



Yucaipa Valley Water District

2022

STANDARD SPECIFICATIONS
FOR THE
DESIGN AND PROCESSING,
FURNISHING OF MATERIALS,
AND
CONSTRUCTION OF SEWER FACILITIES

YVWD SEWER FACILITY STANDARDS

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SEWER STANDARD INDEX

2022



Yucaipa Valley
Water District

Approved by the Yucaipa
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YVWD SEWER FACILITY STANDARDS
DRAWING INDEX (SUBJECT)

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S-2 SEWER MAINLINE LOCATION

MANHOLES

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STANDARD DESIGN REQUIREMENTS:

PLAN SCALE SIZES ARE REQUIRED TO BE DESIGNED AT 1"=40', PROFILE AT 1"=4'. SPECIAL CONSTRUCTION DETAILS MAY BE ADJUSTED AS NECESSARY FOR DESIGN AND CONSTRUCTION PURPOSES.

ALL PLAN SHEETS SHALL BE ON 24-INCH BY 36-INCH ARCHITECTURAL SHEET SIZE D.

ALL PROJECTS SHALL BE SUBMITTED TO THE DISTRICT ON MYLAR PRIOR TO CONSTRUCTION.

ALL PROJECTS, UPON COMPLETION, SHALL UPDATE THE MYLAR PLANS AND PROVIDE AUTOCAD FILES FOR DISTRICT USE AND RECORDS UPON COMPLETION.

STANDARD LEGEND

	RIGHT OF WAY (R.O.W.)
	CENTERLINE
	EXISTING DRINKING WATER LINE
	PROPOSED DRINKING WATER LINE
	EXISTING RECYCLED WATER LINE
	PROPOSED RECYCLED WATER LINE
	EXISTING SEWER LINE
	PROPOSED SEWER LINE
	EXISTING GAS LINE
	PROPOSED GAS LINE
	SERVICE LATERAL
	ENCASEMENT
	EXISTING ELECTRICAL CONDUIT
	PROPOSED ELECTRICAL CONDUIT
	EXISTING TELEPHONE CONDUIT
	PROPOSED TELEPHONE CONDUIT
	EXISTING FIBER OPTIC CABLE
	PROPOSED FIBER OPTIC CABLE
	PORTLAND CEMENT CONCRETE IN SECTION
	PORTLAND CEMENT CONCRETE IN PLAN

	POWER POLE AND GUY LINE		CLEAN-OUT
	TRAFFIC SIGNAL EXISTING		HOUSE CONNECTION SEWER
	WATER WELL		WYE BRANCH
	BUTTERFLY VALVE		CUT-OFF WALL
	GATE VALVE		C.O. CLEAN-OUT
	FIRE HYDRANT		D.I.P. DUCTILE IRON PIPE
	BLOW-OFF		D.M.H. DROP MANHOLE
	AIR & VACUUM VALVE ASSEMBLY (SIZE PER PLAN)		J.M.H. JUNCTION MANHOLE
	DRINKING WATER QUALITY SAMPLE STATION		M.H. MANHOLE
	RECYCLED WATER QUALITY SAMPLE STATION		V.C.P. VITRIFIED CLAY PIPE

STANDARD DESIGN REQUIREMENTS AND LEGEND

2022

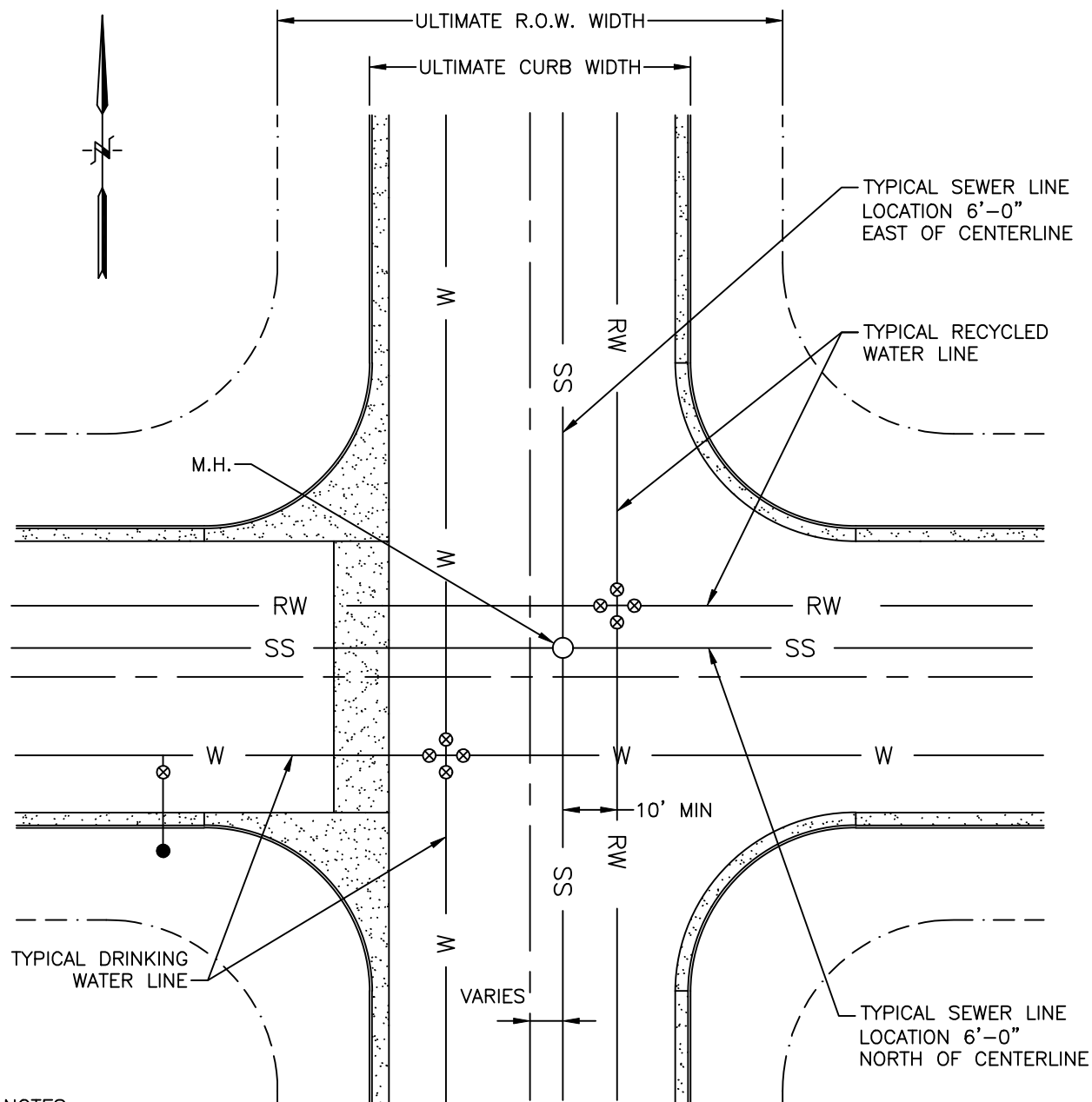


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NOTES:

SEWER PIPELINE SIZE TO BE DETERMINED BY Y.V.W.D.

PLAN SCALE SIZES ARE REQUIRED TO BE DESIGNED AT 1"=40', 1"=4' PROFILE. SPECIAL CONSTRUCTION DETAILS MAY BE ADJUSTED AS NECESSARY FOR DESIGN AND CONSTRUCTION PURPOSES.

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SEWER MAINLINE LOCATION

2022

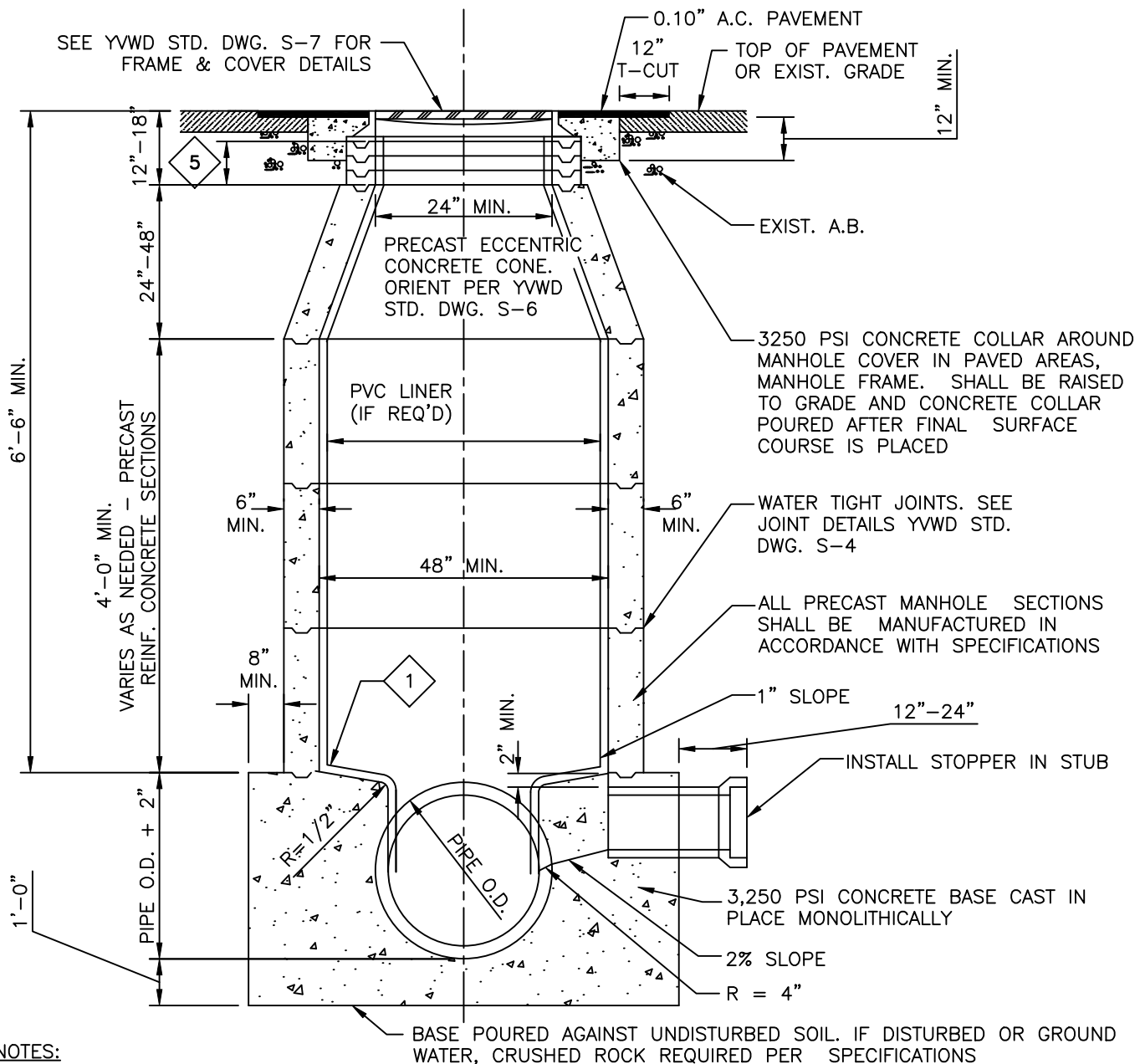


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MANHOLE DETAIL

2022



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FOR LOCATION OF
MH. SHAFT
OPENING SEE
YVWD STD. DWG.
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PIPE SHALL BE LAID
WITH END SQUARE INTO
MH. BASE, UNLESS
OTHERWISE NOTED.
CONSTRUCT FILLET
SHELF OVER PIPE TO
DRAIN

MH. STATIONING

0.10' MIN. FALL ACROSS MH.
UNLESS SEWER SLOPE GREATER.
0.20' MIN. FALL FOR 90" MH.

JOINT SEALING
COMPOUND
STRIP PER
MANUFACTURERS
REQUIREMENTS

PLASTIC JOINT

MORTAR JOINT

NOTES:

1. MORTAR JOINTS - SUFFICIENT MORTAR SHALL BE APPLIED ACROSS ENTIRE FACE OF JOINT SO THAT WHEN PRECAST UNITS ARE PLACED ON TOP OF ONE ANOTHER, THE MORTAR WILL SQUEEZE OUT BOTH THE INSIDE AND OUTSIDE WALL FACES. JOINTS SHALL BE "POINTED UP" AFTER SETTING PRECAST UNITS EXCLUDING GRADE RINGS.
2. ALL MORTARED JOINTS MUST HAVE A TOOLED FINISH ON INSIDE OF MANHOLES. EXCESS MORTAR SHALL BE CLEANED OFF OF PRE-CAST CONCRETE SECTIONS.
3. PLASTIC JOINTS - PREFORMED COLD-APPLIED READY-TO-USE PLASTIC JOINT SEALING COMPOUND SHALL BE QUICK-SEAL AS SUPPLIED BY QUIKSET UTILITY VAULTS, SANTA ANA, CALIFORNIA - OR APPROVED EQUAL. MUST BE USED WHEN GROUND WATER IS ENCOUNTERED.

CONCRETE BASE AND JOINT DETAIL

2022

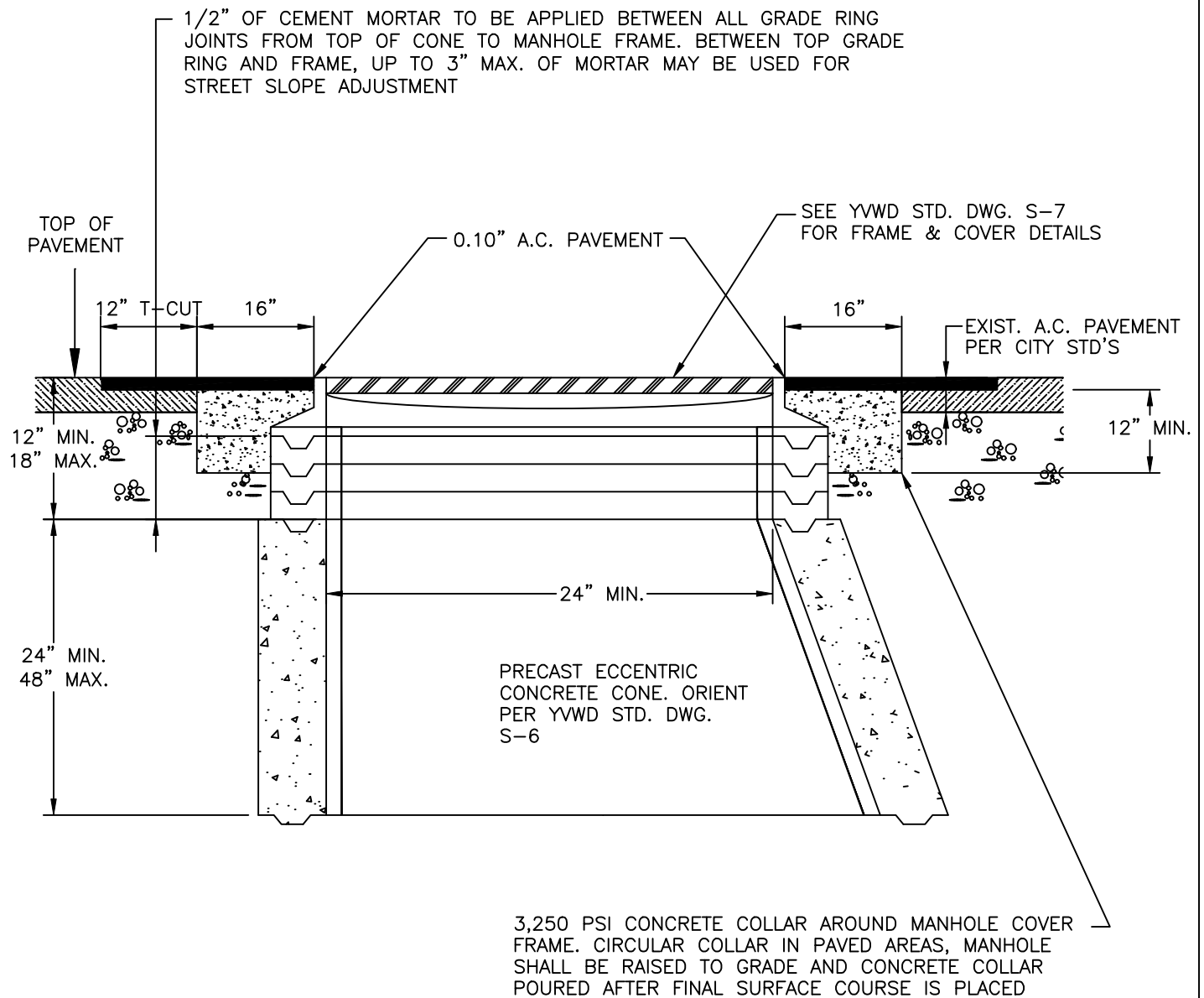


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NOTES:

1. MORTAR JOINTS – SUFFICIENT MORTAR SHALL BE APPLIED ACROSS ENTIRE FACE OF JOINT SO THAT WHEN PRECAST UNITS ARE PLACED ON TOP OF ONE ANOTHER, THE MORTAR WILL SQUEEZE OUT BOTH THE INSIDE AND OUTSIDE WALL FACES. JOINTS SHALL BE "POINTED UP" AFTER SETTING PRECAST UNITS EXCLUDING GRADE RINGS.
2. ALL MORTARED JOINTS MUST HAVE A TOOLED FINISH ON INSIDE OF MANHOLES. EXCESS MORTAR SHALL BE CLEANED OFF OF PRE-CAST CONCRETE SECTIONS.

ADJUST EXISTING MANHOLE TO GRADE

2022

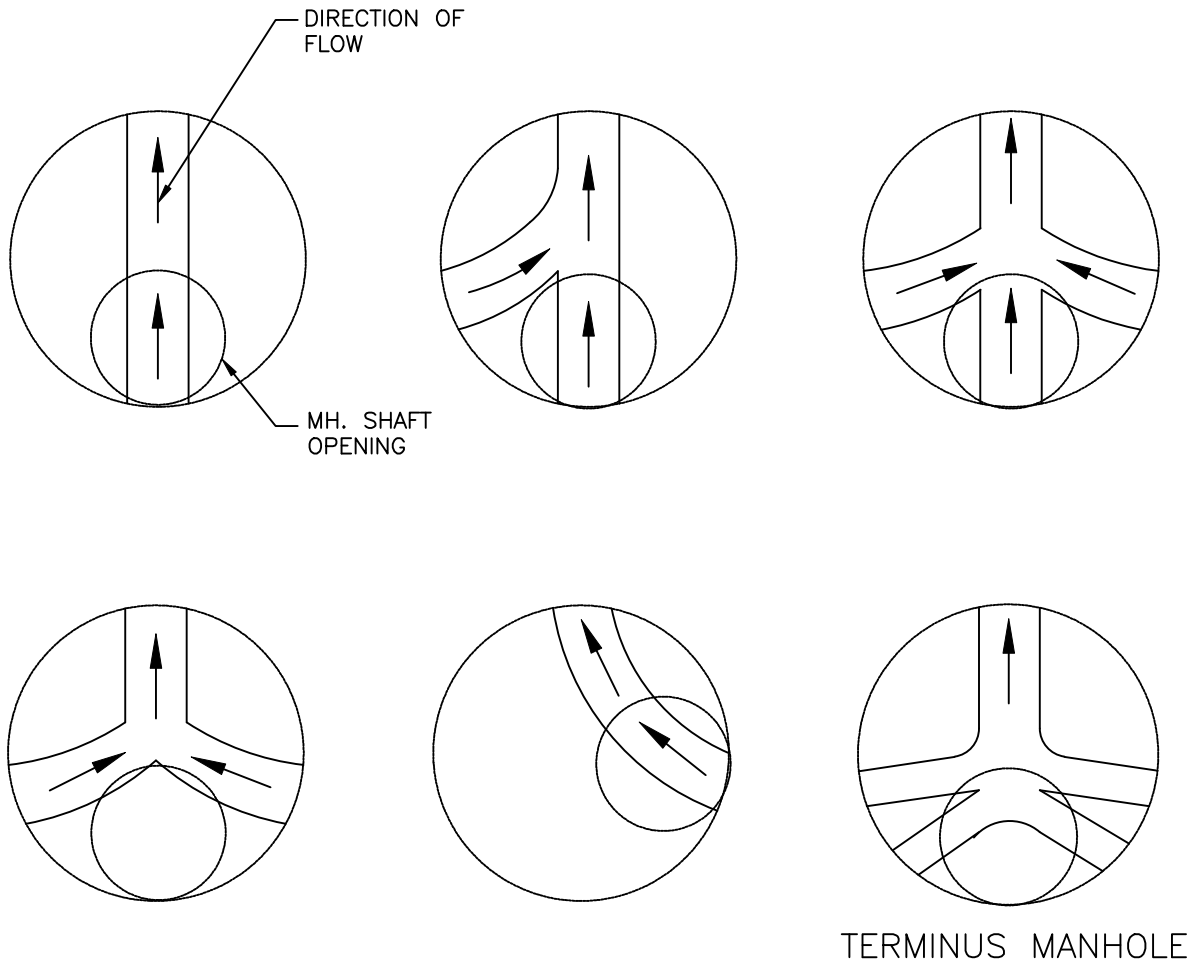


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MANHOLE SHAFT LOCATION DETAILS

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NOTES:

1. 48" AND 60" MANHOLES SHALL HAVE 24" COVERS. 72" MANHOLES SHALL HAVE 30" COVERS.
2. WHERE FRAME AND COVER ARE SET 18" ABOVE GRADE, 4 $\frac{1}{2}$ " DIA. INSERTS FOR ADJUSTABLE STUDS SHALL BE CAST IN TOP GRADE RING, ALIGNED AS DETAILED ON SHEET 1 OF 2. FRAME SHALL BE BOLTED TO GRADE RING.
3. WHERE MANHOLE IS LOCATED WITHIN AN EASEMENT, BOLT DOWN FRAME AND COVER SHALL BE REQUIRED.

MANHOLE DIMENSIONS		
SIZE	24"	30"
A	32"	38"
B	27 1/4"	33"
C	24"	30"
D	3.5"	6"
E	4"	4"

MANHOLE SIZES			
SEWER MAIN	MAX BRANCH SIZE	MANHOLE SIZE	FRAME AND COVER
8" – 15"	10"	48"	24"
18" – 21"	12"	60"	24"
24" – 36"	15"	72"	30"

TRAFFIC MANHOLE FRAME AND COVER

2022



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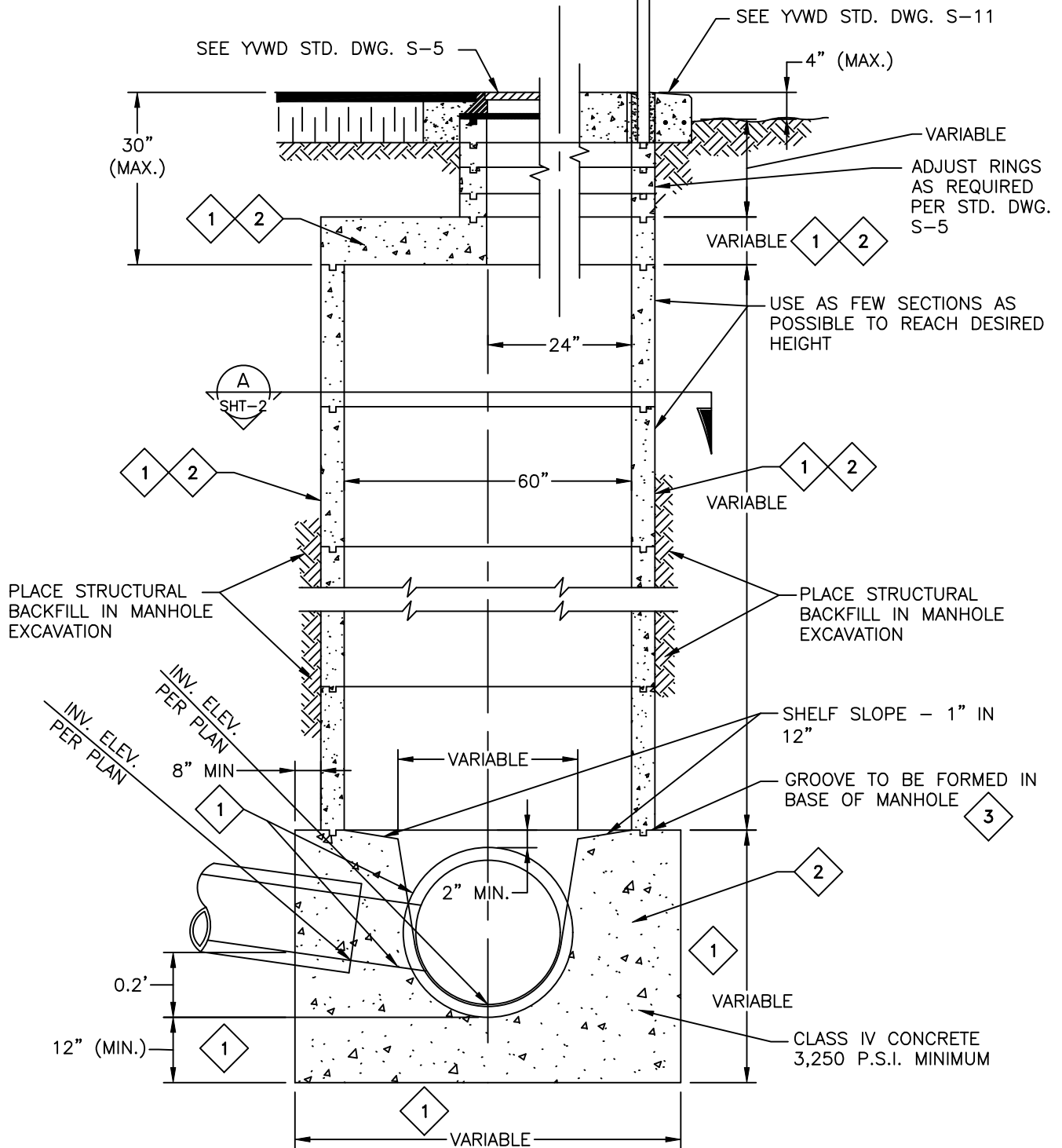
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DETAIL FOR MANHOLES IN PAVED SURFACES

DETAIL FOR MANHOLES IN EASEMENTS



SEE YVWD STD. DWG. S-8 SHEET 2 OF 2 FOR SECTION AND NOTES

SPECIAL MANHOLE (20' TO 30' DEEP)

2022

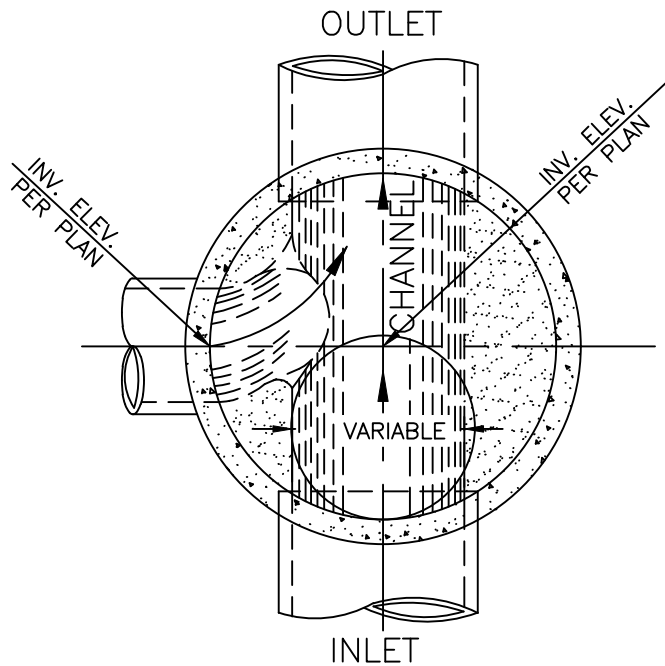


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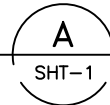
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SECTION



NOTES:

1. DIMENSIONS PER MANHOLE MANUFACTURER'S SPECIFICATIONS.
2. STEEL REINFORCEMENT PER MANHOLE MANUFACTURER'S SPECIFICATIONS.
3. INVERT CHANNELS, SHELF AND GROOVE SHALL BE FORMED MONOLITHICALLY WITH THE MANHOLE BASE, NO REWORKING OF CONCRETE WHICH HAS PARTIALLY HARDENED.
4. ALL SECTIONS TO BE WASHED, TO REMOVE ANY LOOSE MATERIAL AND WHILE STILL WET, THEY ARE TO BE SET IN 1:3 MORTAR TRIMMED SMOOTH INSIDE AND OUTSIDE AT TIME OF SETTING, INCLUDING FRAME. INSIDE MORTARED JOINTS MUST HAVE A TOOLED FINISH. EXCESS MORTAR SHALL BE CLEANED OFF PRE-CAST CONCRETE SECTIONS.
5. CONCRETE FOR MANHOLE SECTION 3,250 P.S.I. MINIMUM.
6. PROVIDE FLEXIBLE JOINT IN ALL SEWER PIPES OUTSIDE MANHOLE BUT WITHIN 12"-24" OF CONCRETE BASE. NO BELLS, USE MISSION CLAY STAINLESS STEEL BAND REPAIR COUPLINGS OR EQUAL.
7. ADJUSTMENT OF FRAME AND COVER AFTER FINAL PAVING OPERATIONS. FRAME AND COVER SHALL BE SET 1/4" BELOW PAVING TO ALLOW FOR PAVING SETTLEMENT.
8. PRECAST MANHOLE SUPPLIER TO SUBMIT STRUCTURAL CALCULATION TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
USE: SOIL ACTIVE PRESSURE = 49 P.C.F.
SOIL BEARING PRESSURE = 1,500 P.S.F. (OR VALUES PER APPROVED SOIL REPORT)

SPECIAL MANHOLE (20' TO 30' DEEP)

2022



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DETAIL FOR MANHOLES IN EASEMENTS

4" MAX.

STD. DWG. S-11
- ADJUST RINGS
AS REQUIRED
PER STD. DWG.
S-5

—USE AS FEW SECTIONS
AS POSSIBLE TO REACH
DESIRED HEIGHT

- PLACE STRUCTURAL BACKFILL IN MANHOLE EXCAVATION

— SHELF SLOPE —
1" IN 12"

INV. ELEV.
PER PLAN

INV. ELEV.
PER PLAN

VARIABLE	UNIT	DESCRIPTION
...	...	...

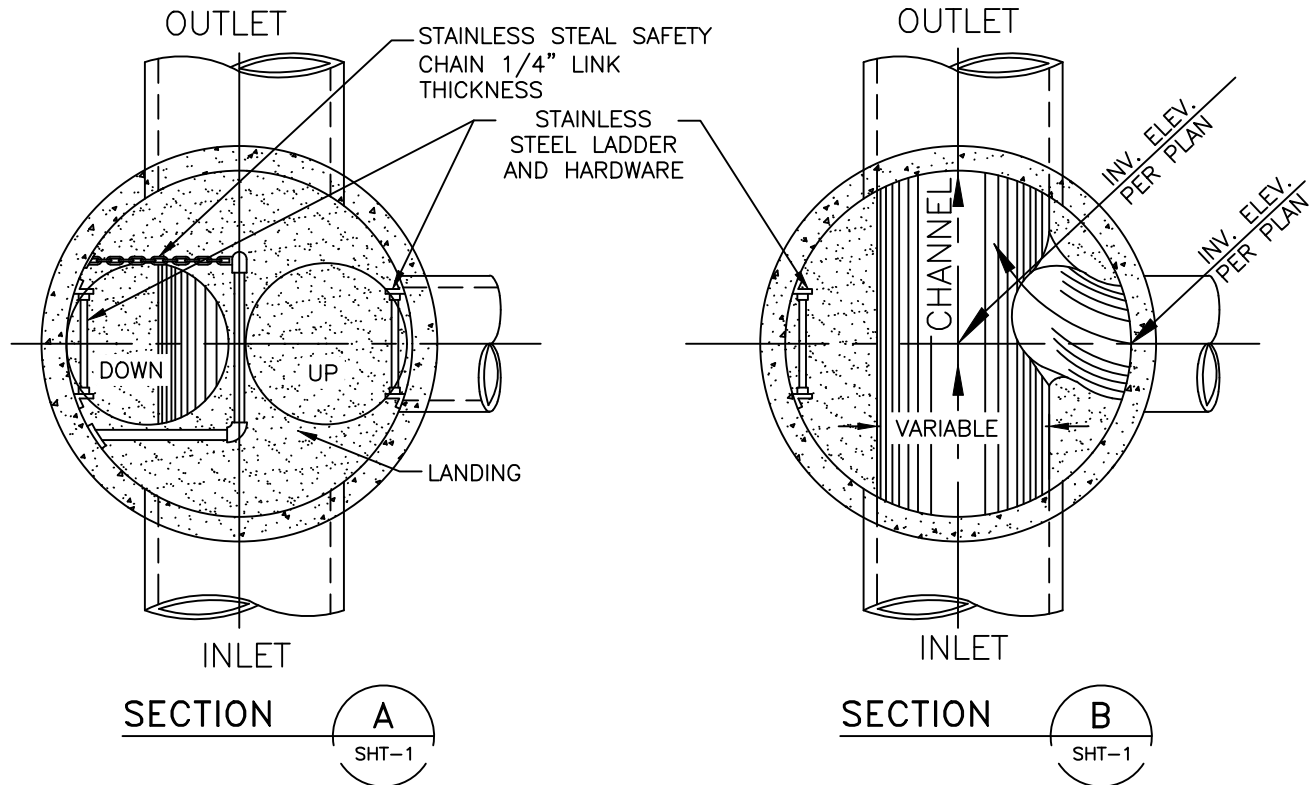
4	VARIABLE
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4	VARIABLE
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NOTES:

1. DIMENSIONS PER MANHOLE MANUFACTURER'S SPECIFICATIONS.
2. STEEL REINFORCEMENT PER MANHOLE MANUFACTURER'S SPECIFICATIONS.
3. INVERT CHANNELS, SHELF AND GROOVE SHALL BE FORMED MONOLITHICALLY WITH THE MANHOLE BASE, NO REWORKING OF CONCRETE WHICH HAS PARTIALLY HARDENED.
4. ALL SECTIONS TO BE WASHED, TO REMOVE ANY LOOSE MATERIAL AND WHILE STILL WET, THEY ARE TO BE SET IN 1:3 MORTAR TRIMMED SMOOTH INSIDE AND OUTSIDE AT TIME OF SETTING, INCLUDING FRAME. INSIDE MORTARED JOINTS MUST HAVE A TOOLED FINISH. EXCESS MORTAR SHALL BE CLEANED OFF PRE-CAST CONCRETE SECTIONS.
5. CONCRETE FOR MANHOLE SECTION 3,250 PSI MINIMUM.
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8. PRECAST MANHOLE SUPPLIER TO SUBMIT STRUCTURAL CALCULATION TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
 USE: SOIL ACTIVE PRESSURE = 49 P.C.F.
 SOIL BEARING PRESSURE = 1,500 P.S.F. (OR VALUES PER APPROVED SOIL REPORT)

SEE YVWD STD. DWG. S-9 SHEET 1 OF 2

SPECIAL MANHOLE (30'+ DEEP)

2022

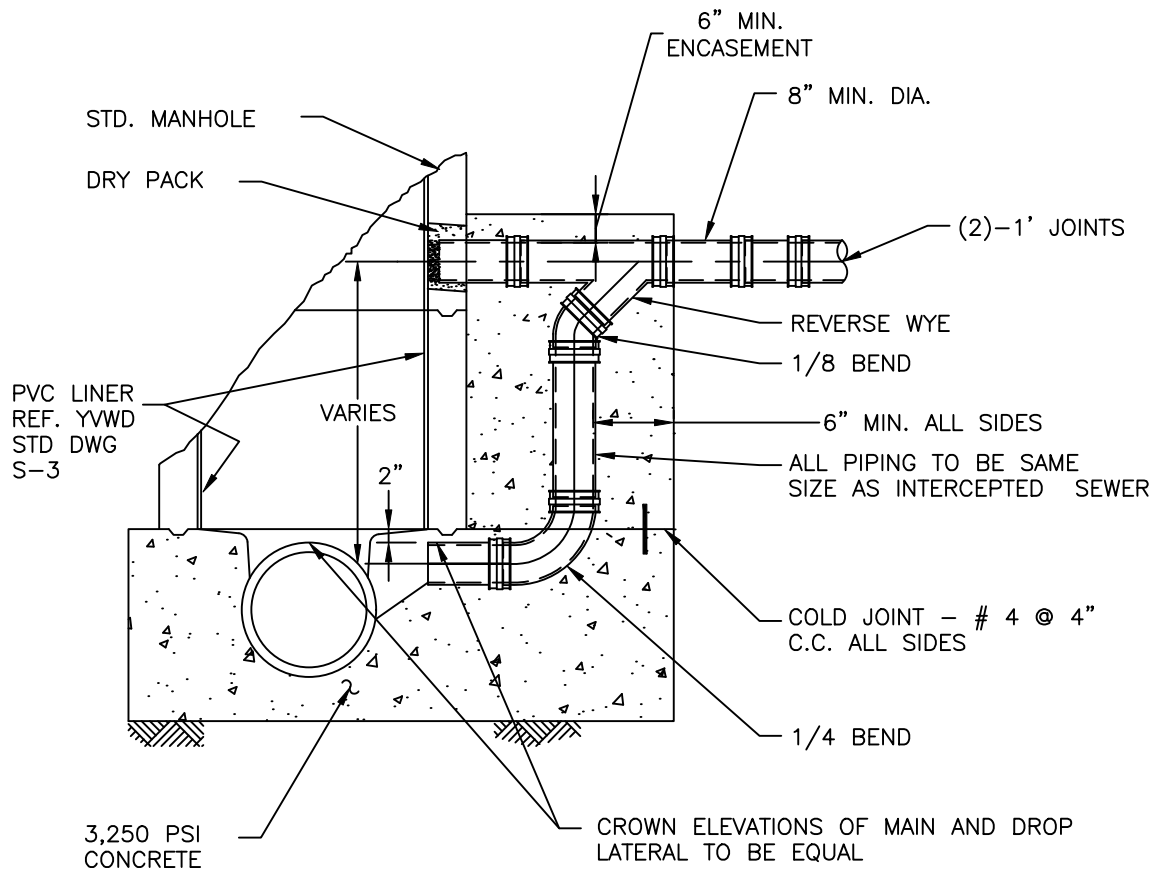


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SECTION

NOTES:

1. DROP MANHOLE ONLY TO BE USED FOR SPECIAL SITUATIONS, AND SHALL NOT BE CONSTRUCTED WITHOUT PRIOR 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.

DROP MANHOLE DETAIL (SPECIAL ACCEPTANCE ONLY)

2022

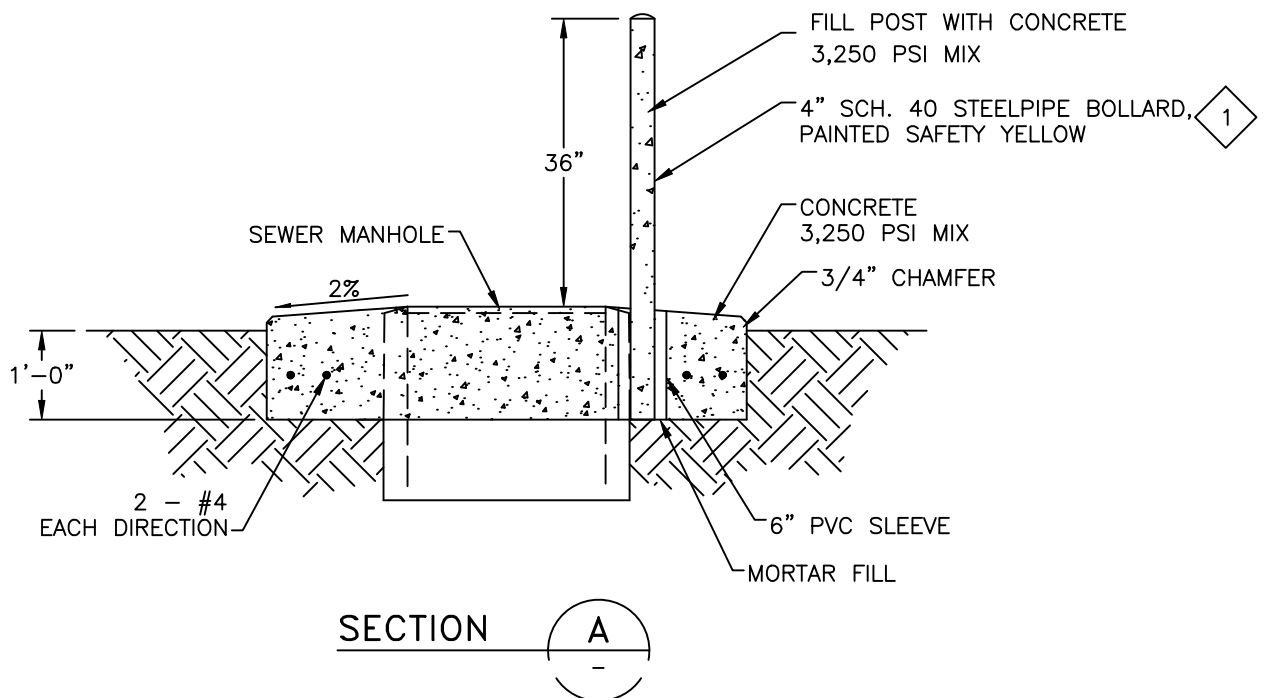
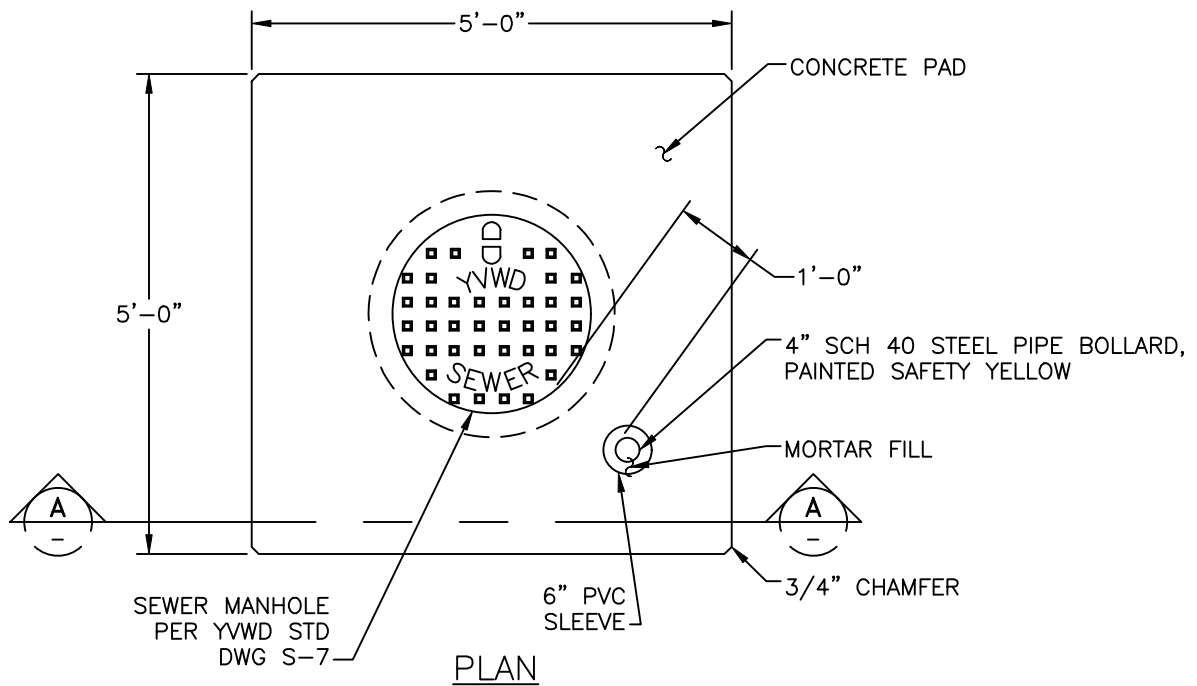


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SEE SHEET 2 OF 2 FOR NOTES

GUARD POST DETAILS

2022

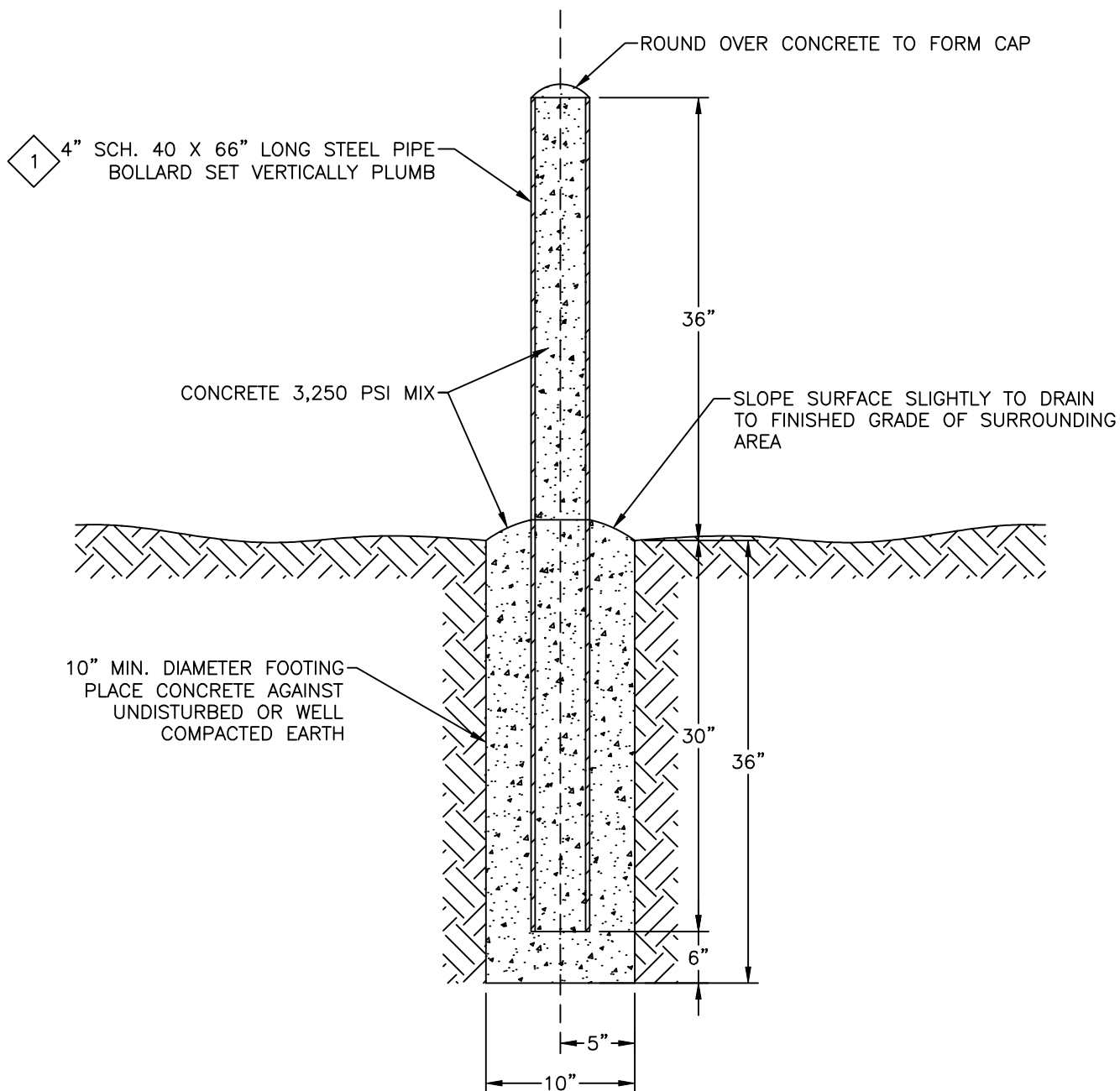


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NOTE:

1. PRIOR TO PAINTING, GUARD POST BOLLARD SHALL BE PREPARED PER SSPC-SP5. PAINT WITH 2 COATS, 3 TO 5 MILS EACH, OF RUST-OLEUM 7543 SAFETY YELLOW 025F.

GUARD POST DETAILS

2022

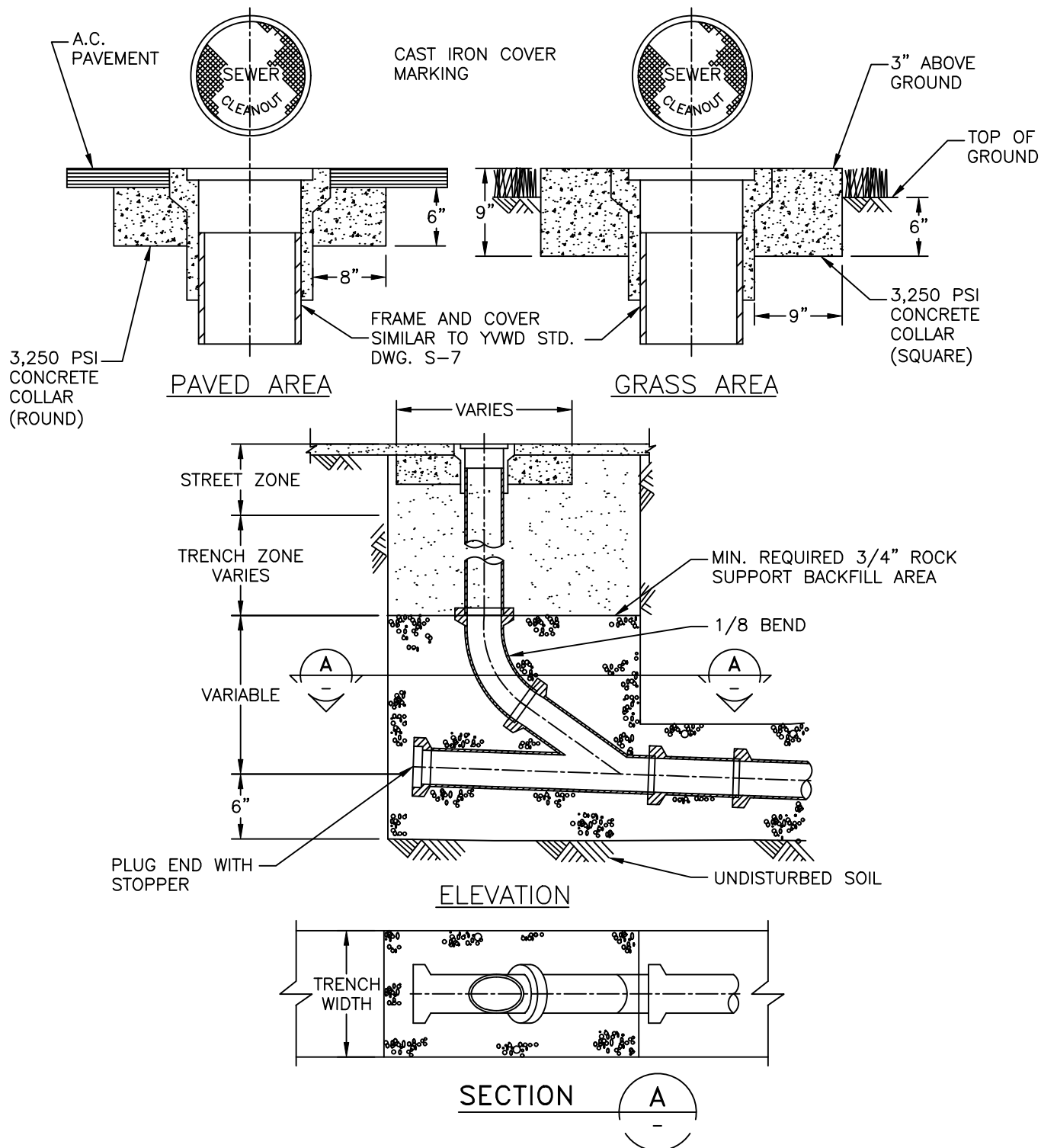


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NOTES:

1. CLEANOUT SHALL NOT BE CONSTRUCTED WITHOUT PRIOR APPROVAL FROM DISTRICT.
2. CLEANOUT PIPE TO BE SAME SIZE AND KIND OF MATERIAL AS MAIN.

TERMINAL OR MAINLINE CLEANOUT DETAIL (SPECIAL ACCEPTANCE ONLY)

2022

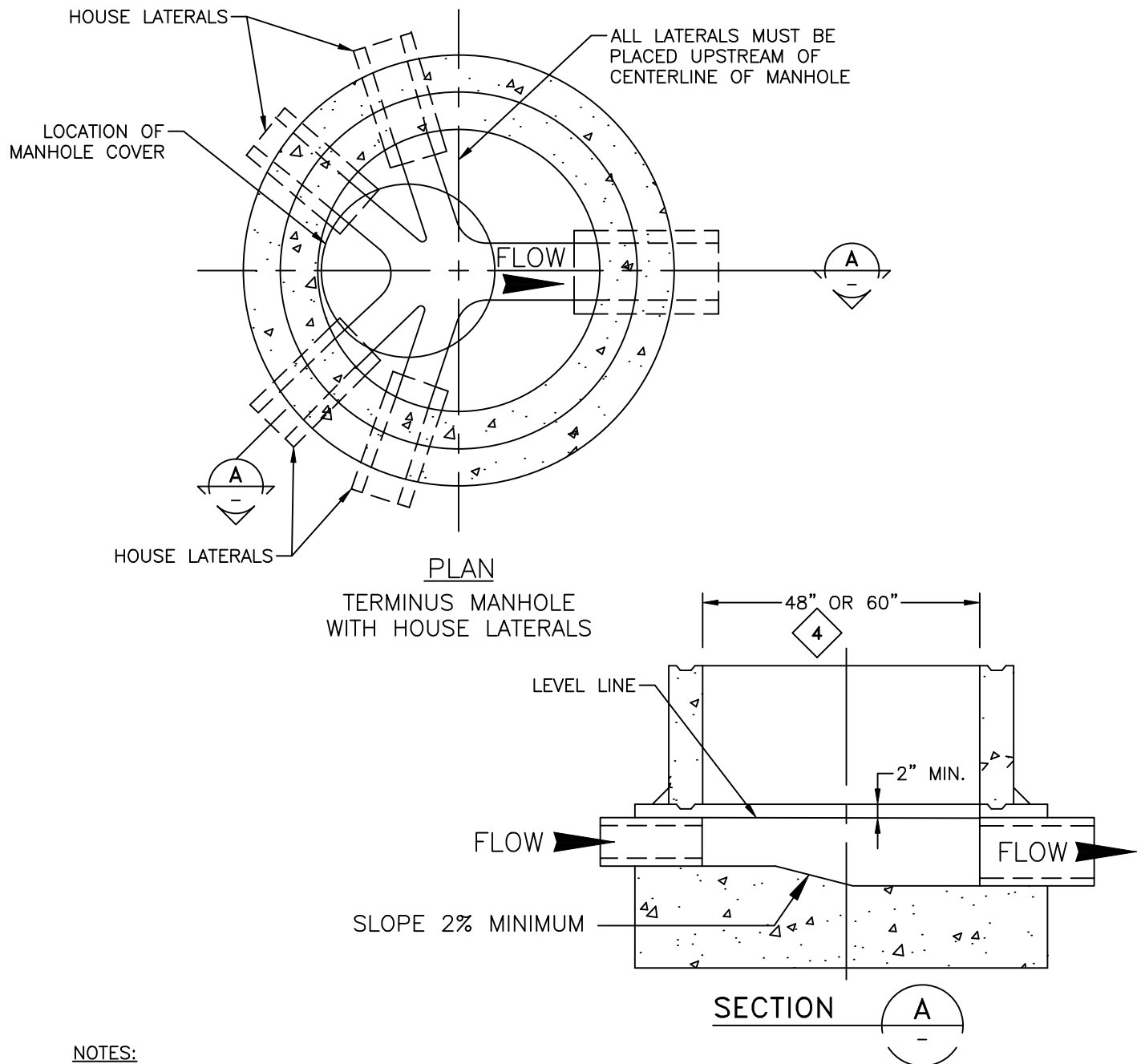


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NOTES:

1. REFER TO STANDARD DRAWINGS OF MANHOLES FOR DETAILS PERTAINING TO MANHOLES ONLY.
2. THE MAXIMUM NUMBER OF LATERALS INTO A TERMINUS MANHOLE SHALL BE FOUR.
3. THE MAXIMUM NUMBER OF LATERALS INTO A KNUCKLE MANHOLE SHALL BE THREE.
4. ALL MANHOLES WITH THREE OR MORE CONNECTING LATERALS SHALL BE 5'-0" DIAMETER.

TERMINUS (CUL-DE-SAC) MANHOLE

2022

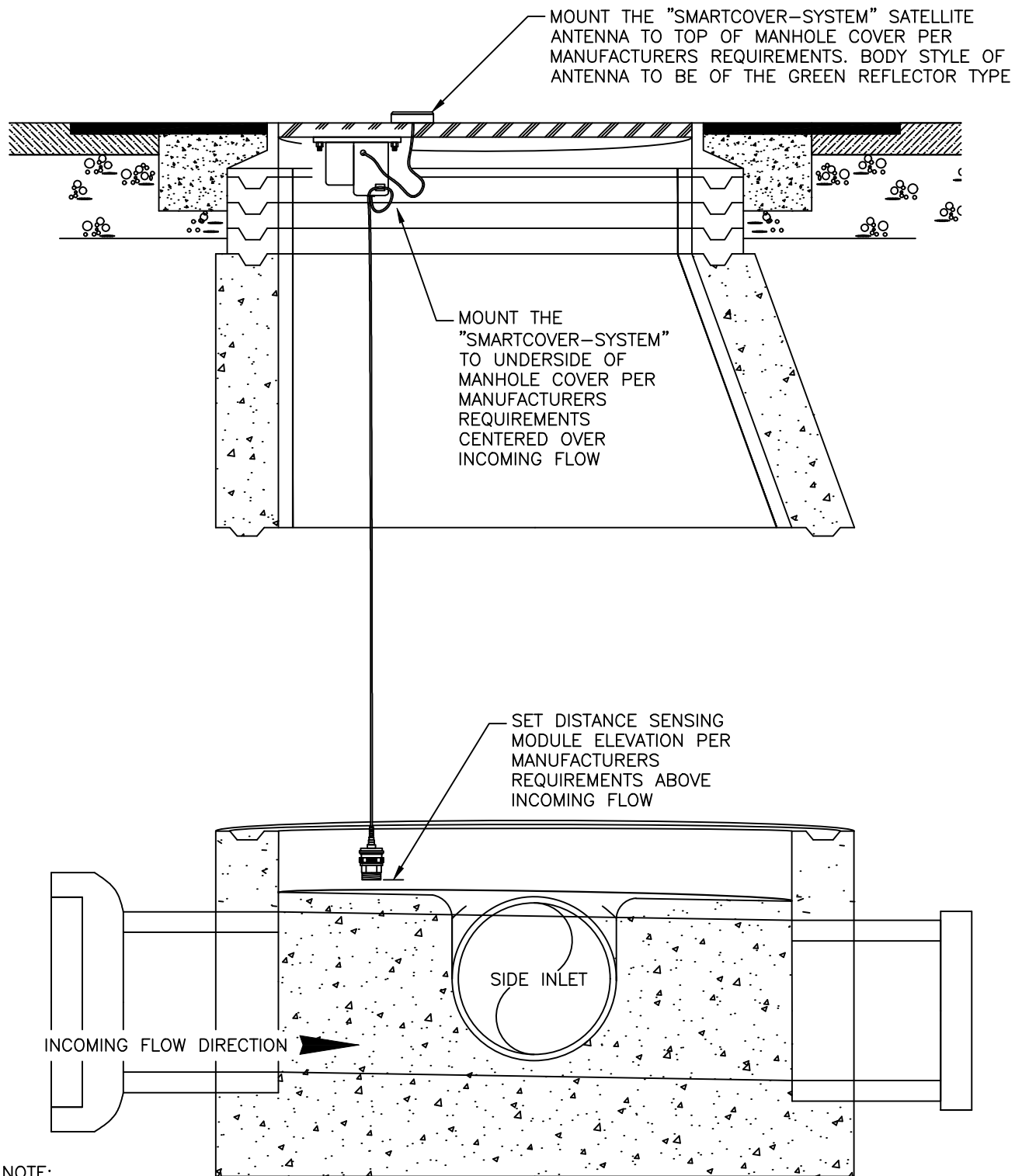


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1. THE "SMARTMANHOLE SYSTEM" IS A PRODUCT OF SMART COVER SYSTEMS, INC. (WWW.SMARTCOVERSYSTEMS.COM).

SMARTMANHOLE SYSTEM INSTALLATION

2022

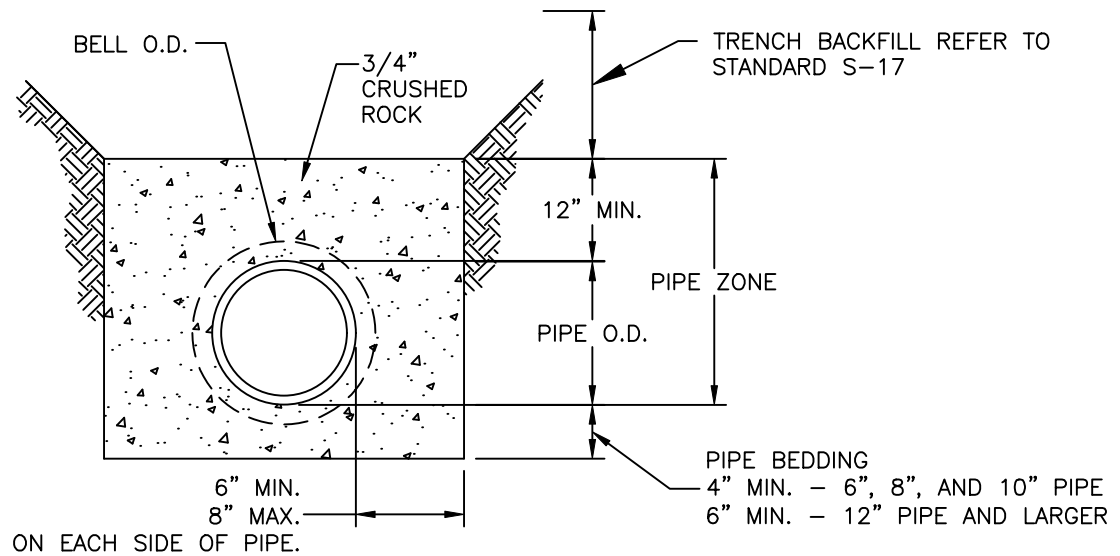


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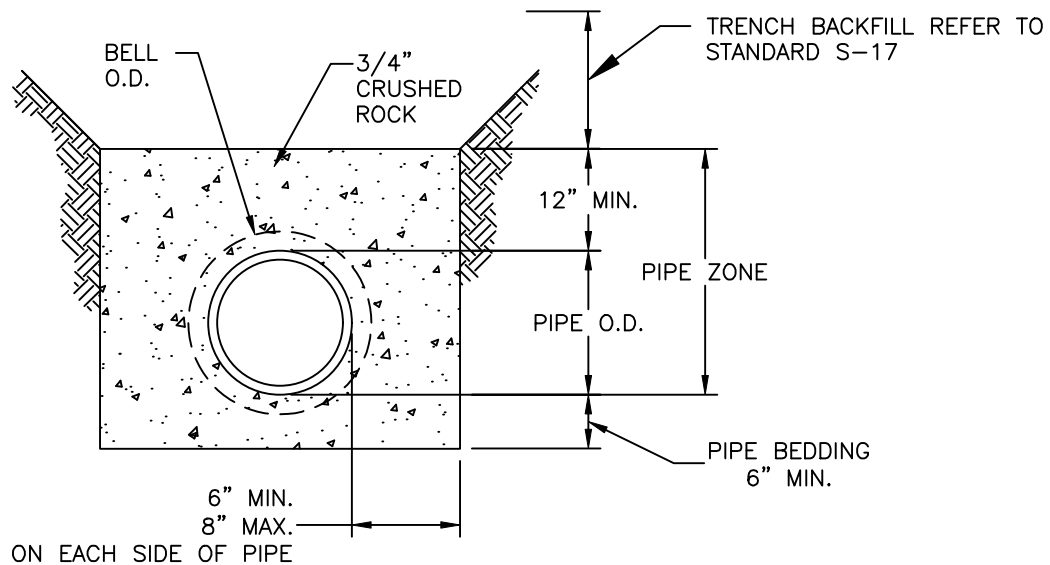
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LOAD FACTOR=1.1



LOAD FACTOR=2.2

NOTES:

1. IF UNSTABLE SOIL IS ENCOUNTERED, DISTRICT REPRESENTATIVE SHALL DETERMINE DEPTH OF REMOVAL AND SIZE OF FOUNDATION ROCK REFILL MATERIAL.

VITRIFIED CLAY PIPELINE BEDDING DETAIL

2022



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MINIMUM LOAD FACTOR – UNLIMITED TRENCH WIDTH

SEWER DIAMETER	DEPTH OF COVER						
	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"
8"	1.1	1.1	1.1	2.2	2.2	2.2	2.2
10"	1.1	1.1	2.2	2.2	2.2	2.2	–
12"	1.1	2.2	2.2	2.2	2.2	–	–
15"	1.1	2.2	2.2	2.2	–	–	–

NOTES:

- 3/4" CRUSHED ROCK SHALL BE PER STANDARD SPECIFICATIONS, WITH THE FOLLOWING GRADATIONS:

SIEVE	% PASSING
1"	100 %
3/4"	90 – 100%
1/2"	20 – 55%
3/8"	0 – 15%
NO. 4	0 – 5%

- FOR SEWER DIAMETERS DIFFERENT THAN SHOWN AND FOR DEPTHS OF COVER DIFFERENT THAN SHOWN, DISTRICT SHALL APPROVE PIPE BEDDING AND PIPE ZONE BACKFILL PRIOR TO CONSTRUCTION.
- WHEN DEPTH REACHES 10'-0", ALL PIPE ZONE BEDDING SHALL BE 3/4" CRUSHED ROCK WITH A MINIMUM DEPTH OF 6" BELOW PIPE UNLESS OTHERWISE NOTED ON PLANS.

VITRIFIED CLAY PIPELINE BEDDING DETAIL

2022

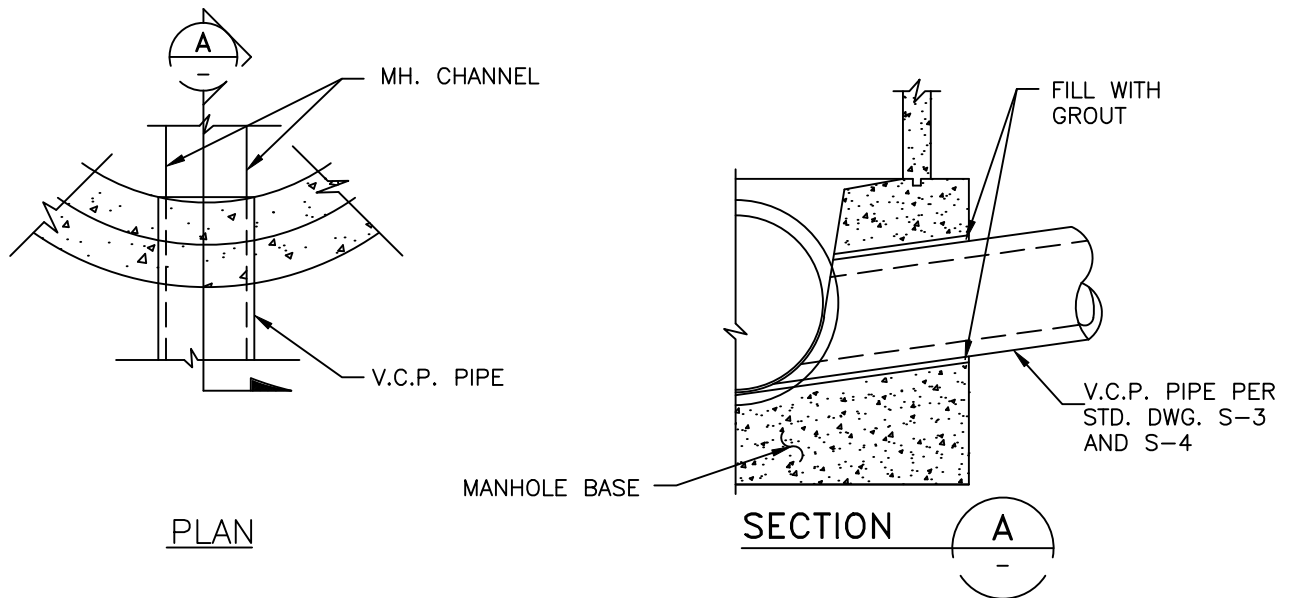


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NOTES:

1. CONCRETE ENCASEMENT PER YVWD STD. DWG. S-18 SHALL BE USED WHERE THE TRENCH WIDTH AT THE UPPER LIMIT OF THE PIPE ZONE EXCEEDS THE MAX. WIDTH SPECIFIED ABOVE.
2. IF UNSTABLE SOIL IS ENCOUNTERED, DISTRICT REPRESENTATIVE SHALL DETERMINE DEPTH OF REMOVAL AND SIZE OF FOUNDATION ROCK REFILL MATERIAL.

SEE YVWD STD. DWGS. S-3, S-4, AND S-5 FOR MANHOLE DETAILS

SPECIAL MANHOLE DETAILS

2022

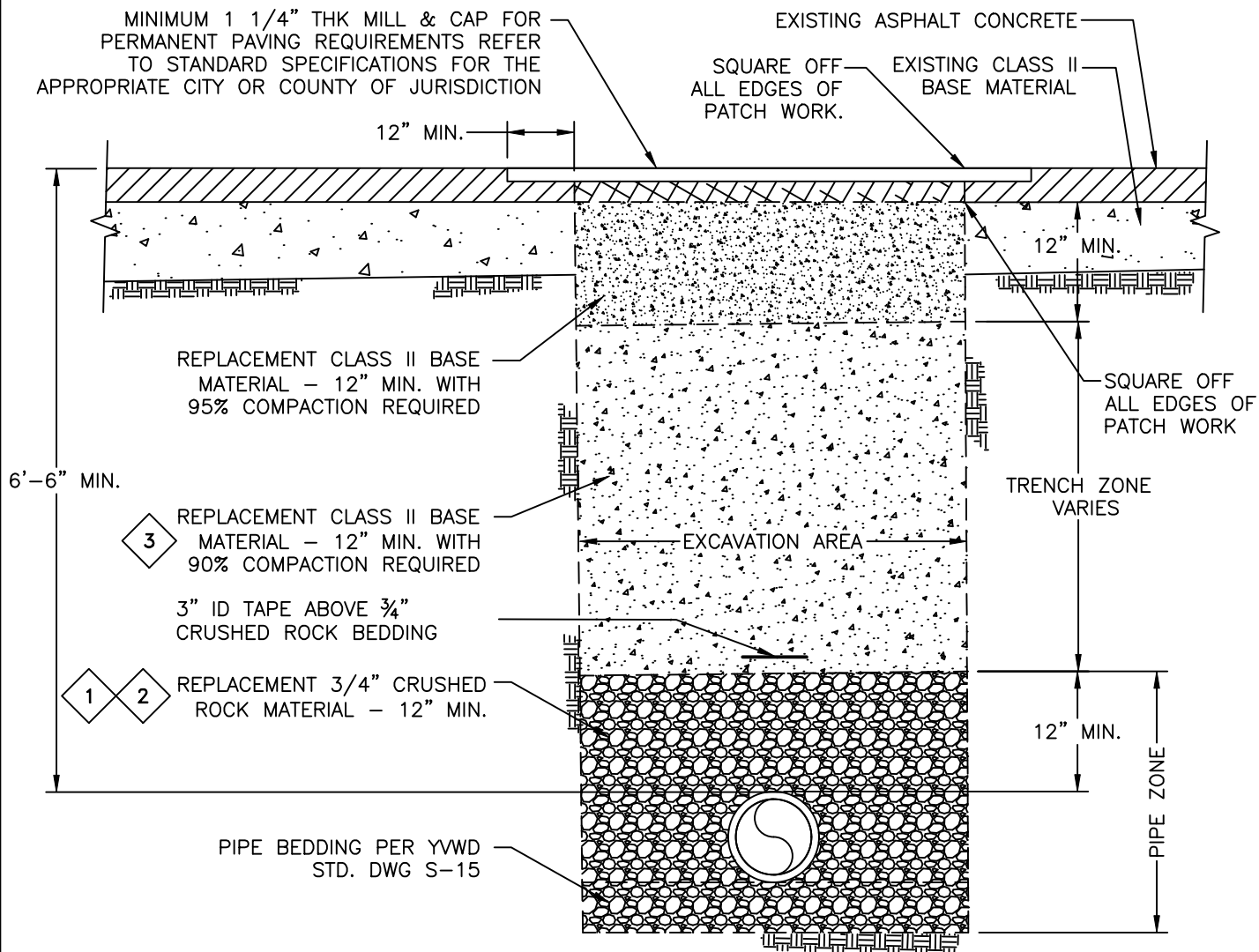


Yucaipa Valley
Water District

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NOTES:

1. 3/4" CRUSHED ROCK MATERIAL SHALL BE USED FOR PIPE ZONE BACK FILL. REMAINING BACK FILL WILL BE IN ACCORDANCE WITH DISTRICT REQUIREMENTS.
2. WHEN DEPTH REACHES 10'-0", ALL PIPE ZONE BEDDING SHALL BE 3/4" CRUSHED ROCK WITH A MINIMUM DEPTH OF 6" BELOW PIPE UNLESS OTHERWISE NOTED ON PLANS.
3. OUTSIDE OF STREET RIGHT OF WAY, COMPACTION SHALL BE 90%.
4. ADDITIONAL ARTERIAL STREET BACKFILL MAY BE REQUIRED BY APPROPRIATE CITY JURISDICTION.

SEE SHEET 2 OF 2 FOR PIPE VS. TRENCH SIZES

TRENCH REPAIR AND PIPE BEDDING DETAIL

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TRENCH REPAIR—PIPE SIZE VS TRENCH SIZE		
PIPE SIZE—INCHES (INSIDE DIAMETER)	TRENCH WIDTH—INCHES	
	MINIMUM	MAXIMUM
4	20	28
6	22	32
8	24	32
10	26	36
12	30	36
14	32	42
16	34	42

TRENCH REPAIR AND PIPE BEDDING DETAIL

2022

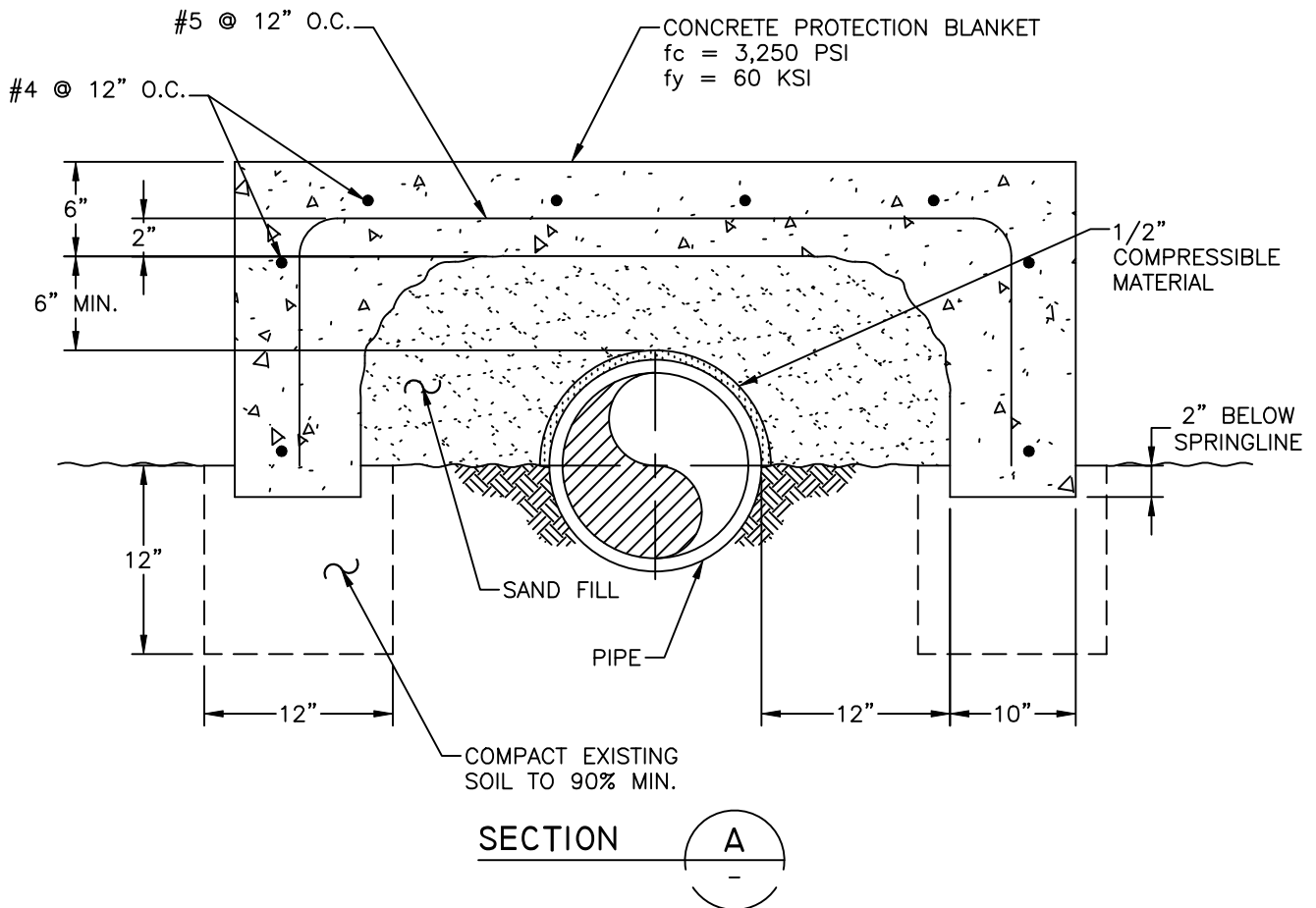
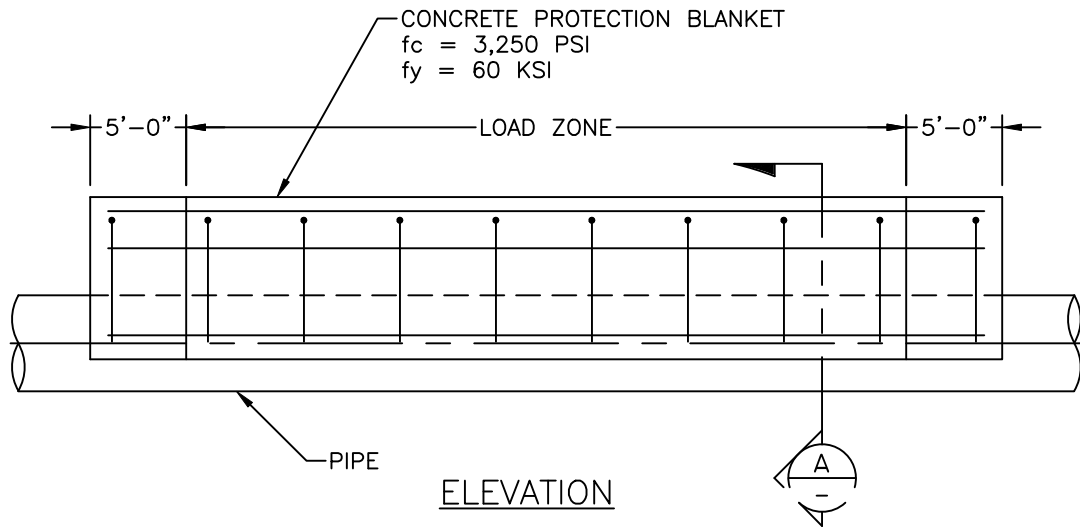


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SEWER MAINLINE PROTECTION DETAIL

2022

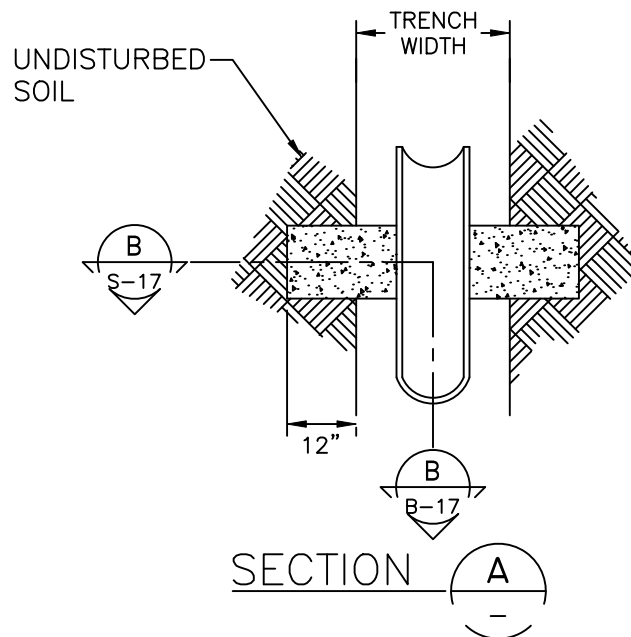
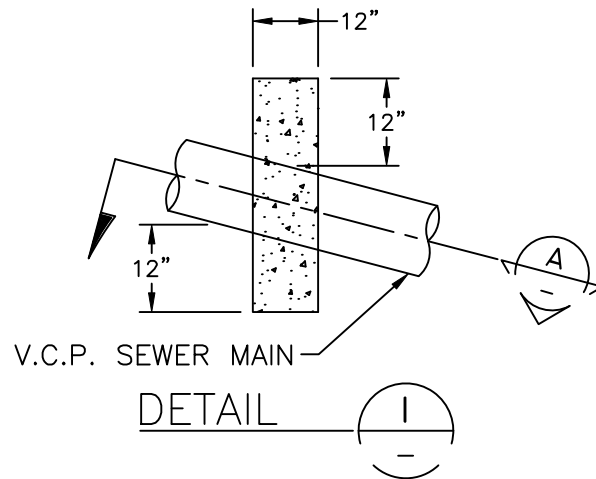
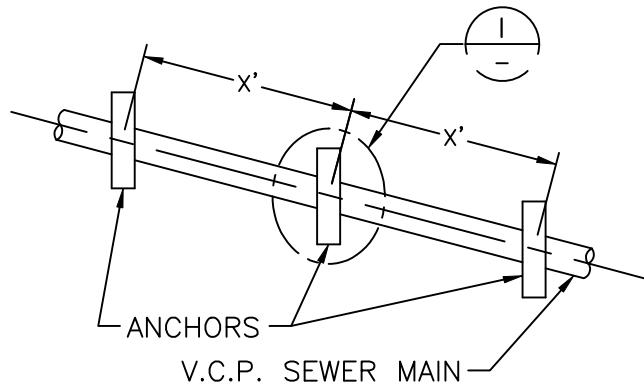


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SEE YWWD. STD. DWG. S-17 SHEET 2 OF 2 FOR SECTION B, REINFORCING STEEL PATTERN, PIPE SLOPE SCHEDULE, AND NOTES

CONCRETE SLOPE ANCHORS

2022

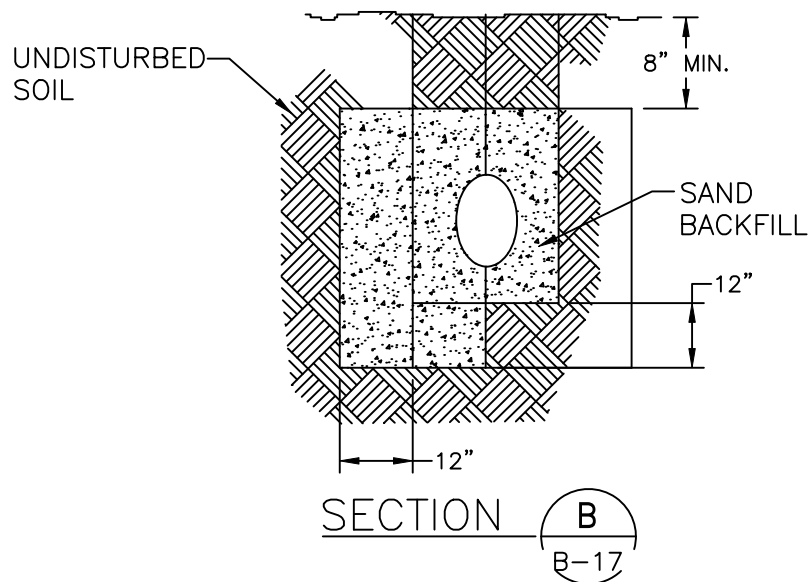


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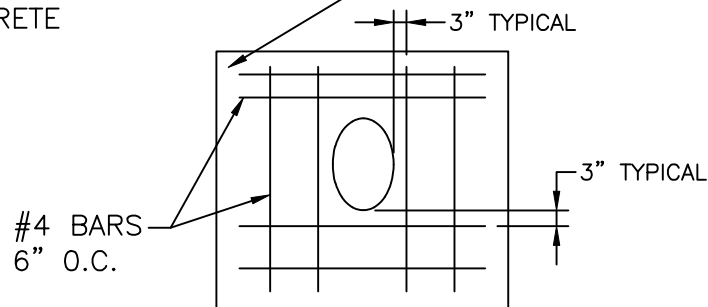
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3" MIN. CLEARANCE BETWEEN
REINFORCING STEEL AND EDGE
OF CONCRETE



REINFORCING STEEL PATTERN

PIPE SLOPE	PIPE SLOPE	X DISTANCE
100%	1:1	12'-0"
66.6%	1-1/2:1	14'-0"
50%	2:1	16'-0"
40%	2-1/2:1	18'-0"
33.3%	3:1	20'-0"

NOTES:

1. PIPE ANCHORS REQUIRED ON ALL SLOPES OF 3:1 OR STEEPER.
2. ANCHOR SHALL EXTEND 12" INTO NATURAL UNDISTURBED SOIL.
3. CONCRETE SHALL BE 3250 PSI MINIMUM.
4. ANCHORS FOR TRAPEZOIDAL TRENCH SECTIONS WILL CONFORM TO TRENCH CROSS SECTION AND EXTEND 12" INTO UNDISTURBED SOIL.

CONCRETE SLOPE ANCHORS

2022

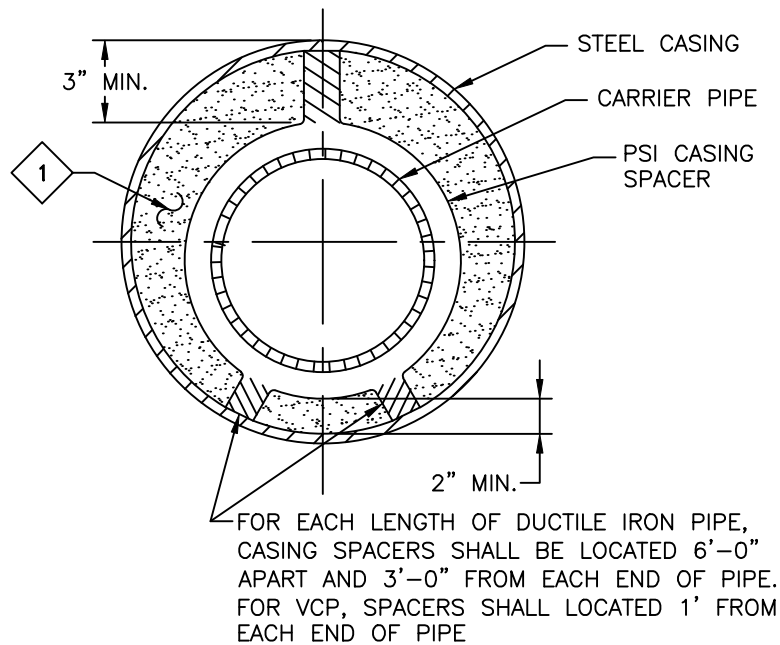


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STEEL CASING SCHEDULE

V.C.P. SIZE	MINIMUM CASING SIZE	MIN. WALL THICK.
6"	16" I.D.	1/4"
8"	18" I.D.	1/4"
10"	21" I.D.	5/16"
12"	24" I.D.	5/16"

NOTES:

1. THE ANNULAR SPACE BETWEEN THE CASING AND THE CARRIER PIPE SHALL BE FILLED WITH AIR BLOWN SAND.
2. UNLESS OTHERWISE NOTED, 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 YVWD STD. DWG S-17.
3. SIZE AND THICKNESS OF CASING SHALL BE AS SHOWN IN SCHEDULE.
4. ALL STEEL CASING PIPE FIELD JOINTS SHALL BE WELDED FULL-CIRCUMFERENCE.
5. PSI CASING SPACERS SHALL BE PROVIDED PER DETAIL ABOVE.
6. CARRIER PIPE SHALL BE AIR PRESSURE TESTED PRIOR TO FILLING CASING AND AGAIN WITH ENTIRE PIPELINE.
7. UPSTREAM AND DOWNSTREAM ELEVATIONS OF CARRIER PIPE TO BE VERIFIED PRIOR TO FILLING.
8. EACH END OF CASING SHALL BE SEALED WITH CONCRETE MORTAR.

STEEL CASING PIPE

2022

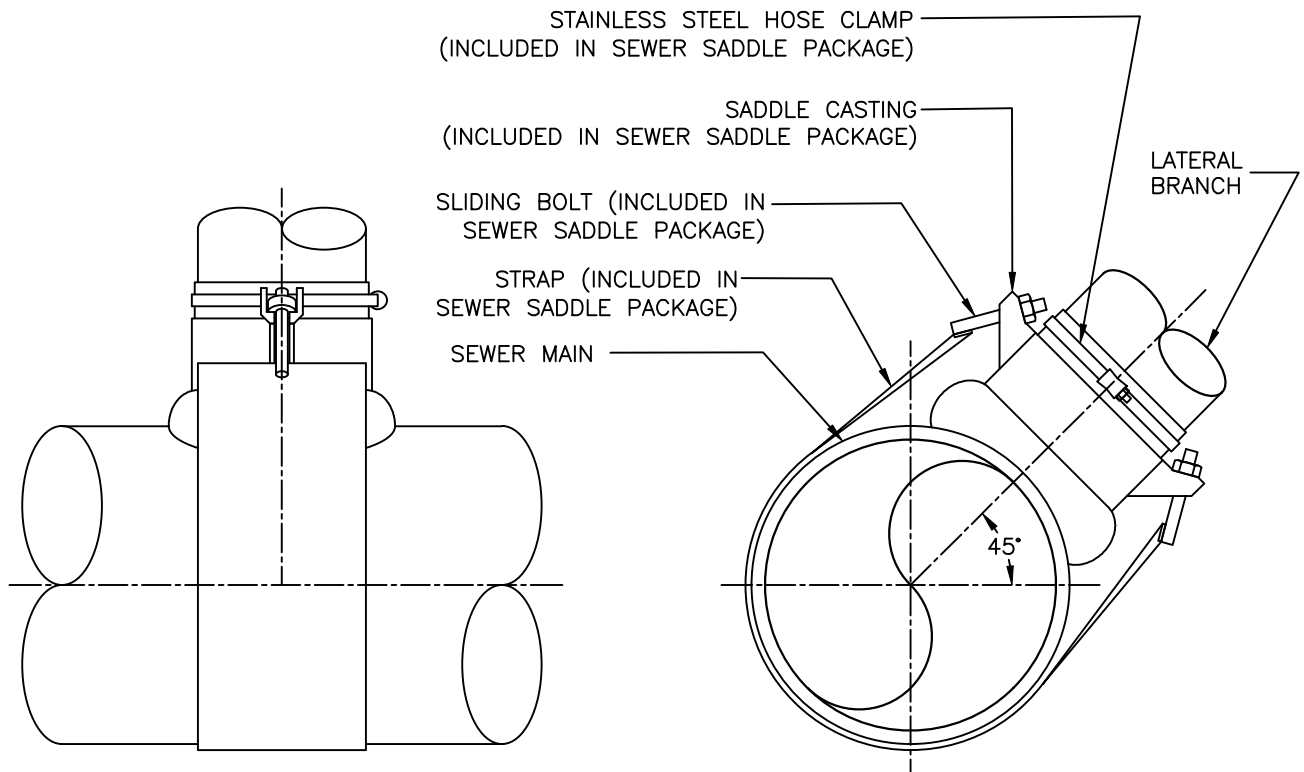


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SEWER SADDLE FOR 4" – 6" CLAY PIPE LATERAL CONNECTION

SEWER DIAMETER	ROMAC INDUSTRIES, INC. PART NUMBER	
	4" LATERAL BRANCH	6" LATERAL BRANCH
8" – 12"	CB-5.38	CB-7.56
14" – 24"	CB-5.38LS	CB-7.56LS
24" – 48"	CB-5.38XLS	CB-7.56XLS

NOTES:

1. LATERAL CONNECTION BY SADDLE METHOD SHALL BE USED ON PIPES 8" IN DIAMETER AND LARGER.
2. THE HOLE FOR THE COLLAR WYE FITTING FOR A SEWER SADDLE SHALL BE MADE WITH A TAPPING MACHINE. THE HOLE SHALL BE CLEANLY MACHINED, AND IF NECESSARY, WORKED BY HAND WITH A RASP OR SANDED TO ACCOMPLISH A TRUE AND NEAT OPENING FOR THE COLLAR WYE.
3. THE COLLAR WYE SADDLE SHALL BE SECURED TO THE SEWER MECHANICALLY.
4. DAMAGED PIPE SHALL BE REPAIRED AS DIRECTED BY THE DISTRICT REPRESENTATIVE.

4" AND 6" SEWER SADDLE CONNECTION TO EXISTING MAINLINE

2022



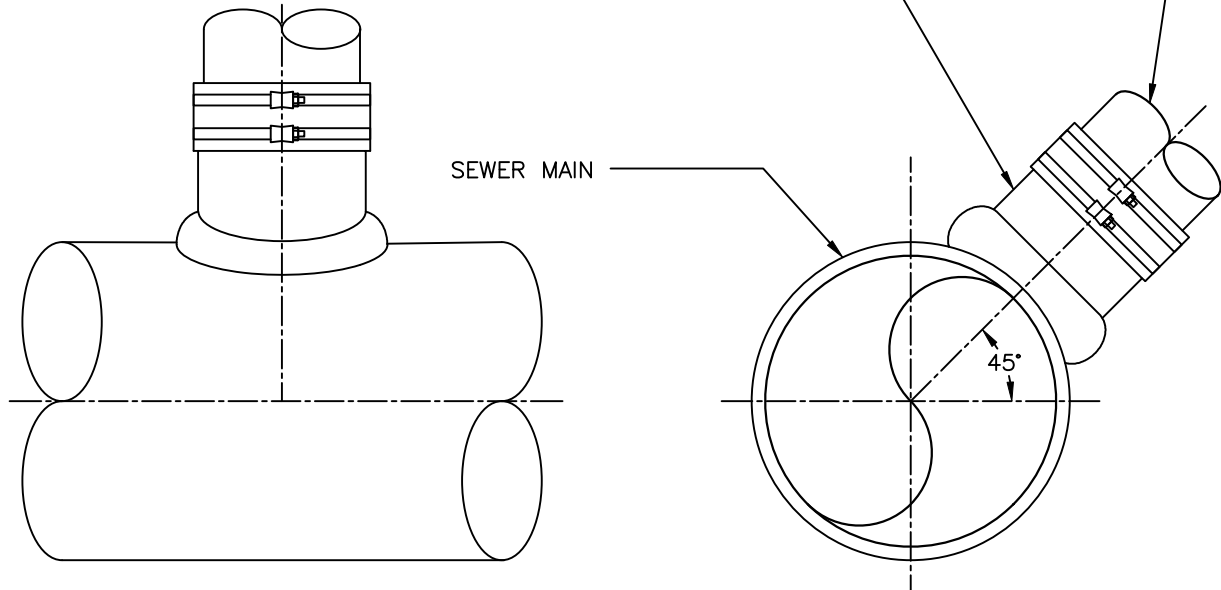
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MISSION CLAY PRODUCTS
 "TWIST-TEE" SEWER LATERAL SADDLE
 INSTALLED PER MANUFACTURERS SPECIFICATIONS
 AT 45 DEGREE ANGLE ABOVE CENTER OF MAIN



TWISTEE SEWER SADDLE FOR 4" – 6" CLAY PIPE LATERAL CONNECTION

SEWER DIAMETER	MISSION CLAY PRODUCTS, LLC TWIST-TEE SEWER SADDLE			
	4" LATERAL BRANCH		6" LATERAL BRANCH	
	PRODUCT NUMBER	PRODUCT NAME	PRODUCT NUMBER	PRODUCT NAME
8" – 10"	1404632	TT4-0810	–	–
12" – 15"	1404634	TT4-1215	1406641	TT6-1215
16" – 27"	1404636	TT4-1627	1406643	TT6-1624

4" AND 6" SEWER SADDLE CONNECTION TO EXISTING MAINLINE

2022

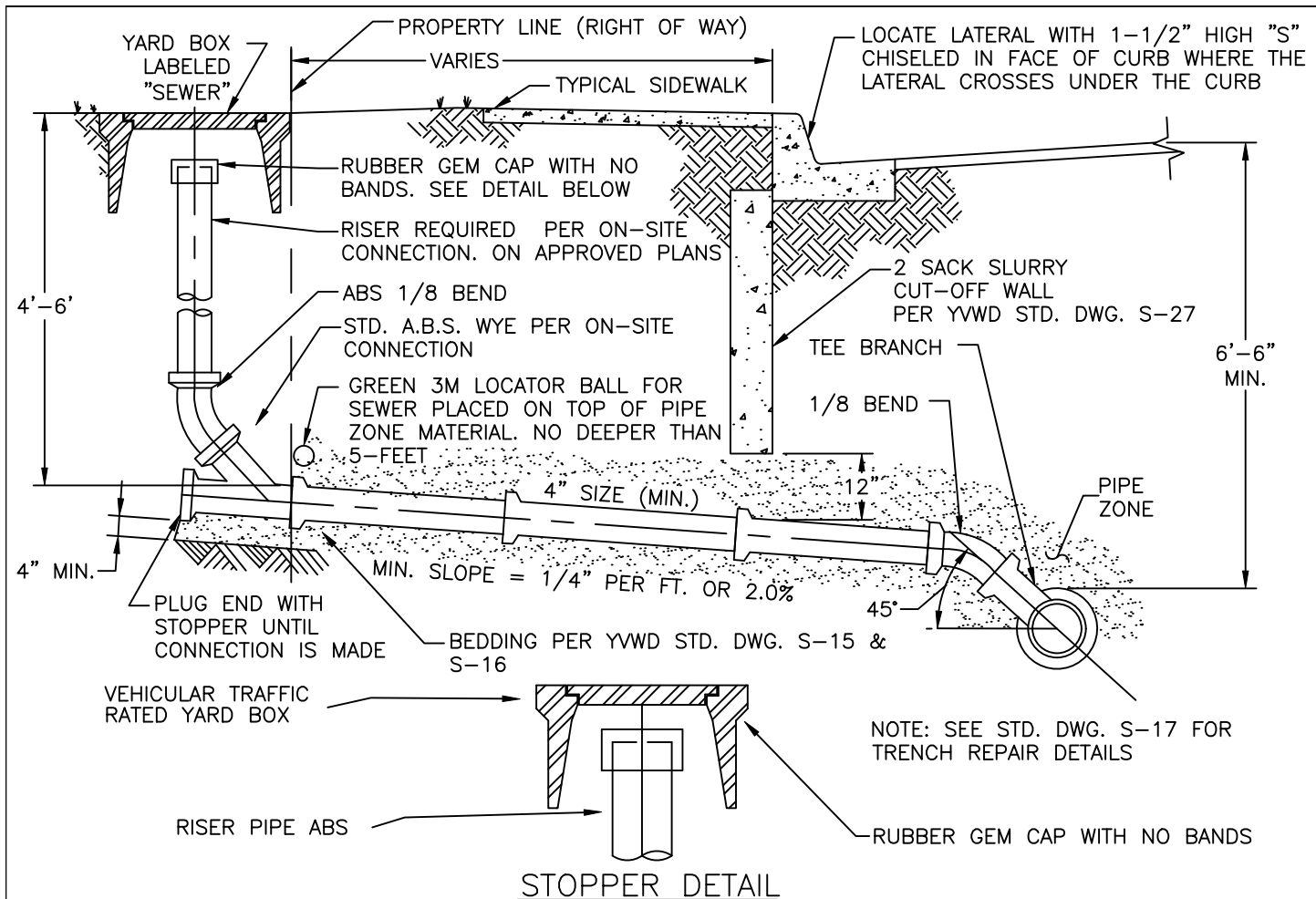


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NOTES:

1. LATERAL SIZE TO BE DETERMINED ON THE BASIS OF TOTAL NUMBER OF FIXTURE UNITS DRAINED, BUT IN NO CASE SHALL THE LATERAL DIAMETER BE LESS THAN FOUR INCHES FOR SINGLE OR MULTIPLE FAMILY RESIDENTIAL AND SIX INCHES FOR COMMERCIAL OR INDUSTRIAL. RISERS SHALL BE THE SAME SIZE AS THE LATERAL.
2. LATERAL TO BE INSTALLED TO PROPERTY LINE. ALL LATERALS ARE TO BE CONSTRUCTED OF EXTRA STRENGTH VITRIFIED CLAY PIPE. MUST BE INSTALLED WITH A MINIMUM HORIZONTAL OFFSET OF 36" FROM ALL OTHER UTILITIES.
3. PLACE 3/4" CRUSHED ROCK A MINIMUM OF 4" BELOW THE PIPE AND 1' ABOVE THE TEE OR WYE, AND LATERAL.
4. IF RISER IS NOT BUILT, PLUG WYE BRANCH WITH STOPPER.
5. INSTALL A SEWER LOCATOR DISK AT THE END OF ALL LATERAL RUNS AT RIGHT OF WAY.
6. ONLY LATERAL RUNS ARE PERMITTED TO BE EITHER "BELL AND SPIGOT", OR "BAND SEAL".
7. WHERE LATERALS ARE INSTALLED IN DRIVEWAYS, A TRAFFIC RATED BOX IS REQUIRED.
8. IF THE LATERAL IS INSTALLED UNDER A PERMANENT HARDSCAPE SUCH AS A CONCRETE DRIVEWAY ALL THE WAY TO THE STRUCTURE, THEN A CUT OFF WALL IS NOT REQUIRED.
9. SHALLOW SEWER LATERAL NEEDS PERMISSION FROM DISTRICT.
10. 3" ID TAPE ABOVE CRUSHED ROCK.

TYPICAL SEWER LATERAL

2022

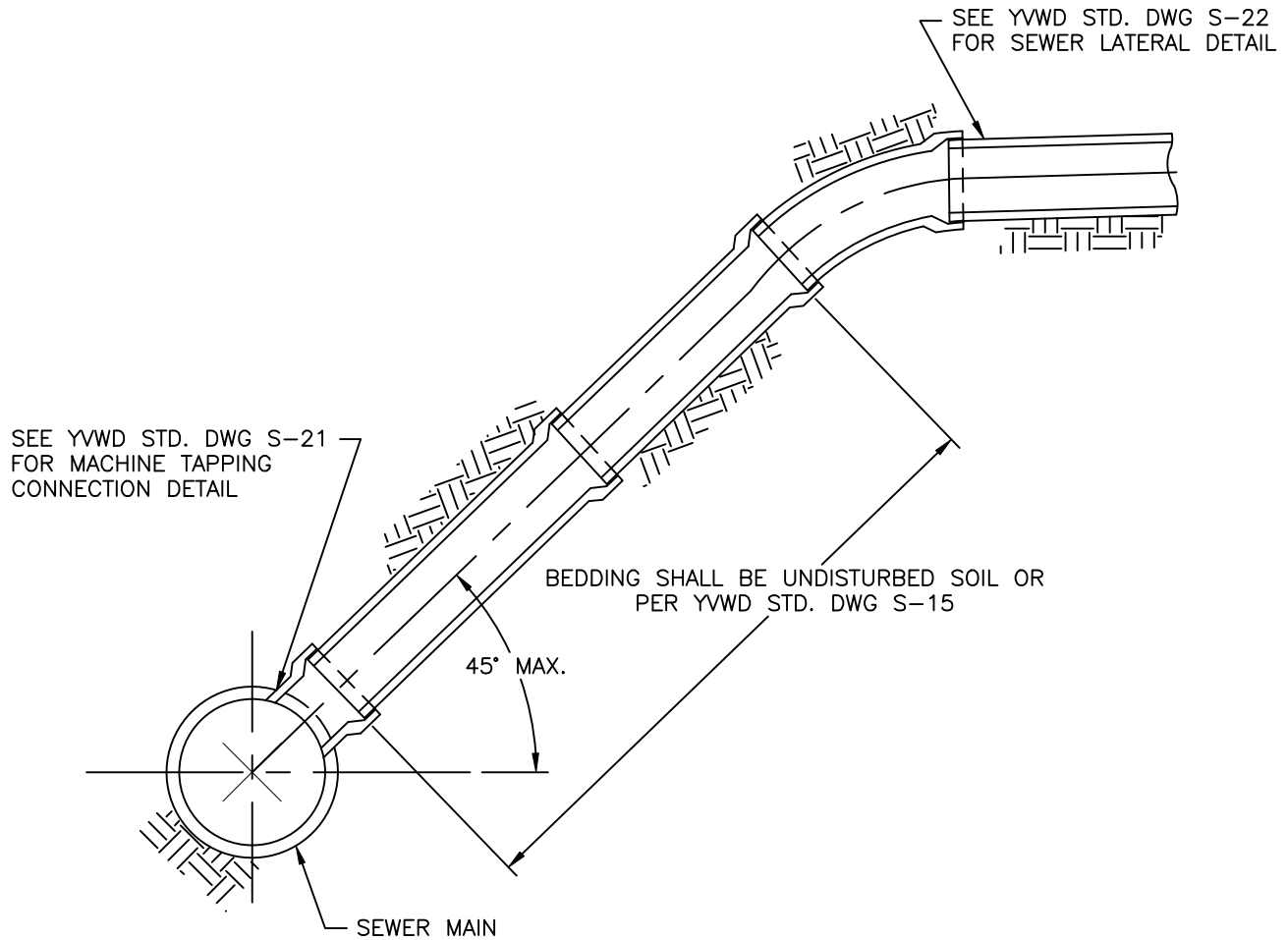


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NOTES:

1. EXTEND ALL LATERALS TO ABOVE KNOWN GROUND WATER LEVELS.
2. SEE CONSTRUCTION DRAWINGS FOR LOCATION AND SIZE OF LATERALS.
3. IF SEWER MAIN IN EASEMENT IS GREATER THAN 7'-0" DEEP, A LATERAL EXTENSION PER THIS DETAIL WILL BE REQUIRED TO BRING END OF CONNECTION PIPE TO 5'-0" OF SURFACE, EXCEPT IN CASES WHERE DEPTH IS NEEDED TO SERVE PROPERTY.

DEEP SEWER LATERAL DETAIL

2022

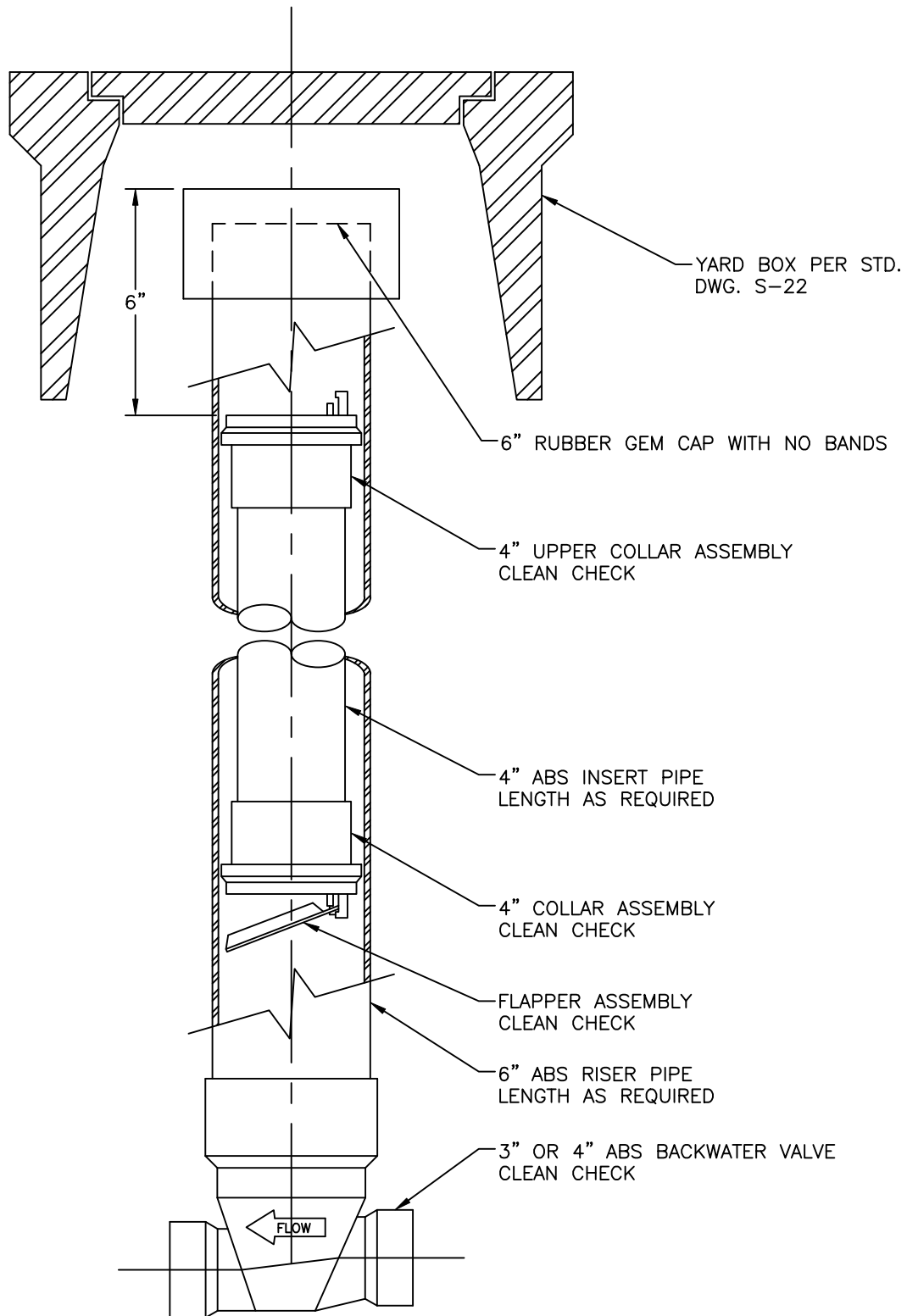


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BACKWATER VALVE DETAIL

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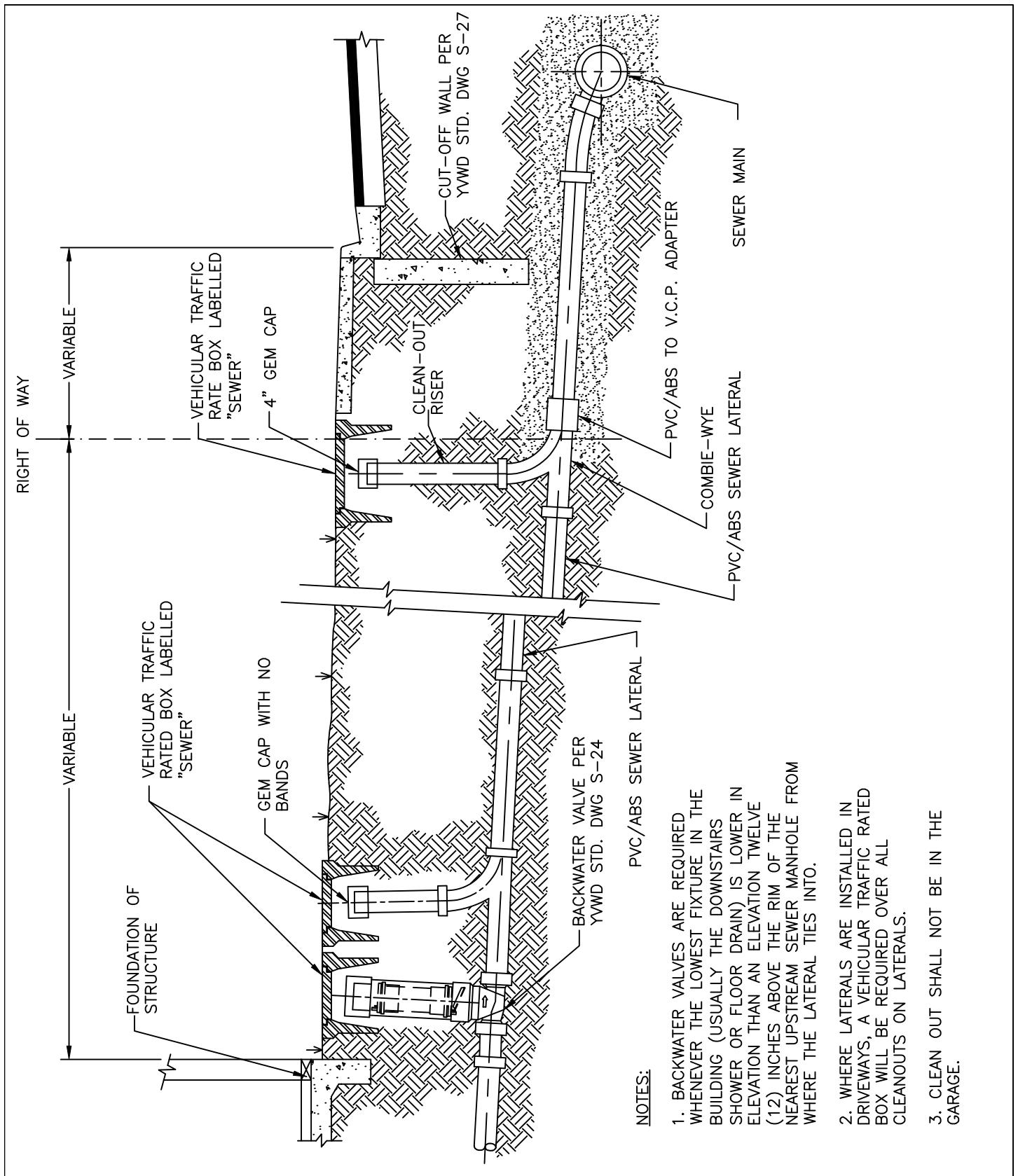


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BACKWATER VALVE INSTALLATION DETAIL

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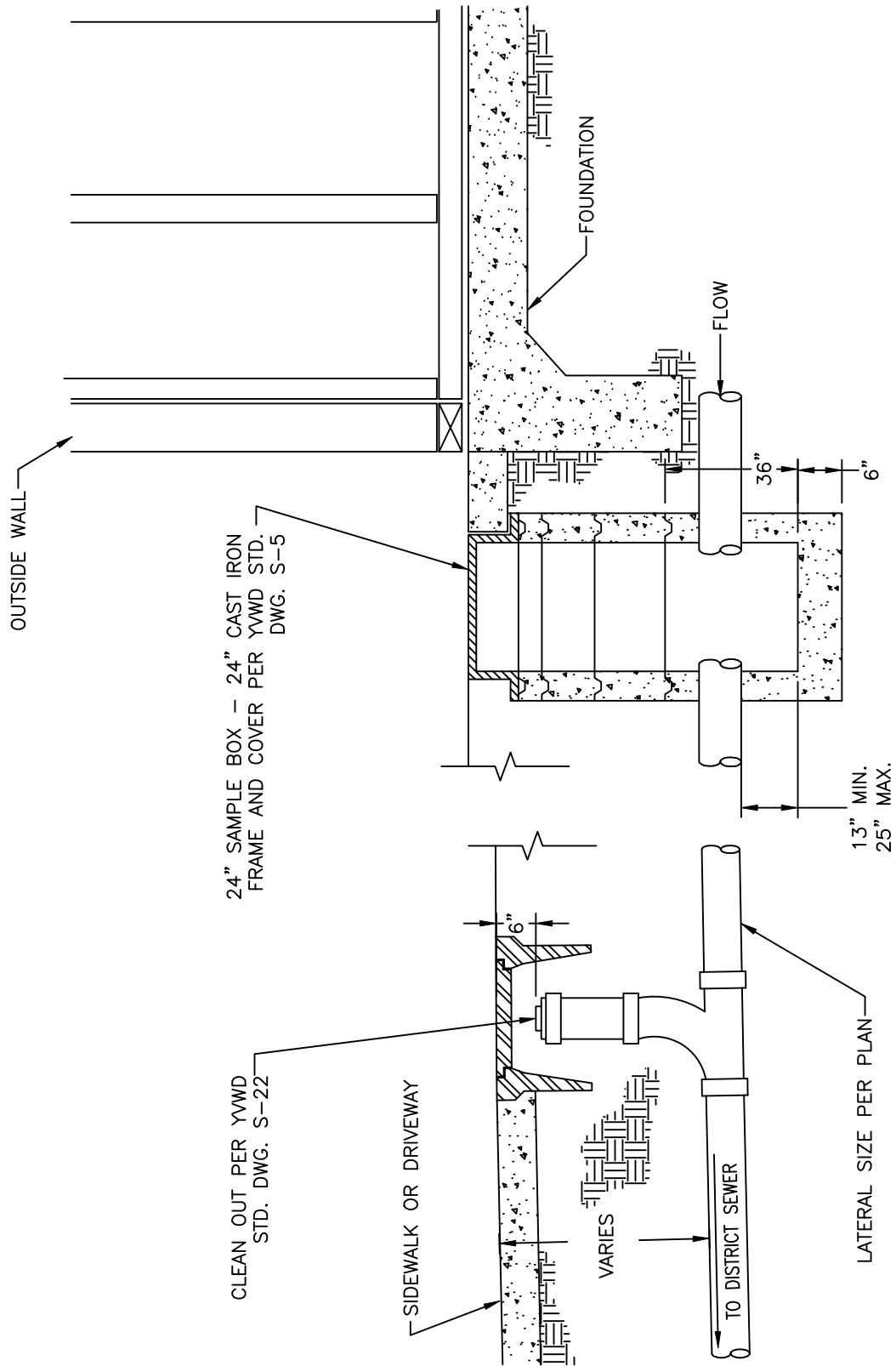


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SEWER SAMPLING BOX

2022

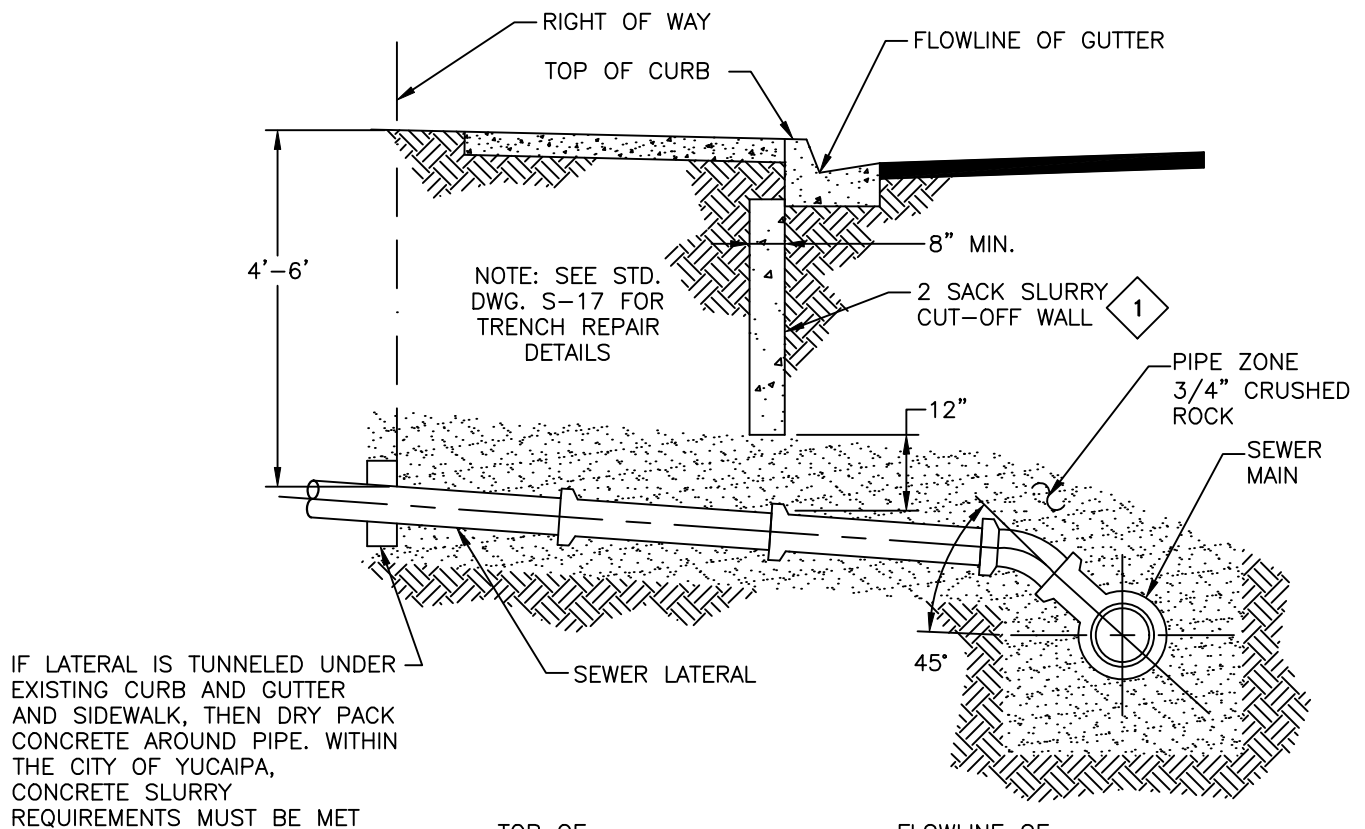


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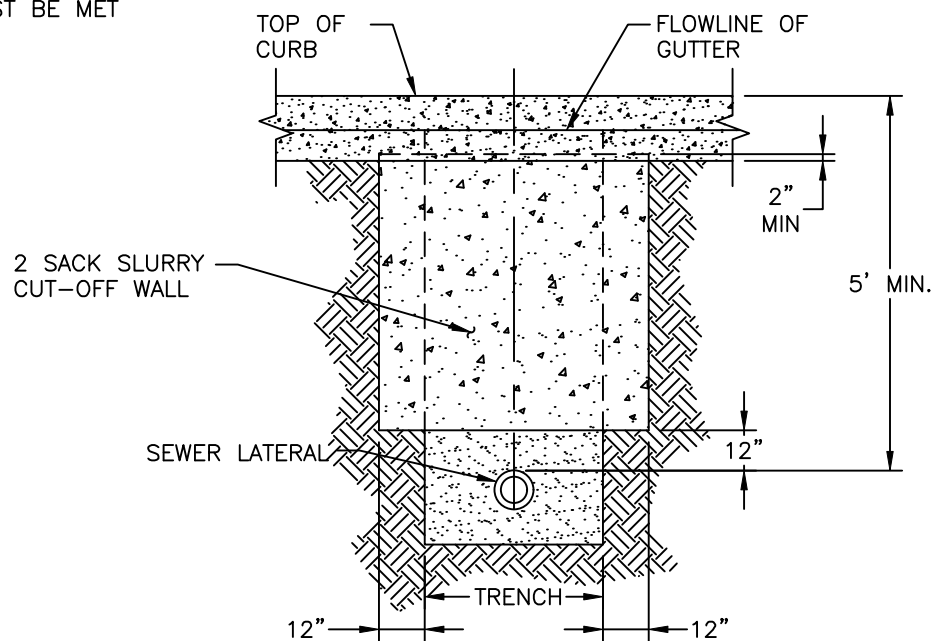
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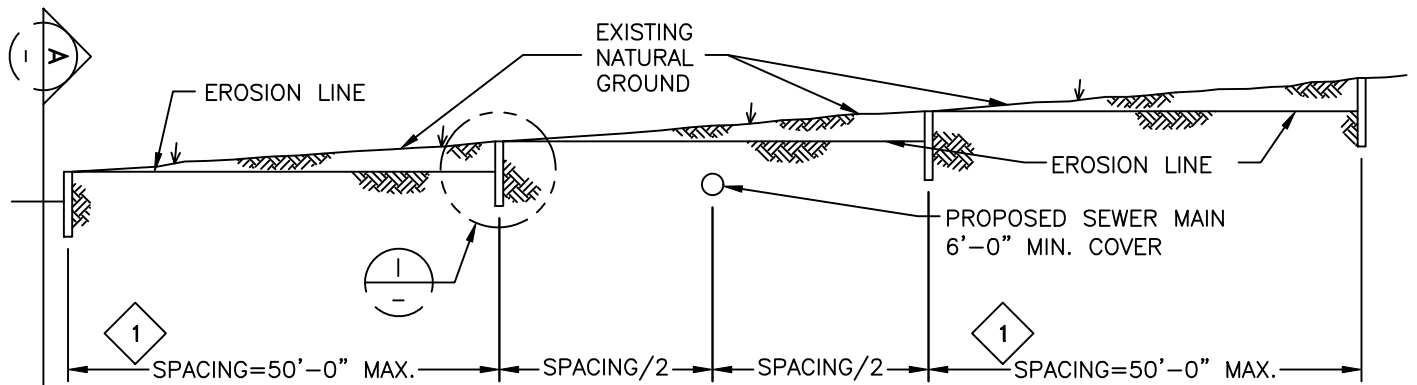
IF LATERAL IS TUNNELED UNDER
EXISTING CURB AND GUTTER
AND SIDEWALK, THEN DRY PACK
CONCRETE AROUND PIPE. WITHIN
THE CITY OF YUCAIPA,
CONCRETE SLURRY
REQUIREMENTS MUST BE MET



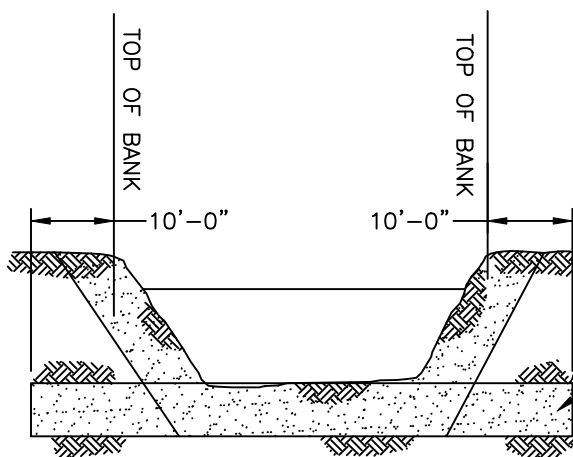
NOTES:

- 1 CUT-OFF WALL SHALL BE CONSTRUCTED AFTER TRENCH COMPACTION IS COMPLETE.
2. A SEWER LATERAL CUT-OFF WALL IS NOT REQUIRED IF THE LATERAL IS INSTALLED UNDER A PERMANENT HARDSCAPE SURFACE SUCH AS A CONCRETE DRIVEWAY AS LONG AS THE LATERAL REMAINS UNDER IT ALL THE WAY TO THE STRUCTURE. CLEAN OUTS WILL STILL BE REQUIRED.

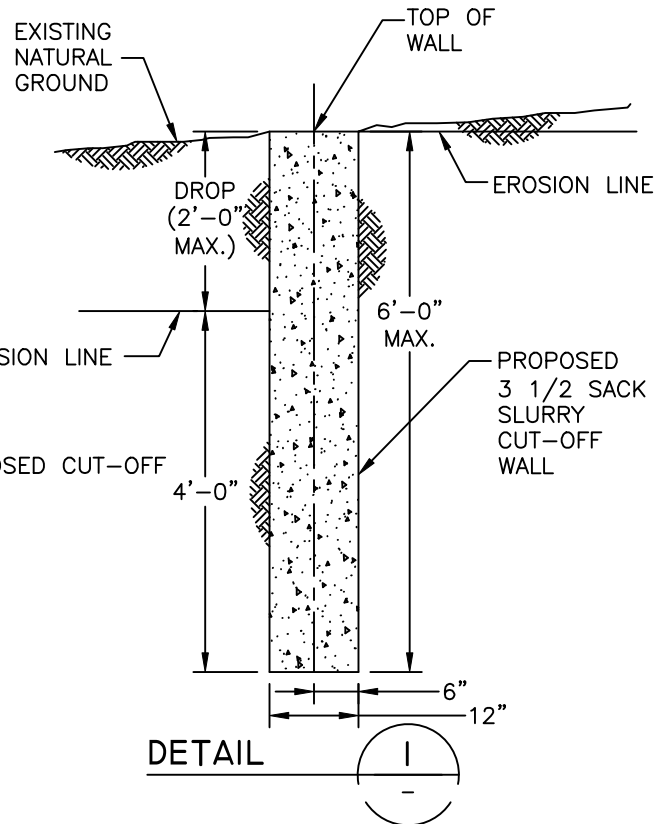
SEWER LATERAL CUTOFF WALL DETAIL



PROFILE



SECTION



DETAIL

NOTE:

- 1 ADJUST SPACING SO THAT THE DIFFERENCE BETWEEN TOP OF WALL AND EROSION LINE (DROP) DOES NOT EXCEED 2'-0".

EROSION CONTROL CUTOFF WALL DETAIL

2022

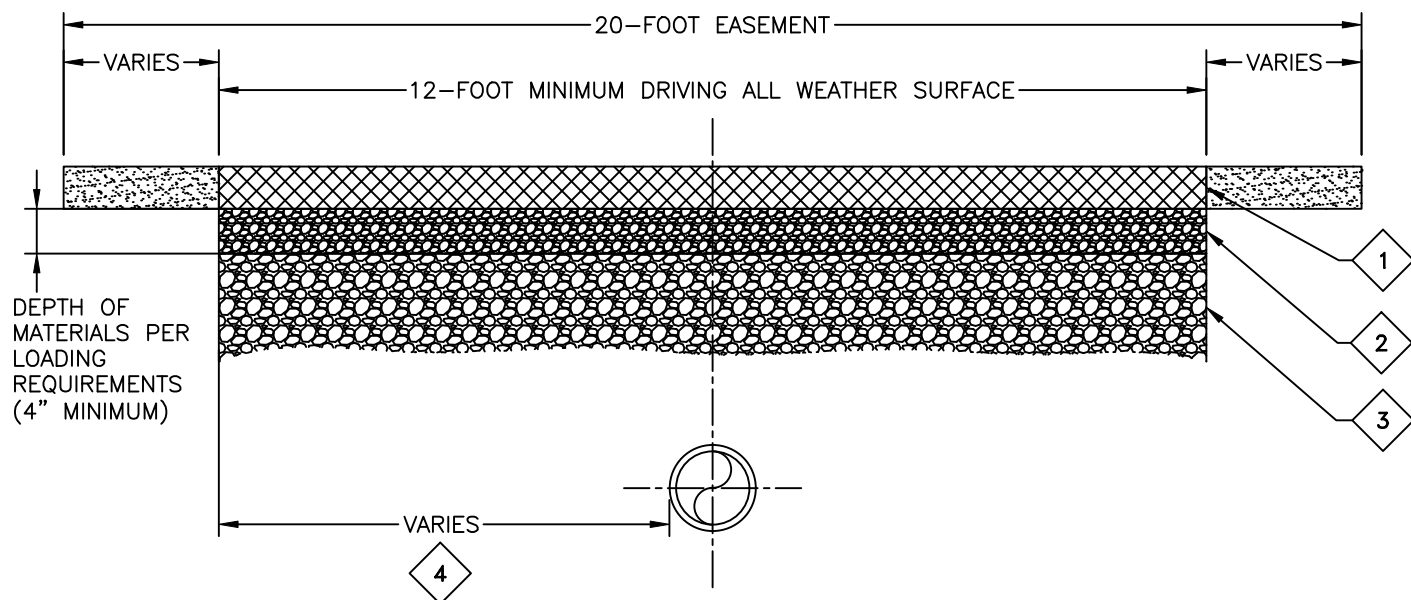


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NOTES:

- 1 ALL WEATHER SURFACE APPROVED MATERIALS INCLUDE ASPHALT, 3250 PSI CONCRETE, SOIL CEMENT OR OTHER APPROVED DRIVING SURFACE CAPABLE OF SUPPORTING AT LEAST 60,000 POUND VEHICLE ACCESS OVER 2 AXLE OR AS OTHERWISE DETERMINED BY THE DISTRICT.
- 2 SUBGRADE MATERIALS COMPACTED TO 95% MINIMUM UNLESS OTHERWISE APPROVED.
- 3 NATIVE OR IMPORTED BACKFILL, COMPACTED TO ENGINEERS SPECIFICATIONS FOR MATERIAL USED AS DRIVING SURFACE.
- 4 4-FOOT MINIMUM FROM EDGE OF ALL WEATHER SURFACE WHEN OVER DISTRICT UTILITY LINES.
5. EASEMENTS THAT HAVE ANGLES WILL REQUIRE A TURNING RADIUS. RADIUS POINT WILL BE DETERMINED BY THE DISTRICT.
6. NO PERMANENT WALL, FENCE, VEGETATION, OR STRUCTURE MAY BE CONSTRUCTED ACROSS OR WITHIN THE DISTRICT EASEMENT WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DISTRICT.
7. SLOPE ELEVATION DESIGN WILL BE REVIEWED AND APPROVED BY THE DISTRICT.

TYPICAL DISTRICT EASEMENT

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