ronald K. Jensen</i> 7/28/89	STD 533
	City Engineer Date	
TYPICAL ANCHOR BLOCK FOR 45° VERTICAL BEND		

4-2'x4" UNFINISHED REDWOOD SKIDS, 3' LONG, BEVELED AT LEADING EDGE.
 8 SKIDS PER STANDARD LENGTH OF PIPE, TO BE WIRED 3' FROM EACH
 END OF PIPE. NOTCH SKID TO ALLOW WIRE TO PASS THROUGH.
 SUPPORT FULL LENGTH OF CASING.

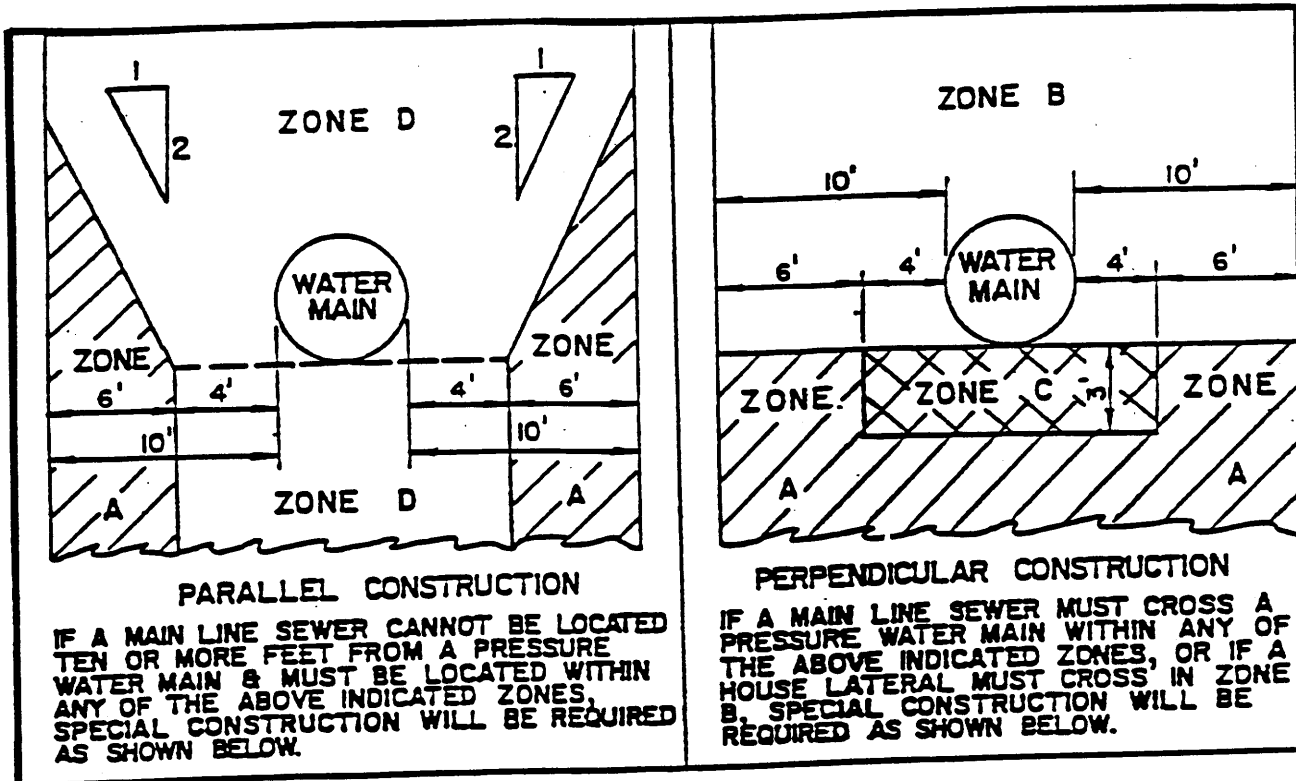


GENERAL NOTES FOR JACKING

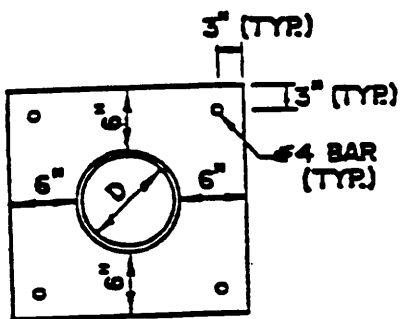
1. CASING SHALL BE INSTALLED BY THE JACKING OR BORING METHOD
2. CASING JOINTS SHALL BE WELDED JOINTS.
3. PIPE SHALL BE SPACED TO PROVIDE A COUPLING WITHIN ONE FOOT OF END OF STEEL CASING.
4. REDWOOD SKIDS SHALL BE PROVIDED AS PER DETAIL ABOVE
5. SIZE AND THICKNESS OF CASING WALL SHALL BE AS SHOWN BELOW IN SCHEDULE

STEEL CASING		
PIPE DIAMETER	CASING DIAMETER	CASING THICKNESS
6"	12" I.D.	3/16"
8"	16" I.D.	1/4"
10"	18" I.D.	1/4"
12"	20" I.D.	1/4"

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87	STD 534
	City Engineer	
INSTALLATION ON PULLING WATER PIPE THRU CASING		



ZONE	SEWER CONSTRUCTION REQUIREMENTS
A	V.C.P. WITH APPROVED COUPLINGS
B OR C	V.C.P. ENCASED PER DETAIL A
D	DO NOT LOCATE ANY PARALLEL SEWER IN THIS AREA WITHOUT APPROVAL OF THE CITY ENGINEER.



DETAIL A

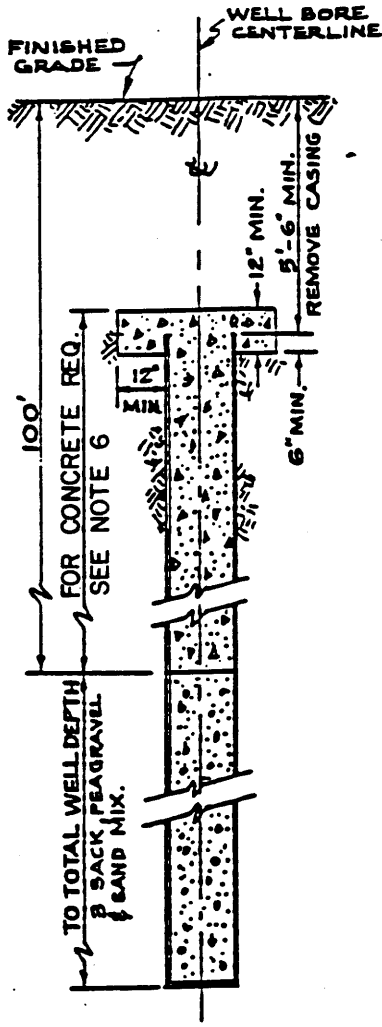
GENERAL NOTES

1. PARALLEL CONSTRUCTION OF SEWER FORCE MAINS WILL NOT BE PERMITTED IN ANY ZONE.
2. PERPENDICULAR CONSTRUCTION OF SEWER FORCE MAINS IN ANY ZONE REQUIRES ASBESTOS CEMENT PIPE ENCASED PER DETAIL A.
3. COUPLINGS SHALL BE CERAMIC, BAND SEAL OR APPROVED EQUAL.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD. 535
	REQUIREMENTS OF SANITARY SEWER IN VICINITY OF WATER MAIN	

PROCEDURE

1. Methods and procedures employed in the destruction of water wells shall conform with the Buena Park City Code and Chapter II of Bulletin 74 of the State of California, Department of Water Resources as modified by this standard and by the City Engineer.
2. Water wells "abandoned" as defined by Chapter II of Bulletin 74 of the State of California, Department of Water Resources shall be destroyed upon receipt of a permit from the Department of Public Works of the City of Buena Park.



SECTION DETAIL
FOR REFERENCE ONLY
SCALE - NONE

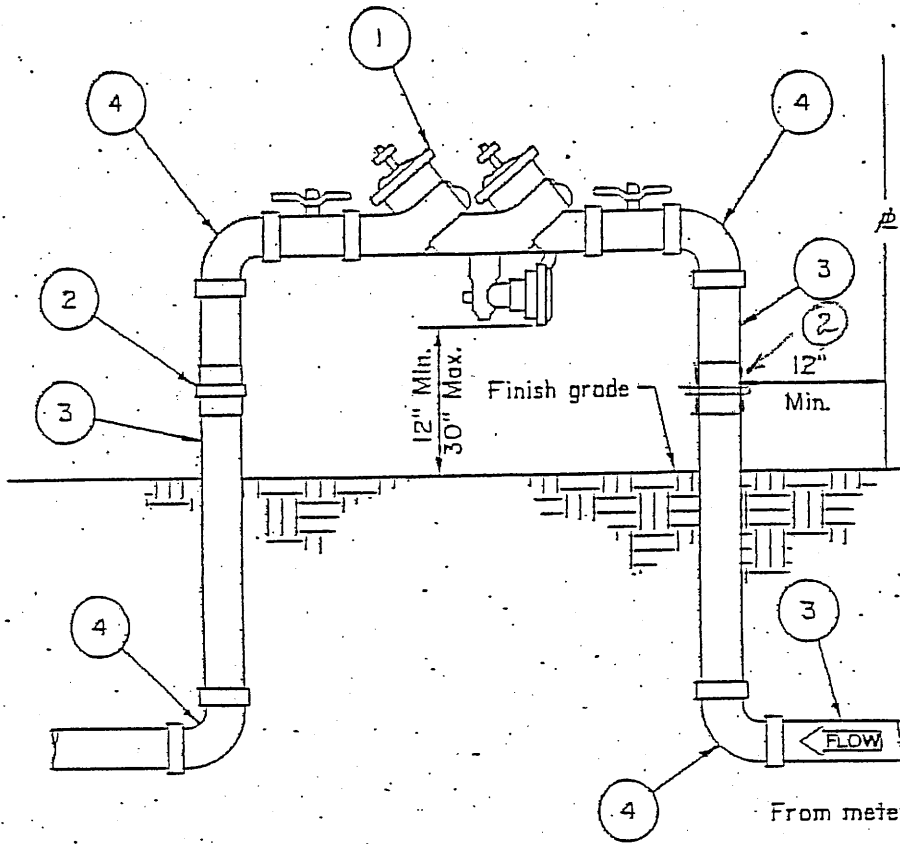
3. Prior to permit issuance for the destruction of a water well, well logs and/or records showing depth of the well, formations encountered and details of well construction shall be submitted by the owner of the well to the City Engineer for review.
4. Location of the vertical center line of the well bore at its intersection with the finished grade with north-south and east-west tie distances from the intersection of the nearest street survey center lines or as otherwise approved by the City Engineer is required.
5. Upon receipt of permit, the well shall be line sounded in the presence of the Public Works Department Inspector. If obstructions are found to exist they shall be removed by cleaning out the hole or by re-drilling. At the direction of the City Engineer certain sections of the casing shall be perforated or otherwise punctured to permit the entrance of sealing materials and in all cases the top of the casing shall be removed to 5'6" minimum below finished grade.
6. Upon completion of above preparatory work the hole shall be backfilled with a three sack, pea gravel and sand concrete mix to within 100' of the surface or as otherwise approved by the City Engineer. The remainder shall be backfilled with class 560-C-3250 concrete with maximum slump of 5" and finished-off as shown in the detail hereon.
7. Volume of backfill material used must be equal to at least the calculated volume of the hole.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved: <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD. 536
WATER WELL DESTRUCTION PROCEDURE		REV. 4/13/94

LIST OF MATERIALS

- ① Reduced pressure backflow prevention assembly
- ② Brass union.
- ③ Riser and nipples, brass or copper.
- ④ 90 Degree elbow, brass or copper.

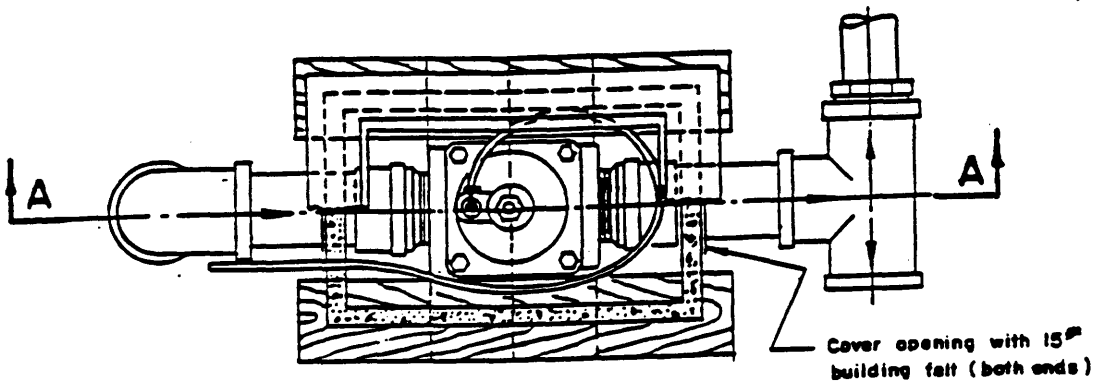
Assembly Shall Be Located as Close to the Service Connection as Possible With No Connections between the Water Meter and the Backflow Prevention Assembly



NOTES:

1. See other sections of these Specifications for related requirements, or Special Provisions if applicable.
- 3, 4. All fittings shall be brass or copper with either IPT or soldered connections.

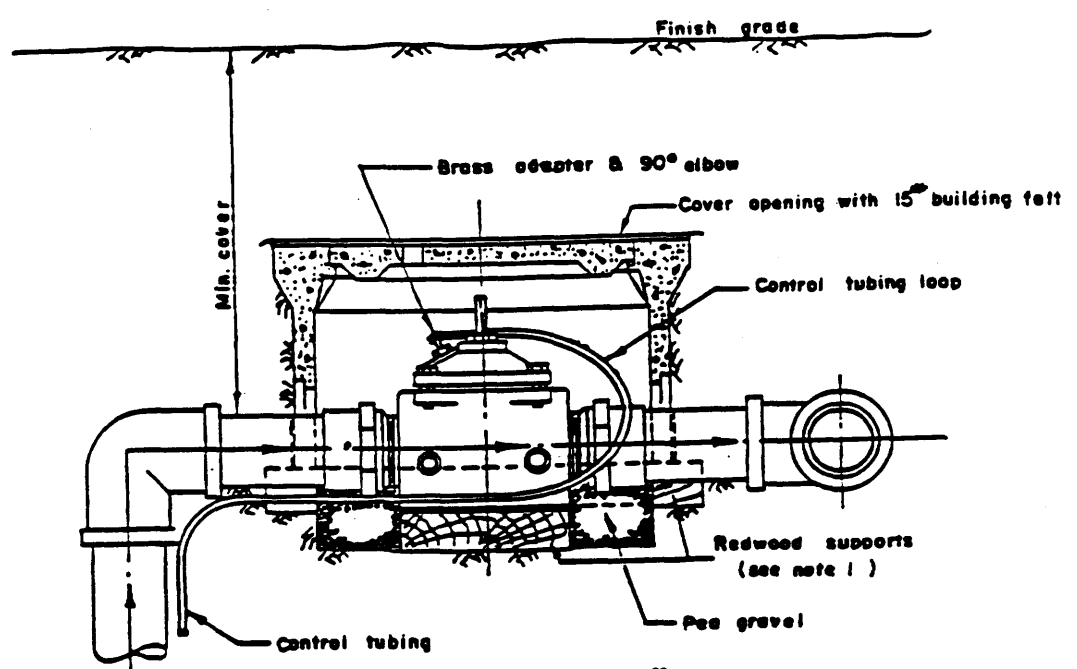
REVISED DATE _____ _____ _____	CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	DRAWN <u>ECW.</u> DATE <u>12-1-00</u>
3/4" THROUGH 2 1/2" REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY		STD. NO. 537 REV.



PLAN

NOTES:

1. Wood supports for valve and P.C.C. enclosure shall be of treated, all heart redwood. Large valves (2" thru 3") shall be supported by two pieces (2" x 4" x 15") as shown and small valves (1" thru 1/2") shall be supported by a single piece (2" x 4" x 15"). P.C.C. enclosure, in all cases, shall be supported by two pieces (2" x 4" x 21") as shown.

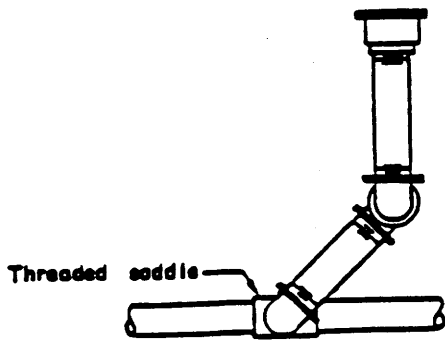


SECTION "A-A"

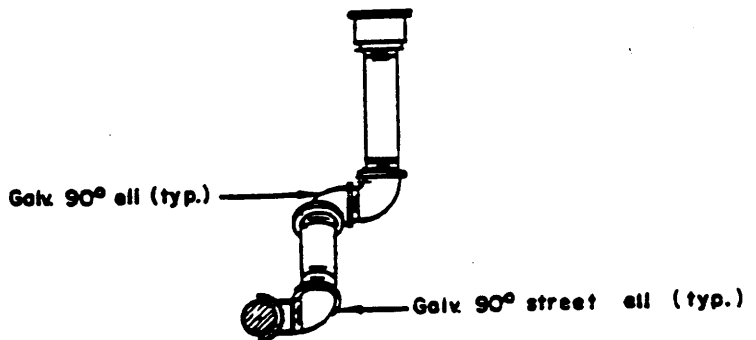
NOTES: (CONT.)

2. P.C.C. enclosure shall be "BROOKS" No. 3 meter box or equal, with one piece light weight cover. Pipe opening in P.C.C. enclosure shall be enlarged, if necessary, to maintain a 1/2" clearance between enclosure and pipe.
3. Plastic control tubing shall be insulated from the valve.

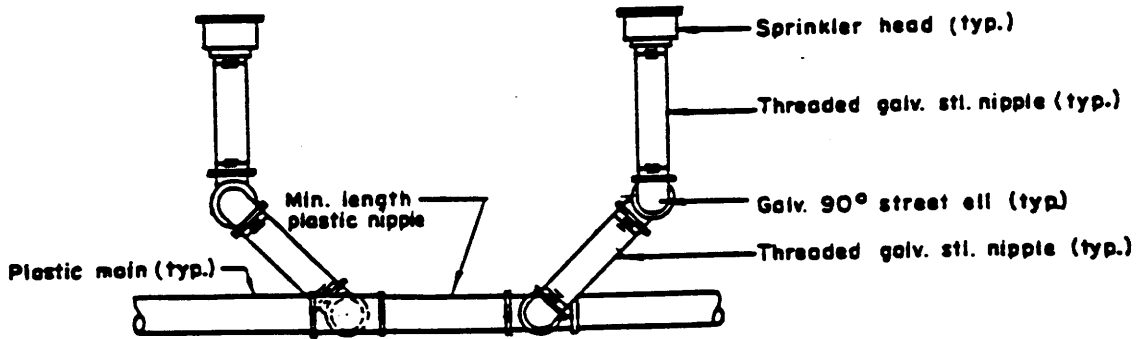
CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <i>Donald K. Jensen</i> 5/15/87 City Engineer Date	STD. 538
REMOTE CONTROL VALVE FOR LAWN SPRINKLERS		



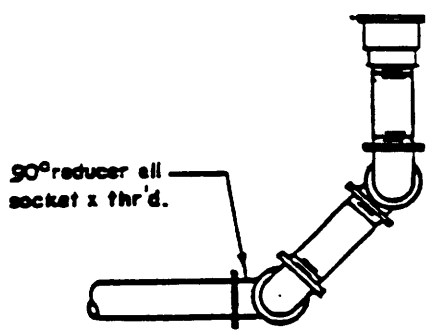
SADDLE CONNECTION



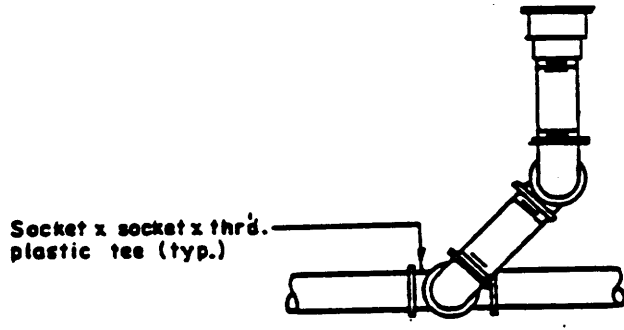
SADDLE CONNECTION
(END VIEW)



DOUBLE TEE CONNECTION



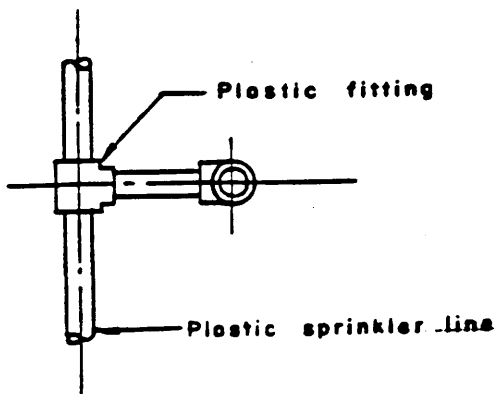
ELL CONNECTION



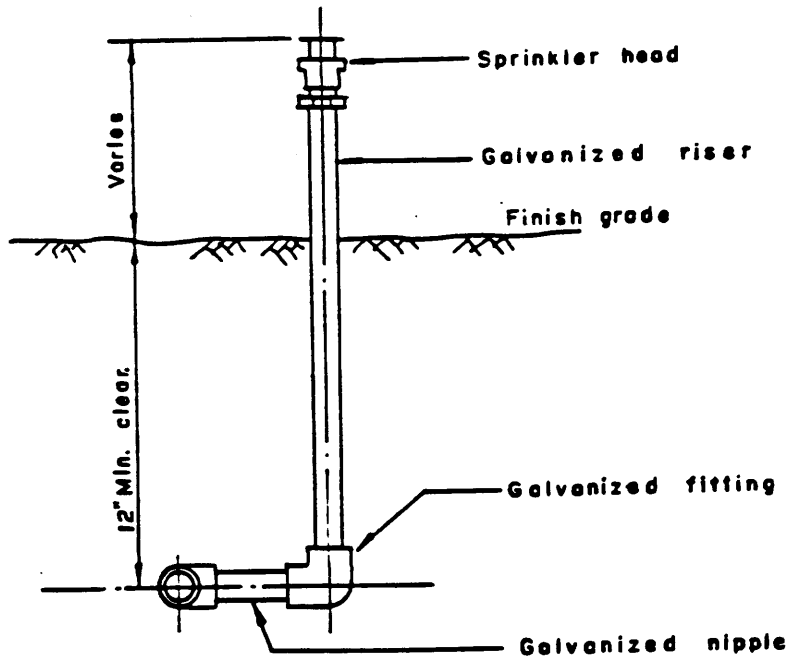
TEE CONNECTION

NOTE:
ALL FITTINGS, EXCEPT TEE ON MAIN, SHALL BE GALVANIZED STEEL.

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald Jensen</u> 5/15/87 City Engineer Date	STD. 539
RISER DETAILS TYPE "A"		



PLAN



ELEVATION

CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS	Approved <u>Donald K. Jensen</u> 5/15/87 City Engineer Date	STD. 540
RISER DETAIL TYPE "B"		

IMPROVEMENT
PLAN,
GRADING PLAN
AND
STORM DRAIN PLAN
REQUIREMENTS

CITY OF BUENA PARK - PUBLIC WORKS DEPARTMENT

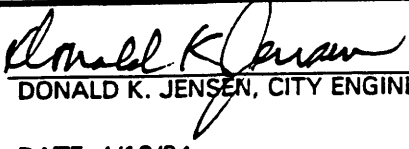
GRADING PLAN REQUIREMENTS

1. Grading plan shall be prepared and signed by a Registered Civil Engineer licensed by the State of California.
2. Plan shall be legibly drawn in a professional manner, at a minimum scale of 1" = 40', on a 24" x 36" sheet with a 3" x 9" title block in the lower right hand corner for the drawing number and review approval, in accordance with GP-1. All elevations shall be per City of Buena Park bench mark datum. The design shall be per current City requirements and standards.
3. The following shall be shown and dimensioned on the plan:
 - a. Project property lines.
 - b. Centerline of adjacent street and distance to nearest intersection.
 - c. Existing utilities (water, sewer, telephone, electric, gas, cable, etc.) and public improvements.
 - d. Adjacent structures or buildings within 50' of subject property.
 - e. Proposed utility connections, structures, buildings, parking lot pavement, masonry block walls and retaining walls.
 - f. Proposed public improvements (curb, gutter, sidewalk, driveway approaches) and street pavement areas.
4. Accurate contours and/or elevations of existing ground and finished grade shall be shown at 50' (maximum) grids. Plan shall also show contours and/or elevations for adjacent properties to no less than 50' from the project property lines, and finished floor elevations for proposed, plus finished floor elevations of existing buildings to remain, and buildings on adjacent property within 50' of project property lines.
5. Flow line grade and elevations of all drainage swales, gutters, or drainage structures shall be shown.
6. The quantity of excavation and fill shall be shown.
7. Public Works will inspect the following:
 - a. Sewer lines (on-site) designed with manholes, all lines 6" and larger, appurtenances, and all lines located in the dedicated right of way and easements.
 - b. On-site water lines 3" and larger from property line to existing or proposed structures, all water lines in dedicated right of way and easements.
 - c. Irrigation systems in dedicated right of way and not connected to on-site systems.
 - d. Designed drainage structures, storm drain and appurtenances.

ALL OTHER ON-SITE UTILITIES, TO INCLUDE SEWER LATERALS LESS THAN 6" AND WATER LATERALS LESS THAN 3", SHALL BE INSPECTED AND APPROVED BY THE BUILDING DIVISION.

8. Masonry block walls may be constructed per City of Buena Park standard STD-303. All other wall designs or retaining walls shall be detailed on the grading plans and calculations approved by the Building Division.
9. Cut and fill slopes shall be no greater than 1' vertical to 2' horizontal. (To be used only with the approval of City Engineer if developer and/or Engineer desires to use this approach at the perimeter of the site.)
10. All on-site drainage shall generally be toward the street unless site conditions dictate otherwise. Drainage may be directed through the driveway approach. Where existing conditions make this unfeasible, an approved drainage structure will be required in accordance with City standards and specifications.
11. Minimum grades for on-site drainage shall be 1% on AC pavement or earth, and 0.5% on concrete unless otherwise allowed. Concrete swales and gutters, if required, shall be a minimum 6" thick and 3' wide unless otherwise permitted.
12. Parking area pavement and driveways shall be a minimum of 3" AC/4" AB, or 6" thick, concrete Class 564-C-3000 unless otherwise recommended by a soils engineer and approved by the City Engineer.
13. All utility service connections shall be underground.
14. Plan checking fees shall be deposited with the Construction Services Division prior to plan check. Grading permit fees will be calculated after the plan has been approved.
15. Concrete curbs 6" high are required between planters and/or landscaped areas, parking areas or driveway, and shall be shown on the plan.
16. Plan shall agree with all other plans submitted to the Planning Division, Building Division, Fire Department and Construction Services Division as to the location of buildings, planters, parking area, fire services and utilities, and shall comply with all Federal, State, and County requirements.

The above is required in order to conform to the requirements of Sections 15.20.010 and 15.20.020 of the Code of the City of Buena Park and Chapter 70 of the Uniform Building Code.

<p>CITY OF BUENA PARK DEPARTMENT OF PUBLIC WORKS</p>	<p>APPROVED:  DONALD K. JENSEN, CITY ENGINEER</p> <p>DATE: 4/13/94</p>
GRADING PLAN REQUIREMENTS	STD. GP-R

NOTES:

1. HIGH QUALITY 24" x 36" (61.0 cm x 91.4 cm) LINEN OR DUPLICATE / PHOTOGRAPHIC MYLAR SHALL BE USED.
2. TITLE BLOCK AS SHOWN BELOW SHALL BE USED FOR FIRST SHEET.
3. ALL OTHER SHEETS SHALL HAVE ONLY TITLE INFORMATION AS SHOWN BELOW.
4. PLAN SHALL BE PREPARED IN INK.
5. PLAN MUST BE SIGNED BY A CIVIL ENGINEER LICENSED BY THE STATE OF CALIFORNIA.
6. ALL ELEVATIONS SHALL BE PER CITY OF BUENA PARK BENCH MARK OR APPROVED ORANGE COUNTY DATUM.
7. CITY OF BUENA PARK STANDARDS SHALL BE USED FOR CONSTRUCTION AND REFERENCED ON THE PLAN.
8. SEE GRADING PLAN REQUIREMENTS.

Updated copy

DRAWN: WVN	DATE: 09/01/00
CHECKED: NSH	SCALE: N.T.S.
APPR.: _____	DATE: _____

3-1/2"
(8.9cm)

3-1/2"
(8.9cm)

1/2" (1.3cm) Border

Title Block Location

24" x 36" (61.0cm x 91.4cm) SHEET

CITY OF BUENAPARK
DEPARTMENT OF PUBLIC WORKS
 THIS SET OF PLANS AND SPECIFICATIONS MUST BE KEPT ON THE JOB AT ALL TIMES AND IT IS UNLAWFUL TO MAKE CHANGES OR ALTERATIONS WITHOUT WRITTEN PERMISSION FROM THE ENGINEERING DIVISION.
 APPROVAL OF THIS SET OF PLANS AND SPECIFICATIONS SHALL NOT BE HELD TO PERMIT OR APPROVE THE VIOLATION OF ANY LAW. THIS SET HAS BEEN REVIEWED FOR COMPLIANCE WITH THE APPLICABLE CITY STANDARDS, SPECIFICATIONS, REQUIREMENTS AND CONDITIONS OF APPROVAL AS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS. THE CITY IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS, OR ACCURACY OF THE PLAN, NOR DOES APPROVAL OF THIS PLAN CONSTITUTE APPROVAL BY ANY OTHER CITY DEPARTMENT.
 DATE: _____
 BY: _____

1/2
(1.3c)

1"
(2.5c)

1/2
(1.3c)

GRADING PLAN FOR (PROJECT & LOCATION)

1/2" (1.3cm)		CHECKED:		REV. NO.	
1/4" (6cm)		RECOMMENDED:		GP-	
1/4" (6cm)		APPROVED:			
2" (5.1cm)		BENCH MARK:		1/2" (1.3cm)	
1"				SHEET OF	
				ON OTHER SHEETS	
				2" (5.1cm)	

3-1/4"
(8.3cm)

1/2"
(1.3cm)

3"
(7.6cm)

1/2"
(1.3cm)

1/4"
(6cm)

ON FIRST SHEET ONLY

10" (25.4 cm)

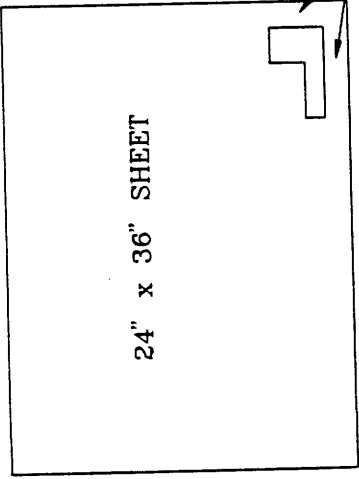
**GRADING PLAN
TITLE BLOCK**

- HIGH QUALITY 24" x 36" LINEN OR DUPLICATE/PHOTOGRAPHIC MYLAR SHALL BE USED.
- TITLE BLOCK AS SHOWN BELOW SHALL BE USED FOR FIRST SHEET.
- ALL OTHER SHEETS SHALL HAVE ONLY TITLE INFORMATION AS SHOWN BELOW.
- PLAN SHALL BE PREPARED IN INK.
- PLAN MUST BE SIGNED BY A CIVIL ENGINEER LICENSED BY THE STATE OF CALIFORNIA.
- ALL ELEVATIONS SHALL BE PER CITY BENCH MARK OR APPROVED ORANGE COUNTY DATUM.
- CITY OF BUENA PARK STANDARDS SHALL BE USED FOR CONSTRUCTION AND REFERENCED ON THE PLAN.
- SEE GRADING PLAN REQUIREMENTS.

*See Revised
Copy
date
9/1/00*

LEAVE THIS SPACE BLANK
FOR DEPARTMENT
OF PUBLIC WORKS
STAMP

Title Block Location



GRADING PLAN FOR (PROJECT & LOCATION)

REVISIONS		CHECKED:
No.	Date	By

App: _____
RECOMMENDED:
APPROVED:
BENCH MARK:

REFERENCES:

GP-

REV. NO.

1/2

SHEET OF

ON OTHER SHEETS

2"

3-1/4"

ON FIRST SHEET ONLY

9"

CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

APPROVED Donald K. Jensen
CITY ENGINEER
DATE 3/17/94 REVISED _____ NO. _____

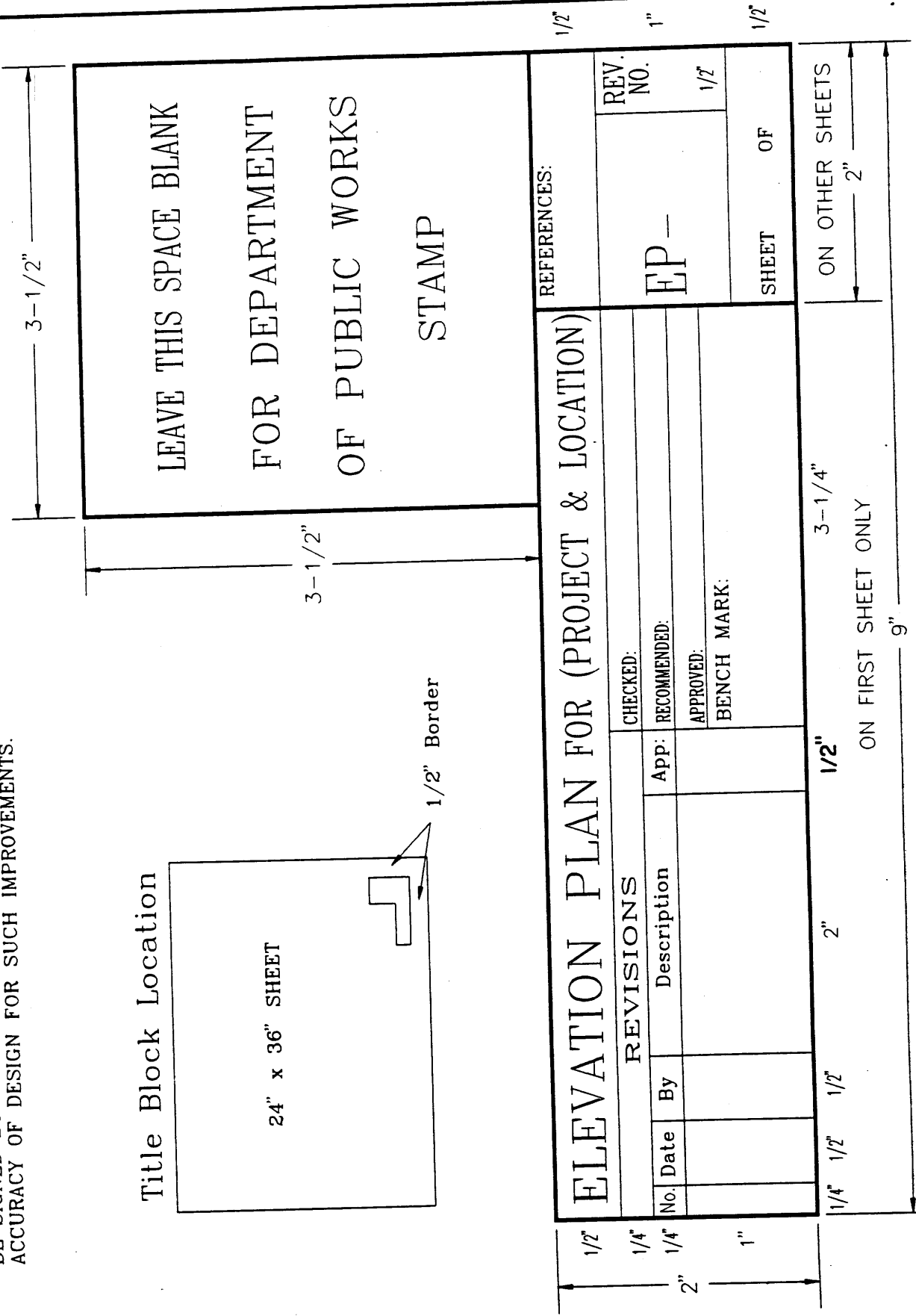
GRADING PLAN TITLE BLOCK

GP-

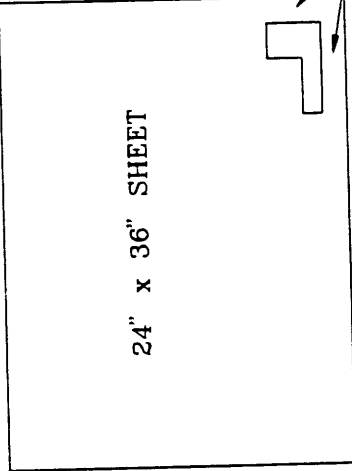
1. HIGH QUALITY 24" x 36" LINEN OR DUPLICATE/PHOTOGRAPHIC MYLAR SHALL BE USED.
 2. TITLE BLOCK AS SHOWN BELOW SHALL BE USED FOR FIRST SHEET.
 3. ALL OTHER SHEETS SHALL HAVE ONLY TITLE INFORMATION AS SHOWN BELOW.

4. PLAN SHALL BE PREPARED IN INK.

5. ALL ELEVATIONS SHALL BE PER CITY BENCH MARK OR APPROVED ORANGE COUNTY DATUM.
 6. CITY OF BUENA PARK STANDARDS SHALL BE USED FOR CONSTRUCTION AND REFERENCED ON THE PLAN.
 7. OWNER SHALL CERTIFY THAT EXISTING ELEVATIONS AND DRAINAGE FLOW PATTERN ARE TRUE AND CORRECT.
 8. IF ELEVATION PLAN SHOWS MAJOR CHANGES IN OFF-SITE IMPROVEMENTS OR DRAINAGE DESIGN, THE PLAN SHALL BE SIGNED BY A REGISTERED CIVIL ENGINEER LICENSED BY THE STATE OF CALIFORNIA WITH RESPECT TO THE ACCURACY OF DESIGN FOR SUCH IMPROVEMENTS.



Title Block Location



LEAVE THIS SPACE BLANK
 FOR DEPARTMENT
 OF PUBLIC WORKS
 STAMP

ELEVATION PLAN FOR (PROJECT & LOCATION)		1/2"	1/2"	1"	1/2"
		1/2"	1/2"	1"	1/2"
REV. NO.		EP-		1/2"	
SHEET		OF		ON OTHER SHEETS	
REFERENCES:		3-1/4"		ON FIRST SHEET ONLY	
CHECKED:		1/2"		9"	
RECOMMENDED:		1/4"		ON FIRST SHEET ONLY	
APPROVED:		1/4"		ON FIRST SHEET ONLY	
BENCH MARK:		1"		ON FIRST SHEET ONLY	
ELEVATION PLAN FOR (PROJECT & LOCATION)		2"		ON FIRST SHEET ONLY	
REVISIONS		1/2"		ON FIRST SHEET ONLY	
No.	Date	By	Description	9"	
				ON FIRST SHEET ONLY	

CITY OF BUENA PARK
 DEPARTMENT OF PUBLIC WORKS

APPROVED *Ronald K. Jansen*
 CITY ENGINEER
 DATE 3/17/94 REVISIONS NO.

ELEVATION PLAN TITLE BLOCK

EP-

CITY OF BUENA PARK - DEPARTMENT OF PUBLIC WORKS

IRRIGATION SYSTEM PLAN REQUIREMENTS

1. All pipe in the City right of way shall be PVC, Schedule 40.
2. The point of connection of the irrigation main line and the existing water main shall be shown and indicated on the plan.
3. Trench depth for irrigation main line shall be 18 inches minimum and for lateral line 12 inches minimum, in the City right of way.
4. PVC pipe sleeves shall be provided 24 inches deep under all paving prior to installatin of AC paving.
5. All irrigation lines shall be protected by an approved type and size of pressure vacuum breaker. In all instances no irrigation lines shall by-pass the backflow prevention device.
6. After installation, the irrigation system shall be flushed thoroughly to remove dirt and debris prior to installation of sprinkler heads.
7. The Contractor shall adjust the system so that water does not spray on asphalt areas.
8. A permit shall be obtained from the Building Division of the Development Services Department, City of Buena Park, prior to doing any work. Permit fees shall be in accordance with the applicable sections of the Uniform Plumbing Code.
9. Final approved plans for landscaping and sprinkler systems are required from the Planning Division prior to the issuance of permits.

CITY OF BUENA PARK
DEPARTMENT OF PUBLIC WORKS

APPROVED: 
DONALD-K. JENSEN, CITY ENGINEER

DATE: 4/13/94

IRRIGATION SYSTEM PLAN REQUIREMENTS

STD. ISP-1

ENG/CONST. NOTES

NOTES

CITY OF BUENA PARK - PUBLIC WORKS DEPARTMENT

GRADING NOTES

1. All grading shall be done in accordance with the City of Buena Park standards and specifications and the latest City-approved Building Code, Chapter 70, as interpreted by the City Engineer. Whenever the term "Building Official" is used, this shall mean the City Engineer or his authorized representatives.
2. The following permits shall be obtained prior to any construction from the Construction Services Division and applicable fees paid to the Department.
 - (a) Grading permit
 - (b) Sewer permit for sewer lateral or sewer cleanout. The Public Works Inspector shall verify and field check sewer cleanout location prior to construction.
 - (c) Concrete permit for construction of driveway approaches, sidewalks, curb and gutters.
 - (d) Paving permit for street pavement construction.
 - (e) Water line permit for any water main connection, fire protection line construction and domestic water service.
 - (f) Storm drain permit for storm drain connection to an existing City storm drain facility or for new storm drain main line and lateral construction.
 - (g) Southern California Edison Company, Pacific Bell Company, Southern California Gas Company and Comcast Cablevision permits for main or lateral facility installations in the public right of way.
3. In the removal and/or construction of off-site improvements in the City right of way, the Public Works Inspector may use his discretion in determining the extent and limit of work to be undertaken in conformance with the City requirements and in accordance with the approved plans, specifications and City standards.
4. On-site water and sewer laterals shall be in accordance with the latest revision of the Uniform Plumbing Code and inspected by Building Division.
5. Masonry block wall and retaining wall calculations and construction shall be reviewed, inspected and approved, and permit issued by the Building Division.
6. All excavations, construction and installations in the public right of way require inspection. Failure to have inspection will result in reopening of the excavation and possible reconstruction.
7. All waste, vegetation, refuse and deleterious materials shall be removed prior to any grading.

8. No water shall be taken from City fire hydrants without approved application from the Construction Services Division and payment of fees and deposits.
9. Dust shall be controlled by watering.
10. Contractor shall notify UNDERGROUND SERVICE ALERT a minimum of 48 hours advance notice (1/800/422-4133) prior to excavation.
11. Contractor is required to call 714/562-3686, at least 48 hours in advance for inspection.
12. No construction or grading shall begin prior to pre-construction meeting with City Public Works Inspector from the Construction Services Division.
13. Developer will submit two (2) copies of approved street light location plans from S.C. Edison to the City prior to issuance of City permit for street lights.
14. Developer/owner shall be responsible for checking and recognizing all easements in the development and adjacent properties. Engineer of Record shall be responsible for indicating existing utility locations and resolving possible conflicts of service connections for the development.
15. Developer/contractor shall submit a traffic control plan for approval prior to any lane closure or work in the City right of way. Plans shall show the proper placing of barricades or delineators for traffic direction and information.
16. Utility trenches within the City right of way shall not be excavated and left opened on Fridays and weekends. Utility trenches shall be properly provided with steel covers and traffic delineators in accordance with City standards and to the satisfaction of the City Engineer.
17. Compaction on native soil shall be a minimum 95%. With aggregate base over native, minimum compaction is 90%.

CITY OF BUENA PARK

Department of Public Works
"Service with Pride"

GENERAL NOTES

1. All work shall be in accordance with the applicable sections of the Standard Specifications for Public Works, Construction (the Green Book), latest edition, and all subsequent supplements, City of Buena Park Standards, contract documents, and the latest revisions thereof.
2. The location and existence of utilities and improvements shown on the plans are approximate and taken from available records. The contractor shall verify the location of existing improvements and shall take all precautions to protect them whether shown or not. The contractor shall notify the **UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600** 48 hours before any excavation.
3. Contractor shall notify the City Public Works Inspector assigned to the project at least 48 hours prior to beginning of any work.
4. When joining existing pavement, contractor shall feather a minimum of 10'. New construction joining existing paving shall be done with no dangerous or noticeable joints as determined by the City Engineer.
5. Existing raised pavement markers shall be removed prior to construction and replaced upon the finished surface at the same location.
6. The contractor shall provide and maintain traffic control devices at all times in accordance with the standard specifications and as directed by the City Engineer.
7. The contractor shall remove all grass and weeds in cracks or between gutter and pavement and sterilize soil to prevent further growth.
8. All cracks 1/8" wide or greater shall be filled with joint sealer prior to overlay, as noted in specifications.
9. All projects approved by the City shall be designed and constructed within drainage guidelines established by the City and NPDES requirements.

CITY OF BUENA PARK - DEPARTMENT OF PUBLIC WORKS

WATER NOTES

Page 1 of 2

1. All water systems as shown on plans will be installed in accordance with City standards under the jurisdiction of and operated by the City of Buena Park. Main lines to be 150# ductile iron pipe conforming to ANSI/AWWA C-150/A 21.50 and design method shall conform to ANSI/AWWA C-150/A 21.50 (wrapped in polyethylene) or approved equal.
2. All water lines within the street right of way shall have a minimum cover of 30" on service laterals and 36" for mains below finished grade.
3. Fire hydrant assemblies shall be per City of Buena Park standard No. 531 which includes a 6" gate valve as shown.
4. Gate valves shall be per City of Buena Park standard No. 518.
5. Thrust blocks shall be installed at angles and bends and shall be per City of Buena Park standard No. 532 and No. 533.
6. Hot taps shall be per City of Buena Park standard No. 524, 525 or 526.
7. All water lines shall be chlorinated at 40 to 50 ppm tested and approved by the Orange County Health Department for bacteriological quality prior to acceptance. Lines failing the test shall be rechlorinated and retested until passing (see Inspector).
8. Water lines shall be pressure tested for leakage per City of Buena Park standard.
9. Fittings shall be cast iron conforming to ASA A2110 or equal or AWWA C 110 and shall be cement mortar lined in accordance with AWWA C 104 or ASA A 21-4 specification. Fittings shall have caulked or rubber ring joints and installed per the pipe manufacturer's specifications and recommendations.

CITY OF BUENA PARK - DEPARTMENT OF PUBLIC WORKS

WATER NOTES (continued)

Page 2 of 2

10. Water meter boxes and vaults shall be per City of Buena Park standard No. 516, with service connection per standard No. 517.
11. All fire hydrants shall be centered in 3' x 3' x 4" concrete slab when not located in sidewalk area.
12. Backfill on water main shall be provided with sand bedding 6" below and 1' above the pipe to the satisfaction of the City Engineer.
13. No construction shall begin prior to pre-construction meeting with City Public Works Inspector from the Construction Services Division.

CITY OF BUENA PARK - DEPARTMENT OF PUBLIC WORKS

SEWER NOTES

1. The sewer system as shown on plans shall be installed in accordance with the specifications and standards of the City of Buena Park.
2. All sewer manholes shall be a minimum of 15" below finished grade and the sewer contractor shall raise manhole frame and covers to finished grade after surfacing is completed.
3. All manholes shall be per City of Buena Park standard No. 505 and 510.
4. All laterals shall be per City of Buena Park standard No. 513.
5. Manholes shall be provided with non-magnetic stainless steel steps as approved by the City Engineer.
6. All sewer lines shall be tested for leakage, balled and mirrored.
7. Sanitary sewers in vicinity of water mains shall conform to City of Buena Park standard No. 535, for encasement requirements.
8. Maintenance on individual laterals will be the responsibility of the property owners. The City has no responsibility for cleaning or repairing these laterals.
9. Sanitary sewer cleanouts shall be per city of Buena Park standard No. 511.
10. No construction shall begin prior to pre-construction meeting with City Public Works Inspector from the Construction Services Division.

CITY OF BUENA PARK - DEPARTMENT OF PUBLIC WORKS

STORM DRAIN NOTES

1. All storm drain systems as shown on the plans shall conform to the City of Buena Park standards and specifications.
2. All work performed shall be covered by a permit issued by the Construction Services Division.
3. Existing improvements removed or damaged due to the proposed construction shall be replaced to the satisfaction of the City Engineer.
4. Reinforced concrete pipe shall conform to Subsection 207-2 of the Standard Specifications.
5. Construction shall conform to Section 306 of the Standard Specifications.
6. The contractor shall notify the City and UNDERGROUND SERVICE ALERT (1-800-422-4133) at least 48 hours prior to the commencement of any work proposed under these plans.
7. It will be the responsibility of the contractor to obtain approved plans prior to the commencement of work proposed under these plans.
8. Reinforced concrete pipe shall conform to the specifications of AASHTO, Designation M-170 and Section 65 of the State of California Standard Specifications.
9. Pipe shall be installed in accordance with LACFCD Case III bedding as shown on standard drawings 2-D177. "W" values shall be as specified on standard drawing 2-D177 for Case III bedding notes (3a), (3b), (3c).
10. No construction shall begin prior to pre-construction meeting with City Public Works Inspector from the Construction Services Division.