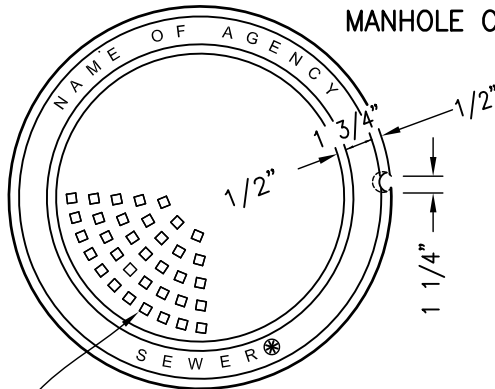
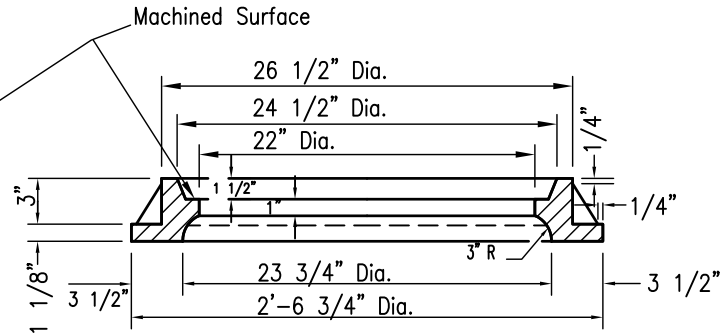
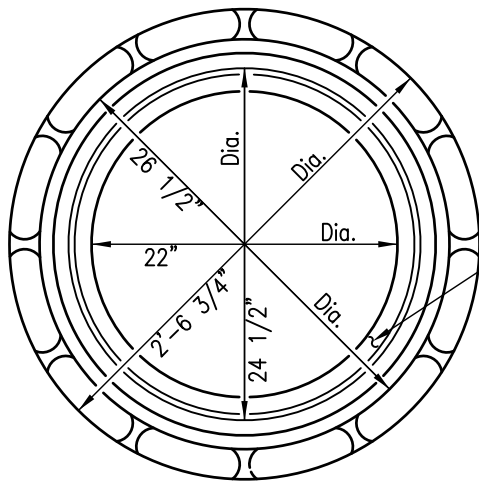


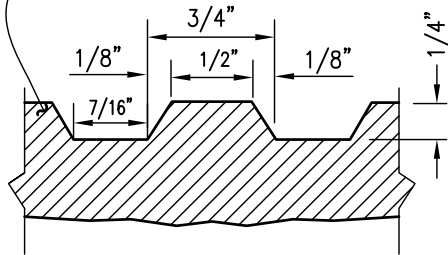
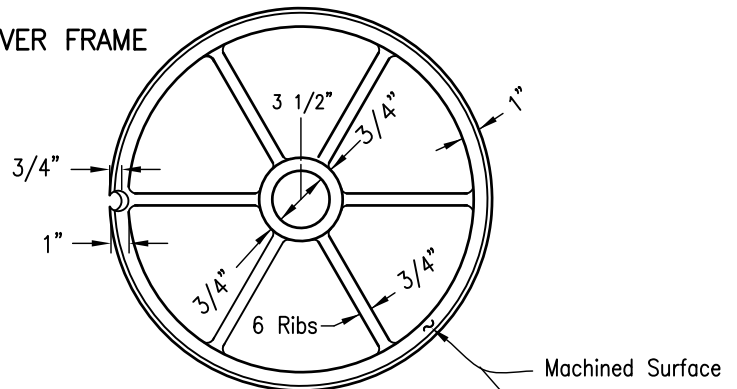
# MISCELLANEOUS

MISCELLANEOUS

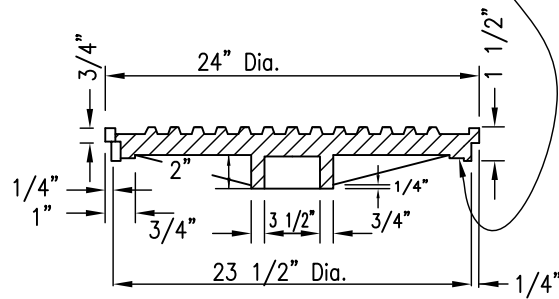
M



MANHOLE COVER FRAME



DETAIL



MANHOLE COVER

NOTES

1. Frame and cover shall be cast iron. Cast iron shall conform to ASTM 48, Class 35B.
2. Weights: Frame 166 lbs – 193 lbs.  
Cover 147 lbs – 171 lbs.
3. Machine all matching surfaces and seats of frame and cover to prevent rocking.
4. Imported frames and covers shall have the country of origin marked in compliance with federal regulations.

FOR	MARK
Sewer Projects	Sewer
Storm Drain Projects	Storm Drain
Water Projects	Water

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Reviewed		T. Stanton	10/18
Reviewed	RP	S. Engeda	03/22

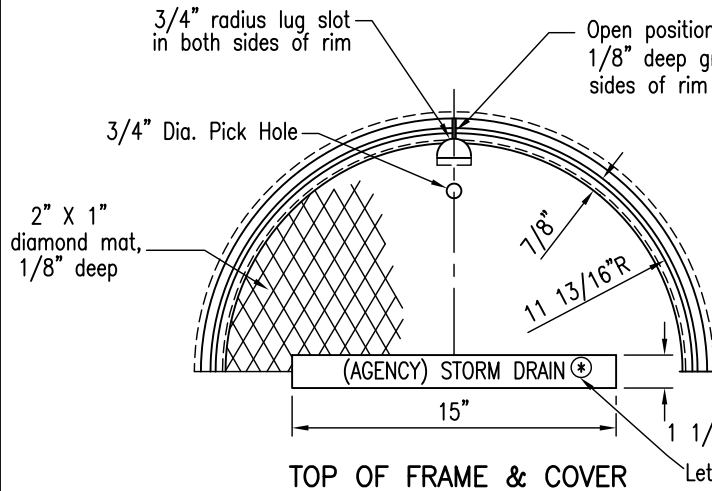
SAN DIEGO REGIONAL STANDARD DRAWING

**24" MANHOLE FRAME AND COVER  
HEAVY DUTY**

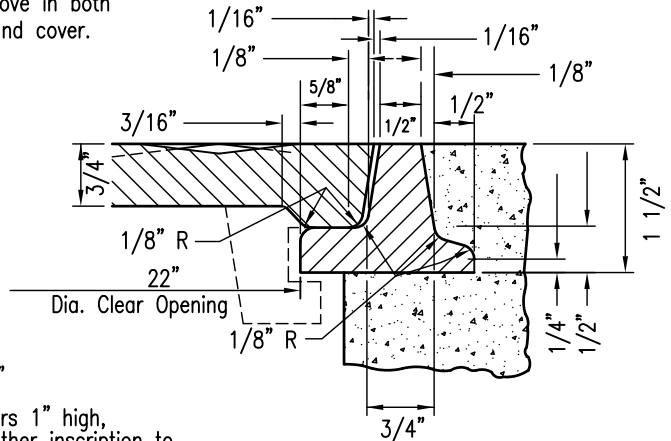
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samsin Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

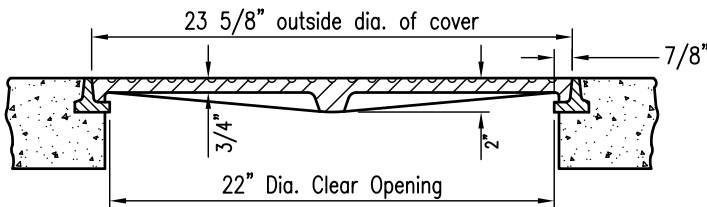
DRAWING NUMBER **M-01**



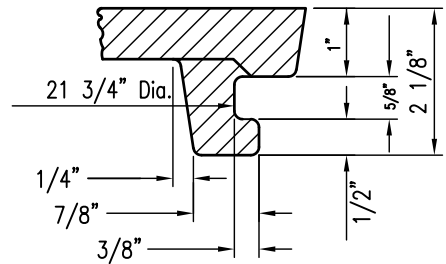
TOP OF FRAME & COVER



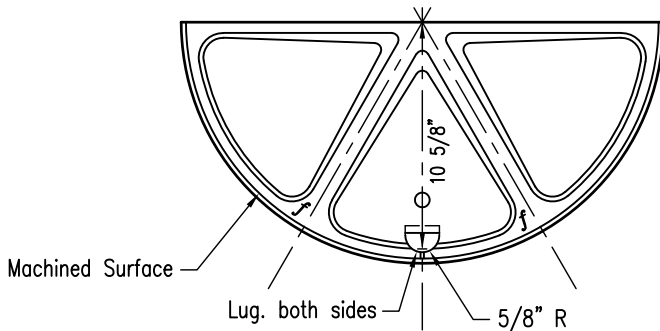
SECTION THROUGH RIM



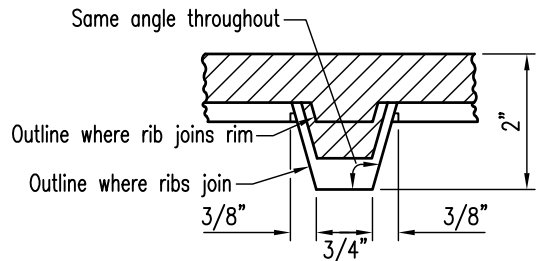
SECTION THROUGH FRAME & COVER



SECTION THROUGH LUG



BOTTOM OF COVER



SECTION THROUGH RIB AT MID RADIUS

**NOTES**

1. Frame and cover shall be cast iron. Cast iron shall conform to ASTM 48, Class 30.
2. Frame and cover for use in non-traffic area only.
3. Weights: Frame 29 lbs - 33 lbs.  
Cover 95 lbs. - 110 lbs.
4. Imported frames and covers shall have the country of origin marked in compliance with federal regulations.

* FOR		MARK	
Sewer Projects		Sewer	
Storm Drain Projects		Storm Drain	
Water Projects		Water	

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

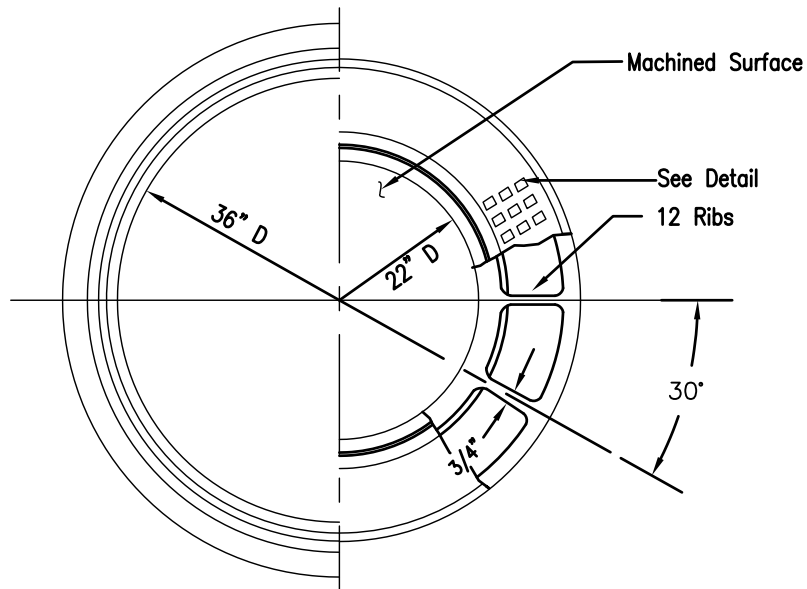
SAN DIEGO REGIONAL STANDARD DRAWING

**24" MANHOLE FRAME AND COVER**  
**LIGHT DUTY**

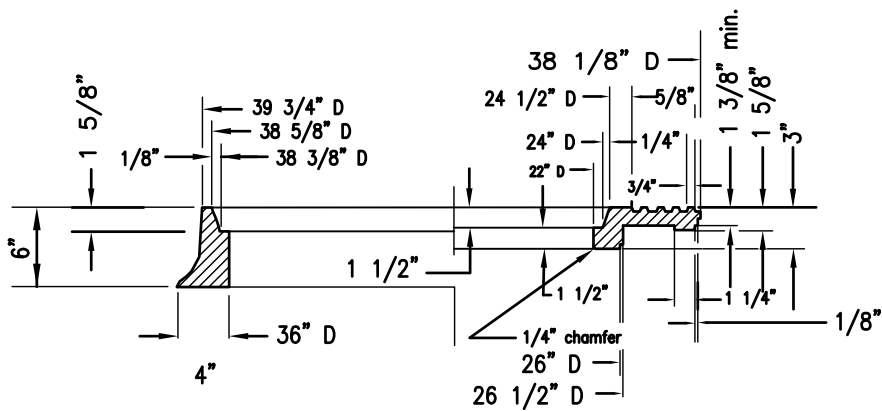
RECOMMENDED BY THE SAN DIEGO  
REGIONAL STANDARDS COMMITTEE

*Samsir Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-02**



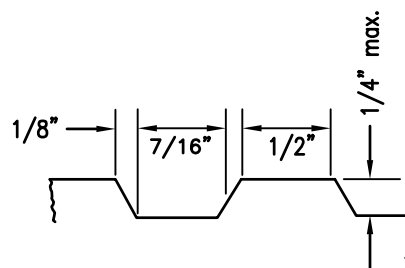
HALF PLAN FRAME & COVER



HALF SECTION FRAME & COVER

NOTES

1. Frame and cover shall be cast iron. Cast iron shall conform to ASTM 48, Class 35B.
2. Weights: Frame 314 lbs - 363 lbs.  
Outer Cover 285 lbs - 330 lbs.  
Inner Cover 147 lbs - 171 lbs.
3. Machine all matching surfaces and seats of frame and cover to prevent rocking.
4. Imported frames and covers shall have the country of origin marked in compliance with federal regulations.



DETAIL

Revision	By	Approved	Date
Updated	DG	T. Stanton	12/15
Reviewed	DG	T. Stanton	10/18
Reviewed	RP	S. Engeda	03/22

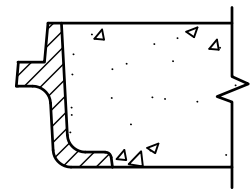
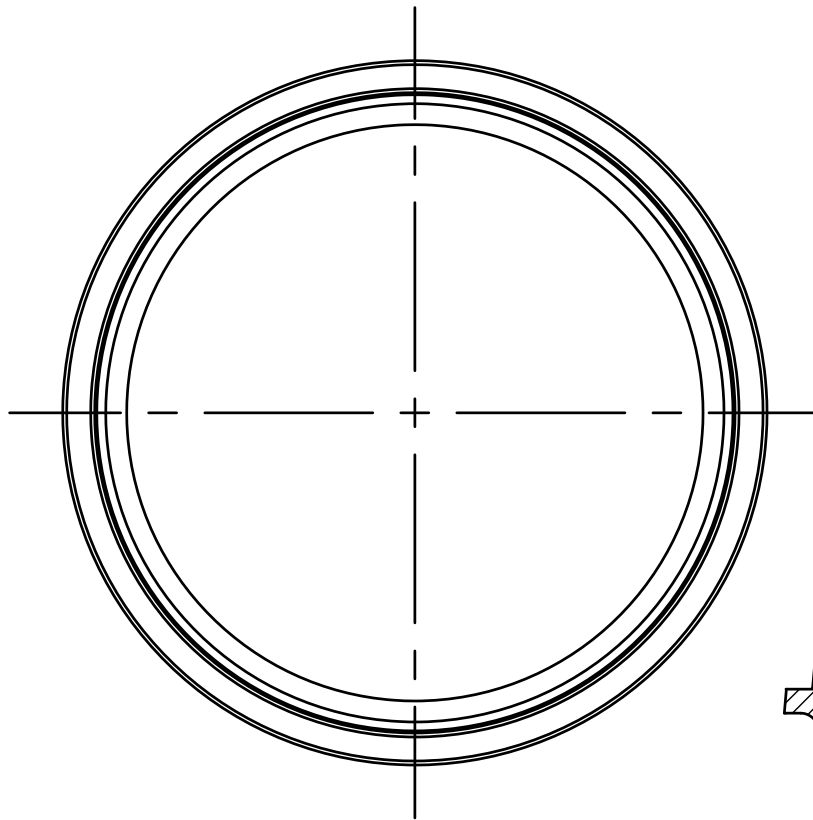
SAN DIEGO REGIONAL STANDARD DRAWING

**36" MANHOLE FRAME  
AND TWO CONCENTRIC COVERS  
HEAVY DUTY**

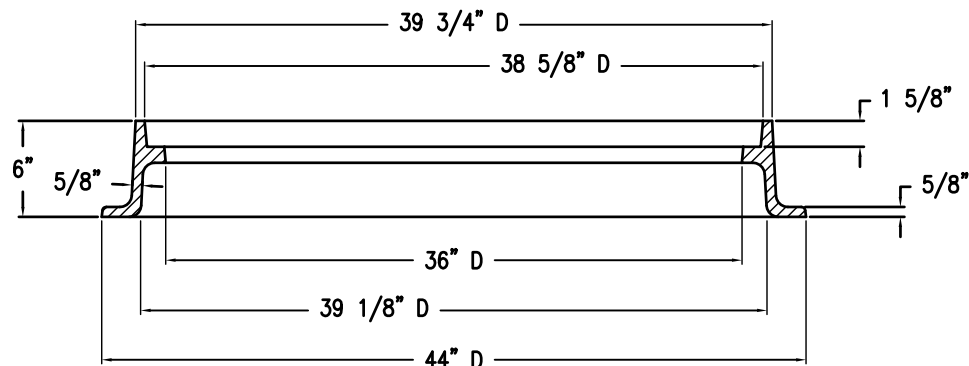
RECOMMENDED BY THE SAN DIEGO  
REGIONAL STANDARDS COMMITTEE

*Samantha Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING  
NUMBER **M-03A**



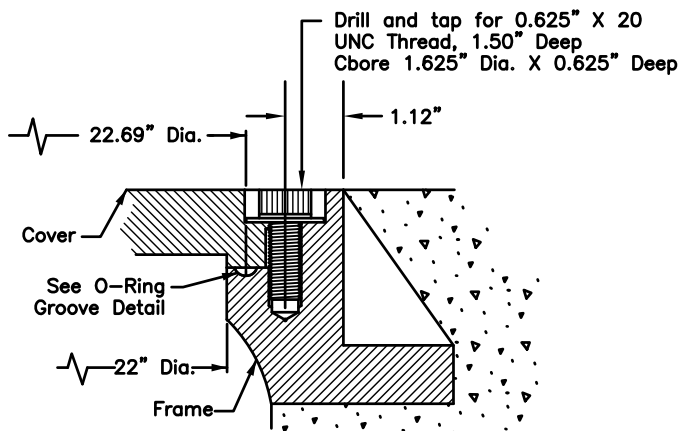
DETAIL OF AC PAVING



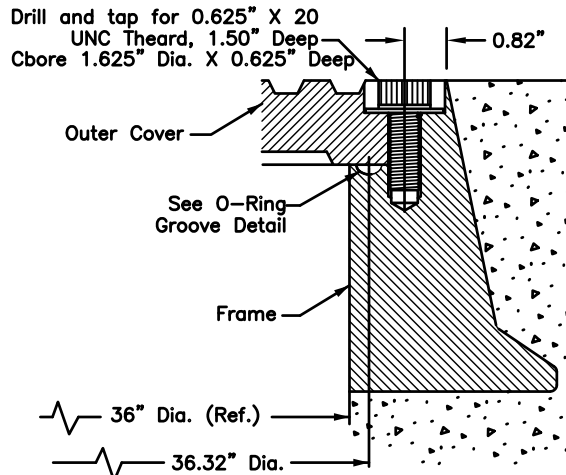
**NOTES**

1. FRAME SHALL BE CAST IRON. CAST IRON SHALL CONFORM TO ASTM 48, CLASS 35B.
2. WEIGHT: FRAME 212 LBS.
3. USE COVER SHOWN ON M-03A.
4. MACHINE ALL MATCHING SURFACES AND SEATS OF FRAME AND COVER TO PREVENT ROCKING.
5. IMPORTED FRAMES AND COVERS SHALL HAVE THE COUNTRY OF ORIGIN MARKED IN COMPLIANCE WITH FEDERAL REGULATIONS.
6. COVER CANNOT BE BOLTED TO THIS FRAME.

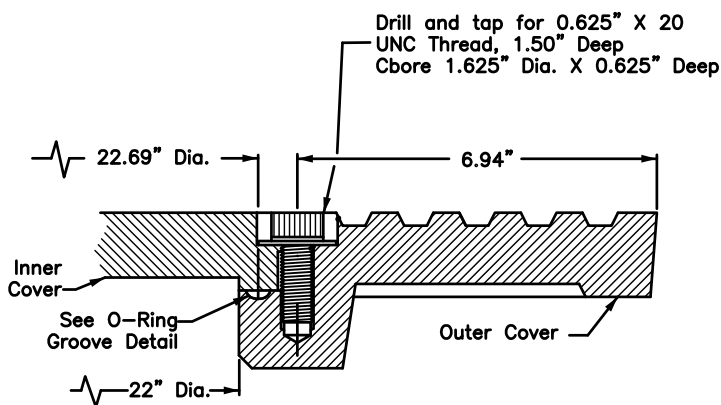
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
Updated	DG	T. Stanton	12/15		<b>36" MANHOLE FRAME LIGHTWEIGHT - HEAVY DUTY</b>
Reviewed	DG	T. Stanton	10/18	Chairperson R.C.E. 52241 Date	
Reviewed	RP	S. Engeda	03/22	DRAWING NUMBER <b>M-03B</b>	



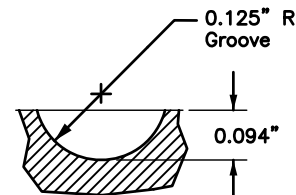
M-01 Detail:  
COVER TO FRAME



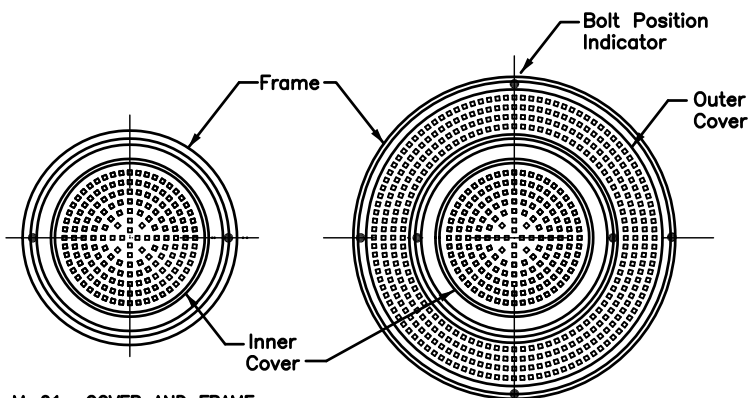
M-03A Detail:  
OUTER COVER TO FRAME



M-03A Detail:  
INNER COVER TO OUTER COVER



NEOPRENE O-RING  
GROOVE DETAIL



M-01 COVER AND FRAME  
BOLT PLACEMENT  
(See Note 3)

M-03A CONCENTRIC COVERS AND FRAME  
BOLT PLACEMENT  
(See Note 3)

NOTES:

1. 0.625" X 20 UNC THREAD, 316 STAINLESS STEEL SOCKET HEAD CAP SCREW AND 1.50" O.D. X 0.687" I.D. X 0.078" THICK 316 STAINLESS STEEL WASHER.
2. 0.25" NEOPRENE O-RING GASKET SHALL BE GLUED INTO MACHINED GROOVE. GLUE SHALL MEET THE REQUIREMENTS OF MIL-M-81288 (AMEND. 1)
3. BOLTDOWN PATTERNS:
  - M-01 DETAIL (24" COVER & FRAME): INSTALL TWO (2) BOLTS AT 180 DEGREES.
  - M-03A DETAIL (CONCENTRIC COVERS): BETWEEN INNER AND OUTER COVERS INSTALL TWO (2) BOLTS AT 180 DEGREES.

Revision	By	Approved	Date
ORIGINAL		Parkinson	2/95
Updated		D. Gerschoffer	12/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. ENGEDA	03/22

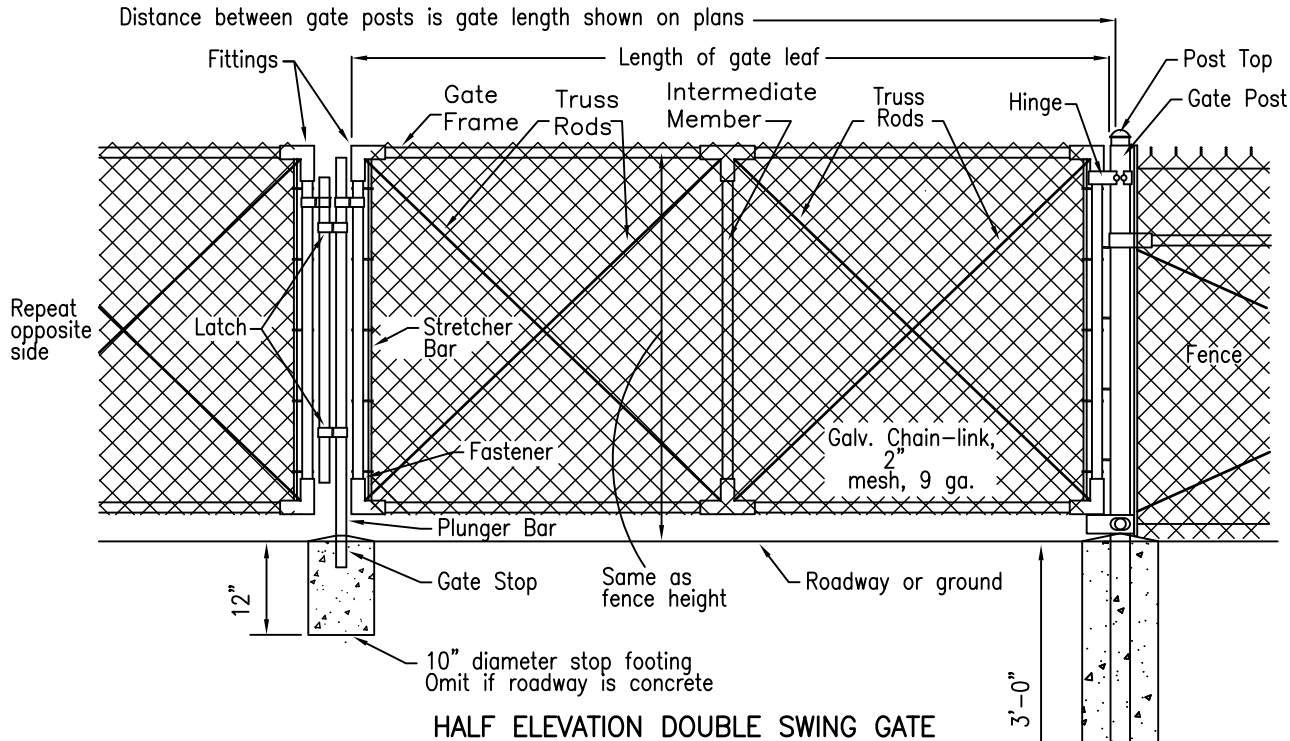
SAN DIEGO REGIONAL STANDARD DRAWING

MANHOLE COVER - LOCKING DEVICE

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samson Engeda* 03/24/2022  
Chairperson R.C.E. 19246 Date

DRAWING NUMBER **M-04**



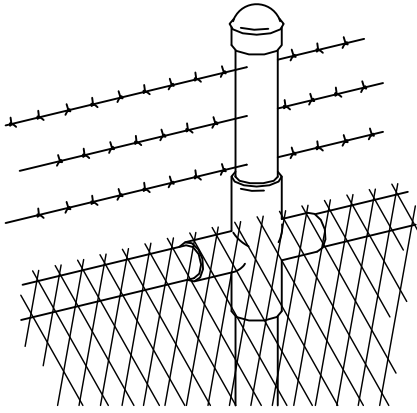
HALF ELEVATION DOUBLE SWING GATE

**NOTES**

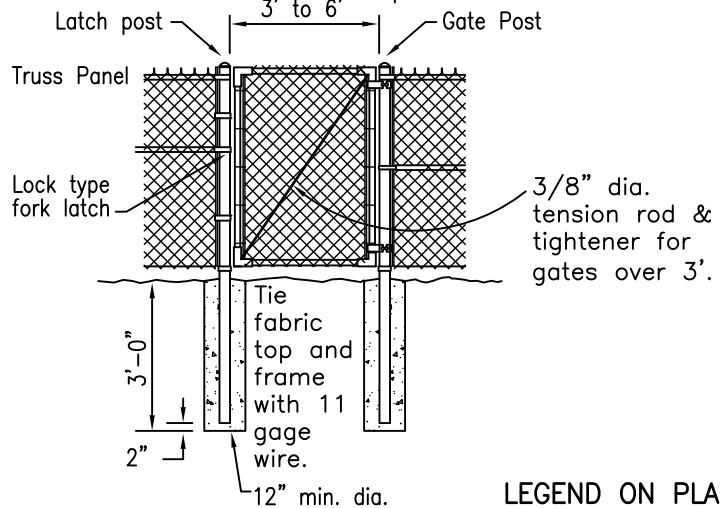
1. All footings shall be 520-C-2500 concrete.
2. The following items shall be furnished and installed only when shown on the plans and/or called for in the special provisions:
  - a. Barbed wire
  - b. Extension post
3. Chain link fence shall conform to Section 206-6 of the Standard Specification for Public Works Construction unless specifically noted on this drawing.

Diameter of footing = 4 times outside diameter of post.

Clear opening shown on plans.

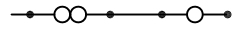


EXTENSION POST AND BARBED WIRE



WALK GATE

**LEGEND ON PLANS**



Revision	By	Approved	Date
ORIGINAL		A. Kercheval	12/75
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

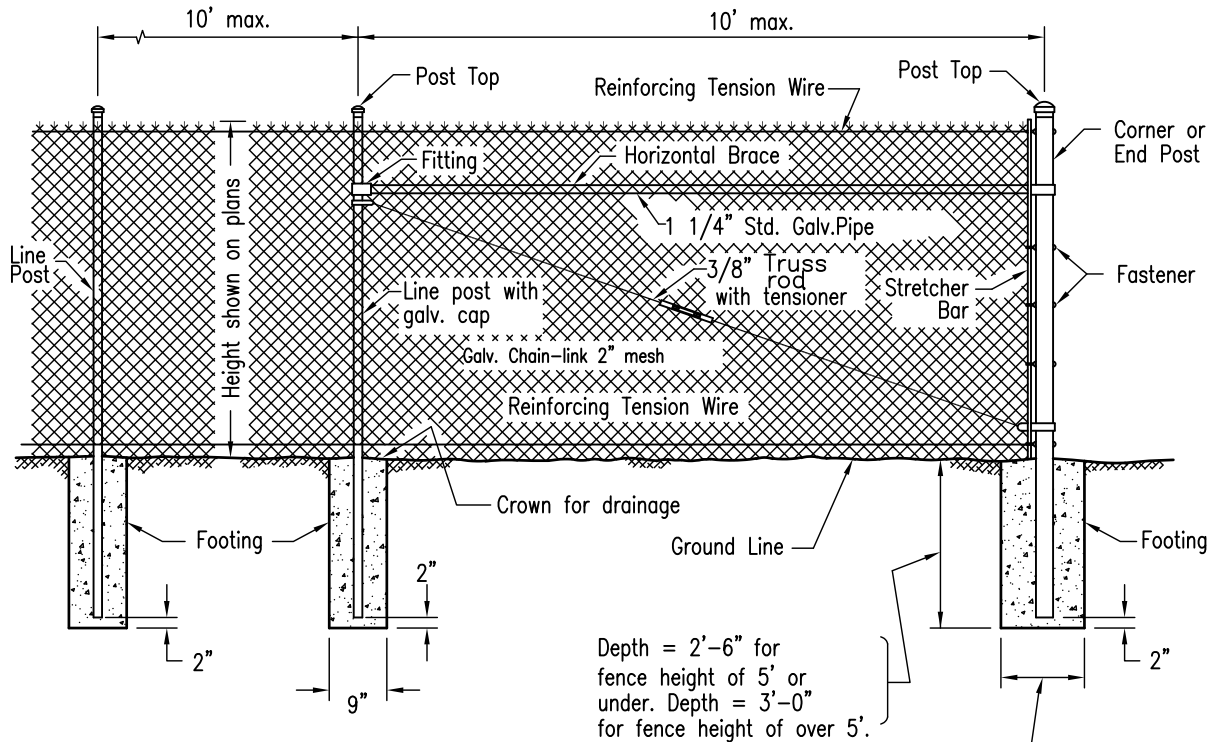
SAN DIEGO REGIONAL STANDARD DRAWING

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

**CHAIN LINK GATE**

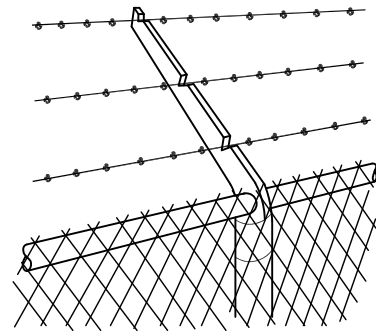
*Somson Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-05**



Depth = 2'-6" for fence height of 5' or under. Depth = 3'-0" for fence height of over 5'.

Diameter of footing = 4 times outside diameter of post.

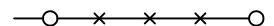


EXTENSION ARM AND BARBED WIRE

**NOTES**

1. All footings shall be 520-C-2500 concrete.
2. The following items shall be furnished and installed only when shown on the plans and/or called for in the special provisions.
  - a. Barbed Wire
  - b. Extension Arm
  - c. Top Horizontal Rail
3. Chain link fence shall conform to Section 206-6 of the Standard Specifications for Public Works Construction unless specifically noted on this drawing.
4. See Standard Drawing M-20 for additional details.

**LEGEND ON PLANS**



Revision	By	Approved	Date
ORIGINAL		A.Kercheval	12/75
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

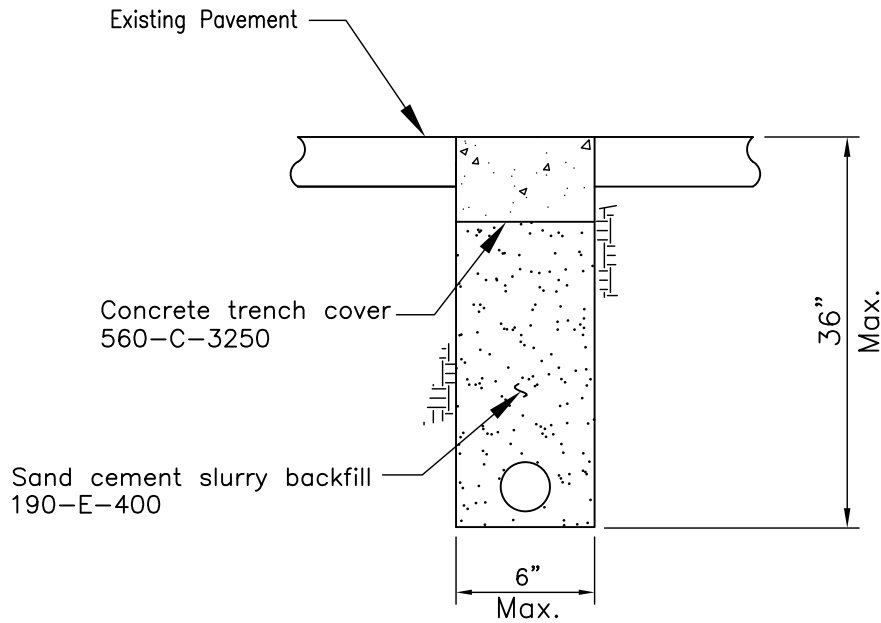
**CHAIN LINK FENCE**

*Samsin Engeda* 03/24/2022

Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-06**

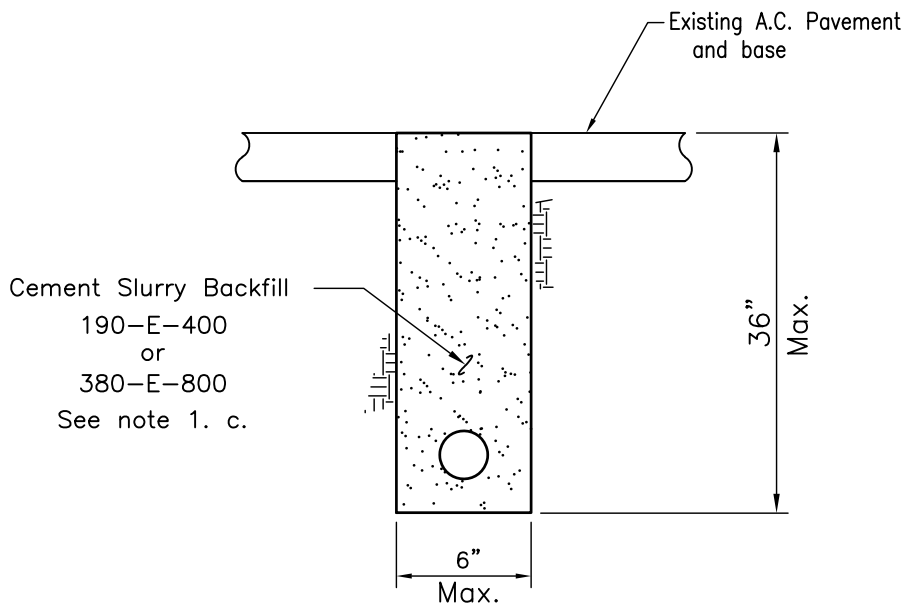




**NOTES**

1. Concrete encasement or sand cement slurry backfill shall have a minimum slump of 4".
2. Sand cement slurry backfill shall be thoroughly consolidated to encase conduits. Tampers or vibrators shall be used.
3. Concrete shall be screeded off to match pavement grade and floated to assure proper edge match.
4. Existing pavement will not require saw cutting when using rockwheel for excavation except when the existing pavement is concrete and trench finish is concrete.
5. All cuts shall be parallel or perpendicular to street centerline, when practical.
6. Allow concrete backfill or concrete trench cover 7 calendar days minimum, but no longer than 30 calendar days to cure and dry before applying any road surface finishes.
7. In major or prime arterial streets, an approved set accelerating admixture, such as calcium chloride, may be used only with prior approval of the Agency's Engineer otherwise the contractor shall protect the trench with the approval of the agency's Engineer.
8. See drawing G-33 for narrow trench resurfacing.
9. See table on drawing M-15 for standard minimum conduit depths.

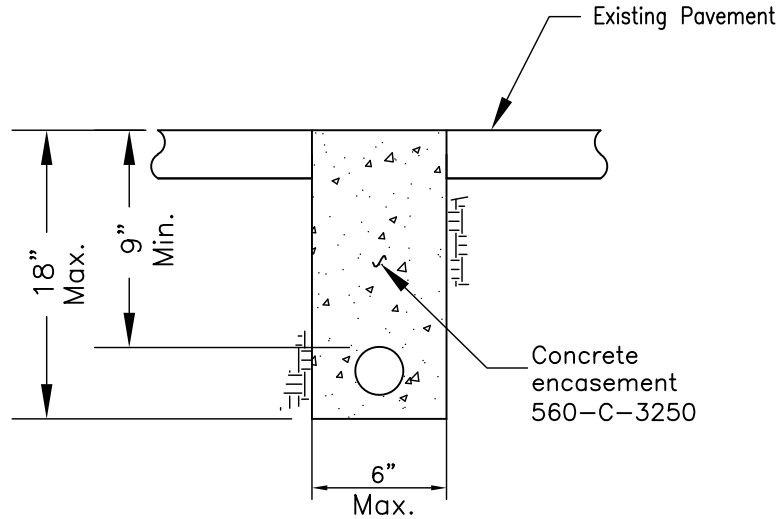
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
Reviewed	DG	T. Stanton	10/18		<b>NARROW TRENCHES TRENCHING &amp; BACKFILLING</b>
Reviewed	RP	S. Engeda	03/22	DRAWING NUMBER <b>M-07</b>	



**NOTES**

1. Cement Slurry Backfill:
  - a. Cement slurry backfill shall have a maximum slump of 4".
  - b. Cement slurry backfill shall be thoroughly consolidated to encase conduits. Tampers or vibrators shall be used.
  - c. Cement slurry backfill shall be as follows:
    - Alleys and local residential streets ..... Class 190-E-400
    - All other streets ..... Class 380-E-800
2. Existing A.C. pavement will not require sawcutting when using rockwheel for excavation.
3. All cuts shall be parallel or perpendicular to street centerline, when practical.
4. See drawing G-33 for narrow trench resurfacing.
5. See table on drawing M-15 for standard minimum conduit depths.

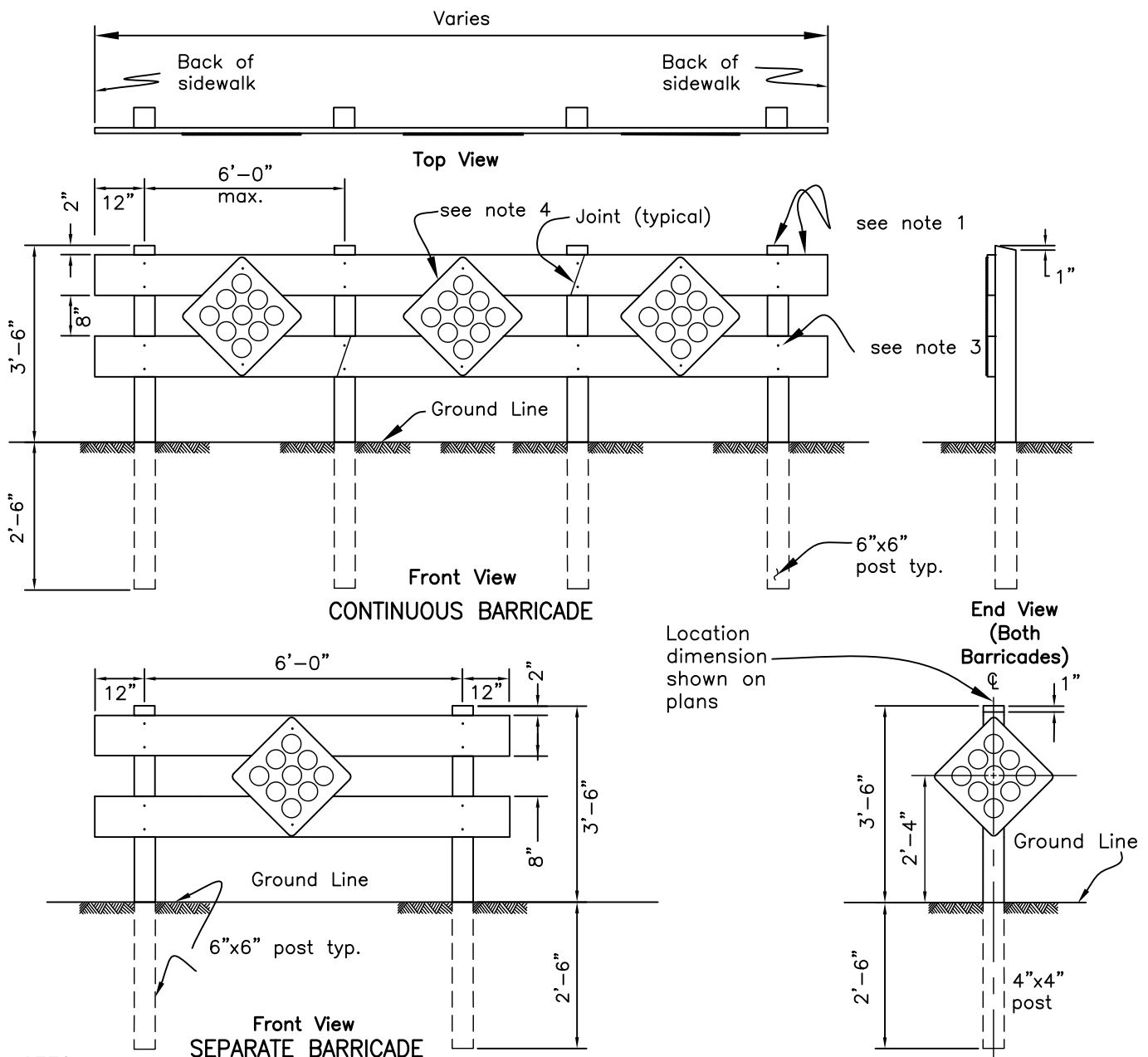
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
Reviewed	DG	T. Stanton	10/18		<b>NARROW TRENCHES TRENCHING &amp; BACKFILLING</b>
Reviewed	RP	S. ENGEDA	03/22	Chairperson R.C.E. 52241	
					DRAWING NUMBER <b>M-07A</b>



**NOTES**

1. Concrete encasement or backfill shall have a minimum slump of 4”.
2. Concrete encasement and/or sand cement slurry backfill shall be thoroughly consolidated to encase conduits. Tampers or vibrators shall be used.
3. Concrete shall be screeded off to match pavement grade and floated to assure proper edge match.
4. Existing pavement will not require saw cutting when using rockwheel for excavation except when the existing pavement is concrete and trench finish is concrete.
5. All cuts shall be parallel or perpendicular to street centerline, when practical.
6. Allow concrete backfill or concrete trench cover 7 calendar days minimum, but no longer than 30 calendar days to cure and dry before applying any road surface finishes.
7. In major or prime arterial streets, an approved set accelerating admixture, such as calcium chloride, may be used only with prior approval of the Agency’s Engineer otherwise the contractor shall protect the trench with the approval of the Agency’s Engineer.
8. This type of trench shall be permitted for supply cables of 750 volts or less. See California Public Utility Commission General Order No. 128, Rule 33.4 D.(1)(b) and where the conduit can not be placed at the proper recommended depth.
9. See drawing G-33 for narrow trench resurfacing.
10. This detail shall be used only when there is underground conflicts. See table on drawing M-15 for standard minimum conduit depths.

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
Reviewed	DG	T. Stanton	10/18		<b>NARROW TRENCHES TRENCHING &amp; BACKFILLING SHALLOW CONDUIT DEPTH</b>	<i>Samsan Engeda</i> 03/24/2022
Reviewed	RP	S. Engeda	03/22	Chairperson R.C.E. 52241 Date		
				DRAWING NUMBER		<b>M-08</b>

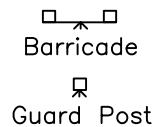


**NOTES**

1. Posts to be structural grade redwood or pressure treated (with wood preservative) Douglas Fir, surfaced four sides; cross pieces to be 2"x8" select grade Douglas Fir, surfaced four sides.
2. All exposed portions of barricades shall be painted with two coats of white exterior enamel over prime coat.
3. Connections shall be made with 3/8" x 6" galvanized lag screws with one (1) washer each.
4. Object Marker fasteners to be 3/8" x 1 1/2" galvanized lag screws.
5. Object Markers (reflector signs) per most current edition of the CA MUTCD shall be used:
  - a. Type 1 Object Markers (yellow): OM1-1, OM1-2, or OM1-3.
  - b. Type 4 Object Markers (red): OM4-1, OM4-2, or OM4-3.
  - c. Red object markers shall be used on dead end streets. In all others cases, yellow object markers shall be used.
  - d. Reflector material shall be plastic or other approved reflectorized material.
  - e. Sign material shall be aluminum alloy 60661-T6 or 5052-H38, aluminum thickness 0.063".
6. 6' long hot section metal post per Caltrans Std. Plan A74-A optional for guard post

**Front View  
GUARD  
POST**

**LEGEND ON PLANS**



Revision	By	Approved	Date
Updated	TC	T. Stanton	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

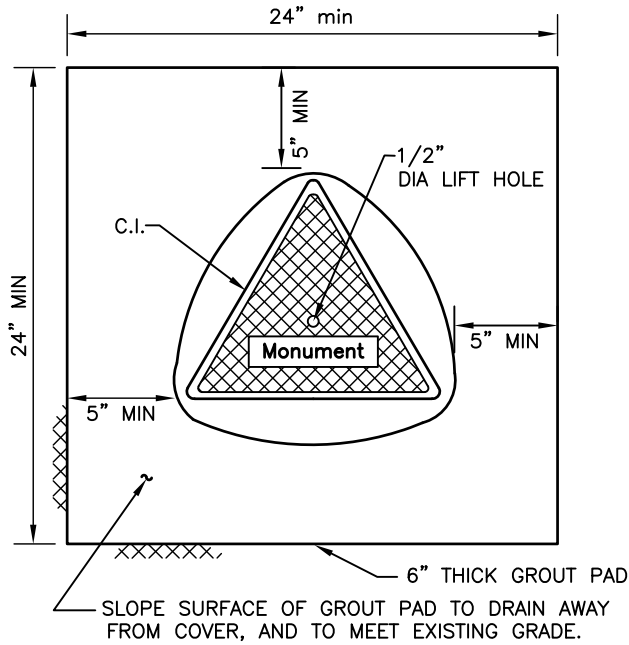
**GUARD POST AND BARRICADE**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

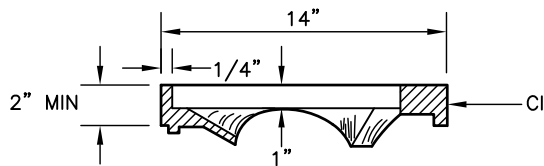
*Samantha Engeda* 03/24/2022

Chairperson R.C.E. 52241 Date

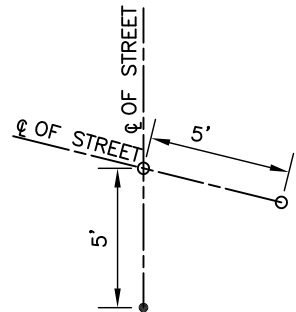
DRAWING NUMBER **M-09**



PLAN-IN UNPAVED AREA

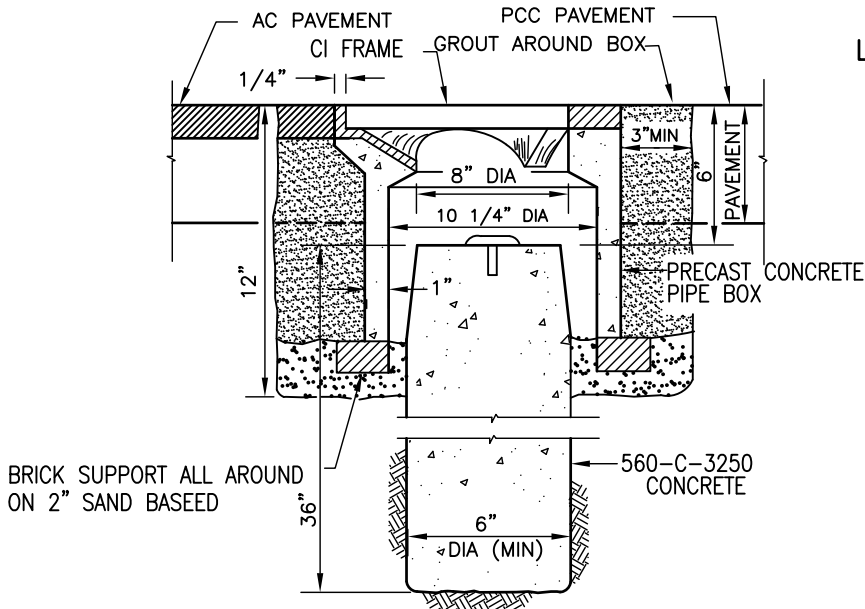


RISER RING



ALTERATION LOCATION OF MONUMENT. TIE DISTANCES SHOWN ON FINAL SUB-DIVISION MAP IF ALTERNATE LOCATION IS USED  
SEE ADDITIONAL STREET SURVEY MONUMENT NOTES ON M-10B

LOCATION OF STREET SURVEY MONUMENT



TYPICAL MONUMENT SECTION IN PAVED AREA

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D.Gerschoffer	09/15
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

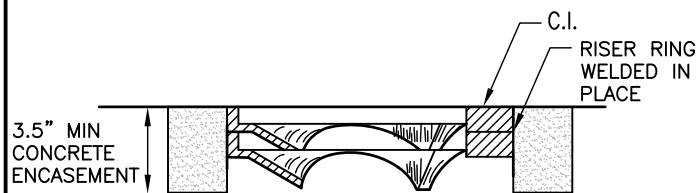
**STREET SURVEY MONUMENT**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

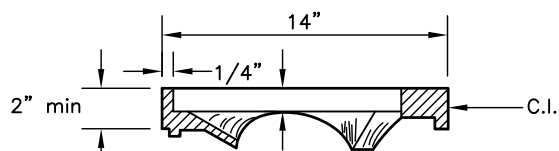
*Samantha Engeda* 03/24/2022

Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-10A**

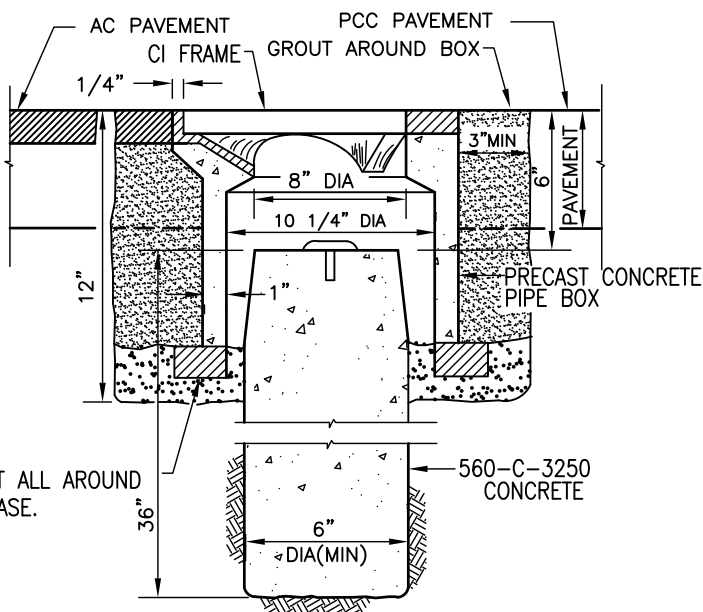


RISER RING WELDED TO EXISTING RING

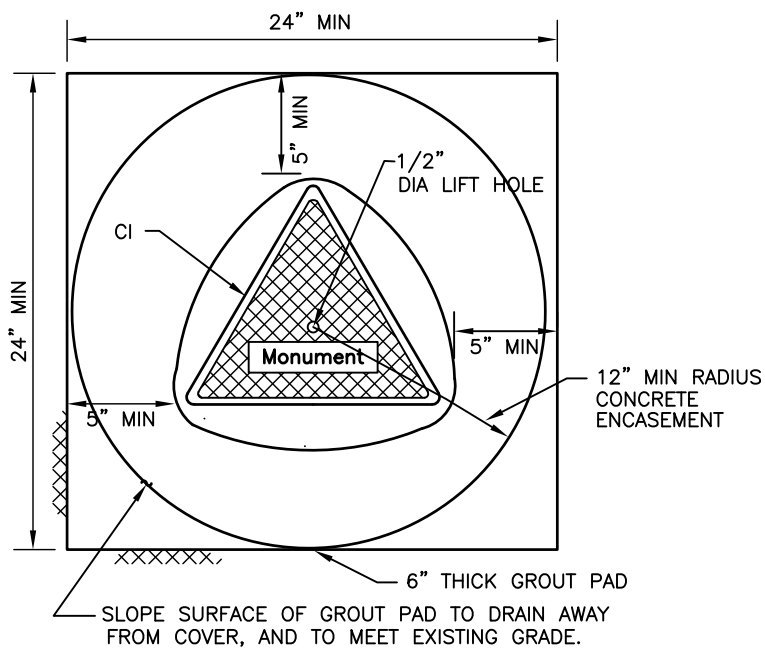


RISER RING

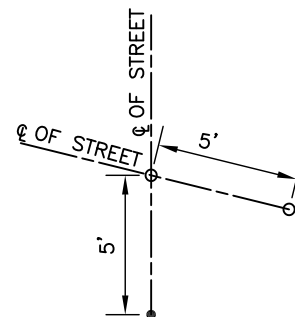
BRICK SUPPORT ALL AROUND ON 2" SAND BASE.



TYPICAL MONUMENT SECTION IN PAVED AREA



PLAN-IN UNPAVED AREA



ALTERATION LOCATION OF MONUMENT. TIE DISTANCES SHOWN ON FINAL SUB-DIVISION MAP IF ALTERNATE LOCATION IS USED. SEE ADDITIONAL STREET SURVEY MONUMENT NOTES ON M-10B

LOCATION OF STREET SURVEY MONUMENT

Revision	By	Approved	Date
New		T.Stanton	10/15
Revised		D.Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

## STREET SURVEY MONUMENT OVERLAY ADJUSTMENT


RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

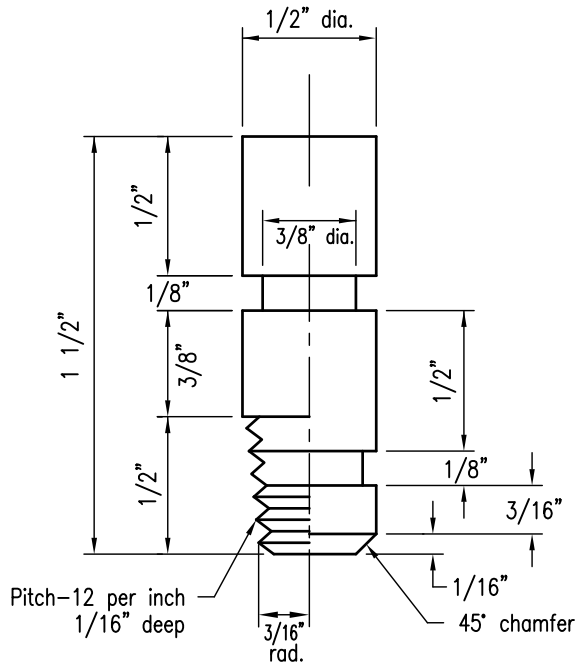
*Samantha Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-10B**

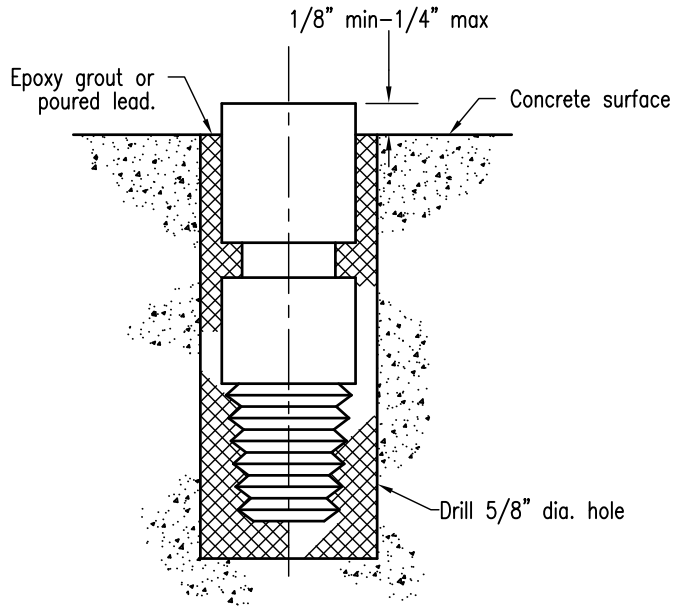
## NOTES

1. COVER AND FRAME TO BE CAST INTEGRALLY WITH PIPE BOX.
2. MONUMENT BASE MAY BE CAST IN PLACE OR PRECAST.
3. FORM AND TAPER EXPOSED UPPER 6" OF CAST-IN-PLACE BASE TO A TOP DIAMETER OF 5". (PRECAST BASE SHALL BE SAND BACKFILLED)
4. MONUMENT MARKER SHALL BE A DOMED BRASS, 3" IN DIAMETER.
5. MONUMENT LOCATION:
  - A) SET ON ALL CENTERLINE INTERSECTIONS UNLESS ACTUAL LOCATION IS MODIFIED BY THE AGENCY AND SHOWN IN MODIFIED LOCATION ON MAP. WHEN CENTERLINE INTERSECTIO IS IMPRACTICAL, OFFSET 5' ON CENTERLINE OF MAJOR STREET, (SEE DETAIL AT RIGHT). IF NEITHER CETERLINE CAN BE OCCUPIED, TWO MONUMENTS WILL BE SET IN LINE AROUND THE FRONT ON THE PERIMETER OF A 10' DIAMETER CIRCLE, WHOSE CENTER IS THE POINT.
  - B) SET ON CENTERLINE AT INTERVALS NOT EXCEEDING 1000' ON STRAIGHT RUNS.
  - C) SET ON CENTERLINE AT POINTS OF CURVATURE.
  - D) SET ON CENTER AT CENTER POINTS OF CUL-DE-SACS.
  - E) SET ON CENTERLINE WHEN CENTER POINT OF CUL-DE-SAC IS OFFSET FROM CENTERLINE.
  - F) THESE STANDARDS MAY BE MODIFIED AT THE DISCRETION OF THE THE AGENCY IN CASES WHERE STRICT COMPLIANCE THEREWITH RESULTS IN MORE MONUMENTS THAN IT CONSIDERS NECESSARY. THE FOLLOWING TECHNIQUE FOR REDUCING THE NUMBER OF MONUMENTS WILL BE ROUTINE.
  - G) SUBSTITUTION OF ONE MONUMENT ON THE "POINT OF INTERSECTION" FOR MONUMENTS AT THE "BEGINNING OF CURVE" AND THE "ENDING OF CURVE" WHEN THE "POINT OF INTERSECTION" FALLS WITHIN THE PAVEMENT AREA.
  - H) DELETION OF ANY MONUMENT OTHERWISE REQUIRED BY THESE STANDARDS WHEN ITS POSITION CAN BE DETERMINED BY TURNING ONE ANGLE FROM A POINT ON A STRAIGHT LINE BETWEEN TWO OTHER MONUMENTS, PROVIDING SUCH POINT IS NOT MORE THAN 300' FROM THE POINT ON WHICH THE DELETED MONUMENT WOULD HAVE BEEN PLACED.
  - I) FOR RAISING STREET SURVEY MONUMENT TO FINISH GRADE, RISER RING IS TO BE WELDED TO EXISTING RING AND BROUGHT TO SURFACE. ALL WELDING MUST BE DONE TO THE EXTERIOR OF THE RISER RING. NO INTERIOR WELDS ARE TO BE DONE. ENCASE RISER RING IN FAST SETTING CONCRETE WITH A MINIMUM OF 3.5" THICKNESS. CONCRETE MUST OBTAIN 1600 PSI BEFORE TRAFFIC USE, AND HAVE A MINIMUM STRENGTH OF 3250 PSI.

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		<b>STREET SURVEY MONUMENT NOTES</b>	 03/24/2022
Note I Rev		D. Gerschoffer	10/18	Chairperson R.C.E. 52241 Date		
Reviewed	RP	S. Engeda	03/22	DRAWING NUMBER		<b>M-10C</b>



TYPE-A TYPE-B  
ELEVATION



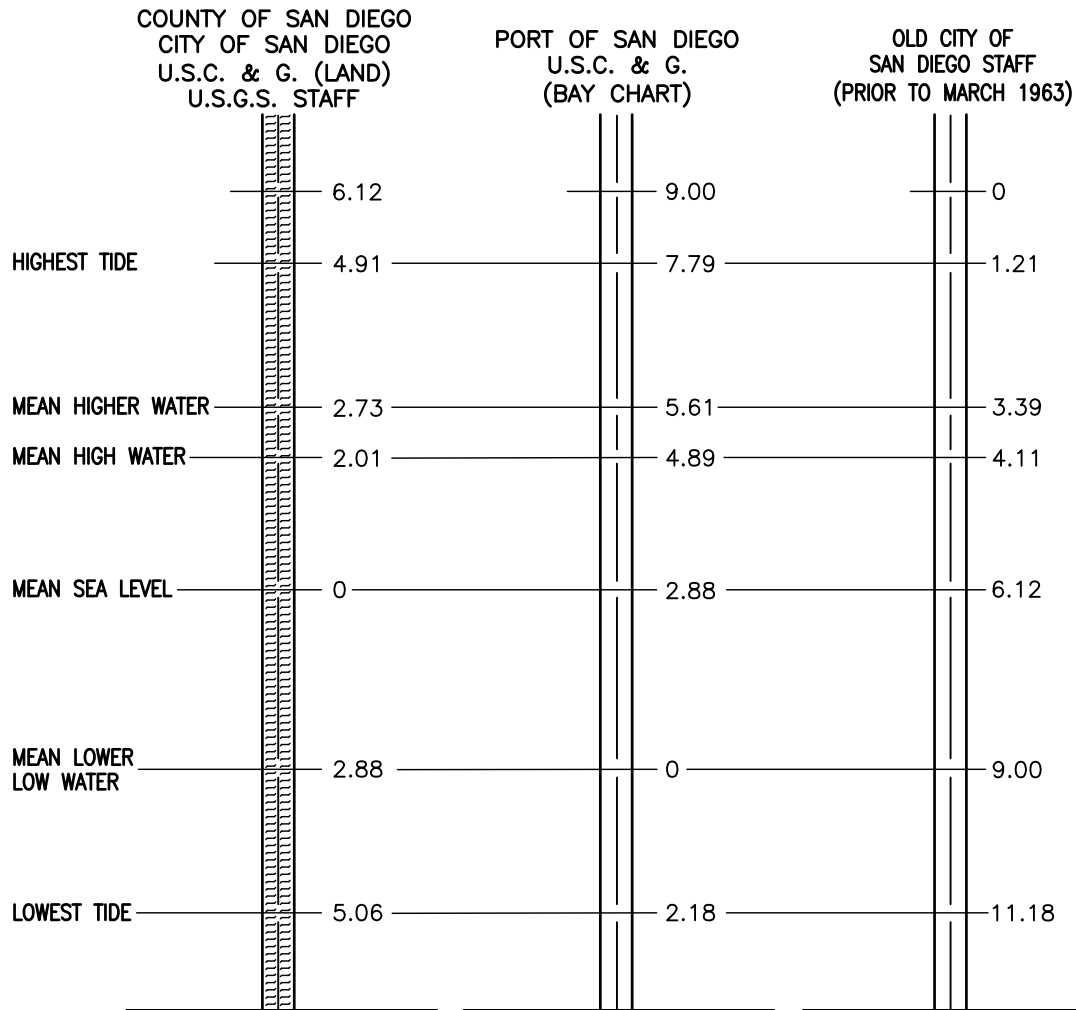
INSTALLATION IN EXISTING CONCRETE  
(Typical for Type A or B)

**NOTES**

1. Material- Brass A.S.T.M. B-16. All machine tolerances  $\pm 1/64$ " machine finish.
2. May be installed in fresh concrete at time of installation of concrete structure.
3. Location-in most stable, permanent location in vicinity, such as in base for street light standard or traffic signal (behind sidewalk), in curb (not near joint, on curve or near trees), on top of drainage headwall, in foundation for building

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	<b>BENCH MARK - BRASS PLUG</b>		 Chairperson R.C.E. 52241 Date
Revised		D. Gerschoffer	09/15			
Reviewed		D. Gerschoffer	10/18			DRAWING NUMBER <b>M-11</b>
Reviewed	RP	S. Engeda	03/22			





**LEGEND**

- U.S.C. & G. = United States Coast and Geodetic Survey.
- U.S.G.S. = United States Geological Survey.
- MEAN HIGH WATER = Mean of all high water in San Diego Bay.
- MEAN HIGHER WATER = Mean of all higher water in San Diego Bay. Bay charts and topography up to the mean high tide based on zero at the mean lower low water.

**SOURCE**

Data based on U.S.C. & G. "Sea level Datum of 1929".

Revision	By	Approved	Date	<b>DATUMS</b>	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		<i>Samsir Engeda</i> 03/24/2022
Revised		D. Gerschoffer	09/15		
Reviewed		D. Gerschoffer	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	<b>M-12</b>

**FOUND MONUMENTS**

Found monuments must denote the character of the monument, how it is identified and the record, or no record as applicable.

**SET MONUMENTS – Criteria for Locating and Character**

On subdivision boundaries, permanent monuments are required; and must be shown on the map at intervals as specified by the local agency. The location of such points that are unacceptable or will be destroyed by construction may be established by ties to permanent reference monuments shown on the final map.

A permanent monument shall be no less substantial than the following:

- a. An iron pipe of minimum two inch diameter not less than 2' in length placed upright in the ground so that the top of said pipe is flush with the surface. Said pipe shall be filled with a metal or cement plug at least three inches in depth and centered with a metal tack and disc; or
- b. A metal plug with tack and disc set flush with the surface in portland cement concrete sidewalk, curb or pavement; or other monument satisfactory to the City Engineer or County Surveyor. The metal plug shall be anchored 1" deep in sidewalk.

Lot corners and points of curves along street and alley right of way lines where portland cement concrete sidewalks, curbs or pavement exist, or will be constructed as part of the subdivision requirements, shall be identified with tack and disc set flush with the surface along an extension of the lot line at an approved offset, to be measured radially or at right angles to the right of way line in said sidewalk, curb pavement. In case the sideline of the lot is not radial or at right angles to the right of way line a disc shall be set along an extension of the sideline at an offset to be measured radially or at right angles to the right of way line. Where no such concrete work exists, and none will be required to be constructed, all lot corners, angle points and points of curve shall be marked with a monument no less substantial than a one-half inch steel rod or pipe, 18" long, set flush with the surface.

**LEGEND**

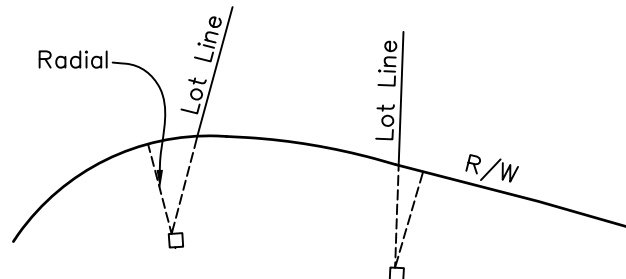
- Fd 2" Iron Pipe Marked RCE XXXX or per Map XXX unless otherwise noted
- ▲ Fd Street Survey Monument Stamped RCE XXXX or LS XXXX
- ◎ Set 2" x 24" Iron Pipe Marked RCE XXXX or LS XXXX
- Set Lead and Disc Stamped RCE XXXX or LS XXXX
- Set ½" x 18" Iron Pipe Marked RCE XXXX or LS XXXX
- △ Set Street Survey Monument Stamped RCE XXXX or LS XXXX per Standard Drawing M-10

The addition of other symbols is permissible where such will result in a clearer map.

The following notes should be used in the legend where applicable.

Unless otherwise shown on this map:

1. All lot corners except as described below will be monumented by a ½" by 18" iron pin stamped (RCE or LS number).
2. Lot corners along the sideline of dedicated street right of way will be monumented by a disc stamped (RCE or LS number), set along an extension of the lot line at an offset of \_\_\_ in the (curb, sidewalk). The offset shall be measured radially, or at right angles, to the right of way line. (See example below.)
3. All points of curve of the sidelines of dedicated streets will be monumented by a disc stamped (RCE or LS number), set at an offset of \_\_\_ in the (curb, sidewalk). The offset shall be measured radially.



**EXAMPLE OF OFFSET DISCS**

Revision	By	Approved	Date	<b>SAN DIEGO REGIONAL STANDARD DRAWING</b>	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		<b>SURVEY MONUMENTS</b>	<i>Samson Engeda</i> 03/24/2022
Revised		D. Gerschoffer	09/15			Chairperson R.C.E. 52241 Date
Reviewed		D. Gerschoffer	10/18			DRAWING NUMBER
Reviewed	RP	S. Engeda	03/22			<b>M-13</b>

1 Gram = 15.4324 grains  
 1 Gram = 0.0353 oz.  
 1 Kg. = 2.2046 lb.  
 1 Kg. = 0.0011 ton  
 1 Ton (met) = 1.1023 ton

WEIGHT

1 Grain = 0.0648 g.  
 1 Ounce = 28.3495 g.  
 1 Pound = 0.4536 kg.  
 1 Ton = 907.1848 kg.  
 1 Ton = 0.9072 ton (met)

1 Sq. cm. = 0.1550 sq. in.  
 1 Sq. m. = 10.7639 sq. ft.  
 1 Sq. m. = 1.1960 sq. yd.  
 1 Hectare = 2.4710 acres  
 1 Sq. km. = 0.3861 sq. mile  
 1 Sq. km. = 247.10 acres

AREA

1 Sq. in. = 6.4516 sq. cm.  
 1 Sq. ft. = 0.0929 sq. m.  
 1 Sq. yd. = 0.8361 sq. m.  
 1 Acre = 0.4047 hectare  
 1 Sq. mile = 2.5900 sq. km.  
 1 Acre = 0.0040 sq. km.

1 Cu. cm. = 0.0610 cu. in.  
 1 Cu. m. = 35.3134 cu. ft.  
 1 Cu. m. = 1.3079 cu. yd.

VOLUME

1 Cu. in. = 16.3872 cu. cm.  
 1 Cu. ft. = 0.0283 cu. m.  
 1 Cu. yd. = 0.7646 cu. m.

1 Liter = 61.0250 cu. in.  
 1 Liter = 0.0353 cu. ft.  
 1 Liter = 0.2642 gal. (U.S)  
 1 Liter = 0.0284 Bu.

CAPACITY

1 Cu. in. = 0.0164 liter  
 1 Cu. ft. = 28.3162 liters  
 1 Gal. = 3.7853 liters  
 1 Bu. = 35.2383 liters

1 MM. = 0.0394 in.  
 1 CM. = 0.3937 in.  
 1 Meter = 3.2808 ft.  
 1 Meter = 1.0936 yd.  
 1 Km. = 0.6214 mile

LENGTH

1 In. = 25.4000 mm.  
 1 In. = 2.5400 cm.  
 1 Ft. = 0.3048 m.  
 1 Yd. = 0.9144 m.  
 1 Mile = 1.6093 km.

MULTIPLE PREFIX  
 1000000 mega  
 1000 kilo  
 100 hecto  
 10 deka


METRIC PREFIX

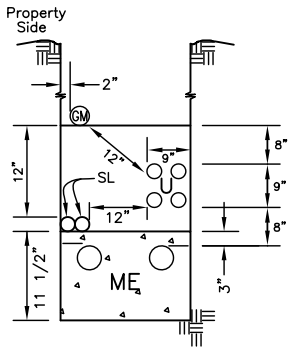
MULTIPLE PREFIX  
 1/10 deci  
 1/100 centi  
 1/1000 milli  
 1/1000000 micro

TEMPERATURE

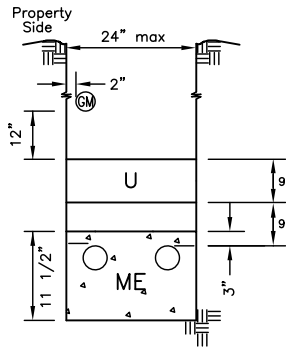
Degrees Fahrenheit =  $9/5$  (Degrees Celsius) + 32

Degrees Centigrade =  $5/9$  (Degrees Fahrenheit - 32)

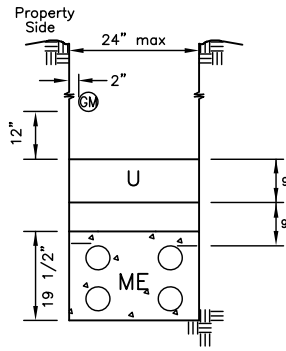
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING  <b>METRIC EQUIVALENTS</b>	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		 03/24/2022 Chairperson R.C.E. 52241 Date
Revised		D. Gerschoffer	09/15		
Reviewed		D. Gerschoffer	10/18		
Reviewed	RP	S. Engeda	10/18		
					DRAWING NUMBER <b>M-14</b>



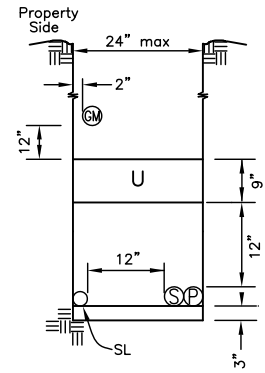
TYPE A



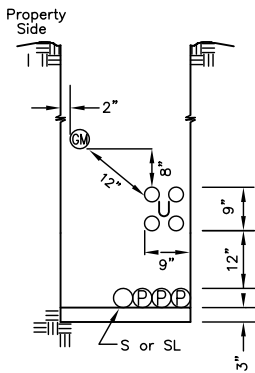
TYPE B



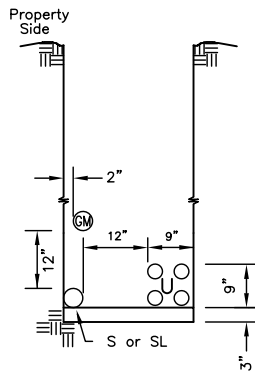
TYPE C



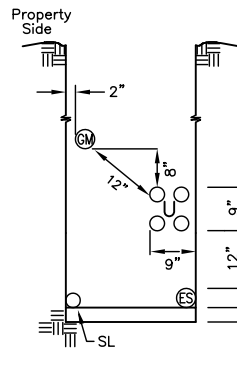
TYPE D



TYPE E



TYPE F



TYPE G

SERVICE TRENCH  
ON  
PUBLIC PROPERTY

Legend		Minimum Cover
GM	Gas Main	30"
GS	Gas Service	30"
P	Primary Electric	42"
S	Secondary Electric	30"
ES	Electric Service	30"
ME	Multiple Electric (P, S or ES in Spacers) Concrete Encased	24"
SL	Street Light (not series)	30"
U	CATV TELCO	24"

**NOTES**

1. All dimensions are typical unless otherwise noted.
2. Generally utilities are to be installed under the applicable specifications for the particular utility and the specifications of the owner Agency.
3. The location of utilities as shown by the Standard Drawing shall in no way violate existing codes or regulations applicable to individual utilities.
4. Installation of sewer and/or water utilities are not permitted in the joint trenches shown above.
5. Minimum depth of gas pipe may, subject to gas company inspectors approval, be reduced to 24" where necessary to clear structure crossings.
6. Depth and width of trench varies.
7. CATV main or trunk line conduit required along all streets, except cul-de-sac streets less than 1,000' in length which may be served by feeder lines only.
8. CATV 1-1/2" feeder conduit shall run across streets with each power service line and capped at edge of sidewalk.
9. All CATV terminals and conduits shall be terminated at generally accepted locations and marked. A map shall be filed with the appropriate agency showing the locations of the CATV system.
10. In no case shall CATV conduits be placed within 12" of gas lines, also conduits are not to be placed directly over gas lines.
11. Catv conduit may be placed with the TELCO conduit provided the TELCO minimum depth is held.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

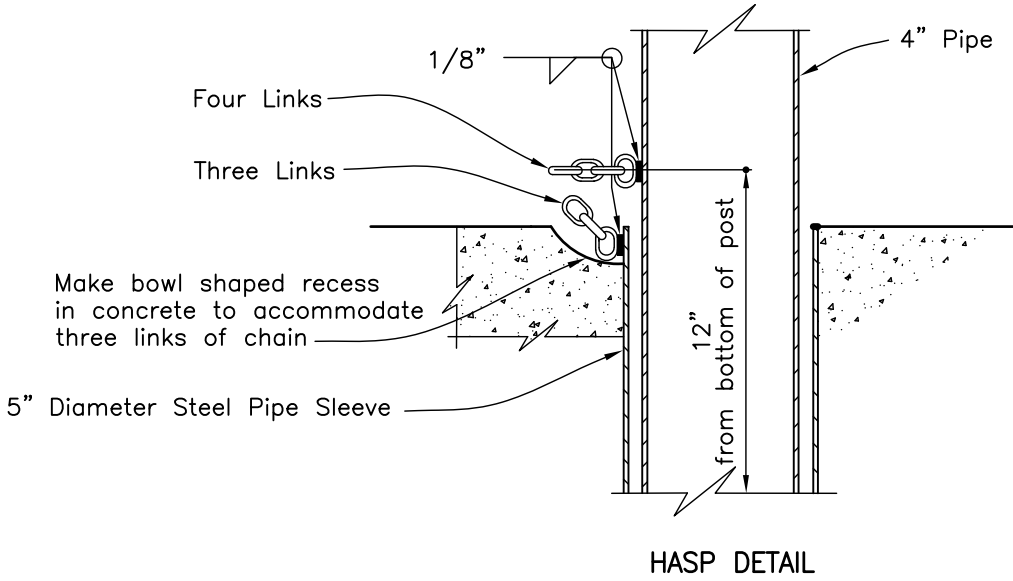
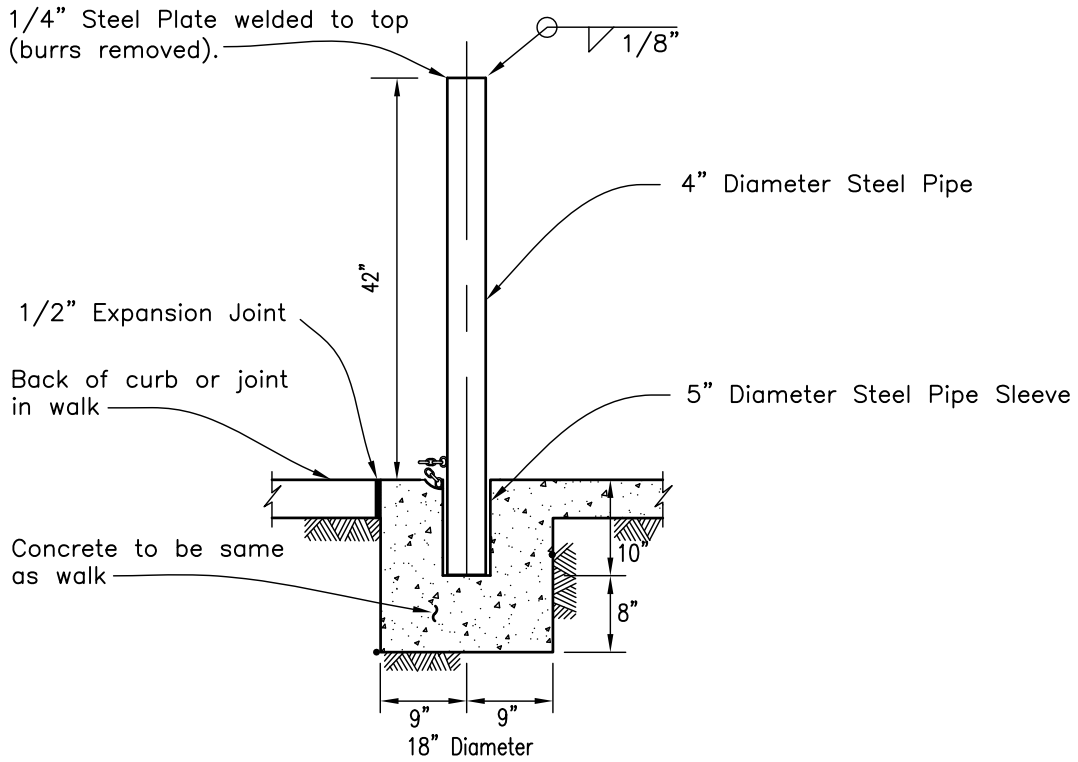
SAN DIEGO REGIONAL STANDARD DRAWING

**JOINT TRENCH LOCATIONS**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Susan Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-15**



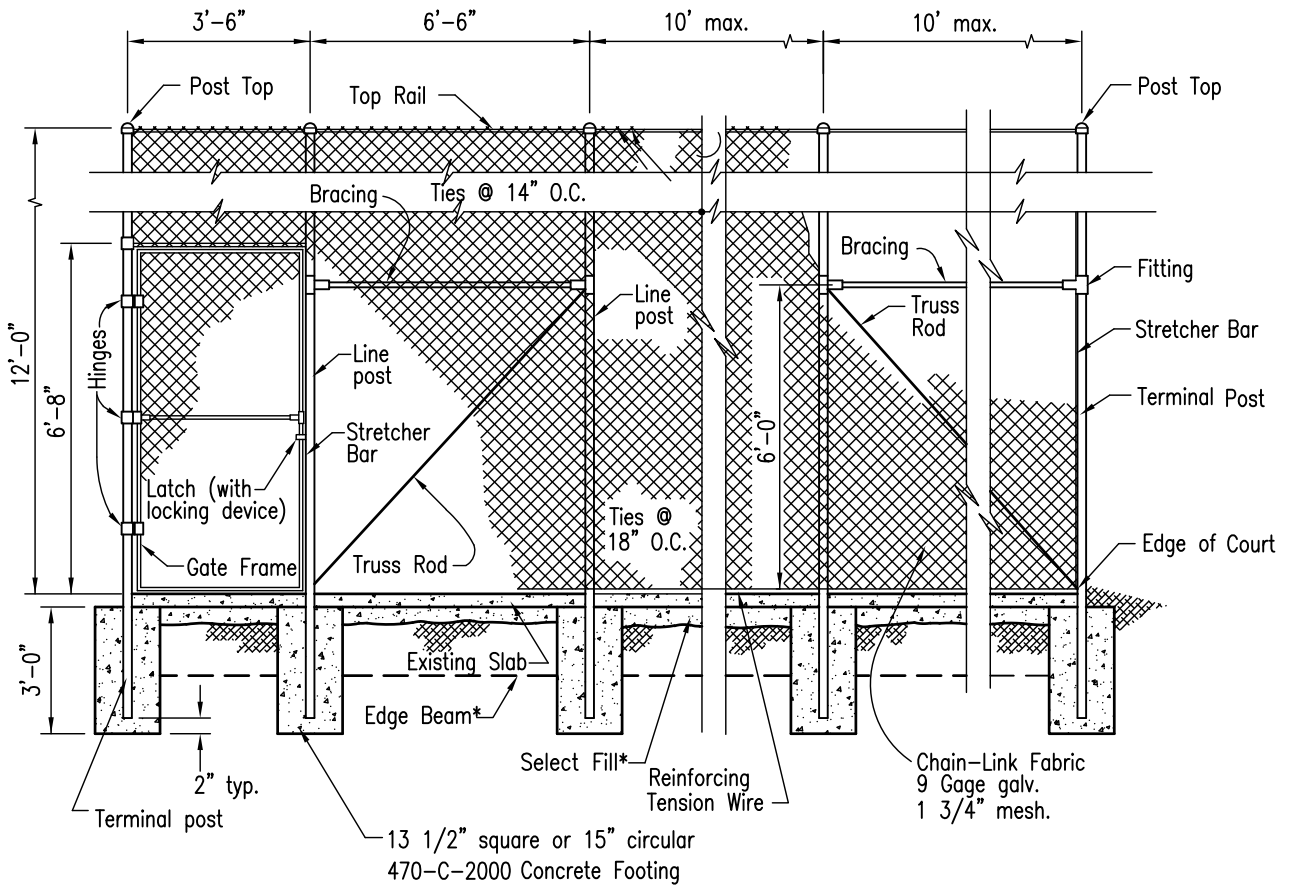
**NOTES**

1. Chain to be 1/4" proof coil chain galvanized steel.  
Weld four links to post and three links to pipe sleeve.
2. All metal to be hot-dip galvanized after fabrication.

**LEGEND ON PLANS**



Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Revised		D. Gerschoffer	09/15	<b>DEMOUNTABLE POST</b>	<i>Somesh Engeda</i> 03/24/2022
Reviewed		D. Gerschoffer	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER <b>M-16</b>



\* For Edge Beam, Slab, and Select Fill details, see plans.

**ELEVATION**

DESCRIPTION	MIN. SIZE IN INCHES	MIN. WEIGHT PER LIN FT IN LBS.
Line Post	2.375 O.D.	3.65
Terminal Post	2.875 O.D.	5.79
Top Rail	1.660 O.D.	2.27
Bracing	1.660 O.D.	2.27
Gate Frame	1.660 O.D.	2.27

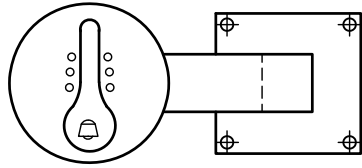
**NOTE:**

Chain link fabric shall be erected on the interior side of the courts.

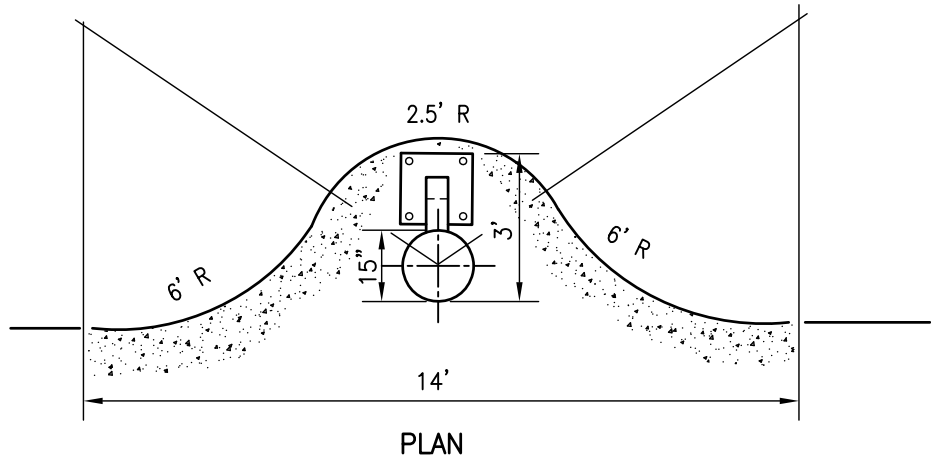
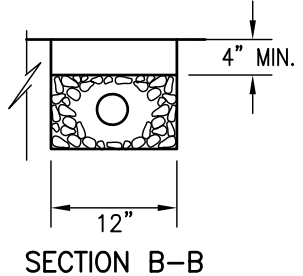
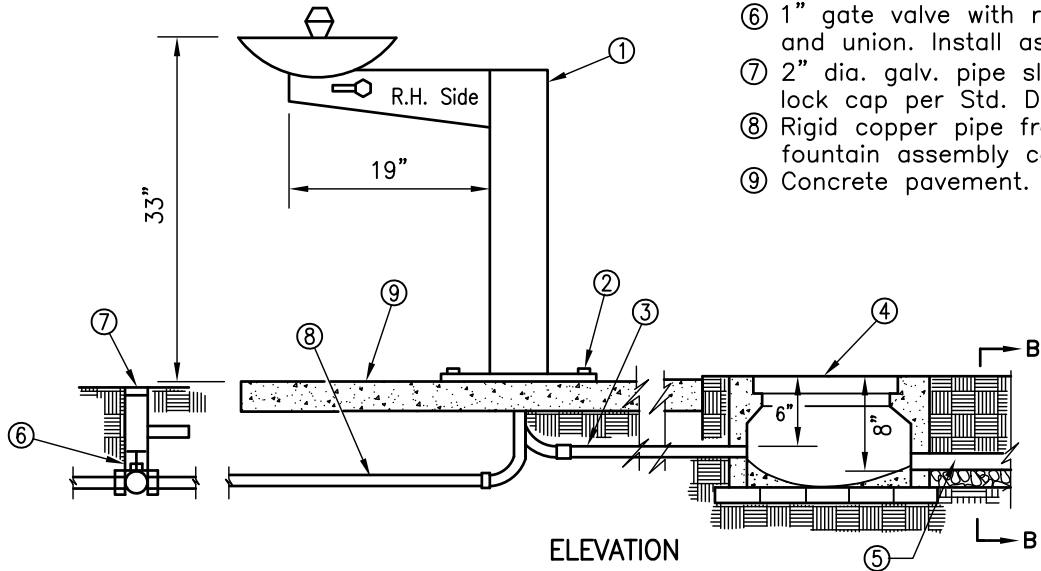
**CAUTION:**

This Standard Drawing is not to be used if any wind screen is to be applied to the fence.

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		<b>TENNIS COURT FENCE CHAIN LINK</b>
Revised		D. Gerschoffer	09/15	Chairperson R.C.E. 52241 Date	
Reviewed		D. Gerschoffer	10/18	DRAWING NUMBER	
Reviewed	RP	S. Engeda	03/22	<b>M-17</b>	



- ① Drinking Fountain – Haws model 3376 or approved equal.
- ② 3/8" dia. Expansion anchors with flat (recessed heads) screws 4 places.
- ③ 1 1/4" P.V.C. pipe with sweep 90° ell connection to fountain drain.
- ④ 9 1/2" x 16" concrete yard box with hinged locking top (Brooks No. 3HL or equal) set on red brick foundation.
- ⑤ 4" x 40' perforated plastic underdrain pipe, encased in 3/4" crushed rock.
- ⑥ 1" gate valve with red brass cross handle and union. Install as per Std. Dwg. I-12
- ⑦ 2" dia. galv. pipe sleeve with red brass lock cap per Std. Dwg. I-12
- ⑧ Rigid copper pipe from gate valve to fountain assembly connection.
- ⑨ Concrete pavement.



**NOTES**

1. Install fountain so that right hand side faces prevailing wind.
2. Hand form a concrete bowl at bottom of yard box to facilitate sand clean out.
3. Perforated drain pipe and trench are to drain away from fountain at 1% min. slope. Keep drain in lawn areas.
4. Item no. 6 is a 1" gate valve. Use red brass bushing reducers to adapt to feed pipe.

LEGEND ON PLANS



Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

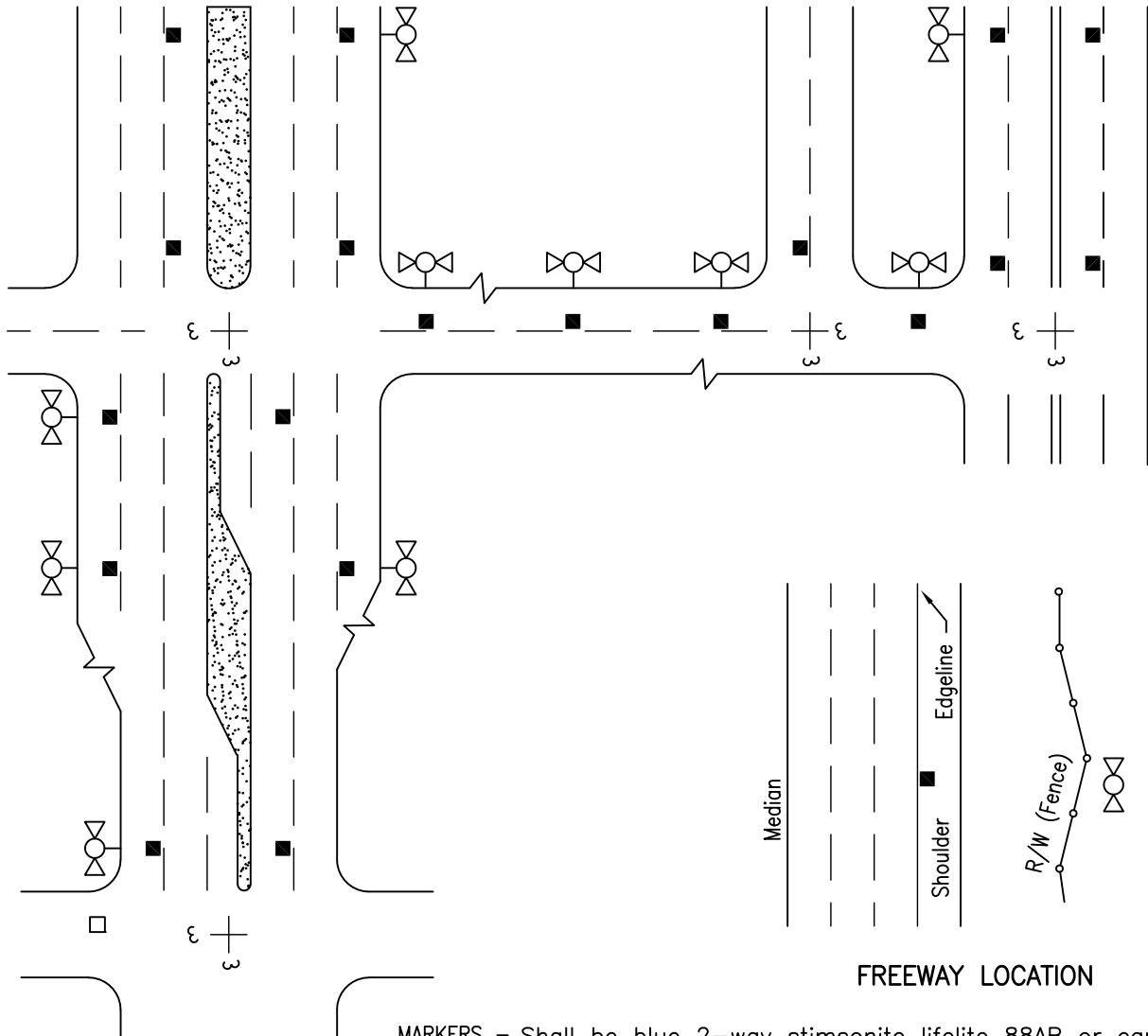
**DRINKING FOUNTAIN**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samsin Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER M-18**

## STREET LOCATIONS

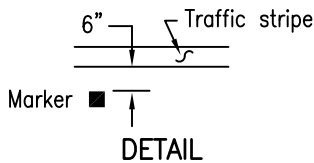


## FREEWAY LOCATION

**MARKERS** - Shall be blue 2-way stimsonite lifelite 88AB or equal.

**ADHESIVE** - An ample amount of two (A&B) epoxy or equal.

**SURFACES** - Clean and dry prior to installation per manufacturer's recommendations. Install markers with reflective surfaces facing oncoming vehicles and offset 2" from lane lines toward fire hydrant.



### NOTES

1. Fire Department will provide location(s) for all markers in PRD's, Commercial Lots and other areas outside of Public Right of Way.
2. Markers must be installed at the new and relocated hydrants and within all resurfacing projects.
3. For streets without lane lines or streets with raised pavement markers and no painted lane lines, install markers 6" from centerline or existing markers.

### LEGEND ON PLANS

- Marker ■
- Fire Hydrant

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

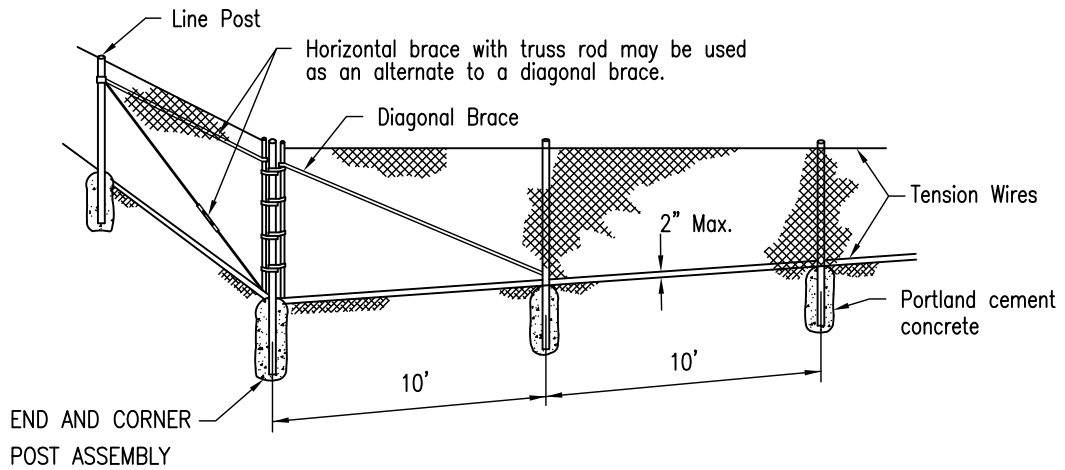
## FIRE HYDRANT MARKERS

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

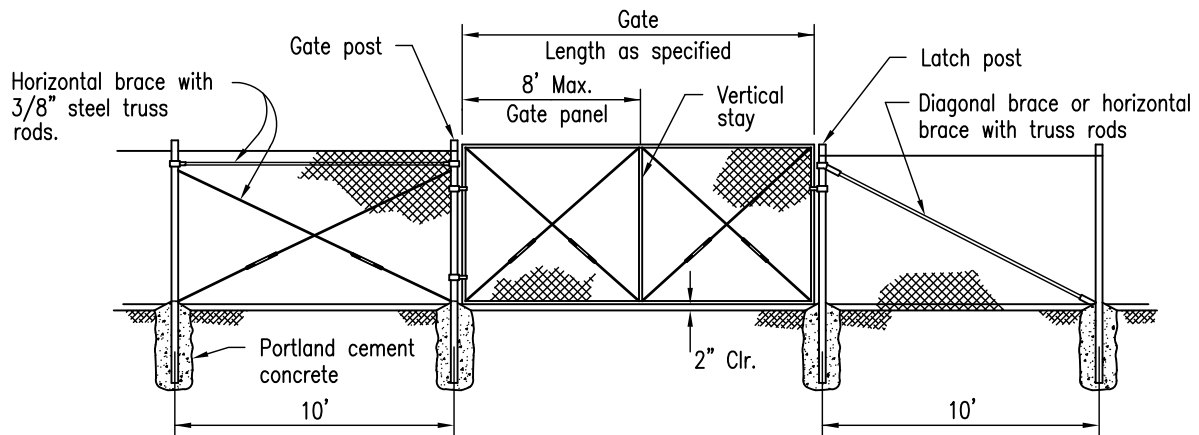
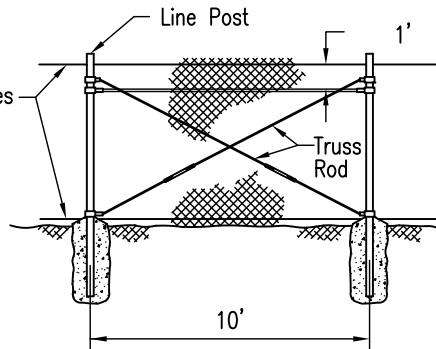
*Samantha Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-19**





Line posts at 1000' max. intervals braced and trussed in both directions.



Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

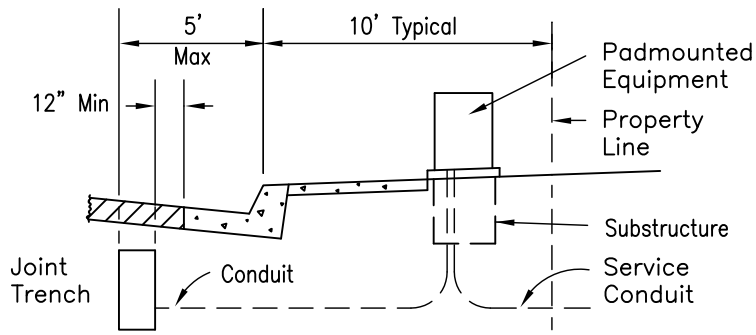
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

**CHAIN LINK FENCE  
DETAILS**

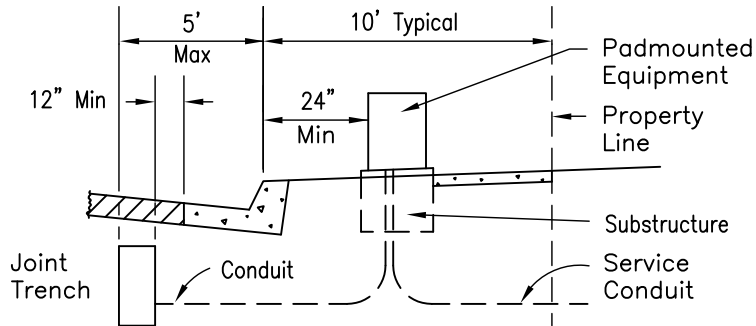
*Saman Engeda* 03/24/2022

Chairperson R.C.E. 52241 Date

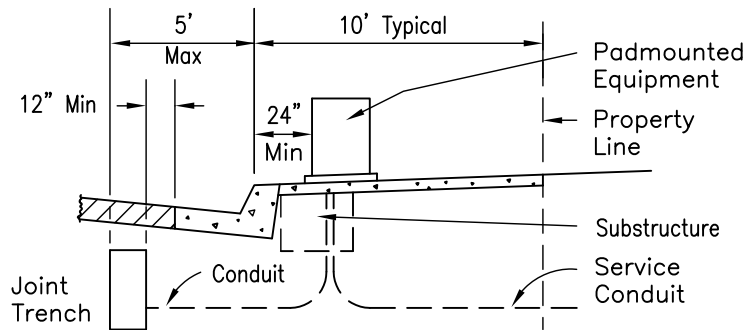
DRAWING NUMBER **M-20**



**SIDEWALK NEXT TO CURB**



**SIDEWALK NEXT TO PROPERTY LINE**

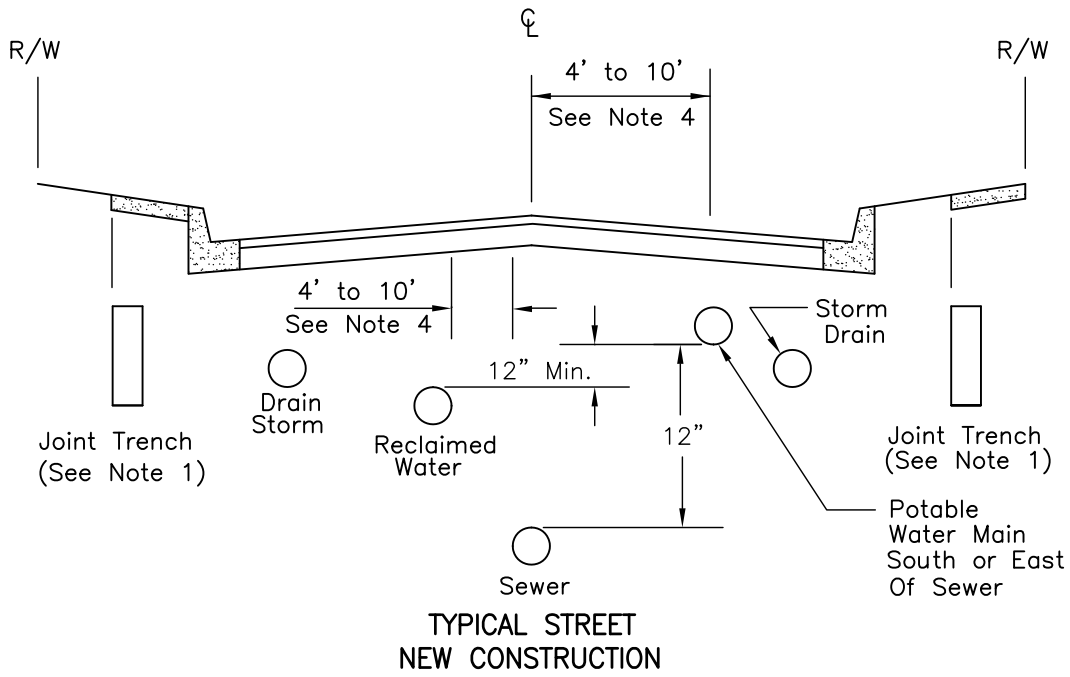
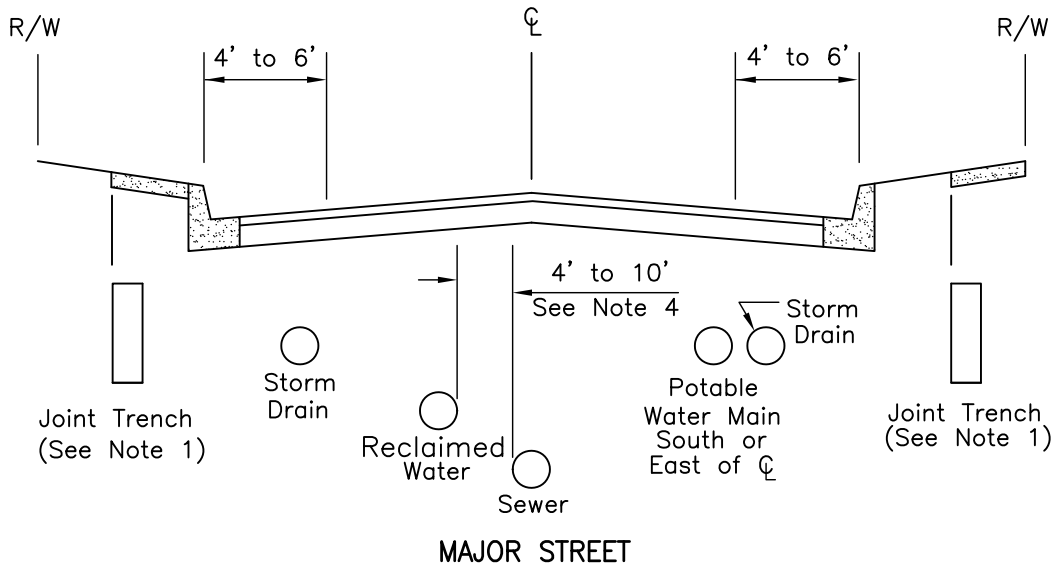


**SIDEWALK NEXT TO CURB AND PROPERTY LINE**

**NOTES**

1. Sidewalk shall have a minimum of 4' clear area (path, not including curb) passing pedestals, pullboxes and other structures.
2. See Standard Drawing M-15 for joint trench.

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		<b>UNDERGROUND TYPICAL LOCATION CONVERSION/REPLACEMENT/ UPGRADE</b>
Revised		D. Gerschoffer	09/15	Chairperson R.C.E. 52241 Date	
Reviewed		D. Gerschoffer	10/18	DRAWING NUMBER	
Reviewed	RP	S. Engeda	03/22	<b>M-21</b>	



**NOTES**

1. At catch basin locations, joint trench shall be 4' minimum from back of curb to inside wall of trench. See Standard Drawing M-15 for configuration of utilities in joint trench.
2. Sewer and reclaimed water mains shall be designed to cross under potable water mains. The vertical separation between potable water and reclaimed water shall be a minimum of 12".
3. Sewer and reclaimed water laterals shall cross under potable water main, with a minimum vertical separation of 12".
4. Sewer and reclaimed water mains shall maintain a 10' minimum horizontal separation, O.D. to O.D., with any potable water or sewer/reclaimed main. This separation may be reduced utilizing special construction, with special approval from the Agency and the County Health Dept. For sewer or reclaimed water mains less than 24" in diameter, only Agency approval is required.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Revised		D. Gerschoffer	10/18
Revised	RP	S. Engeda	03/22

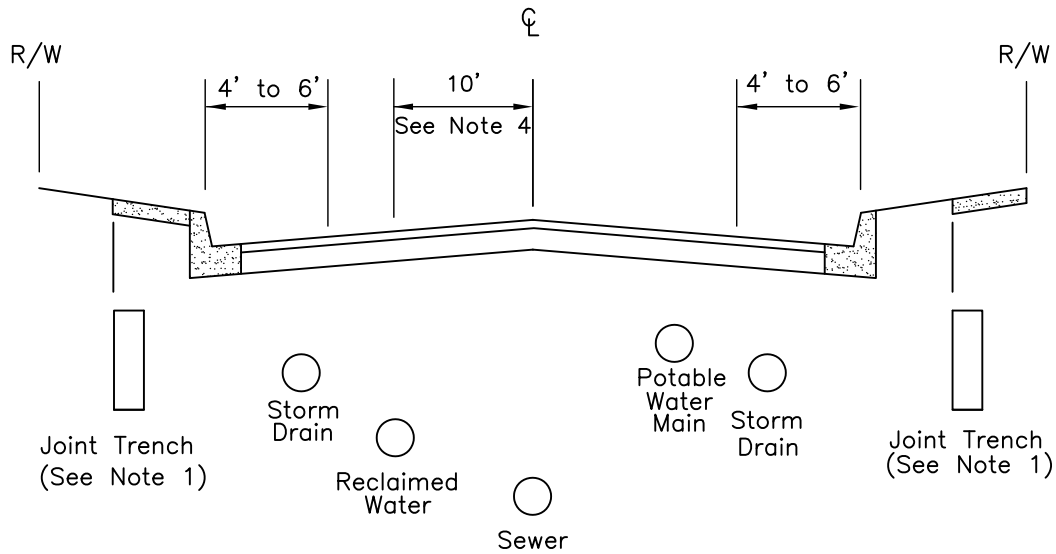
SAN DIEGO REGIONAL STANDARD DRAWING

**UTILITY LOCATIONS  
LOCAL AND MAJOR STREETS**

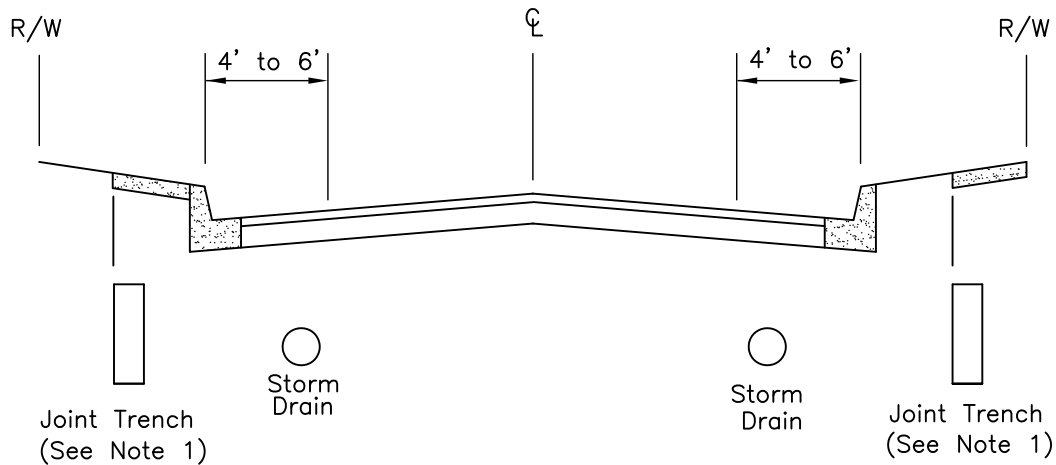
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Saman Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER M-22**



**PRIME ARTERIAL**



**EXPRESSWAY**

**NOTES**

1. At catch basin locations, joint trench shall be 4' minimum from back of curb to inside wall of trench. See Standard Drawing M-15 for configuration of utilities in joint trench.
2. Sewer and reclaimed water mains shall be designed to cross under potable water mains. The vertical separation between potable water and reclaimed water shall be a minimum of 12".
3. Sewer and reclaimed water laterals shall cross under potable water main, with a minimum vertical separation of 12".
4. Sewer and reclaimed water mains shall maintain a 10' minimum horizontal separation, O.D to O.D., with any potable water or sewer/reclaimed main. This separation may be reduced utilizing special construction, with special approval from the Agency and the County Health Dept. For sewer or reclaimed water mains less than 24" in diameter, only Agency approval is required.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

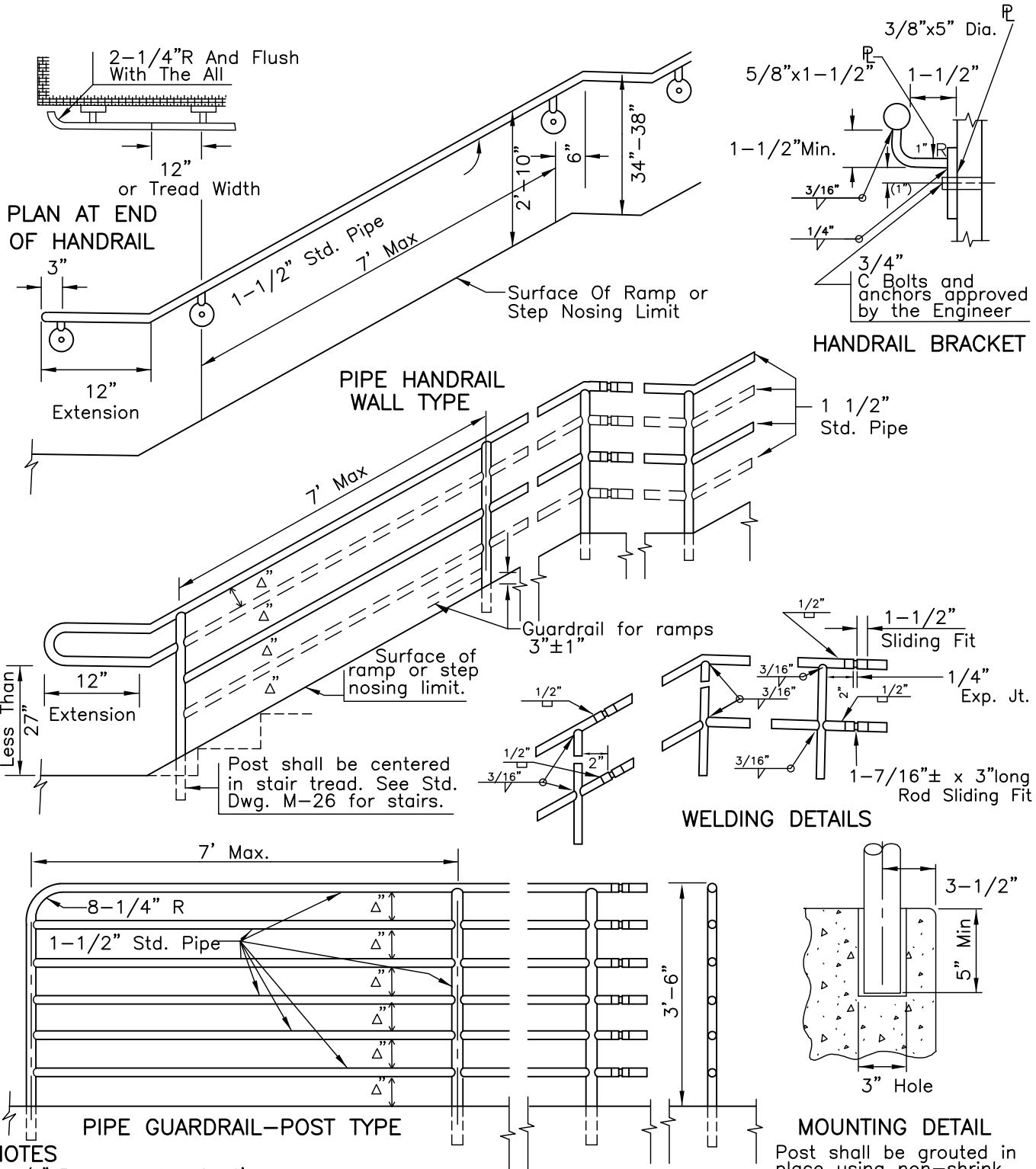
SAN DIEGO REGIONAL STANDARD DRAWING

**UTILITY LOCATIONS  
PRIME ARTERIALS  
AND EXPRESSWAYS**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Susan Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER M-23**



**NOTES**

1. 1/4" Expansion joints @ 16"± centers.
2. Weld and grind smooth all connections.
3. All railing to be hot dip galvanized after fabrication.
4. Pipe shall seamless steel ASTM A53 Grade B.
5. Maximum Δ = 4". Guardrails and handrails for stairs and ramps more than 30" above have intermediate rails equally spaced such that a sphere 4" in diameter cannot pass through.
6. Handrail extension for stairs, at all bottom risers, shall be 12" plus one tread width.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed	RP	S. Engeda	03/22

**SAN DIEGO REGIONAL STANDARD DRAWING**

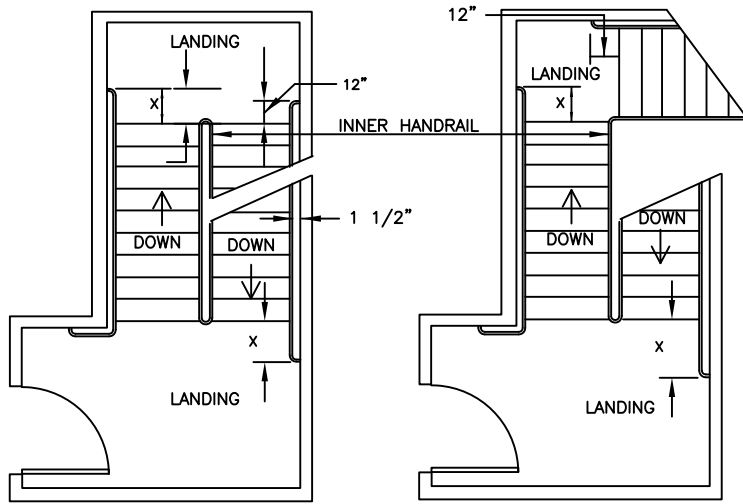
**PEDESTRIAN PROTECTIVE RAILING**

**DETAILS NO. 1**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

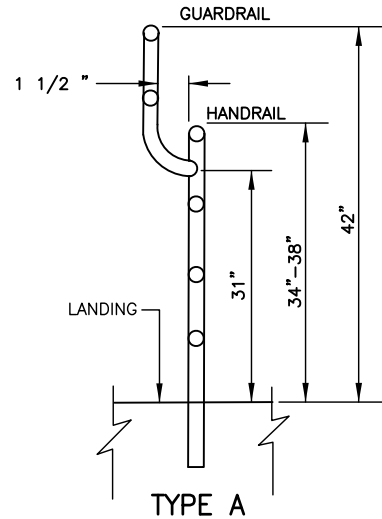
*Soman Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER M-24**

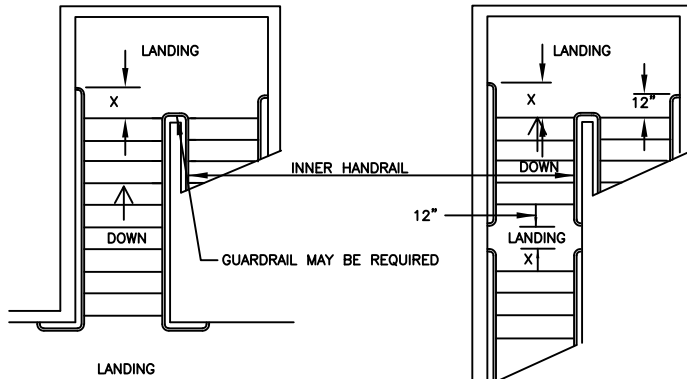


X IS THE MINIMUM HANDRAIL EXTENSION OF 12 INCHES PLUS THE WIDTH OF ONE TREAD AT EACH BOTTOM RISER.

NOTE: INNER HANDRAIL AT LANDINGS OF STAIRS THAT DOUBLE BACK OR IMMEDIATELY TURN SHALL BE CONTINUOUS, AND SHALL NOT EXTEND ONTO LANDING OR PATH OF TRAVEL.



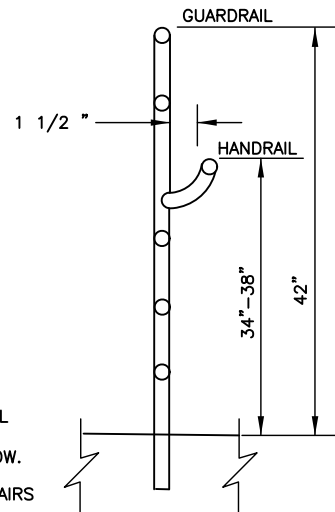
TYPE A GUARDRAIL EXTENSION



STAIR HANDRAILS

PROVIDE GUARDRAIL EXTENSIONS AS FOLLOWS:

1. TYPE A ON OPEN SIDE OF ALL LANDINGS MORE THAN 30" ABOVE GRADE OR FLOOR BELOW.
2. TYPE B ON OPEN SIDE OF STAIRS (INCLUDING LANDINGS) WHEN SPECIFIED.



TYPE B GUARDRAIL EXTENSION

NOTES

1. Post type guardrails, and handrails for stairs or landings 30" or less above grade or floor below shall have only one intermediate rail centered between the step nosing limit (or if specified the top of curb) and top of railing.
2. Post type guardrails, and handrails for stairs or landings more than 30" above grade or floor below shall have intermediate rails equally spaced such that a sphere 4" in diameter cannot pass through.
3. Where handrail extensions interfere with transverse walkways the horizontal portions shall not encroach but be turned away from stairs and parallel to walkway.
4. The top of guardrails for stairways, exclusive of their landings, may have a height as specified for handrails.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

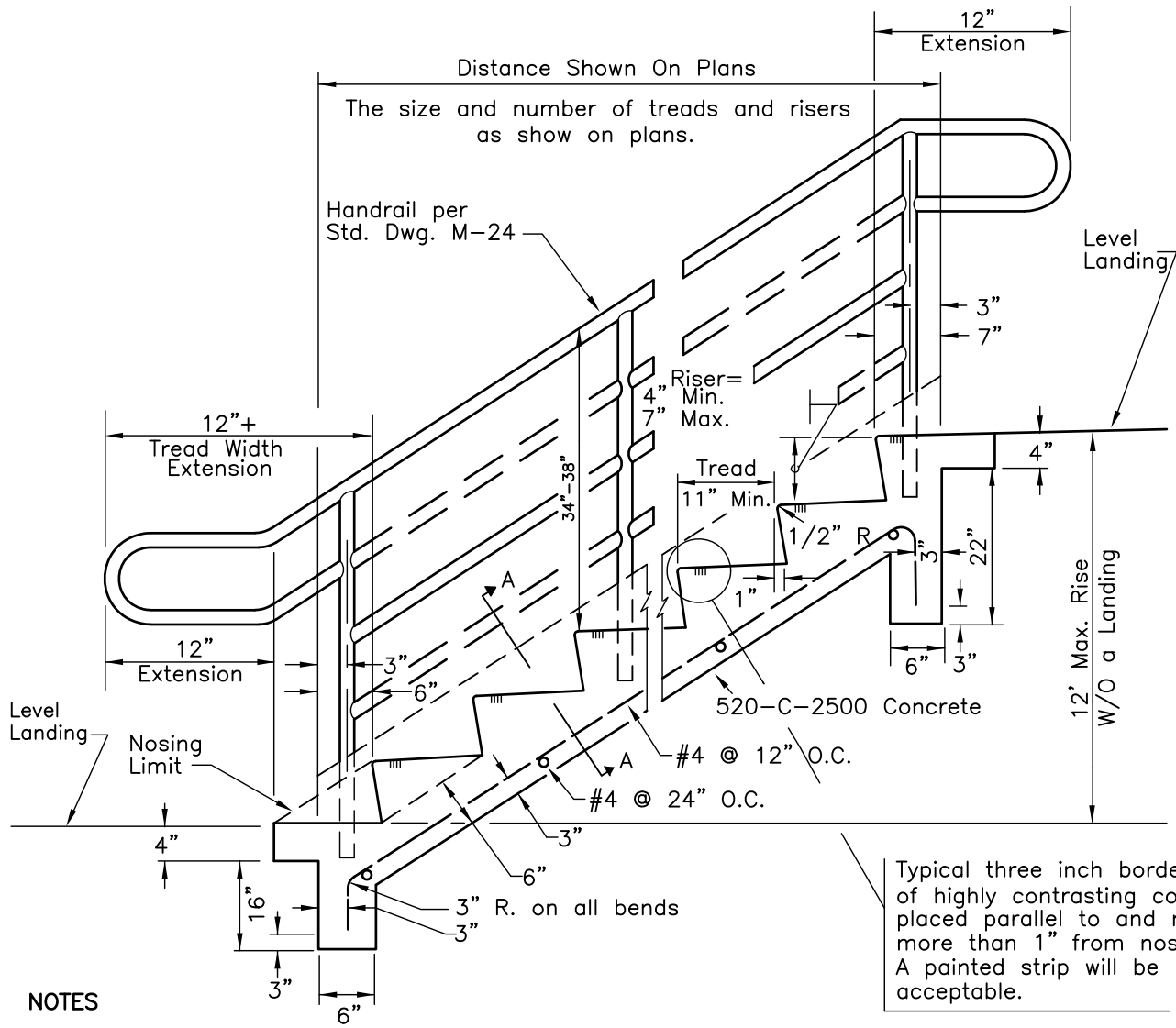
**PEDESTRIAN PROTECTIVE RAILING  
DETAILS NO. 2**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samsir Engeda* 03/24/2022

Chairperson R.C.E. 52241 Date

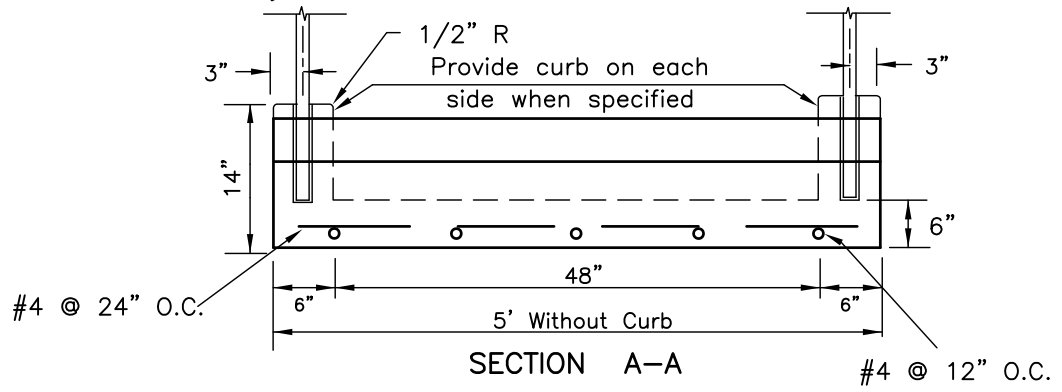
DRAWING NUMBER **M-25**



Typical three inch border of highly contrasting color placed parallel to and not more than 1\"/>

**NOTES**

1. Broom finish on treads, trowel finish on all other exposed surfaces.
2. 1/4\"/>



Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		D. Gerschoffer	10/18
Reviewed	RP	S. Engeda	03/22

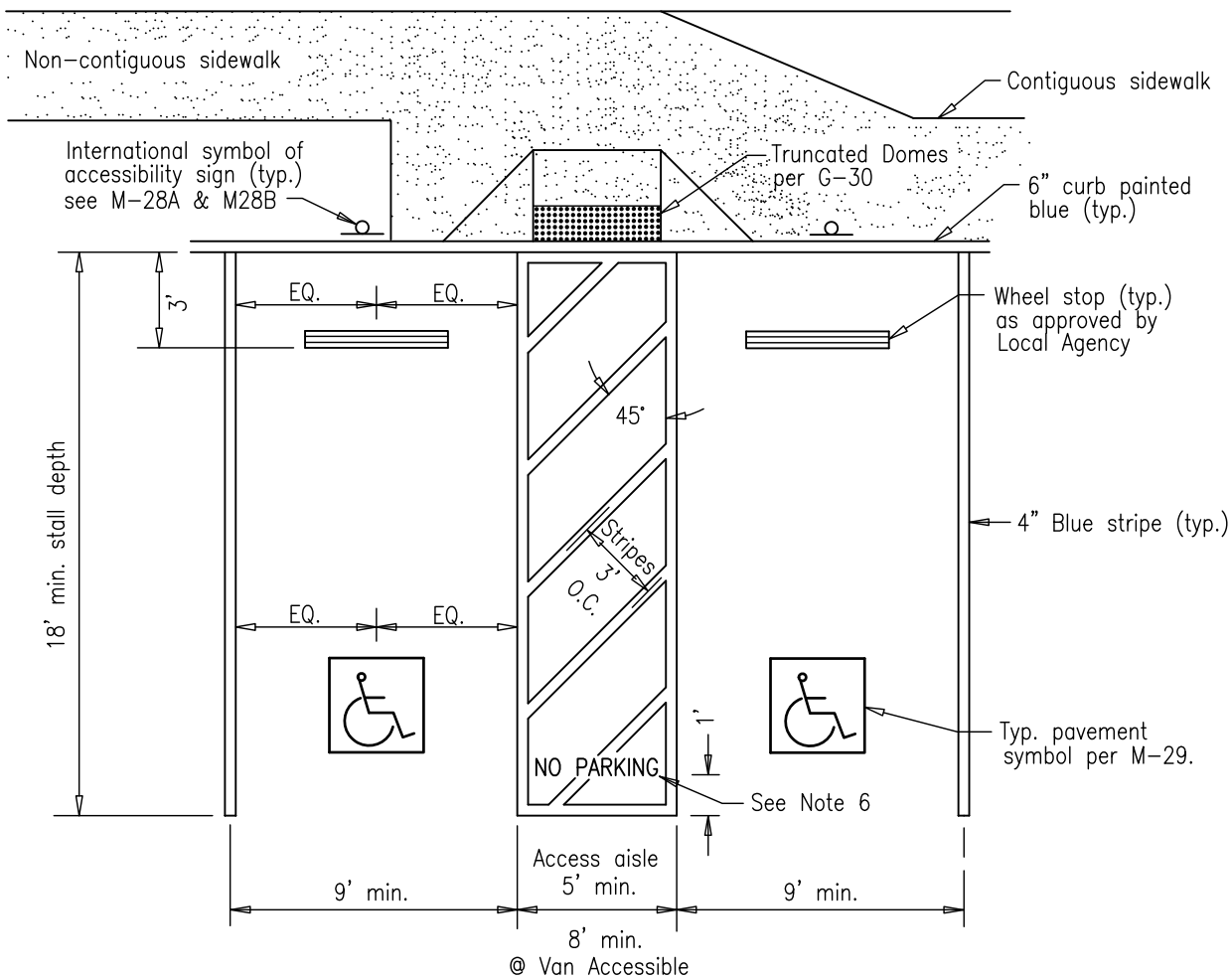
SAN DIEGO REGIONAL STANDARD DRAWING

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Somarin Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER M-26**

**CONCRETE STEPS**



**NOTES:**

1. Provide for adequate drainage.
2. For appropriate ramp alternate to conform to topographical conditions, see standard drawings G-27 through G-32B.
3. Blue color should match color No. 15090 in the Federal Standard 595a as specified in Section 522(b)2.
4. If only one accessible parking stall is going to be provided, the access aisle shall be 8' (van accessible) and located on the passenger side.
5. Sidewalk cross slope shall not exceed 2.0%.
6. "NO PARKING" 12" high stencil marking, reflective white over blue stripes.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		K. Equipado	10/18
Reviewed	RP	S. Engeda	03/22

**SAN DIEGO REGIONAL STANDARD DRAWING**

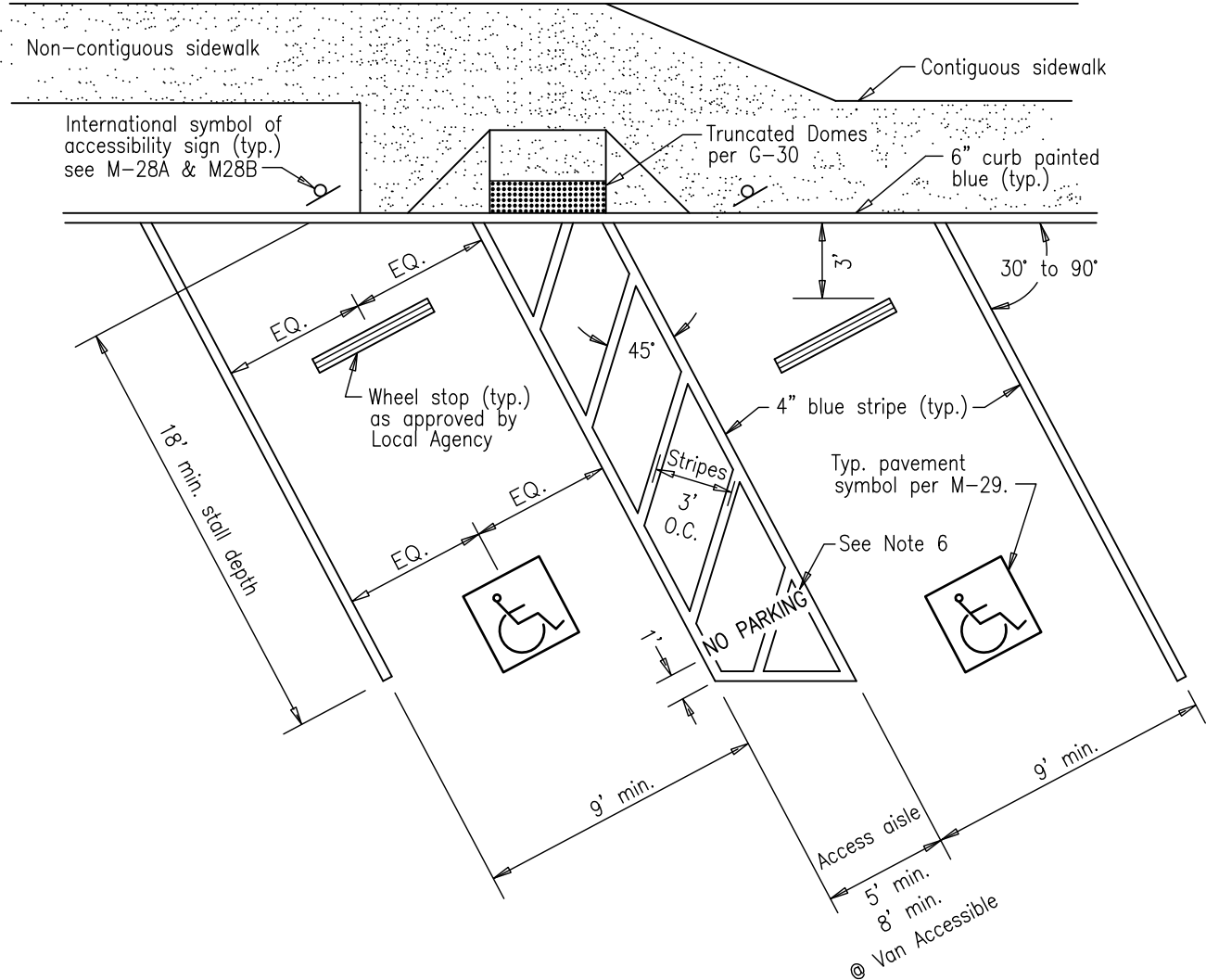
**DISABLED PARKING STALL(S)**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Somesh Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER M-27A**





**NOTES:**

1. Provide for adequate drainage.
2. For appropriate ramp alternate to conform to topographical conditions, see standard drawings G-27 through G-32B.
3. Blue color should match color No. 15090 in the Federal Standard 595a as specified in Section 522(b)2.
4. If only one accessible parking stall is going to be provided, the access aisle shall be 8' (van accessible) and located on the passenger side.
5. Sidewalk cross slope shall not exceed 2.0%.
6. "NO PARKING" 12" high stencil marking, reflective white over blue stripes.

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Revised		D. Gerschoffer	09/15
Reviewed		K. Equipado	10/18
Reviewed	RP	S. Engeda	03/22

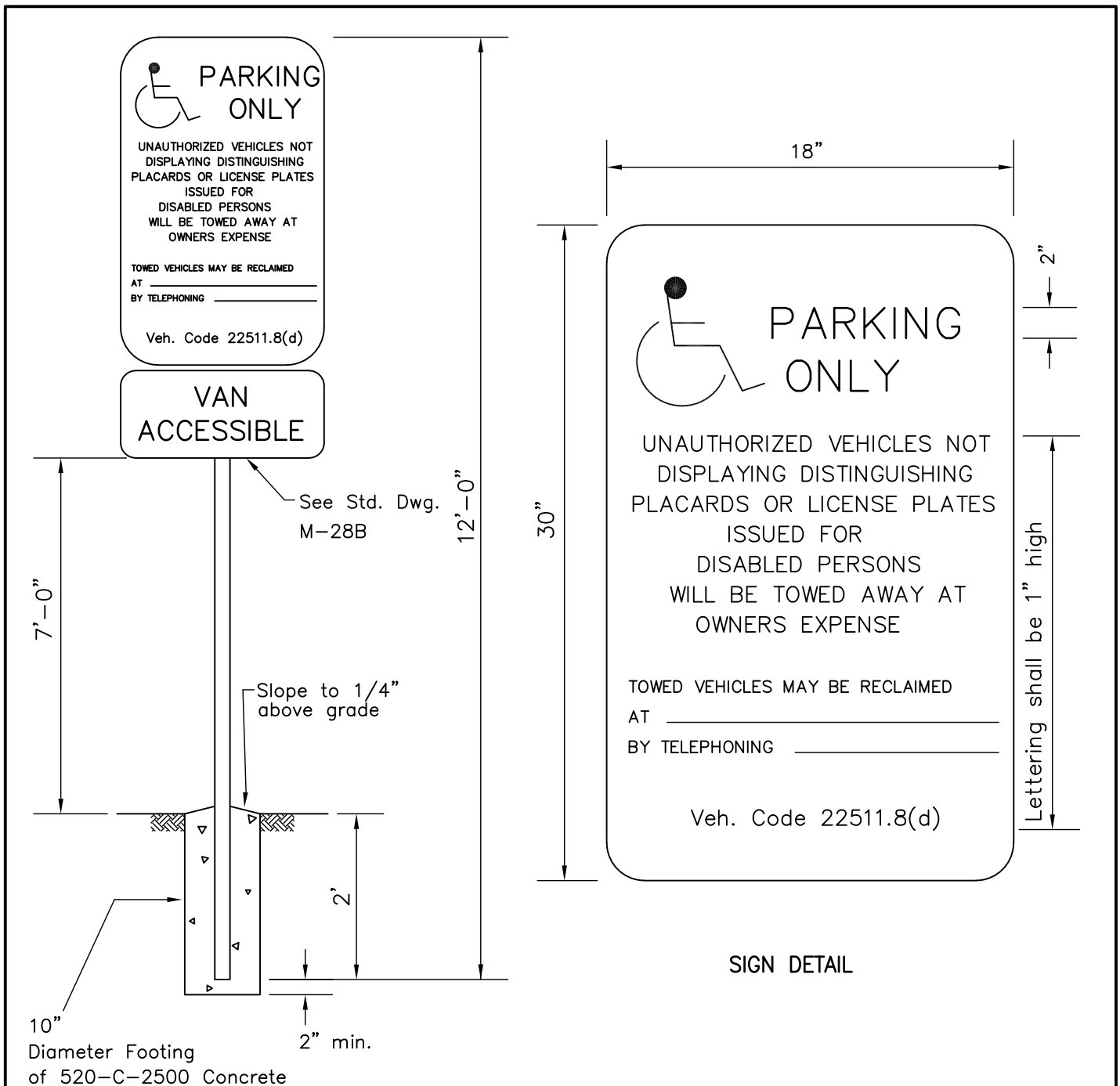
SAN DIEGO REGIONAL STANDARD DRAWING

**DIAGONAL DISABLED  
PARKING STALL(S)**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samsir Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-27B**



**NOTES:**

1. Sign shall be constructed of a minimum 0.062" thick aluminum.
2. Lettering, symbol and border shall be reflectorized white, on a blue background.
3. Lettering shall be 1" and 2" high.
4. Where space is designed for van accessibility, a sign "VAN ACCESSIBLE" shall be installed.
5. Minimum van accessible vertical clearance is 8'-2".

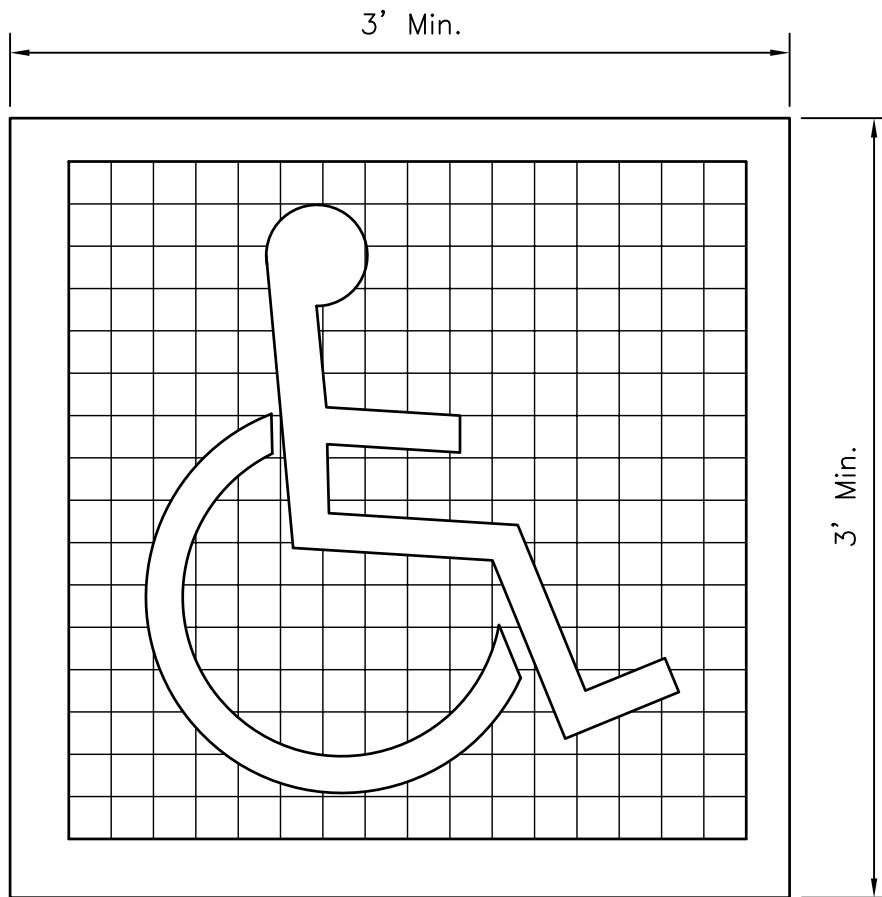
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		<b>DISABLED PARKING SIGN</b>
Revised		D. Gerschoffer	09/15		
Reviewed		K. Equipado	10/18		
Reviewed	RP	S. Engeda	03/22		
					 03/24/2022 Chairperson R.C.E. 52241 Date
					DRAWING NUMBER <b>M-28A</b>



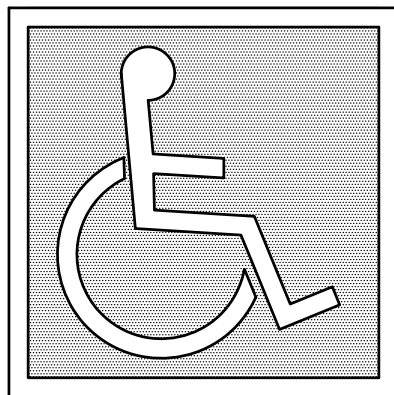
**NOTES**

1. Sign shall be constructed of aluminum, 0.062" minimum thickness.
2. Colors: Background—Reflectorized Blue  
 Border and letters— Reflectorized White  
 Blue color shall match color No. 15090 in the  
 Federal Standard 595a as specified in Section 522(b)2.

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		G.Parkinson	05/92		<b>VAN ACCESSIBLE SIGN FOR DISABLE PARKING SPACE</b>
Revised		D. Gerschoffer	09/15		
Reviewed		K. Equipado	10/18		
Reviewed	RP	S. Engeda	03/22	DRAWING NUMBER <b>M-28B</b>	



(a) SYMBOL PROPORTIONS



← INTERNATIONAL SYMBOL OF ACCESSIBILITY

(b) DISPLAY CONDITIONS

**NOTES**

1. Pavement symbol shall be painted white on a blue background.
2. Blue color shall match color No. 15090 in the Federal Standard 595a as specified in Section 522(b)2.

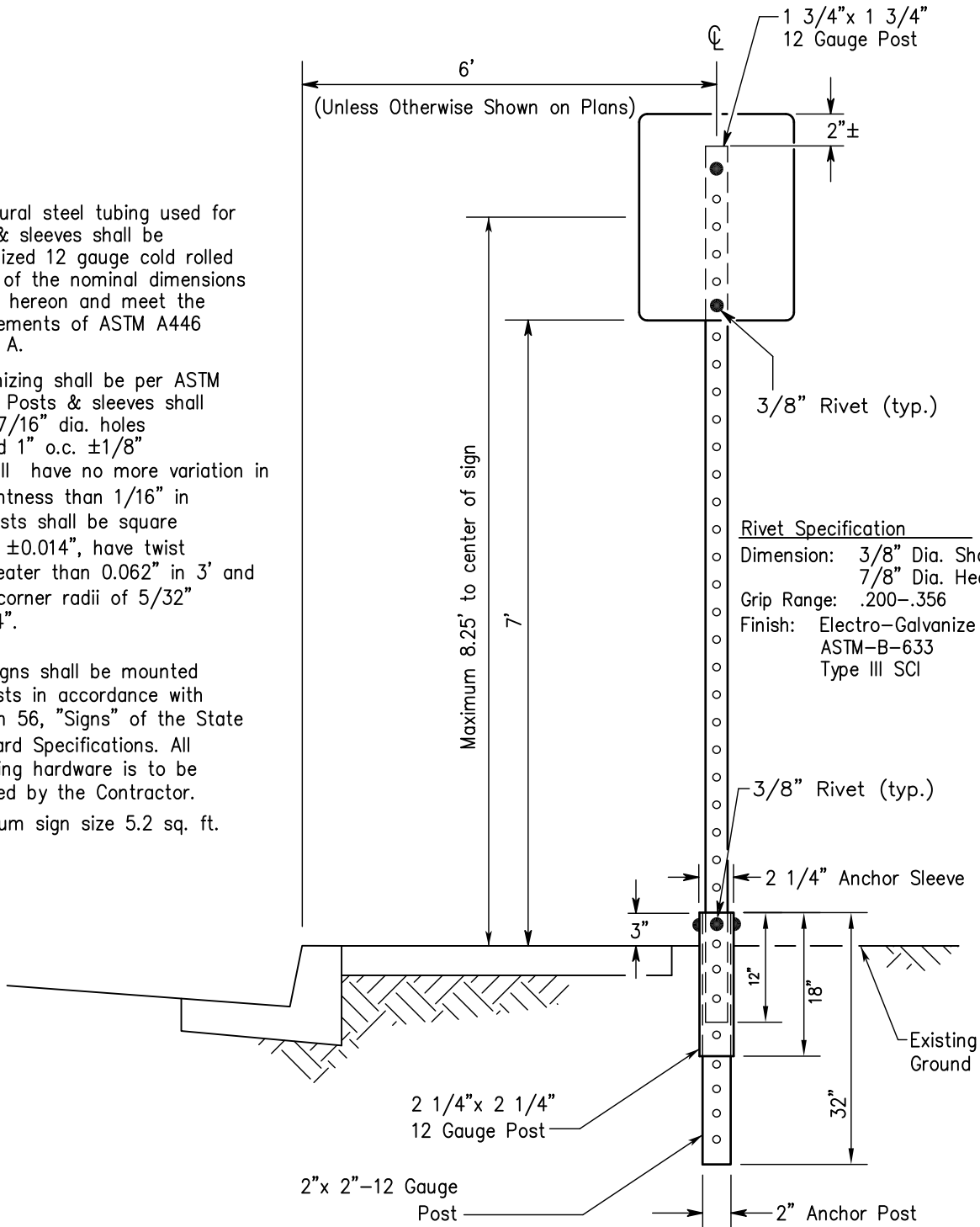
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		G. Parkinson	02/95		<b>PAVEMENT SYMBOL- DISABLED PARKING</b>
Revised		D. Gerschoffer	09/15		
Reviewed		K. Equipado	10/18		
Reviewed	RP	S. Engeda	03/22		
					 03/24/2022 Chairperson R.C.E. 52241 Date
					<b>DRAWING NUMBER M-29</b>

FOR GUARDRAIL STANDARDS USE:  
 Caltrans "Standard Plans for  
 Construction of Local  
 Streets and Roads"

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		G. Parkinson	05/92		<b>GUARD RAIL REFERENCE NOTE</b>
Revised		D. Gerschoffer	09/15	Chairperson R.C.E. 52241 Date	
Reviewed		K. Equipado	10/18	DRAWING NUMBER <b>M-30</b>	
Reviewed	RP	S. Engeda	03/22		

**NOTES**

1. Structural steel tubing used for post & sleeves shall be galvanized 12 gauge cold rolled steel, of the nominal dimensions shown hereon and meet the requirements of ASTM A446 Grade A.
2. Galvanizing shall be per ASTM A525. Posts & sleeves shall have 7/16" dia. holes spaced 1" o.c. ±1/8" & shall have no more variation in straightness than 1/16" in 3'. Posts shall be square within ±0.014", have twist no greater than 0.062" in 3' and have corner radii of 5/32" ±1/64".
3. The signs shall be mounted on posts in accordance with Section 56, "Signs" of the State Standard Specifications. All fastening hardware is to be provided by the Contractor.
4. Maximum sign size 5.2 sq. ft.



Rivet Specification

Dimension: 3/8" Dia. Shank  
 7/8" Dia. Head  
 Grip Range: .200-.356  
 Finish: Electro-Galvanize  
 ASTM-B-633  
 Type III SCI

Revision	By	Approved	Date
ORIGINAL		G. Parkinson	02/95
Revised		D. Gerschoffer	09/15
Reviewed		K. Equipado	10/18
Reviewed	RP	S. Engeda	03/22

SAN DIEGO REGIONAL STANDARD DRAWING

**BREAK-AWAY SIGN POST**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Somali Engeda* 03/24/2022

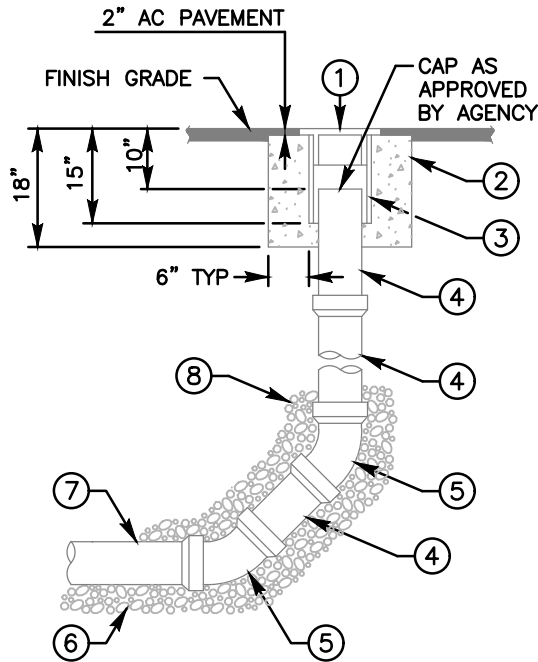
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **M-45**

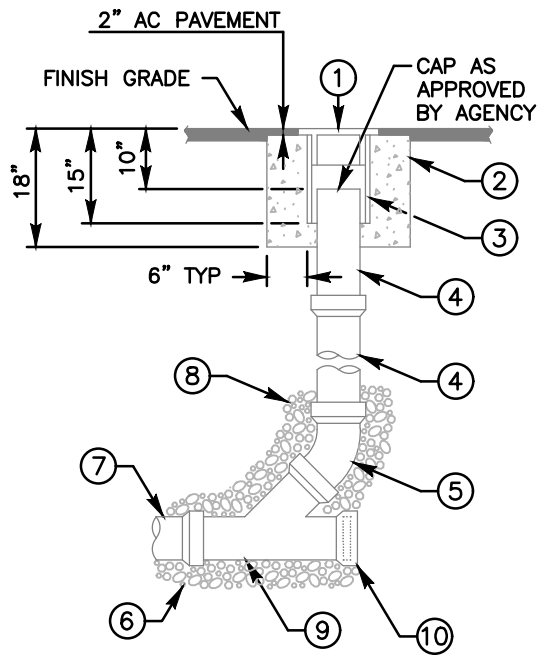
# SEWERAGE SYSTEMS

SEWERAGE SYSTEMS

S



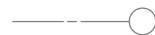
**TYPE A**  
MAINS FOR 6" AND 8"



**TYPE B**  
SEWER LATERAL  
CLEANOUT

**NOTES:**

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) CLEANOUTS TO BE INSTALLED AT THE END OF MAINS WHERE INDICATED ON THE PLANS
- 3) CLEANOUT PIPE TO BE SAME SIZE AND MATERIAL AS SEWER MAIN UP TO 8"
- 4) BACKFILL TO TOP OF 45° BEND WITH 3/4" CRUSHED ROCK
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

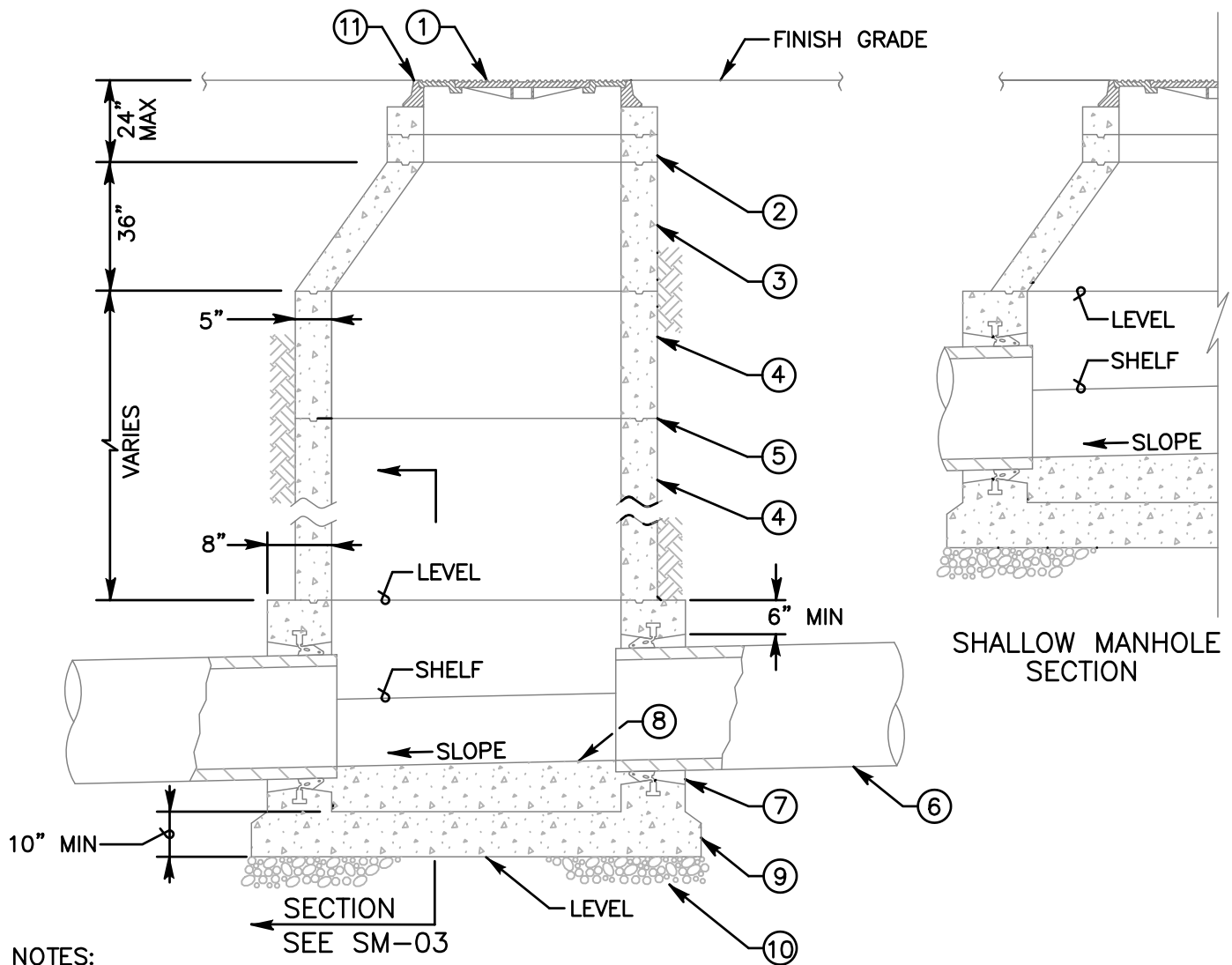


LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	12" CI CLEANOUT BOX COVER MARKED 'SEWER' AND AGENCY NAME AS REQUIRED	⑤	45° ELBOW
②	CONCRETE RING	⑥	3/4" CRUSHED ROCK PIPE BEDDING
③	12" PVC, C-900 x 15" LONG (CLEANOUT BOX)	⑦	SEWER MAIN
④	SIZE x REQUIRED LENGTH PVC PIPE	⑧	3/4" CRUSHED ROCK SEE NOTE 4
		⑨	STANDARD WYE BRANCH
		⑩	INSTALL PLUG AND CONCRETE LUG

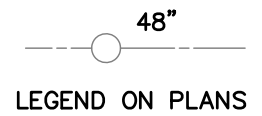
Revision	By	Approved	Date	<b>SAN DIEGO REGIONAL STANDARD DRAWING</b>	<b>SEWER CLEANOUT</b>	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75			<i>Samsin Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	BK	B. KNOLL	04/15			
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
					DRAWING NUMBER <b>SC-01</b>	






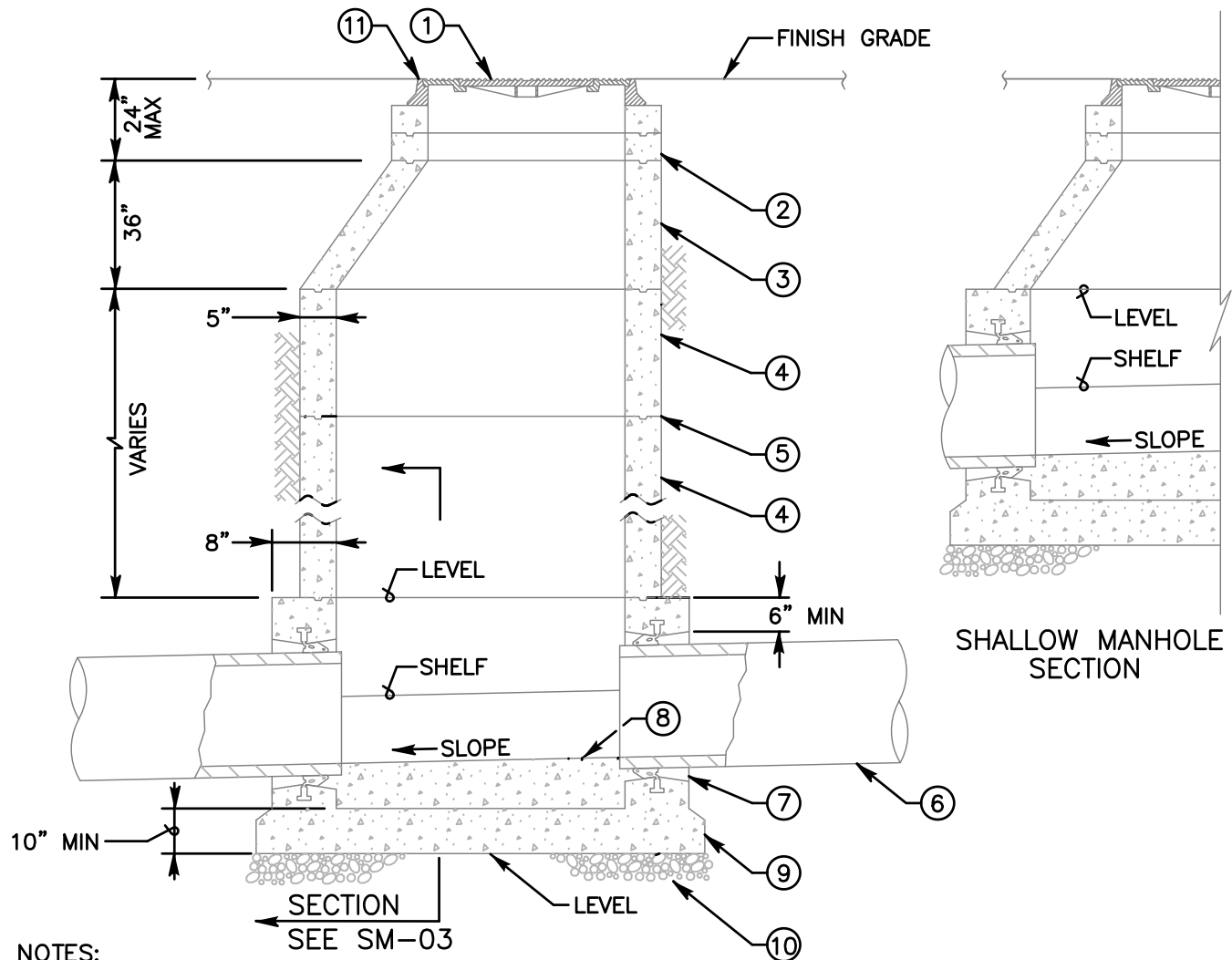
**NOTES:**

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) VERTICAL WALL OF CONE TO BE ON THE UPSTREAM SIDE OF MANHOLE SEE SM-05 FOR ACCESS LOCATIONS
- 3) FOR MANHOLE BASES SEE SM-03
- 4) MANHOLES FOR MAINS 18" AND LARGER SHALL BE COATED AND LINED PER SM-07
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



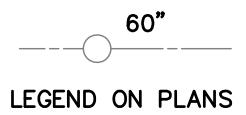
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	36" MANHOLE FRAME AND TWO CONCENTRIC COVERS SEE S.D.R.S.D. M-3	⑦	MANHOLE PIPE CONNECTOR SEE SM-04
②	36" DIA GRADE RING(S) 6" TO 18" HIGH	⑧	FIELD INSTALLED INVERT SEE SM-04
③	ECCENTRIC CONE SEE NOTE 2	⑨	CONCRETE BASE, PRECAST OR CAST IN PLACE
④	48" DIA RING(S) VARIABLE HEIGHT	⑩	6" OF 3/4" CRUSHED ROCK
⑤	WATER TIGHT JOINTS SEE SM-05	⑪	MANHOLE DETAIL SEE SM-05
⑥	SEWER MAIN		

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		<b>48" DIAMETER PRECAST MANHOLE INSTALLATION</b>	 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	BK	B. KNOLL	04/15	DRAWING NUMBER		<b>SM-01</b>
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			



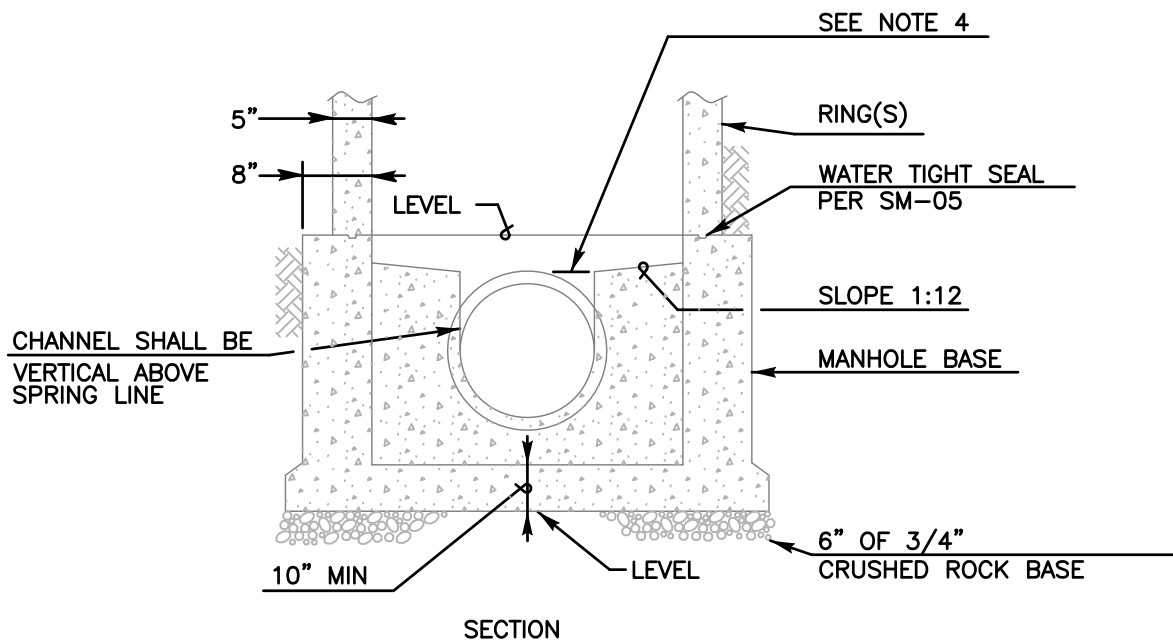
**NOTES:**

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) VERTICAL WALL OF CONE TO BE ON THE UPSTREAM SIDE OF MANHOLE SEE SM-05 FOR ACCESS LOCATIONS
- 3) FOR MANHOLE BASES SEE SM-03
- 4) MANHOLES FOR MAINS 18" AND LARGER SHALL BE COATED AND LINED PER SM-07
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST




ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	36" MANHOLE FRAME AND TWO CONCENTRIC COVERS SEE S.D.R.S.D. M-3	⑦	MANHOLE PIPE CONNECTOR SEE SM-04
②	36" DIA GRADE RING(S) 6" TO 18" HIGH	⑧	FIELD INSTALLED INVERT SEE SM-04
③	ECCENTRIC CONE SEE NOTE 2	⑨	CONCRETE BASE, PRECAST OR CAST IN PLACE
④	60" DIA RING(S) VARIABLE HEIGHT	⑩	6" OF 3/4" CRUSHED ROCK
⑤	WATER TIGHT JOINTS SEE SM-05	⑪	MANHOLE DETAIL SEE SM-05
⑥	SEWER MAIN		

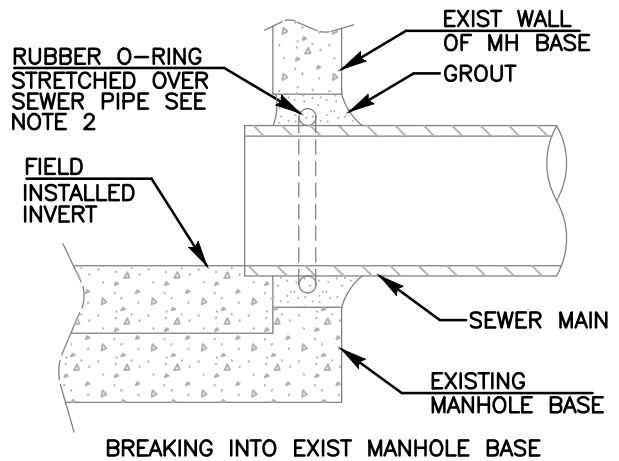
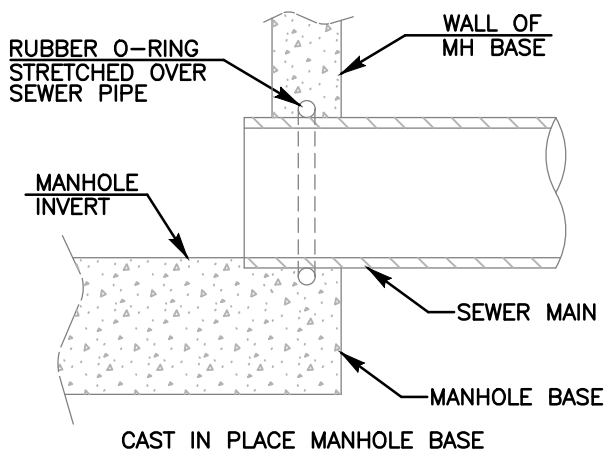
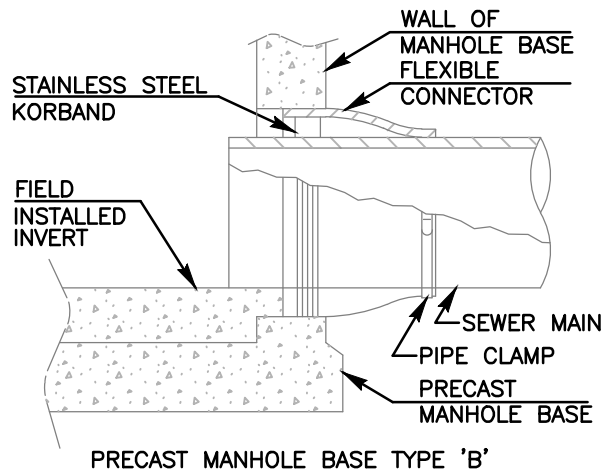
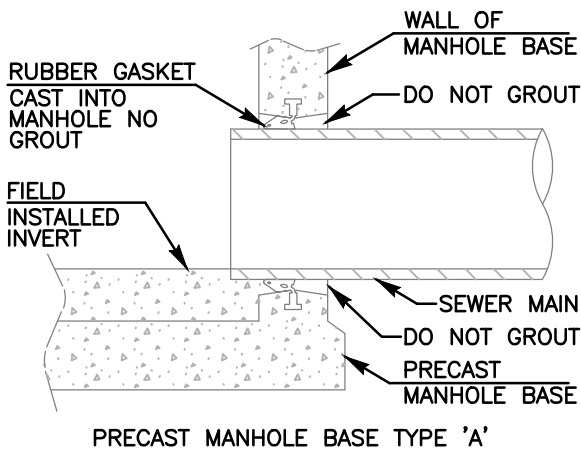
Revision	By	Approved	Date	<b>SAN DIEGO REGIONAL STANDARD DRAWING</b>  <b>60" DIAMETER PRECAST MANHOLE INSTALLATION</b>	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE  <i>Samantha Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
ORIGINAL		Kercheval	12/75		
Reviewed	BK	B. KNOLL	04/15		
Reviewed	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				DRAWING NUMBER	<b>SM-02</b>



NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) FOR MANHOLE INSTALLATIONS SEE SM-01 AND SM-02
- 3) MANHOLE BASES FOR MAINS 18" AND LARGER SHALL BE COATED PER SM-07
- 4) LOWEST POINT ON SHELF SHALL BE EVEN WITH TOP OF PIPE
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

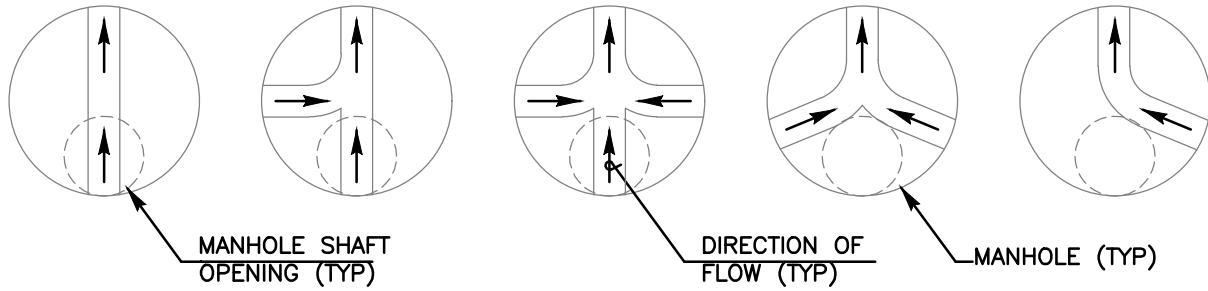
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	<b>SEWER MANHOLE BASE</b>		 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	BK	B. KNOLL	04/15			
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			DRAWING NUMBER



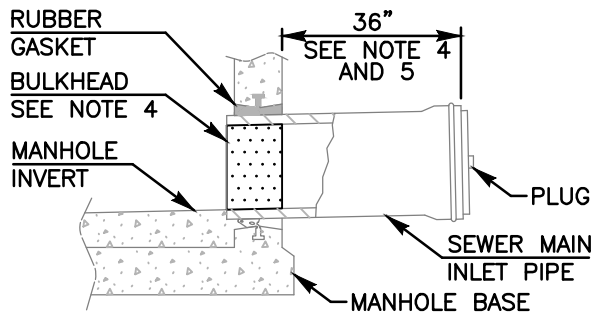
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) A RUBBER O-RING OR A FLEXIBLE CONNECTOR (AS SHOWN IN PRECAST MANHOLE BASE TYPE 'B') CAN BE USED WHEN BREAKING INTO EXISTING MANHOLE
- 3) FOR MANHOLES REQUIRING COATING AND LINING SEE SM-07
- 4) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

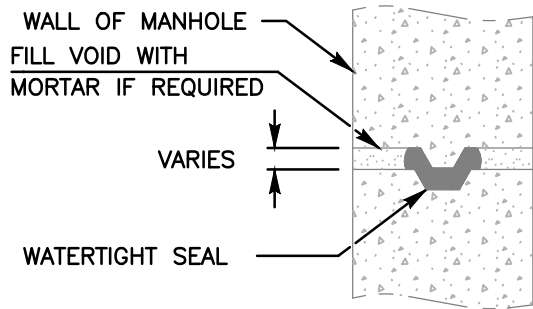
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	<b>MANHOLE PIPE CONNECTORS</b>		<i>Somesh Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	BK	B. KNOLL	04/15			
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
						DRAWING NUMBER <b>SM-04</b>



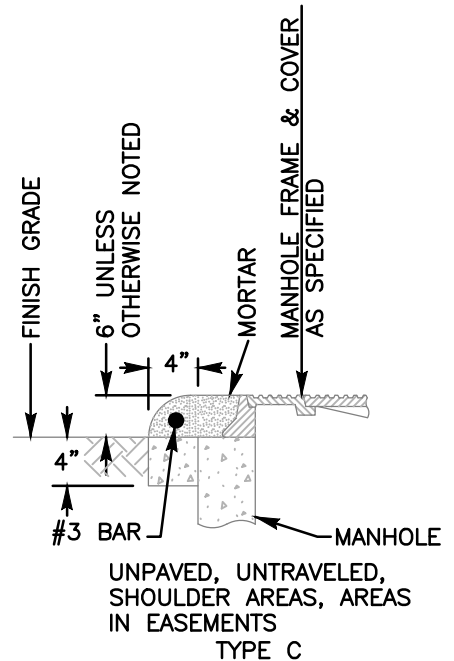
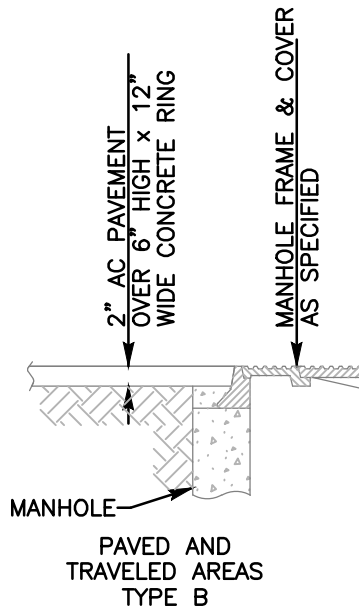
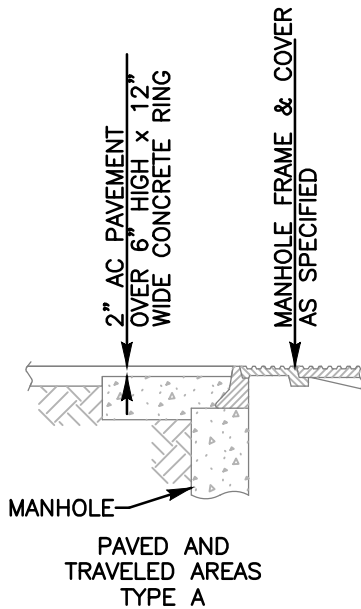
MANHOLE ACCESS LOCATION PLAN VIEW



MANHOLE STUB OUT FOR FUTURE CONNECTION



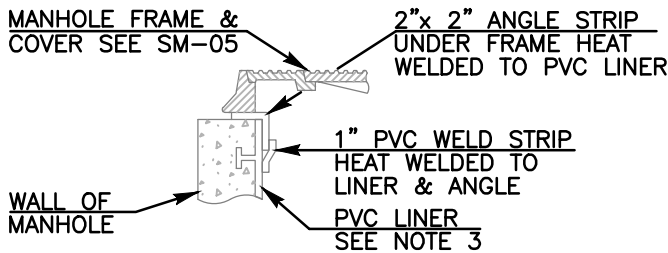
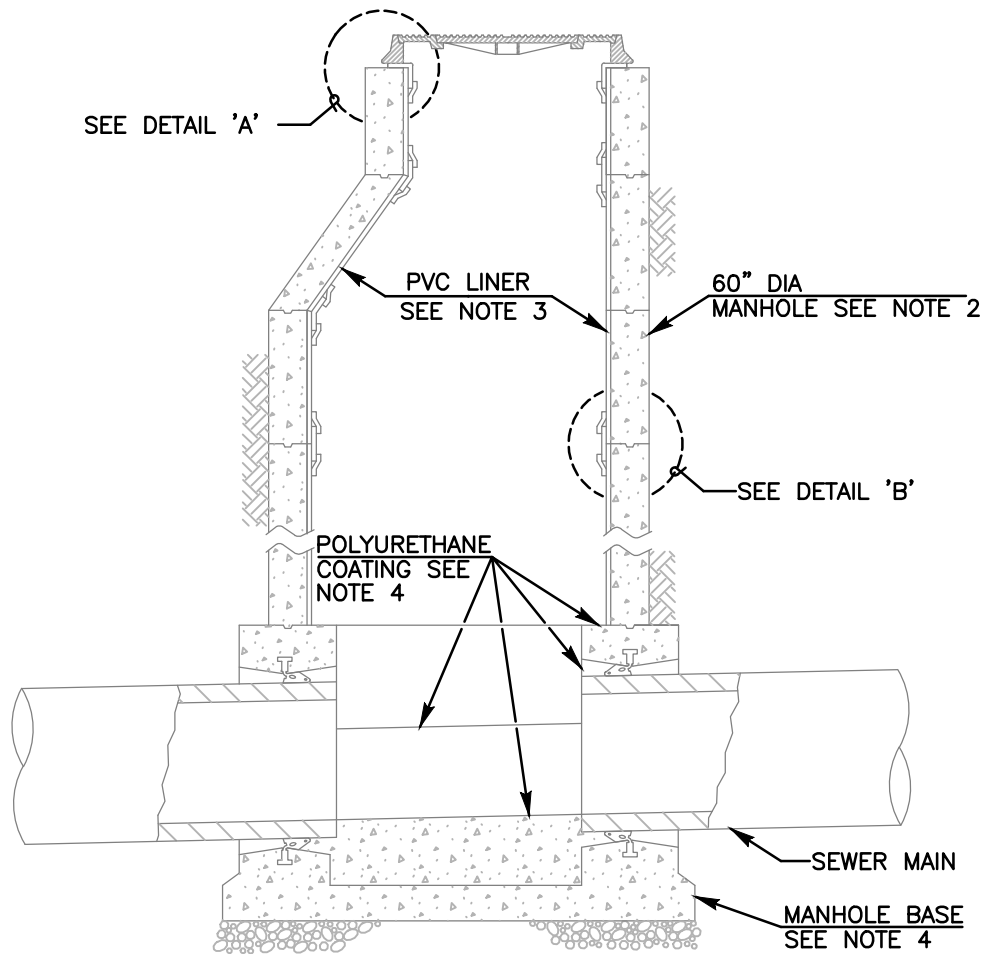
WATERTIGHT MANHOLE JOINT



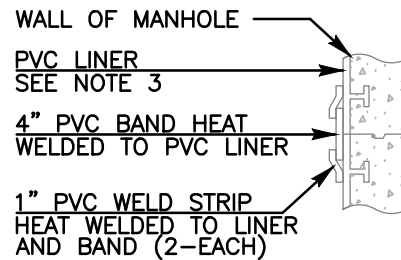
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) VERTICAL WALL OF CONE TO BE ON THE UP STREAM SIDE OF MANHOLE
- 3) FOR MANHOLES REQUIRING COATING AND LINING SEE SM-07
- 4) STUBS SHALL BE BULKHEADED AT THE MANHOLE END
- 5) SEWER MAIN TO BE LAID WITH BELLS UP-GRADE
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	<b>MANHOLE MISCELLANEOUS DETAILS</b>		<i>Samantha Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	BK	B. KNOLL	04/15			
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
				DRAWING NUMBER	<b>SM-05</b>	



DETAIL "A" MANHOLE  
FRAME & COVER

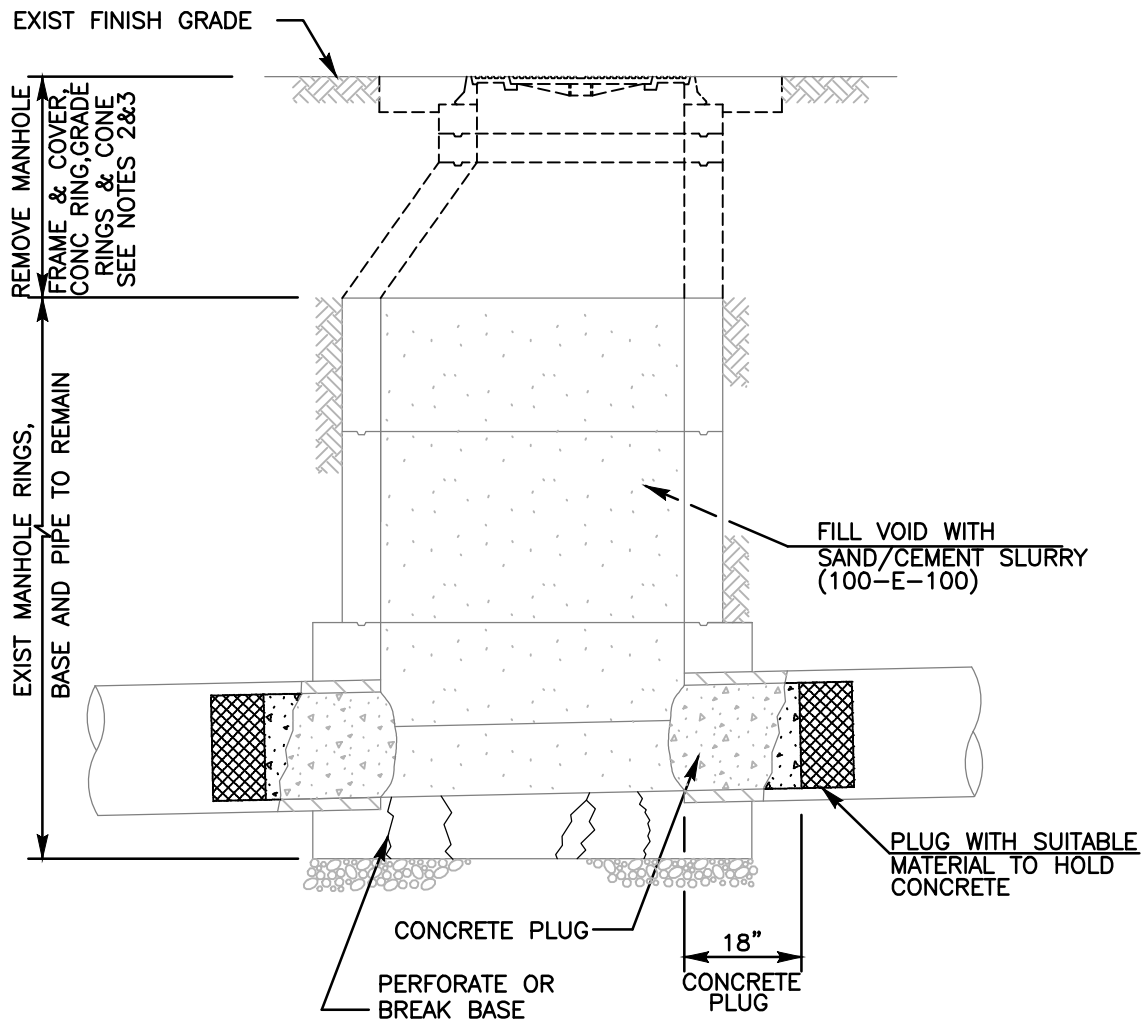


DETAIL "B" MANHOLE  
JOINT SECTIONS

**NOTES:**

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) MANHOLES FOR SEWER MAINS 18" AND LARGER SHALL BE COATED AND LINED
- 3) MANHOLE SHAFT AND CONE SECTIONS, AND GRADE RINGS SHALL HAVE A PVC LINER PLACED WITH T-SHAPED SUPPORTS INTEGRALLY CAST INTO THE CONCRETE (OR AGENCY APPROVED EQUAL TO PVC LINER)
- 4) ELASTOMERIC POLYURETHANE COATING SHALL BE APPLIED TO THE INTERIOR OF MANHOLE BASES
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		<b>MANHOLE COATING AND LINING SYSTEM</b>
Note 3	BK	B. KNOLL	04/15	Chairperson R.C.E. 52241 Date	
Reviewed	BK	B. KNOLL	10/18	DRAWING NUMBER	
Reviewed	RP	S. Engeda	03/22	<b>SM-07</b>	

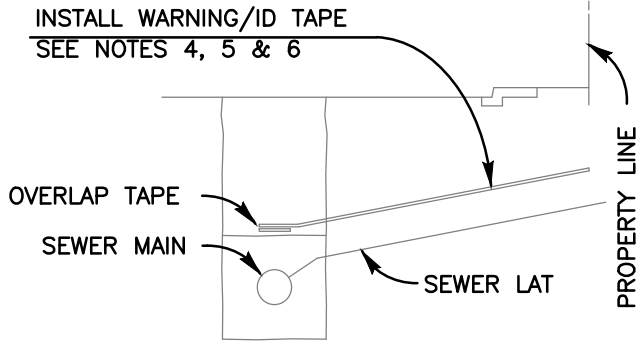


**NOTES:**

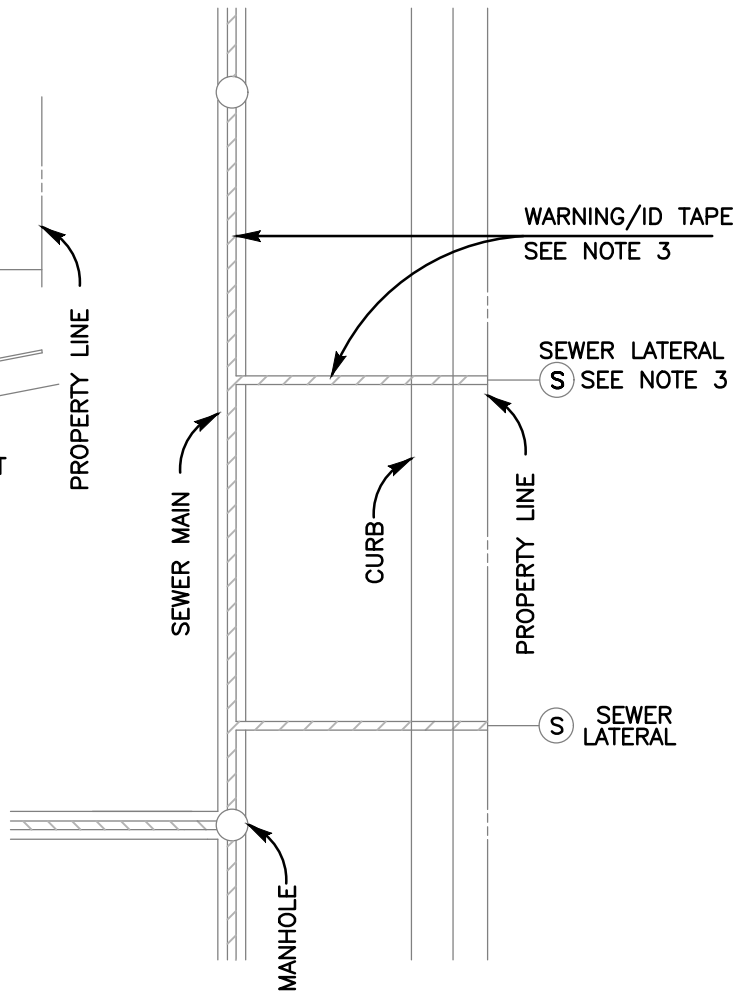
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) ALL SALVAGED MATERIAL BECOMES PROPERTY OF AGENCY OF JURISDICTION
- 3) BACKFILL PER AGENCY'S REQUIREMENT
- 4) FOR CUTTING & PLUGGING ABANDONED SEWER MAINS SEE WP-03

LEGEND ON PLANS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	
ORIGINAL		Kercheval	12/75	<b>EXISTING MANHOLE ABANDONMENT</b>	
Add Call-out	BK	B. KNOLL	04/15		
Reviewed	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
				RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE <i>Samantha Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date	
				DRAWING NUMBER <b>SM-08</b>	



SECTION AT SEWER LATERALS



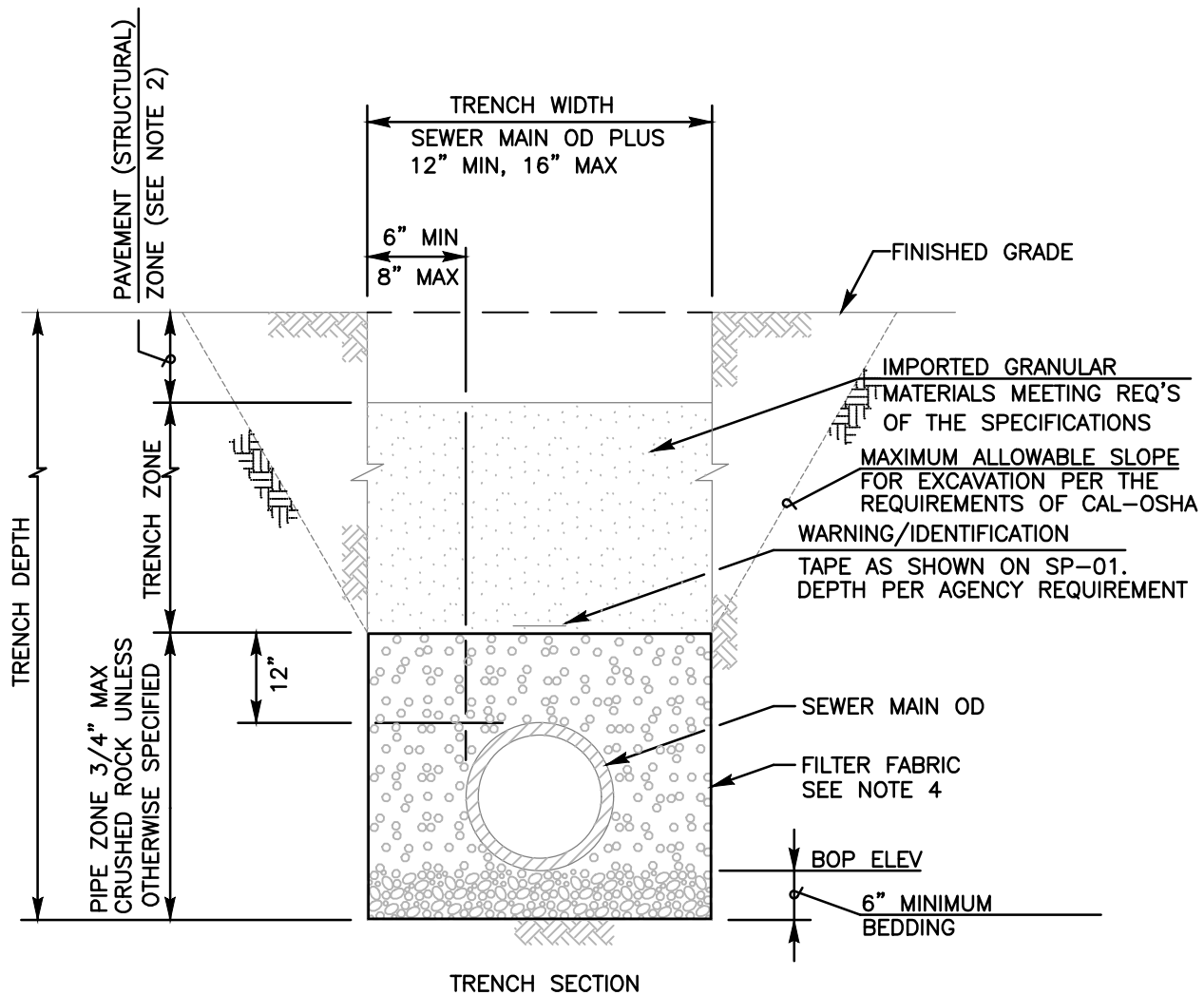
PLAN

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) WARNING/IDENTIFICATION TAPE SHALL BE INSTALLED AS SPECIFIED BY AGENCY
- 3) STAMP OR CHISEL A 2" HIGH 'S' IN CURB FACE TO IDENTIFY SEWER LATERAL LOCATION
- 4) FOR SEWER LATERALS EXTEND TAPE TO PROPERTY LINE
- 5) DEPTH OF WARNING/IDENTIFICATION TAPE AS SPECIFIED BY AGENCY
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		<b>WARNING/IDENTIFICATION TAPE INSTALLATION</b>
Reviewed	BK	B. KNOLL	04/15		
Reviewed	BK	B. KNOLL	10/18		
Reviewed	RP	S. Engeda	03/22		
					DRAWING NUMBER <b>SP-01</b>

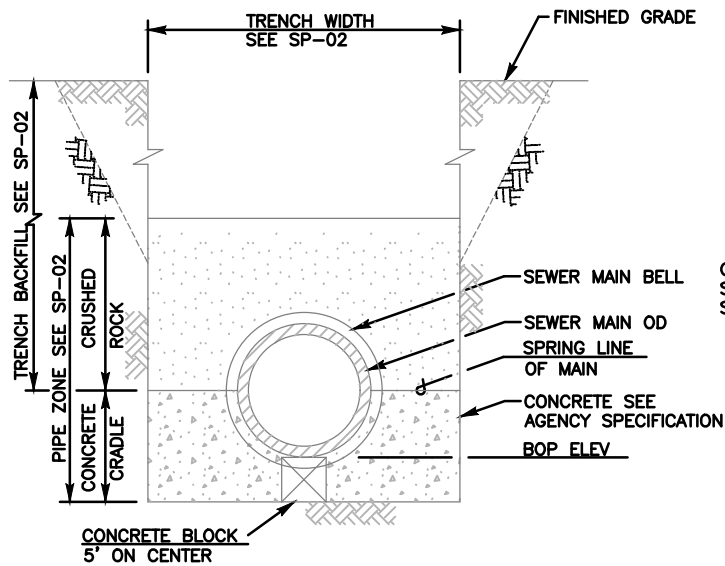




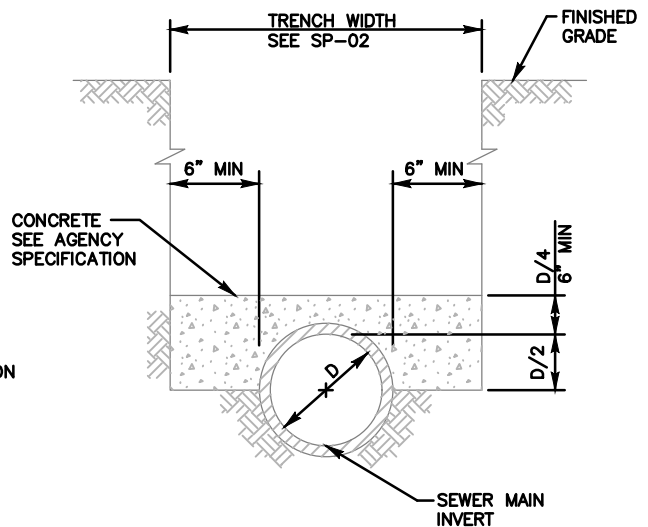
**NOTES:**

- 1) REFER TO AGENCY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND COMPACTING WHERE APPLICABLE
- 2) PAVING OR PAVEMENT REPAIR TO BE DONE IN ACCORDANCE WITH AGENCY OF JURISDICTION
- 3) EXCAVATE BELL HOLES AT EACH JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT
- 4) FILTER FABRIC AS REQUIRED BY AGENCY OF JURISDICTION (WITH A MINIMUM 12" OVERLAP).

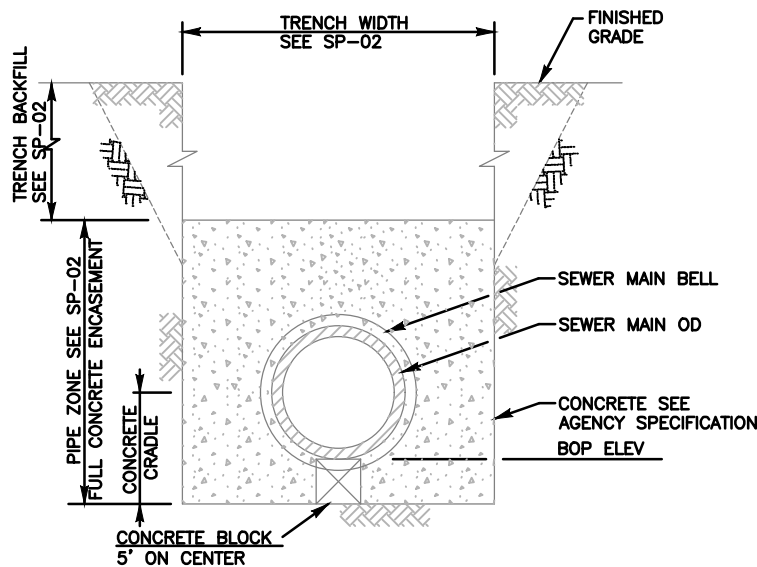
Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75		<b>PIPE BEDDING AND TRENCH BACKFILL FOR SEWER FACILITIES</b>	<i>Samira Engeda</i> 03/24/2022
Reviewed	BK	B. KNOLL	04/15	Chairperson R.C.E. 52241 Date		
Reviewed	BK	B. KNOLL	10/18	DRAWING NUMBER		<b>SP-02</b>
Reviewed	RP	S. Engeda	03/22			



TRENCH SECTION  
CONCRETE PIPE CRADLE



TRENCH SECTION  
CONCRETE PROTECTION



TRENCH SECTION  
CONCRETE PIPE ENCASEMENT

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND COMPACTING WHERE APPLICABLE
- 2) CONCRETE CRADLE SHALL BE USED WHEN THE TRENCH WIDTH AT THE UPPER LIMIT OF THE PIPE ZONE EXCEEDS THE MAX WIDTH SPECIFIED ON SP-02 AND OR DIRECTED BY AGENCY'S ENGINEER
- 3) FOR PIPE BEDDING AND TRENCH BACKFILL SEE SP-02



LEGEND ON PLANS

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Reviewed	BK	B. KNOLL	04/15
Reviewed	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

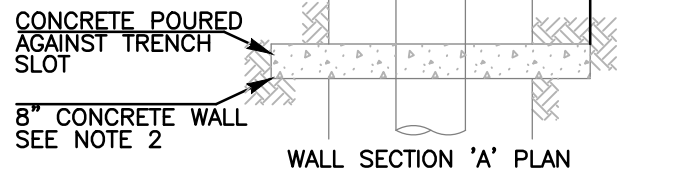
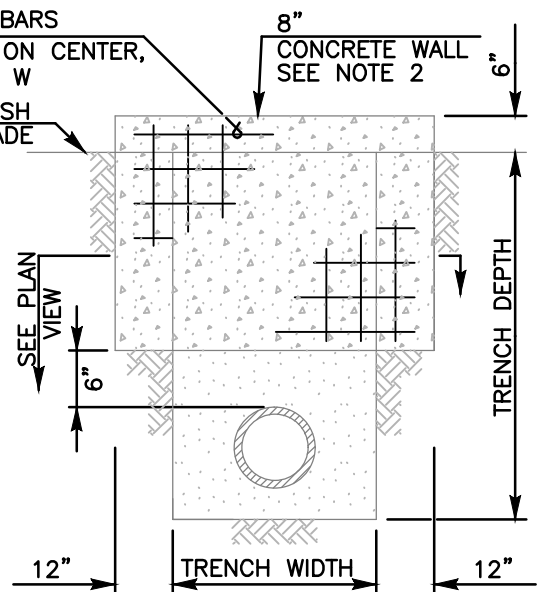
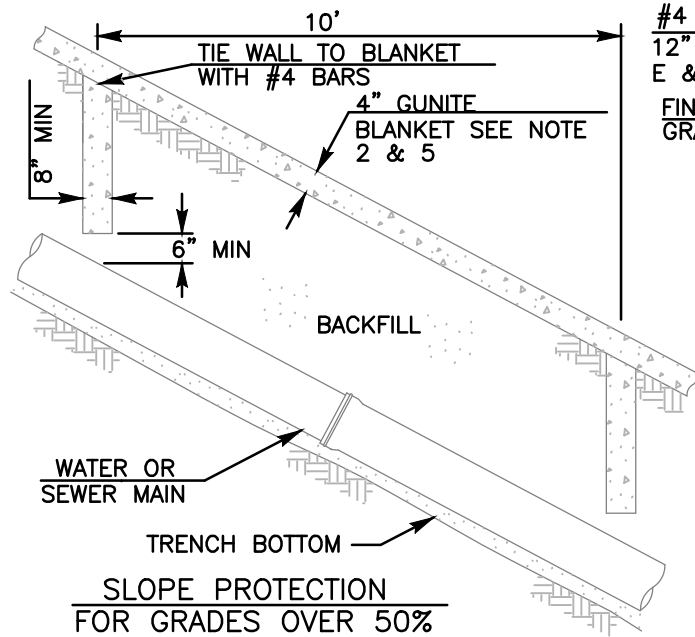
SAN DIEGO REGIONAL STANDARD DRAWING

**CONCRETE PROTECTION FOR  
SEWER PIPE**

RECOMMENDED BY THE SAN DIEGO  
REGIONAL STANDARDS COMMITTEE

*Susan Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING  
NUMBER **SP-03**



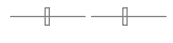
**SLOPE PROTECTION FOR GRADES 20% TO 50%**

**WALL SECTION 'A' ELEVATION**

**WALL SECTION 'A' PLAN**

**NOTES:**

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION
- 3) WALLS SHALL BE REINFORCED CONCRETE OR 8" x 8" x 16" CONCRETE BLOCK, REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS
- 4) FOR GRADES OVER 50%, SLOPE PROTECTION SHALL ALSO INCLUDE AC PAVING, CONCRETE SLAB OR GUNITITE BLANKET PLACED OVER THE PIPELINE ALIGNMENT
- 5) 4" GUNITITE BLANKET WITH 6" SQUARE x 10 GAGE WIRE FABRIC AT THE ENGINEERS DISCRETION



**LEGEND ON PLANS**

Revision	By	Approved	Date
ORIGINAL		J. Tomasulo	03/05
Reviewed	BK	B. KNOLL	04/15
Reviewed	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

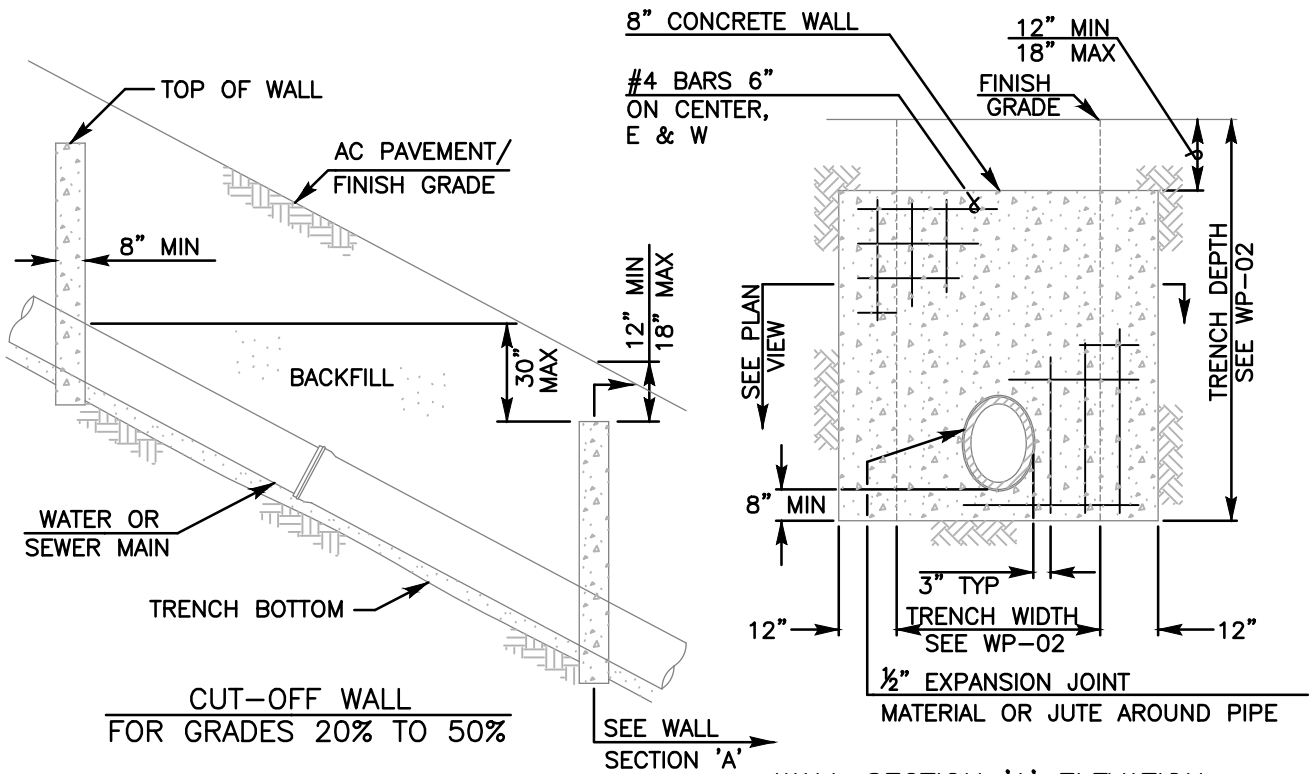
SAN DIEGO REGIONAL STANDARD DRAWING

**SLOPE PROTECTION INSTALLATIONS**

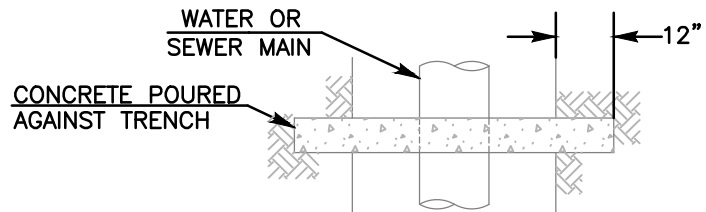
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Somvir Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

**DRAWING NUMBER SP-05**



WALL SECTION 'A' ELEVATION



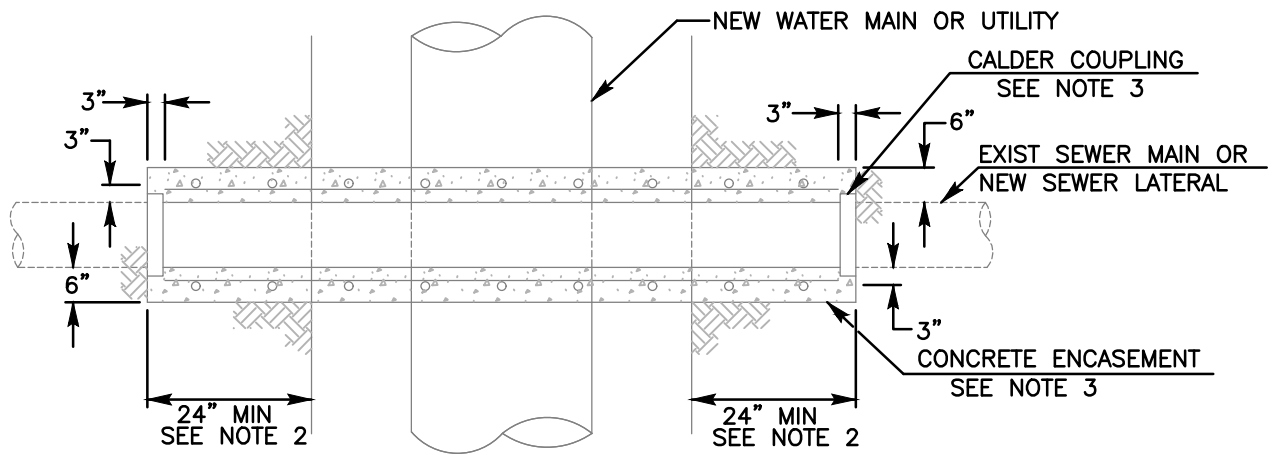
WALL SECTION 'A' PLAN

NOTES:

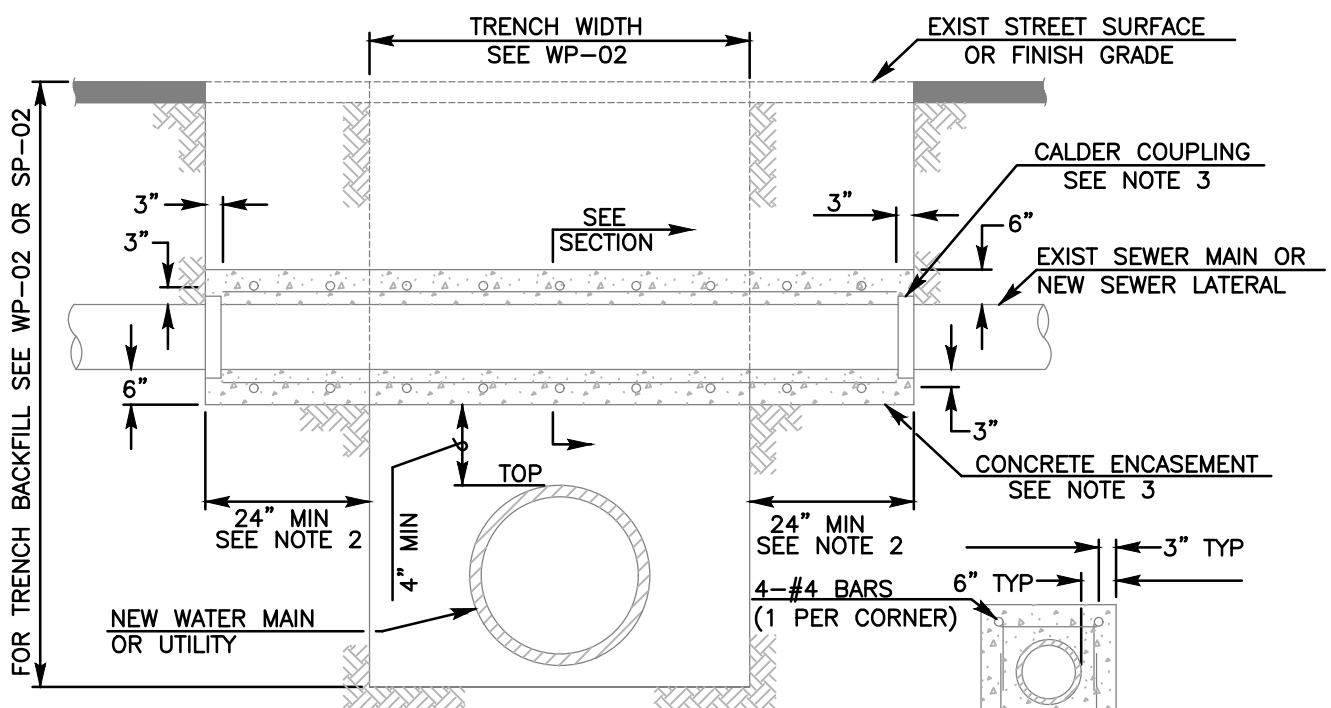
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) FOR USE AS TRENCH BACKFILL STABILIZATION IN TRAVELED AREAS
- 3) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION
- 4) WALLS SHALL BE REINFORCED CONCRETE OR 8" x 8" x 16" CONCRETE BLOCK, REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS (HOR. 2-#4@32", VERT. 1-#4@8")
- 5) FOR GRADES OVER 50% SEE WP-05/SP-05

— — — — —  
LEGEND ON PLANS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	03/05	<b>CUT-OFF WALL INSTALLATION IN TRAVELED AREAS</b>		<i>Sansan Engeda</i> 03/24/2022 Chairperson R.C.E. 52241 Date
Note 4	BK	B. KNOLL	04/15			
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
				DRAWING NUMBER		<b>SP-07</b>



PLAN



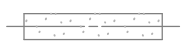
ELEVATION

ENCASEMENT SECTION

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS FOR PROTECTION OF EXISTING FACILITIES
- 2) ENCASEMENT SHALL EXTEND TO FIRST JOINT BEYOND BOTH SIDES OF TRENCH (24" MIN, 48" MAX OF SUITABLE NATIVE SUPPORT BEYOND EDGE OF TRENCH).
- 3) CONCRETE ENCASEMENT REQUIRED FOR SEWER MAINS ONLY. CALDER COUPLINGS REQUIRED FOR SEWER LATERALS ONLY. SEWER LATERALS TO BE REPLACED WITH SCH. 80 PVC WITH NO INTERMEDIATE JOINTS.
- 4) FOR PIPE BEDDING AND TRENCH BACKFILL SEE WP-02 OR SP-02.

LEGEND ON PLANS



Revision	By	Approved	Date
ORIGINAL		J. Tomasulo	03/05
Reviewed	BK	B. KNOLL	04/15
Reviewed	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

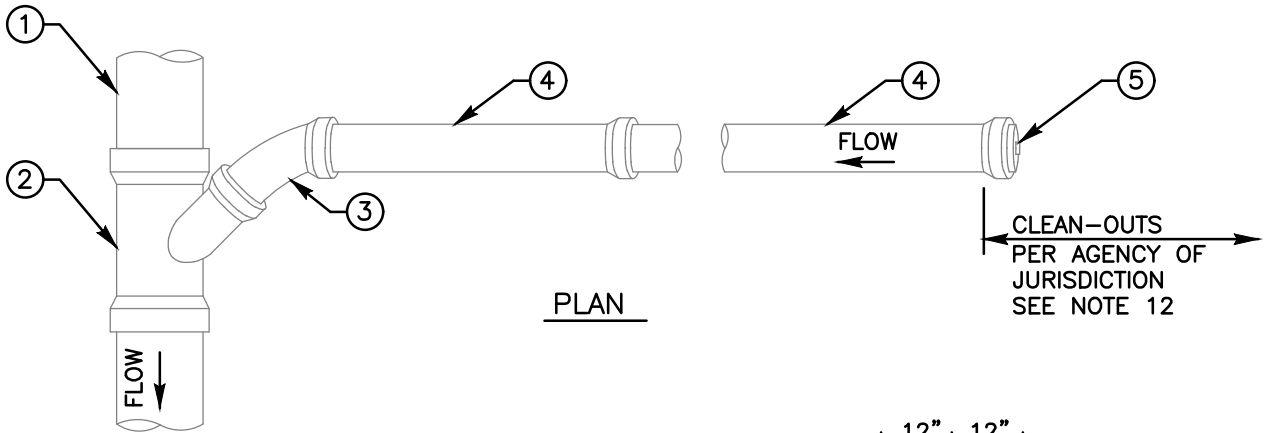
SAN DIEGO REGIONAL STANDARD DRAWING

**PIPE SUPPORT FOR UNDERCUT  
SEWER MAINS OR SEWER LATERALS**

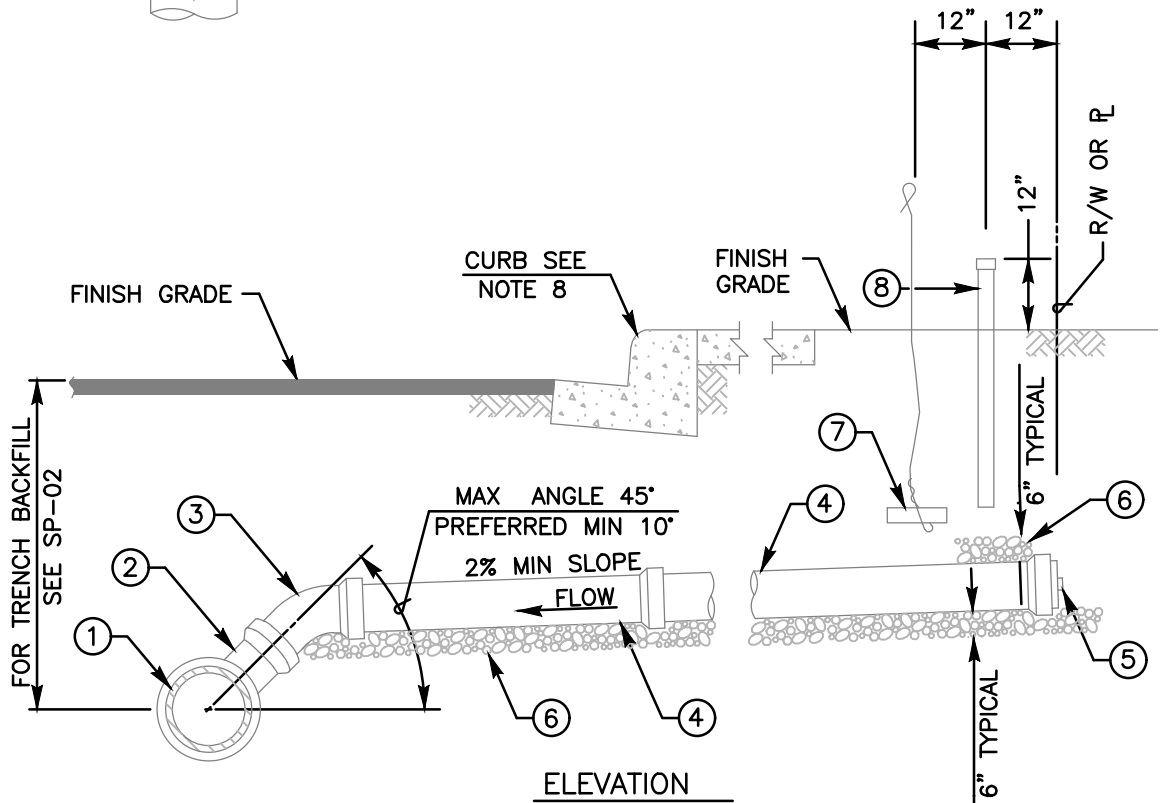
RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samantha Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **SP-09**

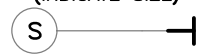


PLAN



ELEVATION

(INDICATE SIZE)



LEGEND ON PLANS

FOR SEWER LATERAL NOTES SEE DETAIL SS-03

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	SEWER MAIN	⑤	PLUG OR CAP
②	45° WYE	⑥	3/4" MAXIMUM CRUSHED ROCK
③	45° ELBOW	⑦	#9 WIRE ATTACHED TO A BRICK
④	PIPE LATERAL SEE NOTE 3 & 5	⑧	4" PVC PIPE WITH GLUED CAP

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Reviewed	BK	B. KNOLL	04/15
Reviewed	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

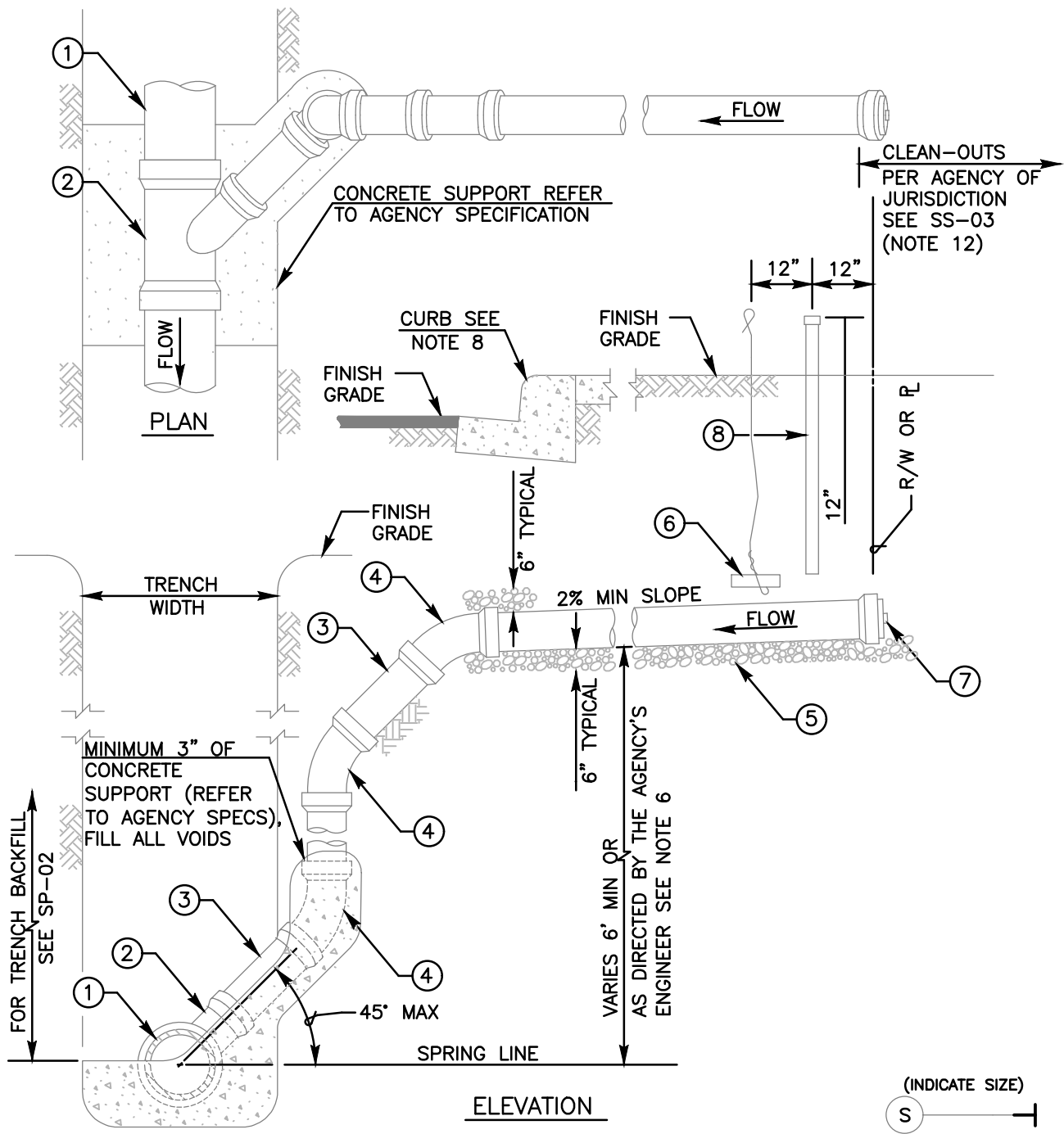
SAN DIEGO REGIONAL STANDARD DRAWING

**4" AND 6" SEWER LATERAL  
INSTALLATION**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Samantha Engeda* 03/24/2022  
Chairperson R.C.E. 52241 Date

DRAWING NUMBER **SS-01**



FOR SEWER LATERAL NOTES SEE DETAIL SS-03

(INDICATE SIZE)  
 S ———— |  
 LEGEND ON PLANS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	SEWER MAIN	⑤	3/4" MAXIMUM CRUSHED ROCK
②	45° WYE	⑥	#9 WIRE ATTACHED TO A BRICK
③	PIPE	⑦	PLUG OR CAP
④	45° ELBOW	⑧	4" PVC PIPE WITH GLUED CAP

Revision	By	Approved	Date
ORIGINAL		Kercheval	12/75
Delete Metric	MR	B. KNOLL	03/11
Reviewed	BK	B. KNOLL	10/18
Reviewed	RP	S. Engeda	03/22

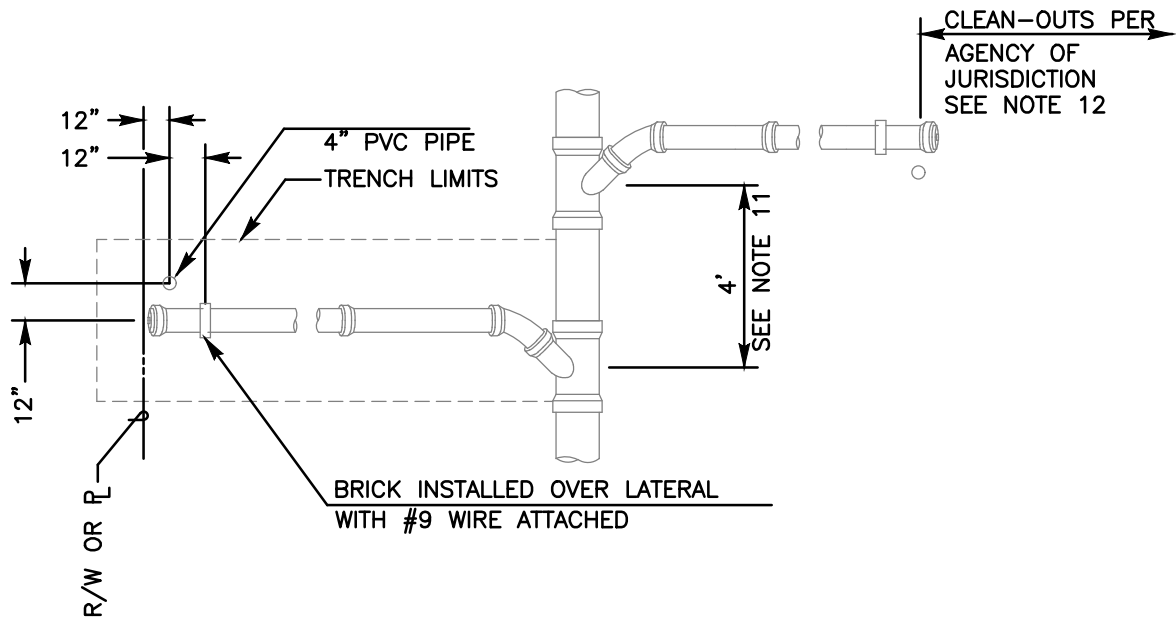
SAN DIEGO REGIONAL STANDARD DRAWING

**4" AND 6" DEEP-CUT SEWER LATERAL  
 INSTALLATION**

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

*Saman Engeda* 03/24/2022  
 Chairperson R.C.E. 52241 Date


DRAWING NUMBER **SS-02**




SEWER LATERAL DETAIL  
SEE NOTE 10 BELOW

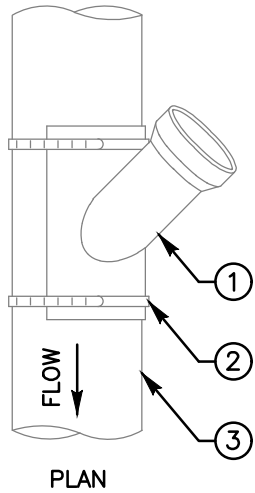
NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) IN NO CASE SHALL LATERAL CONNECT DIRECTLY ON TOP OF SEWER MAIN
- 3) LATERAL SHALL BE INSTALLED TO PROPERTY LINE UNLESS SPECIFIED ON PLANS
- 4) MINIMUM 4' COVER ABOVE LATERAL AT PROPERTY LINE
- 5) LATERAL TO HAVE A MINIMUM SLOPE OF 2%
- 6) VERTICAL PIPE SHALL BE BRACED WHILE BACKFILLING TRENCH
- 7) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON SP-01
- 8) STAMP OR CHISEL A 2" HIGH "S" IN CURB FACE OVER LATERAL TO IDENTIFY SEWER LATERAL LOCATION
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST
- 10) FOR SEWER LATERAL INSTALLATIONS SEE SS-01 AND SS-02
- 11) FOR SEWERS SPECIFIED AS PVC PIPE, A MINIMUM 3' SECTION OF PIPE IS REQUIRED BETWEEN FITTINGS
- 12) SEWER CLEAN-OUT SEE SC-01 TYPE B AS REQUIRED BY AGENCY OF JURISDICTION

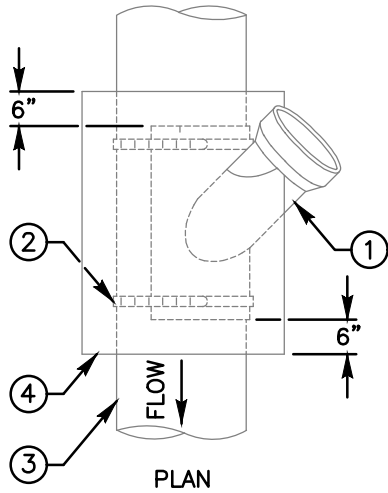
(INDICATE SIZE)  
  
 LEGEND ON PLANS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING		RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	<b>SEWER LATERAL NOTES AND DETAIL</b>		 03/24/2022 Chairperson R.C.E. 52241 Date
Delete Metric	MR	B. KNOLL	03/11			
Reviewed	BK	B. KNOLL	10/18			
Reviewed	RP	S. Engeda	03/22			
				DRAWING NUMBER		<b>SS-03</b>

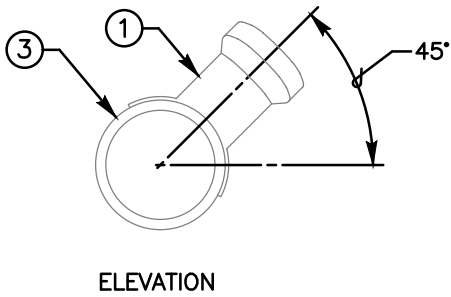




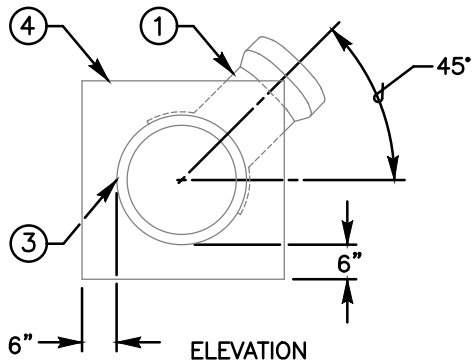
PLAN



PLAN



ELEVATION



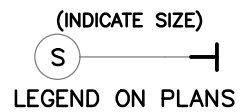
ELEVATION

CUT IN WYE CONNECTION  
TYPE A

CUT IN WYE CONNECTION  
TYPE B

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) CONNECTIONS TO EXISTING SEWER MAINS TO BE MADE BY AGENCY PERSONNEL IN ACCORDANCE WITH SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS
- 3) IN NO CASE SHALL CONNECTION BE MADE DIRECTLY ON TOP OF SEWER MAIN
- 4) NO MORE THAN ONE CUT IN WYE WILL BE ALLOWED FOR EACH LENGTH OF EXISTING VCP SEWER MAIN
- 5) FOR SEWER LATERAL INSTALLATION SEE SS-01 AND SS-02
- 6) FOR TRENCH BACKFILL SEE SP-02
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST



ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
①	45° SADDLE WYE WITH GASKET	③	EXISTING SEWER MAIN
②	STAINLESS STEEL HOSE CLAMPS (2-EACH)	④	CONCRETE ENCASMENT

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	BK	B. KNOLL	04/15	<b>4" AND 6" SEWER CUT-IN WYE CONNECTIONS</b>	<i>Saman Engeda</i> 03/24/2022
Reviewed	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING NUMBER <b>SS-04</b>