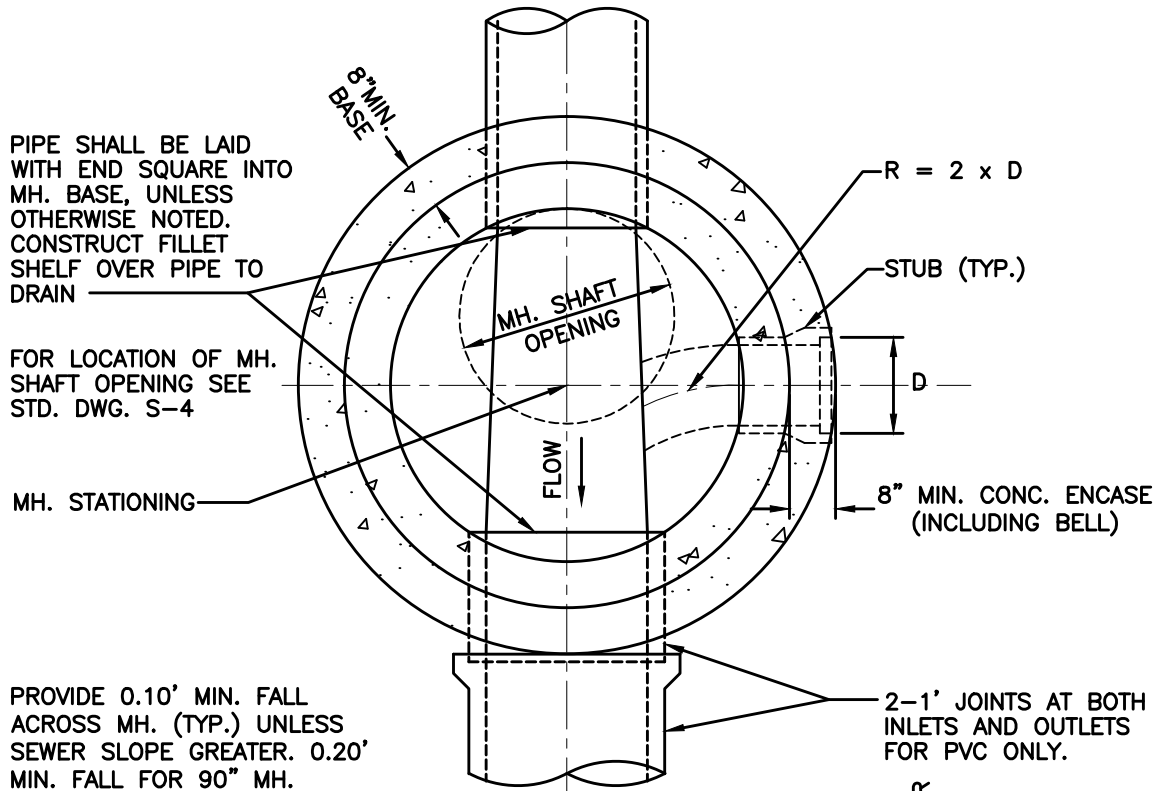


NOTES:

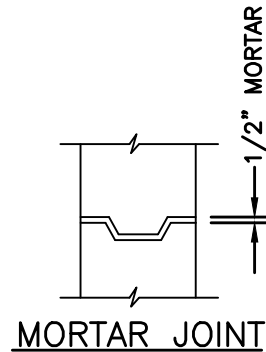
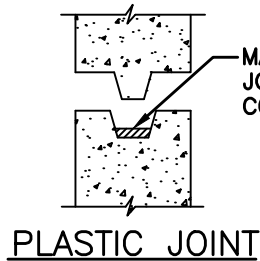
1. PLACE TWO HALF MOON COVERS (5/8" THICK MINIMUM) IN BOTTOM OF MANHOLE AFTER SHAFTS HAVE BEEN SET TO KEEP DEBRIS FROM ENTERING SEWER.
2. FOR DROP MANHOLE SEE STD. DWG. S-13.
3. FOR MANHOLES LOCATED OUTSIDE PAVED AREAS THE FRAME AND COVER SHOULD BE SET A MINIMUM OF 0.1 FT. ABOVE FINISHED GRADE IN SHOULDER AREAS, UNPAVED ROADS OR LANDSCAPE AREAS, AND 18" IN UNFINISHED AREAS.
4. ALL INLETS AND OUTLETS SHALL BE SUPPORTED WITH CONCRETE SUPPORTS PRIOR TO POURING MANHOLE BASE.
5. SEE 33 39 13 FOR MANHOLE SPECIFICATIONS.

SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014	MANHOLE	S-1	SHEET 1 OF 1
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PLAN



NOTES:

1. **MORTAR JOINTS** - APPLY SUFFICIENT MORTAR ACROSS ENTIRE FACE OF JOINT SO WHEN PRECAST UNITS ARE PLACED ON TOP OF ONE ANOTHER, MORTAR WILL SQUEEZE OUT BOTH INSIDE AND OUTSIDE WALL FACES. JOINTS SHALL BE "POINTED UP" AFTER SETTING PRECAST UNITS EXCLUDING GRADE RINGS.
2. **PLASTIC JOINTS** - WHERE GROUND WATER IS ENCOUNTERED USE MASTIC PREMOLDED PLASTIC GASKETS PER 07 92 00 SEAL JOINTS.

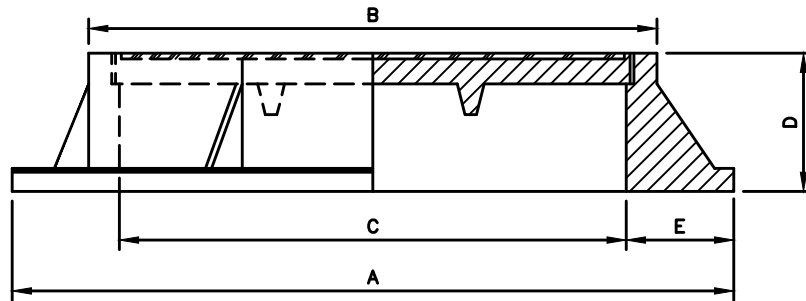
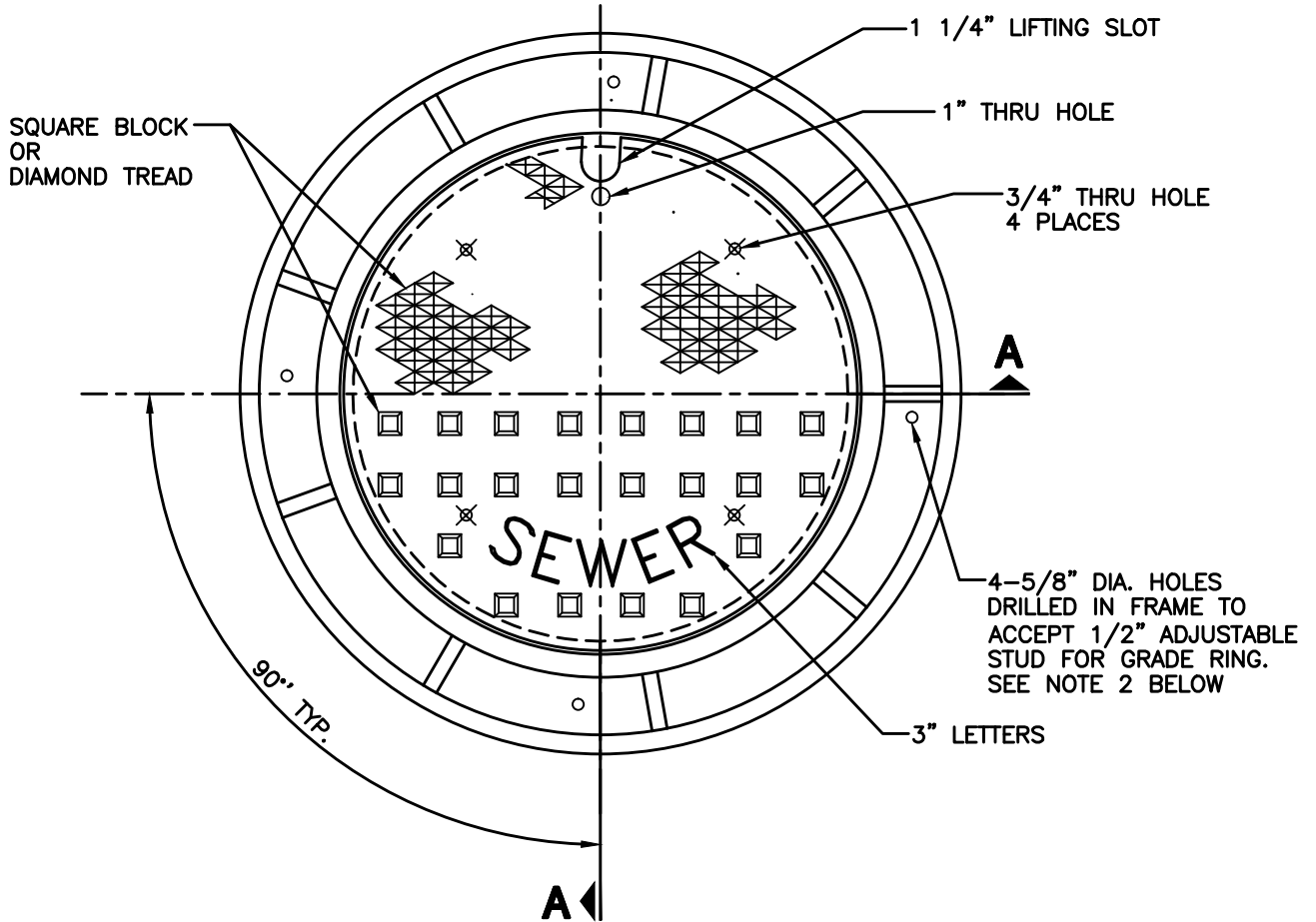
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

CONCRETE BASE AND JOINT

S-2

SHEET
1 OF 1



SECTION A-A

SIZE	36
A	44
B	39
C	36
D	6
E	4

SIZE	LONG BEACH IRON WORKS	ALHAMBRA FOUNDRY	NEENAH FOUNDRY	SOUTH BAY FOUNDRY	PONT-A- MOUSSON
36"	X-106A	A-1251	R-1739-A	SBF 1251-6	N.A.

- 48", 60" & 72" MANHOLES SHALL HAVE 36" COVERS.
- WHERE FRAME AND COVER ARE SET 18" ABOVE GRADE, 4-1/2" DIA. INSERTS ADJUSTABLE STUDS SHALL BE CAST IN TOP GRADE RING, ALIGNED AS DETAILED ABOVE. FRAME SHALL BE BOLTED TO GRADE RING.

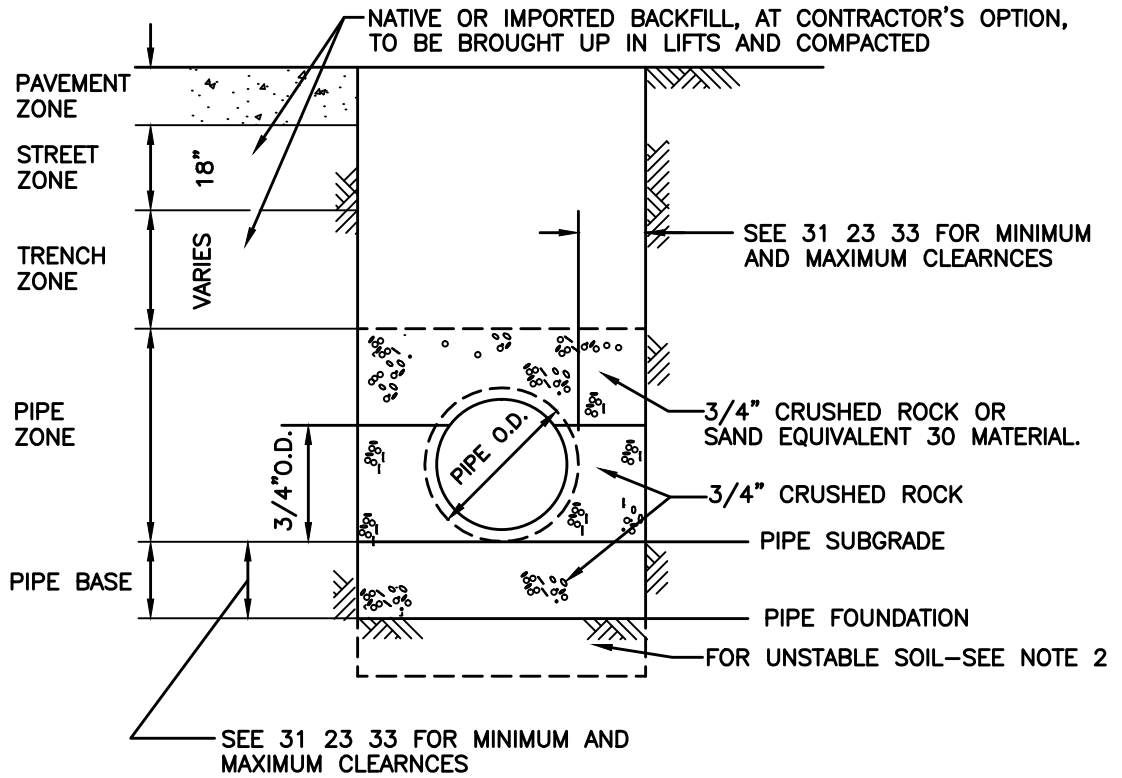
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

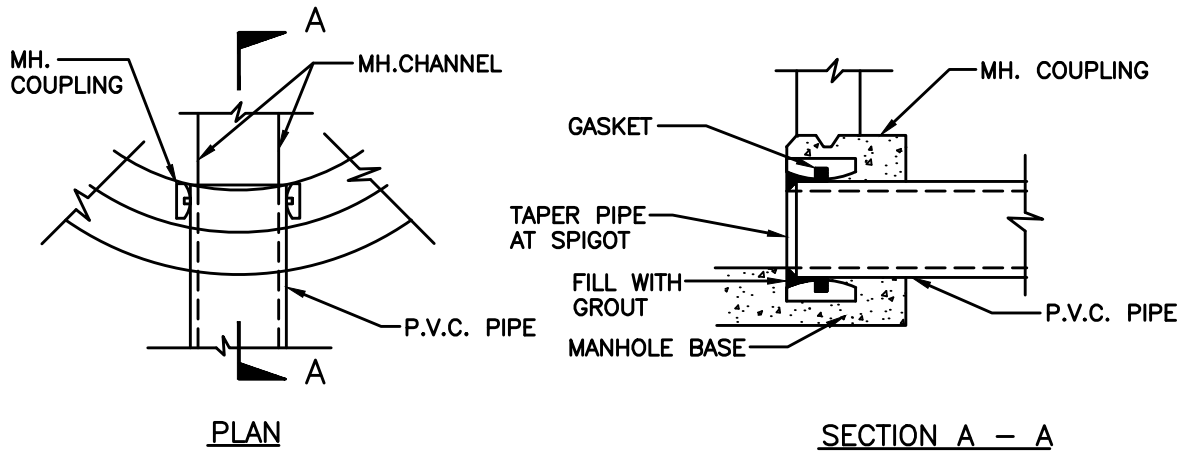
TRAFFIC MANHOLE FRAME AND COVER

S-3

SHEET
1 OF 1



NORMAL BEDDING



MANHOLE CONNECTION

NOTES:

1. USE CONCRETE ENCASEMENT PER STD. DWG. S-9 WHERE TRENCH WIDTH AT UPPER LIMIT OF PIPE ZONE EXCEEDS MAXIMUM WIDTH SPECIFIED.
2. IF UNSTABLE SOIL IS ENCOUNTERED, DISTRICT REPRESENTATIVE WILL DETERMINE DEPTH OF REMOVAL AND SIZE OF FOUNDATION ROCK REFILL MATERIAL.
3. SEE STD. DWG. S-1 & S-2 FOR MANHOLE DETAILS.
4. SEE 31 23 33 FOR COMPACTION REQUIREMENTS.

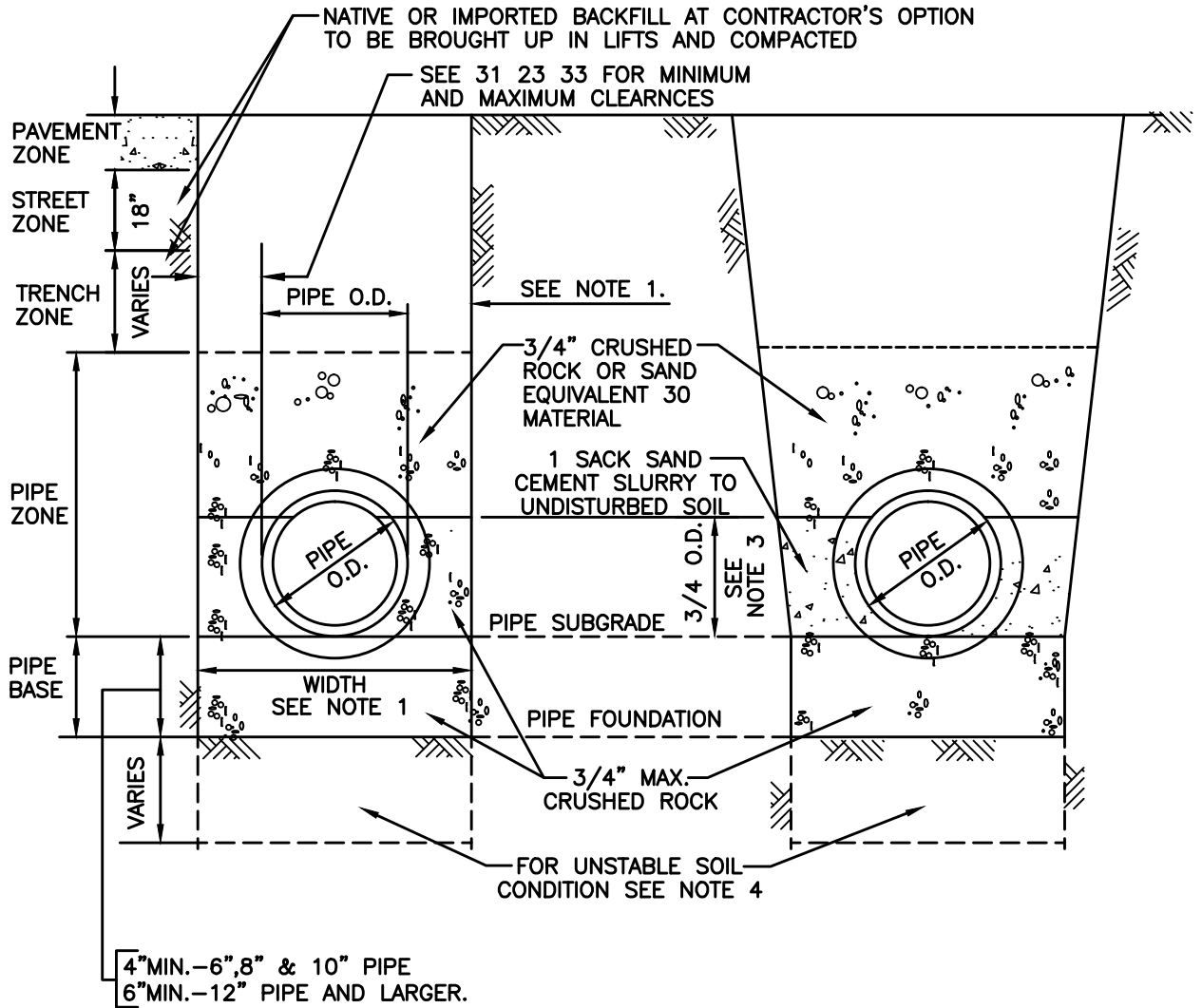
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

PLASTIC PIPE TRENCH AND DETAILS

S-4

SHEET
1 OF 1



TYPICAL NORMAL BEDDING

OVERWIDTH BEDDING

NOTES:

1. SEE 31 23 33 FOR MINIMUM AND MAXIMUM CLEARANCES.
2. OVERWIDTH BEDDING SHALL BE USED WHERE THE TRENCH WIDTH AT THE UPPER LIMIT OF THE PIPE ZONE EXCEEDS THE MAXIMUM WIDTH SPECIFIED ABOVE.
3. MAXIMUM OVERWIDTH BEDDING TO BE DETERMINED IN FIELD BY THE DISTRICT REPRESENTATIVE ON THE BASIS OF OVERWIDTH EXCAVATED.
4. IF UNSTABLE SOIL IS ENCOUNTERED, DISTRICT REPRESENTATIVE SHALL DETERMINE DEPTH OF REMOVAL AND SIZE OF FOUNDATION ROCK REFILL MATERIAL.
5. SEE 31 23 33 FOR COMPACTION REQUIREMENTS.
6. FOR PVC PIPE USE DETAIL S-4.

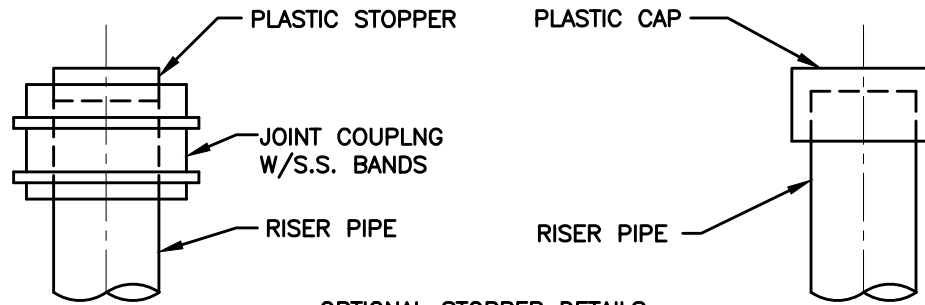
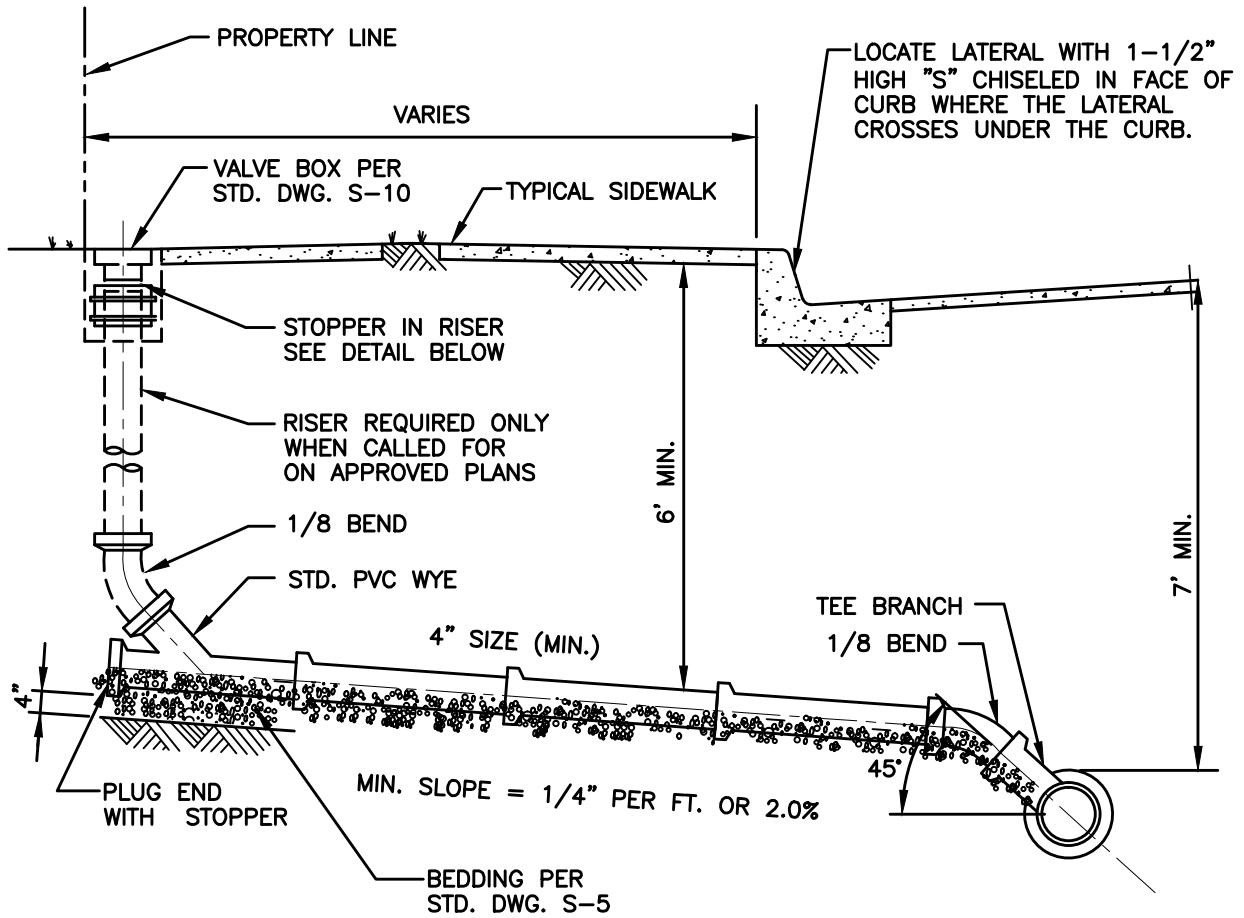
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

TRENCH SECTION AND BEDDING

S-5

SHEET
 1 OF 1



OPTIONAL STOPPER DETAILS

NOTES:

1. LATERAL SIZE TO BE DETERMINED BASED ON THE BASIS OF TOTAL NUMBER OF FIXTURE UNITS DRAINED, BUT IN NO CASE SHALL THE LATERAL DIAMETER BE LESS THAN 4 INCHES FOR SINGLE OR MULTIPLE FAMILY RESIDENTIAL AND 6 INCHES FOR COMMERCIAL OR INDUSTRIAL.
2. CONSTRUCT LATERAL TO BE INTO PROPERTY LINE.
3. PLACE GRAVEL OR CRUSHED ROCK BEDDING TO SPRINGLINE OF TEE OR WYE, AND LATERAL.
4. IF RISER NOT BUILT, PLUG WYE BRANCH WITH STOPPER.

SOUTH COAST WATER DISTRICT STANDARD DRAWING

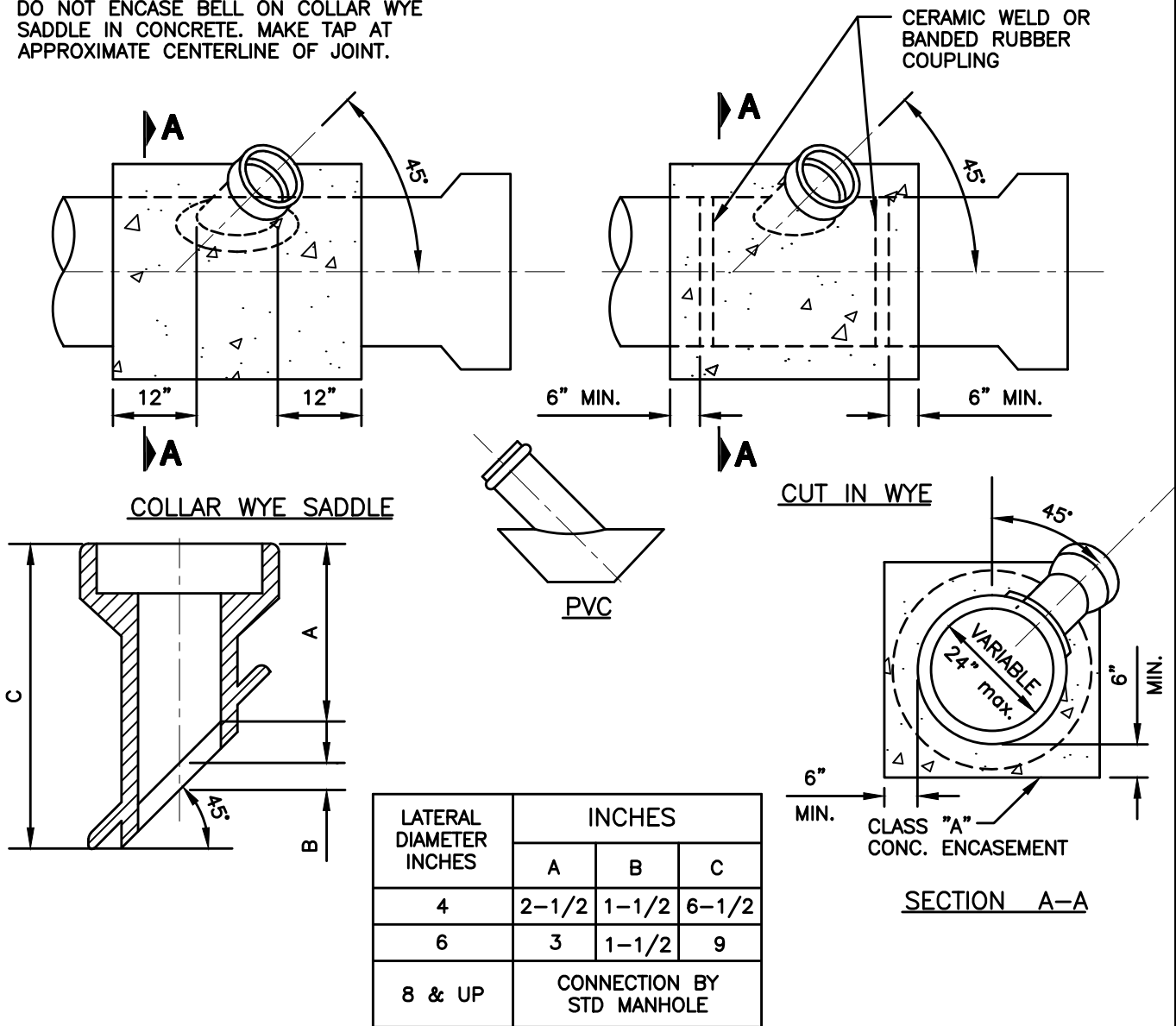
2014

LATERAL

S-6

SHEET
1 OF 1

NOTE:
 DO NOT ENCASE BELL ON COLLAR WYE SADDLE IN CONCRETE. MAKE TAP AT APPROXIMATE CENTERLINE OF JOINT.



NOTES:

1. MAKE HOLE FOR COLLAR WYE FITTING FOR SEWER SADDLE WITH TAPPING MACHINE. HOLE SHALL BE CLEANLY MACHINED, AND IF NECESSARY, WORKED BY HAND WITH RASP OR SANDED TO ACCOMPLISH TRUE AND NEAT OPENING FOR COLLAR WYE.
2. SECURE COLLAR WYE SADDLE SHALL BE SECURED TO THE SEWER WITH AN APPROVED EPOXY RESIN.
3. SECURE SADDLE CONNECTION SHALL WITH CLASS A-2 (600-C-2500) CONCRETE ENCASEMENT AFTER CONNECTION IS ACCEPTED BY DISTRICT REPRESENTATIVE.
4. KEEP CHIPS, DIRT, EPOXY, MORTAR, AND CONCRETE OUT OF SEWER. REACH SADDLED SHALL BE CLEANED AND BALLED IF NECESSARY AS DIRECTED BY DISTRICT REPRESENTATIVE.
5. REPAIR DAMAGED PIPE AS DIRECTED BY DISTRICT REPRESENTATIVE.

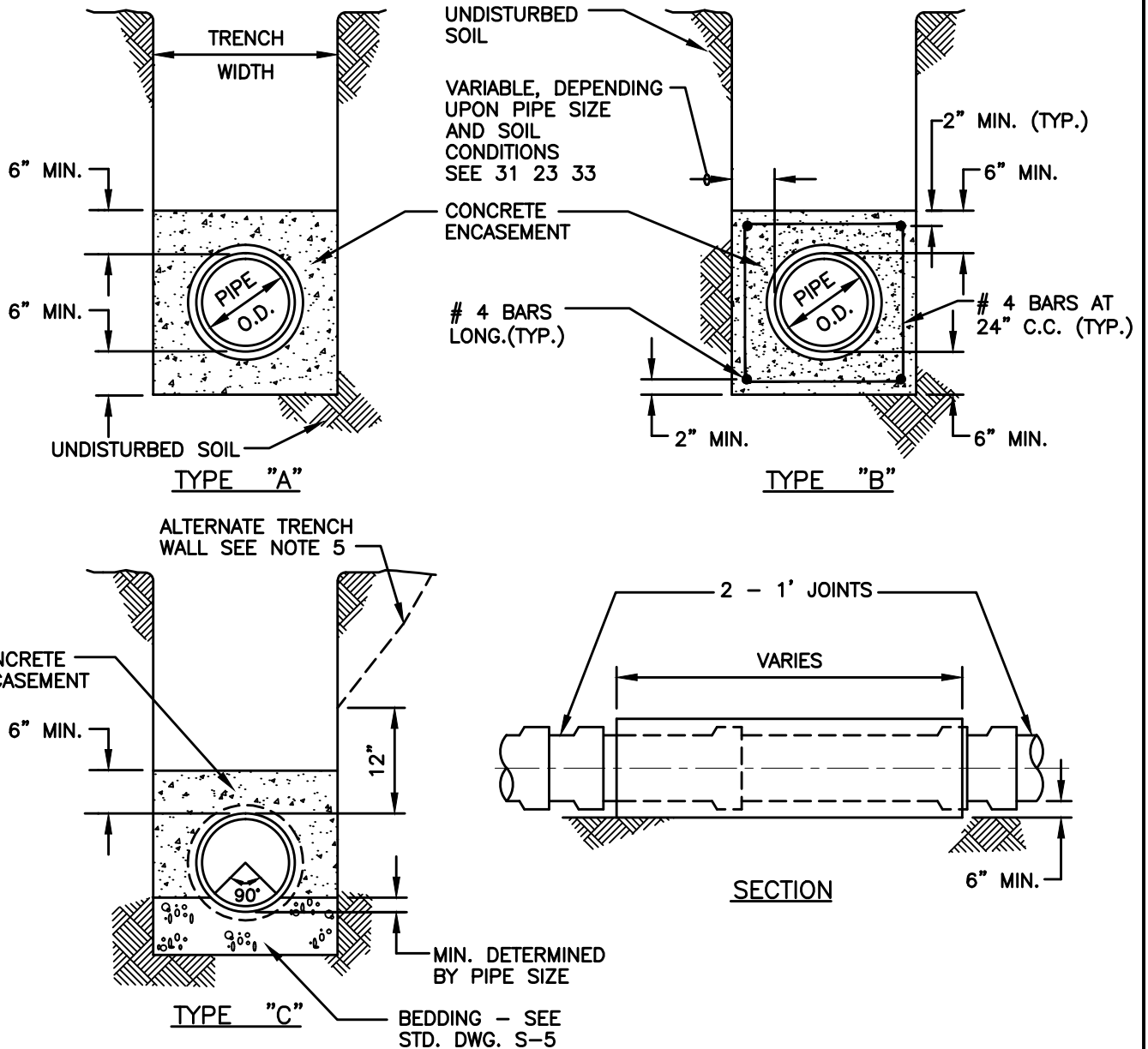
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

SEWER SADDLE & CUT IN WYE CONNECTION

S-7

SHEET
1 OF 1



NOTES:

1. USE CONCRETE ENCASEMENT SHALL BE USED WHEN COVER IS UNDER 4' OR OVER 20'.
2. PLACE ENCASEMENT AGAINST UNDISTURBED NATURAL GROUND OR FILL COMPACT TO 90% RELATIVE DENSITY.
3. USE NO. 4 STEEL REINFORCING BARS PER 03 20 00.
4. TYPE OF CONCRETE ENCASEMENT TO BE USED SHALL BE SHOWN ON PLANS OR AS SPECIFIED BY SCWD REPRESENTATIVE TO MEET UNFORESEEN FIELD CONDITIONS. UNLESS NOTED OTHERWISE, ENCASEMENT SHALL BE CLASS C (520-C-25500) CONCRETE PER 03 30 00.
5. WHERE SLOPED TRENCHES ARE USED, WALLS SHALL NOT BEGIN TO SLOPE CLOSER THAN 12" FROM THE TOP OF THE PIPE.

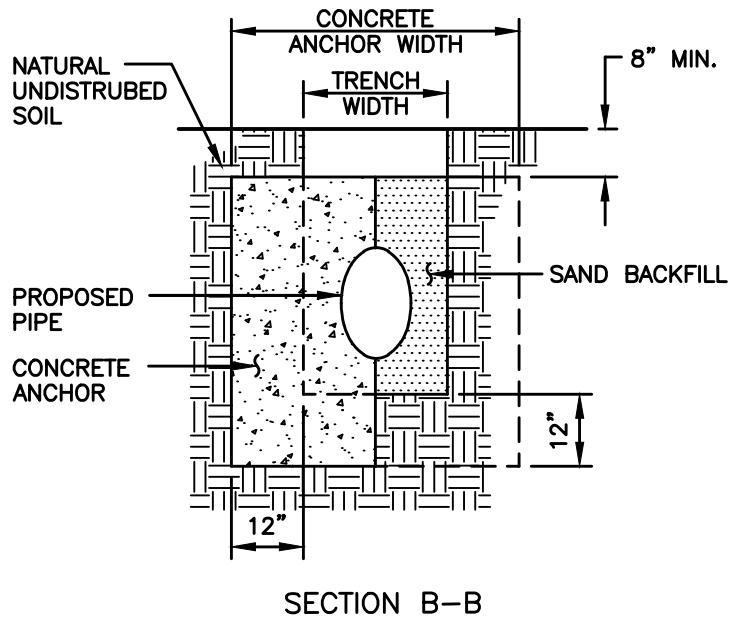
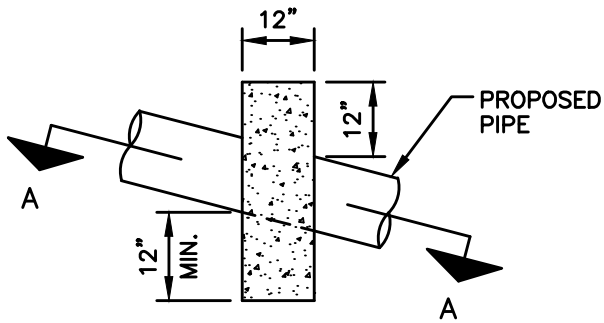
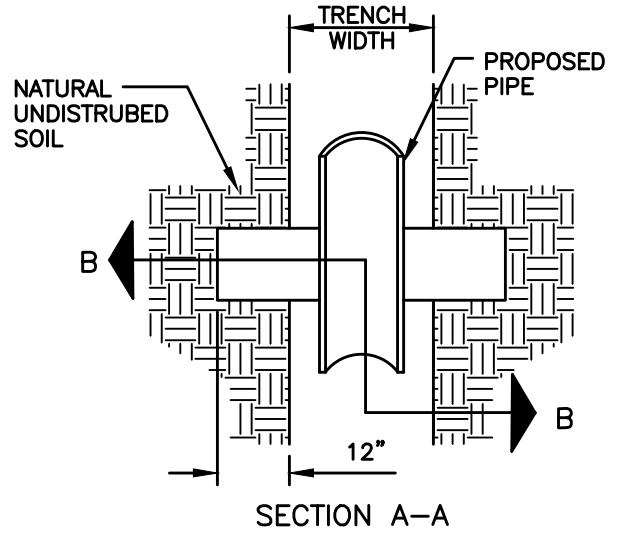
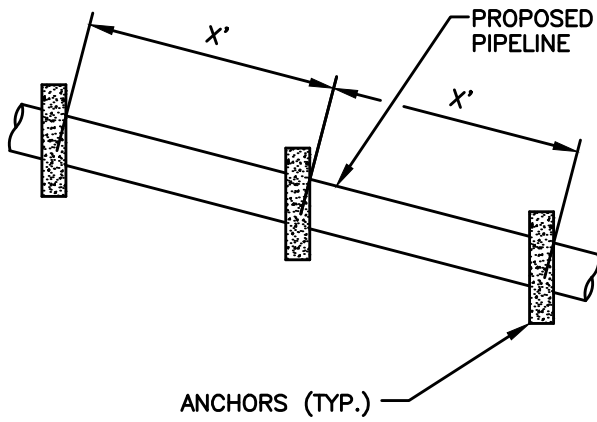
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

CONCRETE ENCASEMENT

S-8

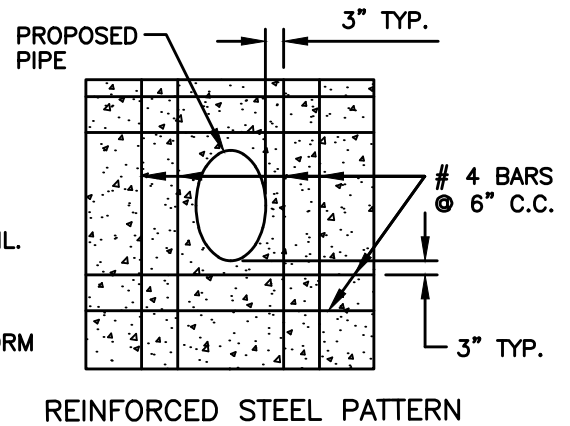
SHEET
1 OF 1



PIPE SLOPE	PIPE SLOPE	X DISTANCE
100%	1:1	12'
66.6%	1-1/2:1	14'
50%	2:1	16'
40%	2-1/2:1	18'
20%	5:1	20'

NOTES:

1. PIPE ANCHORS REQUIRED ON SLOPES OF 5:1 OR GREATER.
2. ANCHOR SHALL EXTEND 12" INTO NATURAL UNDISTURBED SOIL.
3. CONCRETE SHALL BE CLASS A2 (600-C-2500).
4. ANCHORS FOR TRAPEZOIDAL TRENCH SECTIONS SHALL CONFORM TO TRENCH CROSS SECTION AND EXTEND 12" INTO UNDISTURBED SOIL.



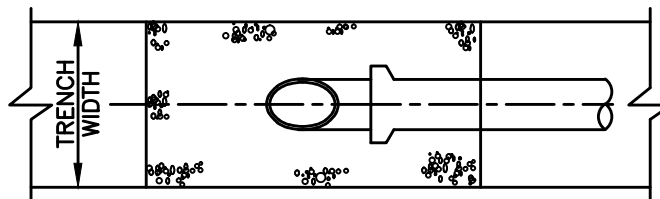
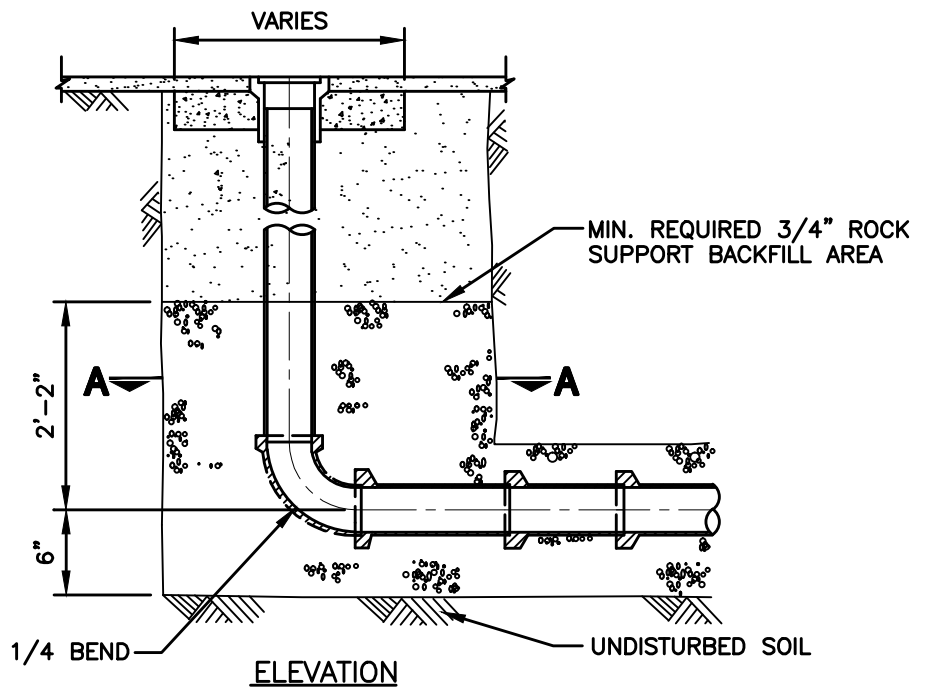
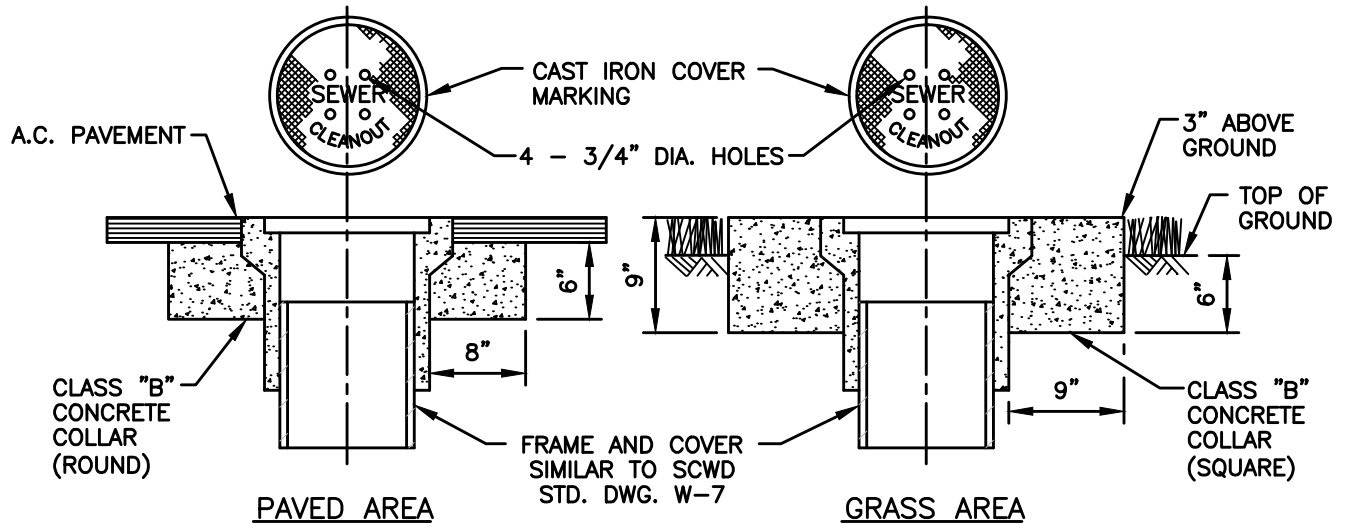
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

CONCRETE SLOPE ANCHORS

S-9

SHEET
1 OF 1



SECTION A - A

NOTES:

1. CLEANOUT PIPE TO BE SAME SIZE AND KIND OF MATERIAL AS MAIN.
2. CLEANOUTS WILL NOT BE USED ON DISTRICT MAINS.

SOUTH COAST WATER DISTRICT STANDARD DRAWING

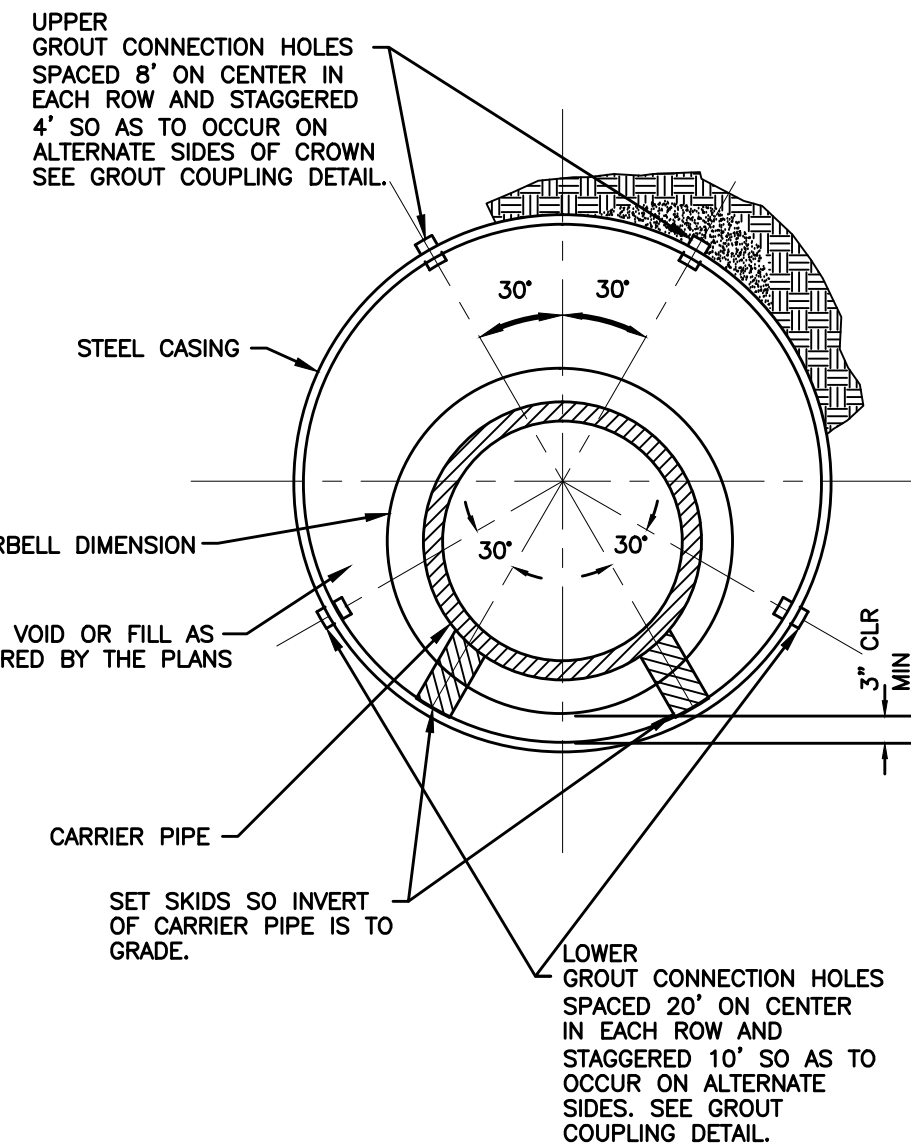
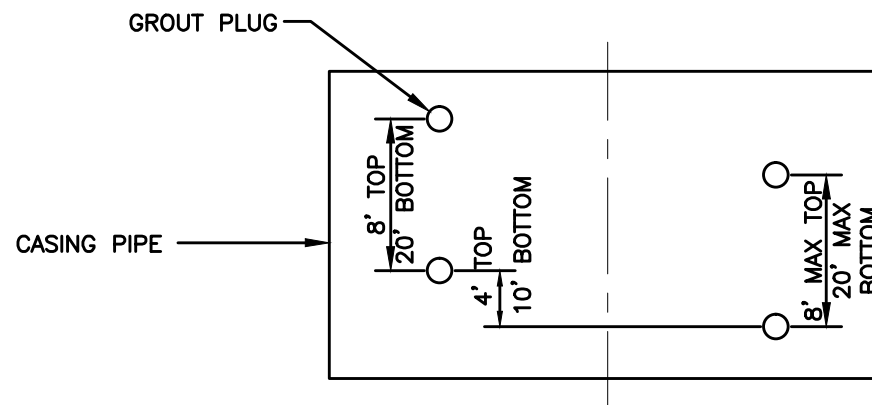
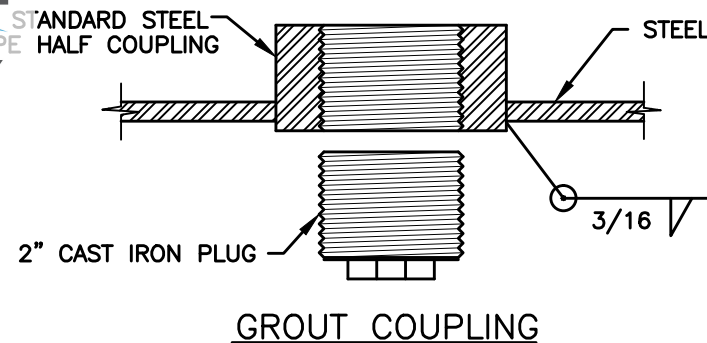
2014

CLEANOUT

S-10

SHEET
 1 OF 1

STEEL CASING SCHEDULE		
NOMINAL CARRIER PIPE SIZE	MINIMUM CASING SIZE	MIN. WALL THICK.
4"	10 3/4" O.D.	1/4"
6"	12 3/4" O.D.	1/4"
8"	16" O.D.	5/16"
10"	18" O.D.	5/16"
12"	20" O.D.	5/16"

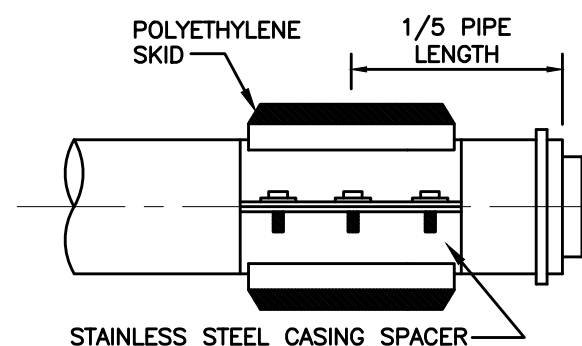


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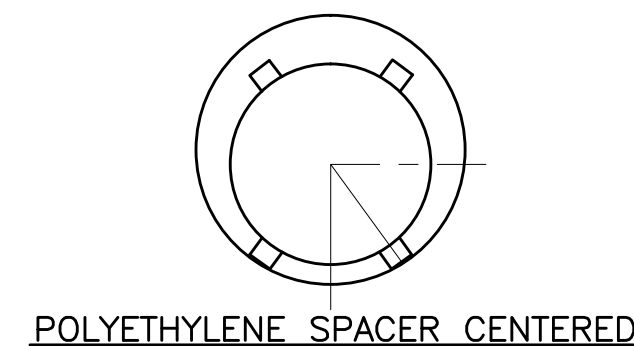
- UNLESS NOTED OTHERWISE, CASING SHALL BE INSTALLED BY THE BORE, JACK AND/OR TUNNEL METHOD. IF OPEN-CUT INSTALLATION OF CASING IS ALLOWED, BACKFILL SHALL BE IN ACCORDANCE WITH STD. DWG. W-12.
- SIZE AND THICKNESS OF CASING SHALL BE AS SHOWN IN SCHEDULE, UNLESS NOTED OTHERWISE IN PLANS.
- ALL STEEL CASING PIPE FIELD JOINTS SHALL BE WELDED FULL-CIRCUMFERENCE.
- PROVIDE A MINIMUM OF TWO CASING SPACERS PER PIPE JOINT. ONE SPACER SHALL BE LOCATED NOT MORE THAN TWO FEET FROM EACH END OF THE CASING.
- CARRIER PIPE SHALL BE AIR PRESSURE TESTED PRIOR TO FILLING CASING.
- UPSTREAM AND DOWNSTREAM ELEVATIONS OF CARRIER PIPE TO BE VERIFIED PRIOR TO FILLING.
- INSTALL SEAMLESS NEOPRENE END SEALS WITH STAINLESS STEEL BANDING STRAPS AT BOTH ENDS.
- CONTRACTOR SHALL FURNISH ALL NECESSARY THRUST RESTRAINT DEVICES.
- PERIPHERY OF CASING TO BE PRESSURE GROUTED IF REQUIRED BY THE PLANS.

SKID SPECIFICATIONS:

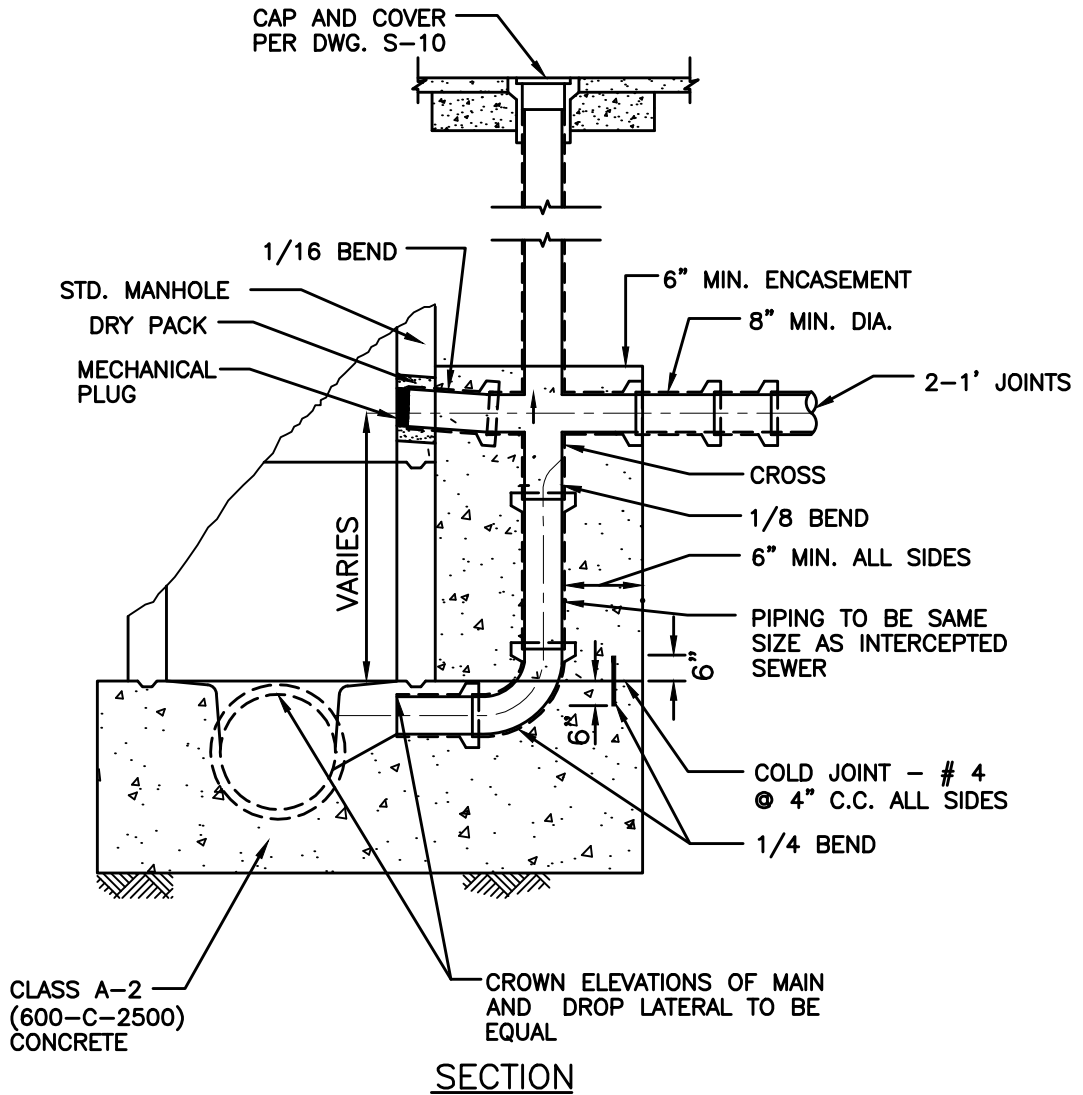
- SKIDS SHALL BE MADE OF POLYETHYLENE AND SHALL BE 24" TO 30" IN LENGTH, 4" IN WIDTH, AND OF SUFFICIENT HEIGHT TO PROVIDE A MINIMUM OF 2" CLEARANCE AT COUPLINGS.
- ALL SKIDS SHALL BE OF EQUAL DIMENSIONS AND POSITIONED UNIFORMLY.
- FOR PIPE WITH DIAMETERS OF 12" AND UNDER, FOUR SKIDS PER PIPE END SHALL BE PROVIDED. FIVE SKIDS PER PIPE END SHALL BE PROVIDED FOR PIPES 14"-16", AND 6 SKIDS FOR PIPES 18"-24".



SPACER PLACEMENT



PIPE SIZE INCHES	NUMBER OF SKIDS PER PIPE END
12 & UNDER	4
14-16	5
18-24	6



NOTES:

1. DROP MANHOLE ONLY TO BE USED FOR SPECIAL SITUATIONS, AND SHALL NOT BE CONSTRUCTED WITHOUT DISTRICT APPROVAL.
2. ALL NEW OPENINGS CONSTRUCTED INTO MANHOLE SHALL BE DONE BY CORE DRILLING.
3. INTERIOR WALL OF MANHOLE TO BE LINED WITH PVC LINER PER SPECIFICATIONS.

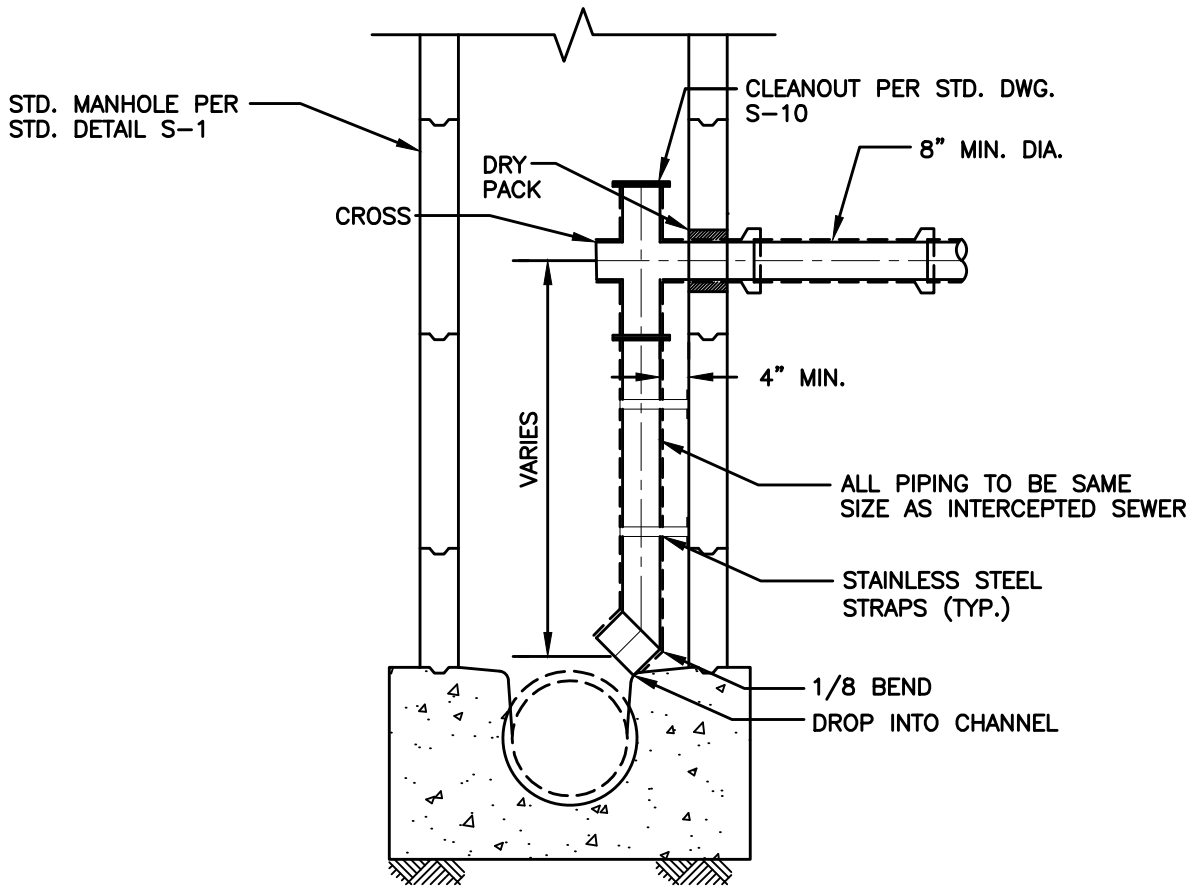
SOUTH COAST WATER DISTRICT STANDARD DRAWING

2014

DROP MANHOLE

S-12

SHEET
1 OF 2



INTERIOR DROP SECTION

NOTES:

1. DROP MANHOLE ONLY TO BE USED FOR SPECIAL SITUATIONS, AND SHALL NOT BE CONSTRUCTED WITHOUT DISTRICT APPROVAL.
2. ALL NEW OPENINGS CONSTRUCTED INTO MANHOLE SHALL BE DONE BY CORE DRILLING.
3. INTERIOR WALL OF MANHOLE TO BE LINED WITH PVC LINER PER SPECIFICATIONS.

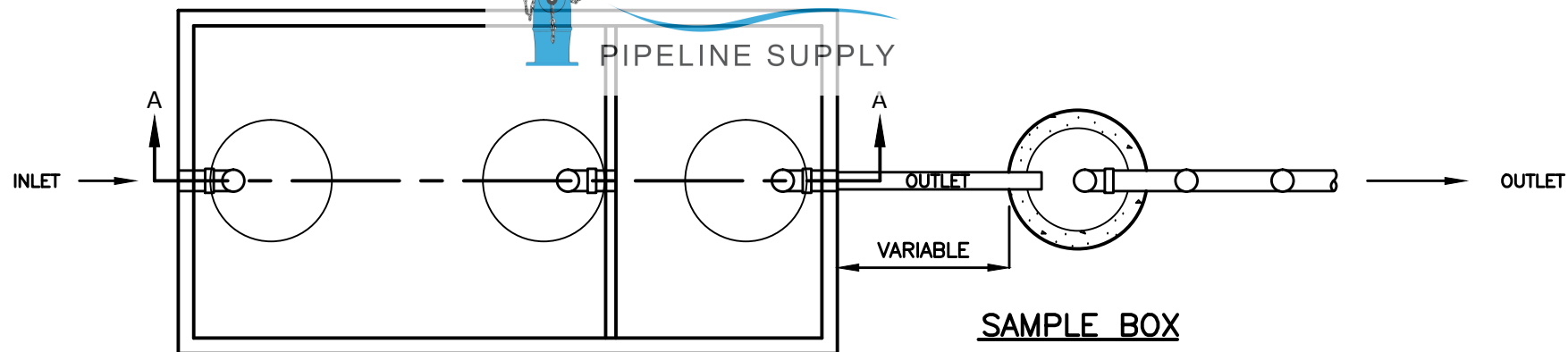
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2014

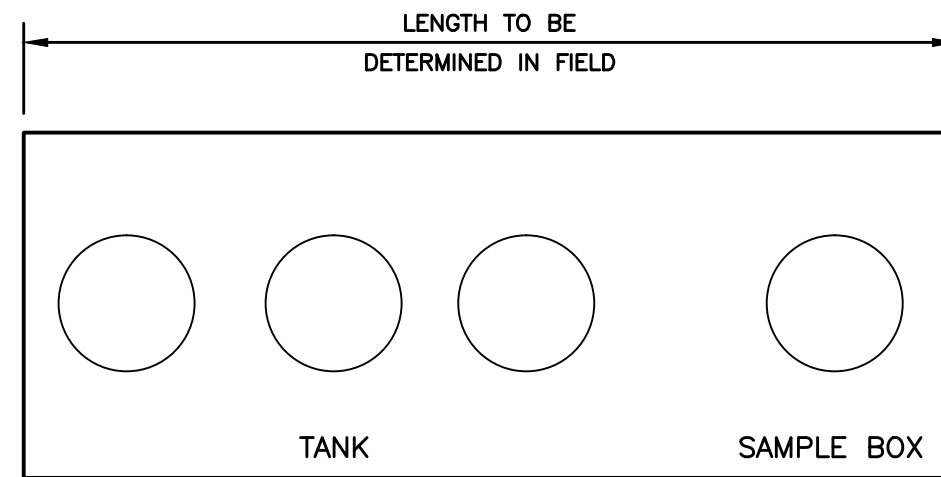
DROP MANHOLE

S-12

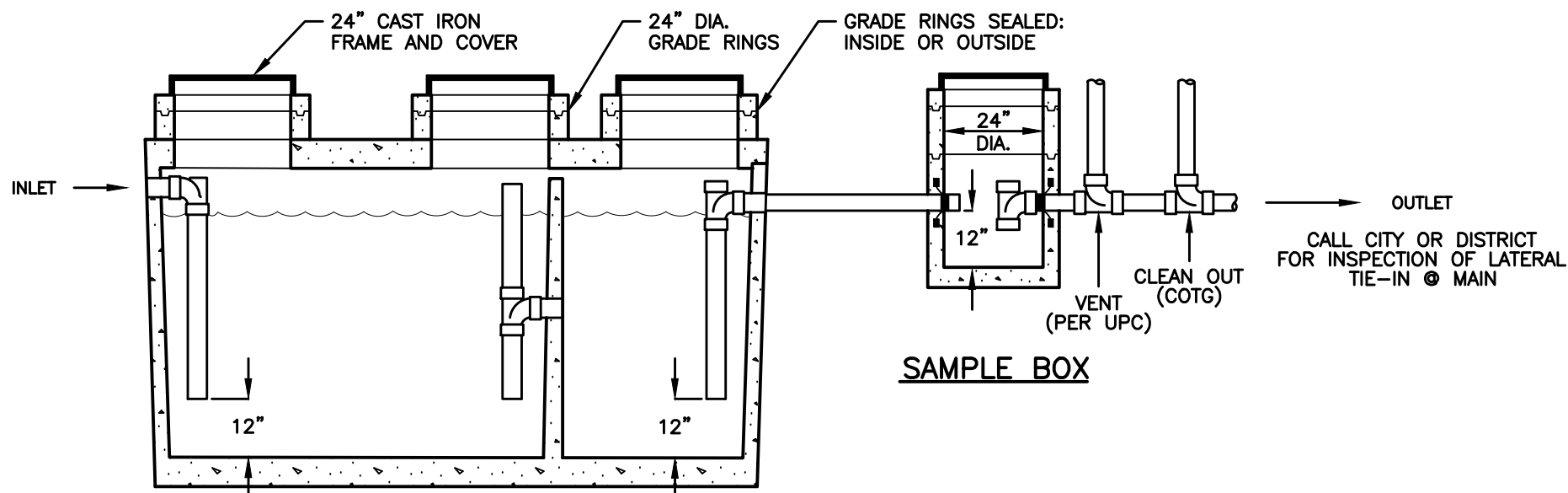
SHEET
2 OF 2



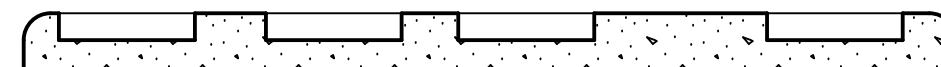
PLAN VIEW



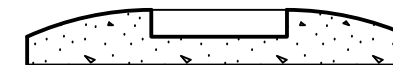
CONCRETE COLLAR DETAIL
PLAN VIEW



SIDE VIEW



PLAN VIEW



END VIEW

GREASE INTERCEPTOR TANK WITH SAMPLE BOX

REQUIREMENTS:

1. SIZE AND LOCATION OF INTERCEPTOR TO BE APPROVED PRIOR TO INSTALLATION.
2. INTERCEPTOR TO HAVE:
 - A. SAMPLE BOX
 - B. SANITARY TEE; INSIDE SAMPLE BOX, DISCHARGE SIDE
 - C. VENT
 - D. CLEANOUT PRIOR TO LATERAL CONNECTION
 - E. MANHOLE AT EACH INTERNAL BAFFLE TUBE - NO MORE THAN 10' BETWEEN MANHOLES
3. INSPECTION OF INTERCEPTOR
 - A. ALL CONNECTIONS TO INTERCEPTOR TO BE INSPECTED BY ECIS PRIOR TO BACKFILL OR REQUEST
4. ALL MANHOLES AND SAMPLE BOXES TO BE INSTALLED A MINIMUM OF 1/2" ABOVE ALL MANHOLE LIDS AND 12" DEEP
5. CONCRETE COLLAR, SAMPLE BOX FITTING AND ALL EXTERIOR PIPING APPLIED BY INSTALLER

SOUTH COAST WATER DISTRICT STANDARD DRAWING			
2014	GREASE INTERCEPTOR TANK	S-13	SHEET 1 OF 1