


ENGINEERING PLAN REQUIREMENTS

1. THE DATUM UTILIZED, OR REQUIRED, TO DETERMINE ELEVATIONS FOR THE SEWERAGE FEATURES SHALL BE INDICATED IN THE PLANS, PREFERABLY ON THE PLAT.
2. ALL DRAINAGE FEATURES (CULVERTS, CATCH BASINS, CROSS DRAINS, ETC.) SHALL BE DEPICTED ON SEWER PLAN/PROFILE DRAWINGS.
3. ALL SEWER FEATURES (MANHOLES, GRAVITY MAINS, SERVICES, ETC.) SHALL BE DEPICTED ON THE SEWER LAYOUT DRAWING, WITH STATION TEXTS, SIZE/TYPE/LENGTH OF PIPING, ELEVATIONS, AND OTHER PERTINENT INFORMATION.
4. SEWERAGE DETAIL SHEET DRAWINGS SHALL BE RESERVED FOR SEWERAGE ITEMS ONLY. NON-SEWERAGE ITEMS SHALL NOT BE INCLUDED ON SHEETS PERTAINING TO SEWERAGE.
5. IT IS PREFERRED THAT ELECTRICAL POWER TO LIFT STATIONS BE 3-PHASE WHENEVER POSSIBLE.
6. ELECTRICAL DESIGNS, SCHEMATICS, AND LAYOUTS FOR NEW SEWER LIFT STATIONS ARE REQUIRED, AND SHALL BE STAMPED AND SIGNED BY A LICENSED ELECTRICAL ENGINEER.
7. (EXCEPTION TO TEN STATE STANDARDS, PARAGRAPH 42.8) WASTEWATER FLOW MEASUREMENT IS NOT REQUIRED AT MOST LIFT STATIONS. FLOW MEASUREMENT MIGHT BE REQUIRED AT MAJOR PUMPING STATIONS. THIS DIVISION SHOULD BE CONSULTED PRIOR TO INCLUDING FLOW MEASUREMENT INTO THE PUMPING STATION DESIGN.
8. THE BOUNDARIES OF SERVITUDES AND RIGHT-OF-WAYS FOR SEWER LIFT STATIONS SHALL PROVIDE SUFFICIENT ACCESS TO ALL PORTIONS OF THE LIFT STATION. MINIMUM DIMENSIONAL REQUIREMENTS ARE SPACE FOR VEHICULAR ACCESS ON AT LEAST TWO SIDES, AND NO LESS THAN THREE FEET (3') OF CLEAR SPACE ON ALL SIDES.
9. LIFT STATION SLAB ELEVATIONS SHALL BE NO LESS THAN EIGHTEEN INCHES (18") ABOVE THE CROWN OF THE NEAREST STREET, OR NO LESS THAN TWELVE INCHES (12") ABOVE THE SURROUNDING GRADE (WHICHEVER IS HIGHER).
10. TO AVOID OVERFLOWING MANHOLES, SEWER FORCE MAINS SHOULD NOT CONNECT TO AN END-OF-LINE MANHOLE.
11. SEWER LINES (INCLUDING SERVICES) SHALL NOT BE LOCATED BELOW DRAINAGE CATCH BASINS/STRUCTURES.
12. FOR TYPICAL FORCE MAIN CONFIGURATIONS, "AIR RELEASE ONLY VALVES" ARE REQUIRED AT HIGH POINTS IN THE FORCE MAIN (NO VACUUM RELIEF VALVES). CONSULT THE MANUFACTURER'S SPECIFICATIONS PRIOR TO INCORPORATING THESE IN THE DESIGN.
13. DUCTILE IRON PIPE IS REQUIRED FOR ABOVE GROUND PORTIONS OF FORCE MAIN HEADER PIPING. ABOVE GROUND PIPE SHALL BE PRIMED READY FOR PAINT. PLANS SHALL CLEARLY DEPICT WHERE METAL PIPE ENDS.
14. HYDRAULIC FLOW CALCULATIONS ARE REQUIRED FOR GRAVITY MAIN PIPE THAT IS GREATER THAN EIGHT INCHES (8") IN DIAMETER WHERE THE MEAN VELOCITY, WHEN FLOWING FULL, IS EXPECTED TO BE LESS THAN 2.0 FEET PER SECOND. SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE DESIGN. A SEWER GRAVITY MAIN SHALL NOT BE A LARGER DIAMETER THAN THE DOWNSTREAM RECEIVING GRAVITY MAIN.
15. THE MINIMUM DRAWDOWN LEVEL FOR LIFT STATION WET WELLS SHALL BE NO LESS THAN THREE FEET (3') FROM THE INVERT OF THE INFLOW LINE TO THE PUMP SHUT OFF LEVEL.
16. SEWER SERVICES SHALL BE LOCATED NEAR THE CENTER OF PARCELS, OR AT OTHER APPROPRIATE LOCATIONS, TO REDUCE THE POSSIBILITY OF BEING OVERLAPPED BY DRIVEWAYS.
17. A LETTER OF NO OBJECTION IS REQUIRED FROM THE SERVITUDE OWNER IF A PROPOSED SEWER LINE IS LOCATED WITHIN A PUBLIC OR PRIVATE SERVITUDE OR RIGHT-OF-WAY.
18. STATION TEXTS FOR SERVICES THAT ARE LAID ON THE DIAGONAL SHALL INDICATE THE POINT PERPENDICULAR TO THE GRAVITY MAIN WHERE THE SERVICE CROSSES THE PROPERTY LINE.

6/7/16 DATE REVISIONS REMOVED WATERMARK	TERREBONNE PARISH CONSOLIDATED GOVERNMENT  SEWER-POLLUTION CONTROL DIVISION ENGINEERING PLAN REQUIREMENTS		
	DRAWN BY: DPM	PROJECT NUMBER	SHEET: 1 of 7
	SCALE: AS SHOWN	441-105-GSE	CAD FILE:
	DATE: 6-30-2016		MAP FILE:

GENERAL NOTES


1. THE DESIGN OF ALL SEWER FACILITIES SHALL ADHERE TO THE RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (ALSO KNOWN AS TEN STATES STANDARDS), 2004 EDITION.
2. A COMPLETE SET OF RECORD DRAWINGS DEPICTING "ACCURATE" LOCATIONS OF ALL FACILITIES SHALL BE PROVIDED BY THE ENGINEER PRIOR TO FINAL INSPECTION. THE TERM "ACCURATE" SHALL COMPLY WITH PROVISIONS CONSISTENT WITH THOSE REQUIRED FOR EXCAVATION PURPOSES, I.E. WITHIN A TOLERANCE ZONE WITH LIMITS INCLUDING THE WIDTH OF THE PIPE PLUS 18 INCHES (18") MEASURED HORIZONTALLY FROM EACH SIDE OF THE PIPE.
3. AS MUCH AS POSSIBLE, RECORD DRAWINGS SHALL INDICATE THE LOCATION OF SEWER FORCE MAINS BY REFERENCE TO PERMANENT STRUCTURES.
4. LENGTHS FOR GRAVITY MAINS SHALL BE MEASURED FROM CENTER-OF-MANHOLE TO CENTER-OF-MANHOLE (OR CLEANOUT).
5. CONTRACTOR'S TEE SHEETS SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION, PREFERABLY WITH THE RECORD DRAWINGS. CONTRACTOR SHALL KEEP ACCURATE RECORDS REGARDING THE LOCATION OF SEWER SERVICES AND MANHOLES, AND SHALL FURNISH TEE SHEETS TO THE ENGINEER.
6. THE LIFT STATION COMPONENTS, THE FENCE GATE, AND THE ACCESS ROADWAY SHALL BE ORIENTED SUCH THAT ACCESS TO THE WET WELL HATCH FROM THE ROADWAY SHALL NOT BE HINDERED. ALSO COMPLETE OPENING/CLOSING OF THE GATE, INWARD OR OUTWARD, SHALL NOT BE HINDERED.
7. SEWER MANHOLES THAT ARE NOT LOCATED WITHIN PAVEMENT (STREET, SIDEWALK, DRIVEWAY, ETC.) SHALL HAVE CONCRETE PADS INSTALLED AROUND THE FRAME/LID. CONCRETE PADS SHALL BE MINIMUM OF 6 FEET (6') IN WIDTH, SQUARE OR CIRCULAR IN SHAPE, AND SHALL HAVE A MINIMUM THICKNESS THAT WILL ENCAPSULATE ANY ADJUSTING RINGS OR 6 INCHES (6"), WHICHEVER IS GREATER. THESE CONCRETE PADS SHALL ALSO SLOPE AWAY FROM THE FRAME, SO THAT THE OUTER EDGES ARE BELOW THE SURROUNDING SOIL/AGGREGATE.
8. MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINKING MORTAR OR OTHER MATERIAL APPROVED BY THIS DIVISION. (TEN STATE STANDARDS, PARAGRAPH 34.6).
9. WHERE CORROSIVE CONDITIONS ARE ANTICIPATED DUE TO SEPTIC OR OTHER CAUSES, CORROSION PROTECTION, SUCH AS SPECTRASHIELD OR AN APPROVED EQUAL, SHALL BE PROVIDED ON THE INTERIOR OF THE MANHOLES; THESE CONDITIONS CAN BE FOUND IN MANHOLES INCLUDING, BUT NOT LIMITED TO, THOSE ADJACENT TO LIFT STATIONS AND THOSE THAT HAVE INCOMING FORCE MAINS.
10. MANHOLE LIDS SHALL BE EMBOSSED WITH THE WORD "SEWER". LIDS SHALL BE EQUIVALENT TO AMERICAN MADE ASTM EAST JORDAN IRON WORKS SPEC.
11. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY CORING A HOLE THROUGH THE WALL OF THE MANHOLE, THEN INSTALLING AN ELASTOMERIC SEAL THAT IS CAULKED INSIDE AND OUT WITH SILICONE SEALANT MATERIAL. BREAKING OUT THE MANHOLE WALL WILL BE ACCEPTABLE ONLY WITH THE USE OF A WALL SLEEVE OR SECTION OF PVC PIPE BEING GROUTED IN ALONG WITH THE ELASTOMERIC SEAL. EXCEPTIONS ONLY WITH OWNER'S APPROVAL. (ASTM C923).
12. ALL FLANGED PIPING, FITTINGS, AND APPURTENANCES SHALL HAVE STAINLESS STEEL* CONNECTING HARDWARE (*304 STAINLESS STEEL BOLTS, *316 STAINLESS STEEL NUTS).
13. MINIMUM 12 INCHES (12") CLEARANCE BETWEEN DRAINAGE FEATURES AND SEWER LINES IS REQUIRED WHEN THE SEWER LINE CROSSES BELOW THE DRAINAGE FEATURES.
14. CORRUGATED PIPE OF ANY TYPE IS NOT ACCEPTABLE FOR USE AS SEWER LINES. EX: PIPE WITH ASTM DESIGNATION "A760", INDICATING CORRUGATED PIPE, SHALL NOT BE ALLOWED. (CHECK ASTM STANDARDS "A760/A760M-15").
15. CROSSES ARE NOT ACCEPTABLE FOR SEWER SERVICE CONNECTIONS TO GRAVITY MAINS OR ON RISER STACKS (SERVICES).
16. STATION TEXTS FOR SERVICES THAT ARE LAID ON THE DIAGONAL SHALL INDICATE THE POINT PERPENDICULAR TO THE GRAVITY MAIN WHERE THE SERVICE CROSSES THE PROPERTY LINE.
17. ALL PIPING INSIDE WET WELLS SHALL BE DUCTILE IRON COATED WITH BITUMINOUS EPOXY.
18. IN ACCORDANCE WITH PARAGRAPH 33.44 OF THE TEN STATE STANDARDS, "SEWERS SHALL BE LAID WITH UNIFORM SLOPE BETWEEN MANHOLES." TPCG POLLUTION CONTROL SHALL DETERMINE WHEN A DEVIATION REQUIRES A REPAIR.

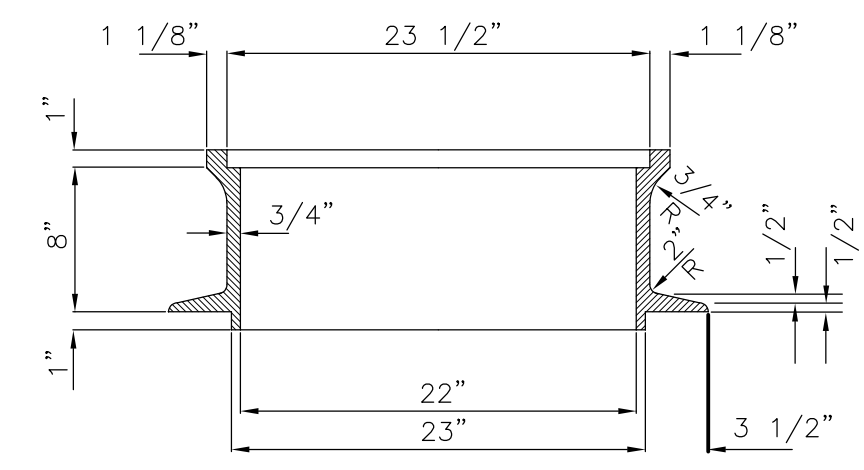
											OWNER					
STREET _____											PROJECT _____					
DATE	MANHOLE NO.	STATION	TEE DIRECTION	DEPTH AT MAIN	6" PVC PIPE HOUSE SERVICE						MANHOLE COMPLETE			REMARKS		
					FEET	RISER PIPE	DEPTH AT P/L	WYES	ELBOWS	PLUGS	OTHER	VERT. DEPTH	ADDED DEPTH		DIAMETER	BORING LENGTH

SAMPLE TEE SHEET (AS PER NOTE 5)

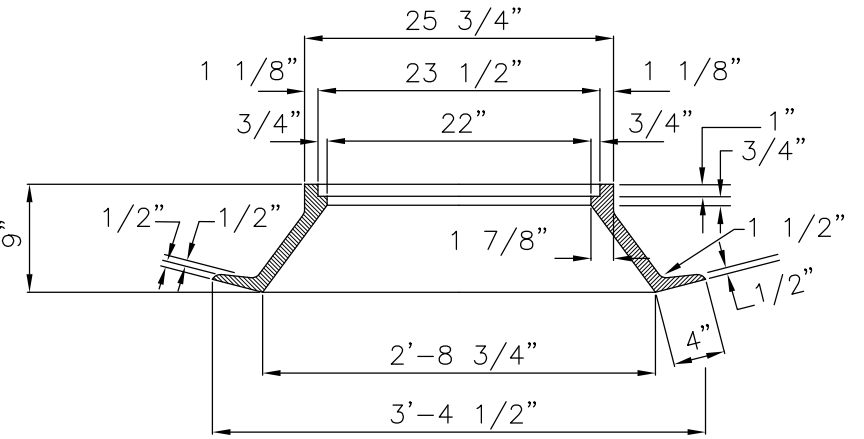
								OWNER				
PLAN SHEET NO. _____			CUT SHEET NO. _____			DATE _____						
LOCATION _____												
LINE	STATION	SLOPE	STAKE ELEVATION	INVERT	CONSTRUCTION CUT	NAT. GRD. ELEVATION	PAY CUT					

SAMPLE CUT SHEET

TERREBONNE PARISH CONSOLIDATED GOVERNMENT				
 SEWER-POLLUTION CONTROL DIVISION				
STANDARD GRAVITY SEWER AND SEWER FORCE MAIN GENERAL NOTES AND DETAILS				
REVISIONS	DRAWN BY: DPM		PROJECT NUMBER	SHEET: 2 of 7
	SCALE: AS SHOWN		441-105-GSE	CAD FILE:
	DATE: 6-30-2016			MAP FILE:

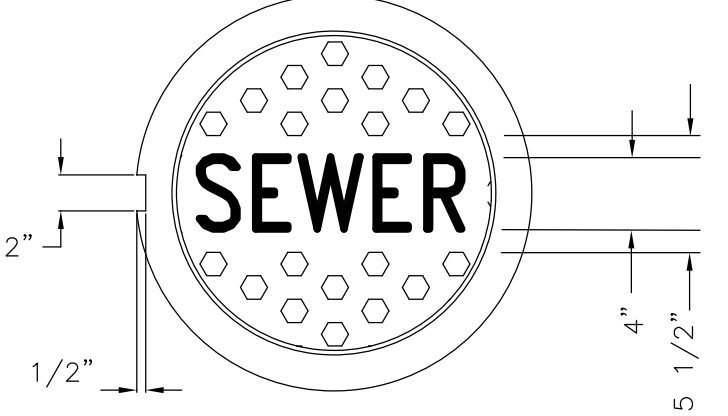


STRAIGHT MANHOLE FRAME
N.T.S.

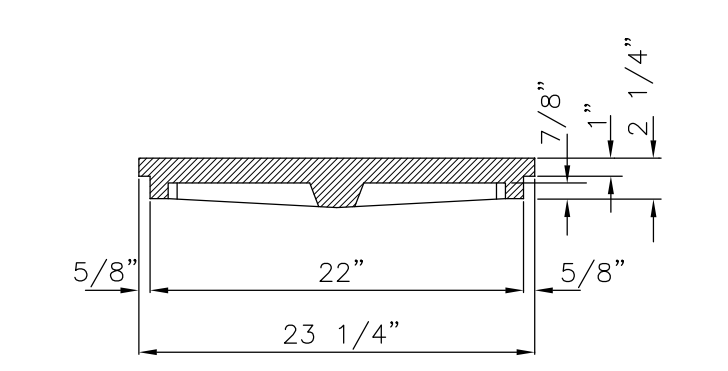


FLARED MANHOLE FRAME
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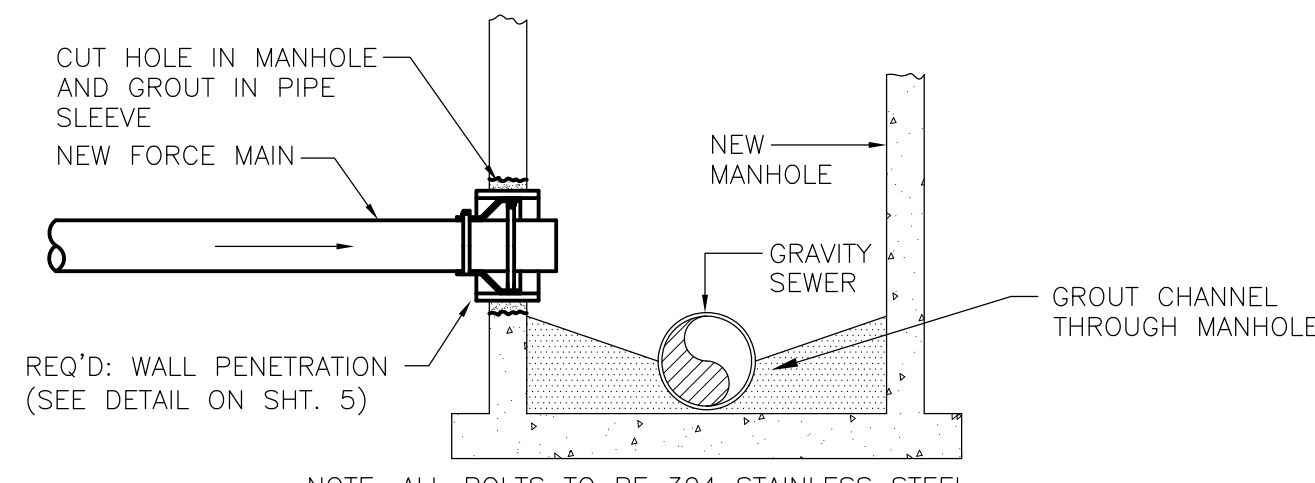
NOTE: ALL CASTINGS SHALL CONFORM TO ASTM A-48 LATEST REVISION CLASS 30 FOR GRAY CASTINGS



PLAN - MANHOLE COVER
N.T.S.

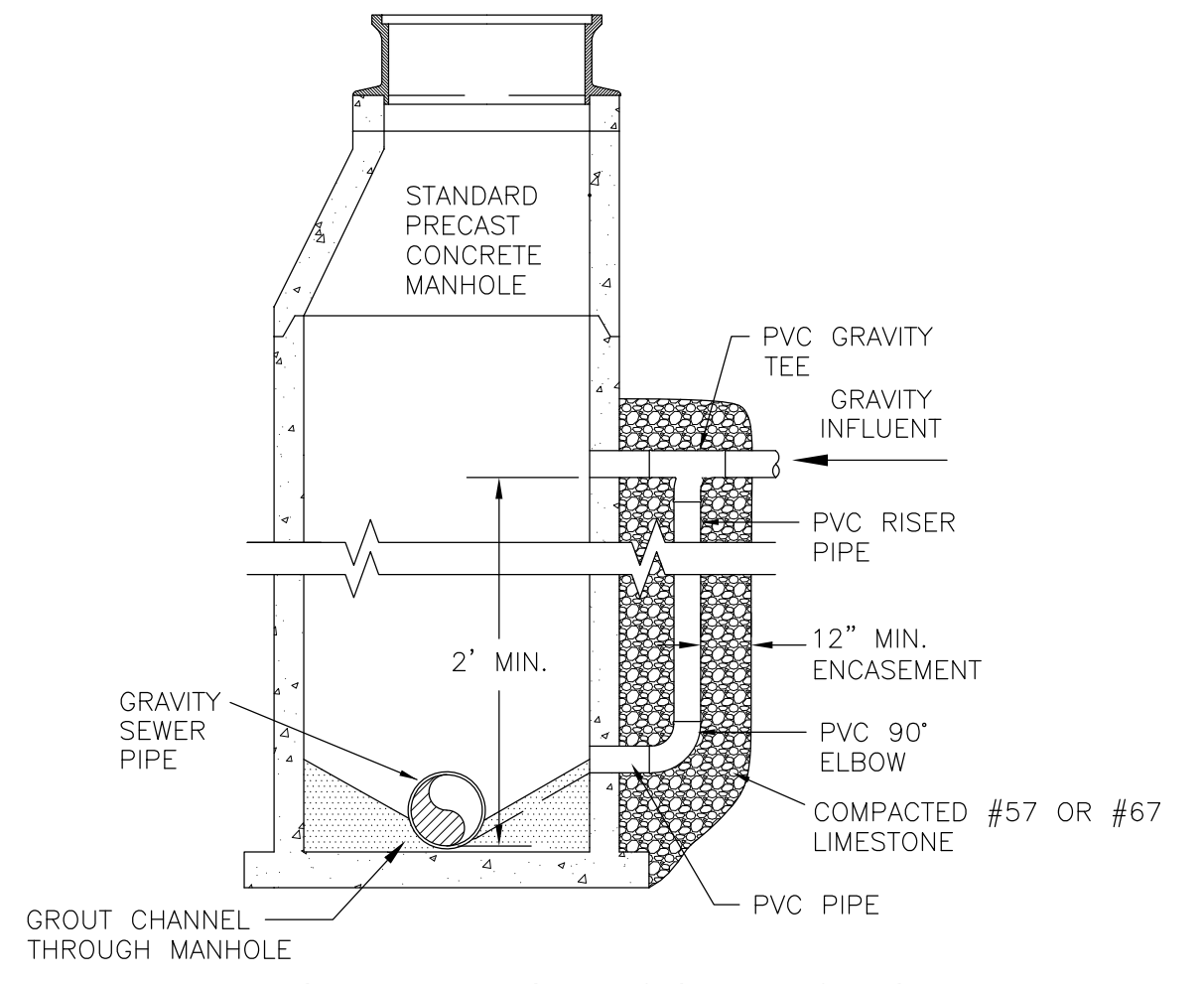


SECTION - MANHOLE COVER
N.T.S.



FORCE MAIN CONNECTION TO MANHOLE
N.T.S.

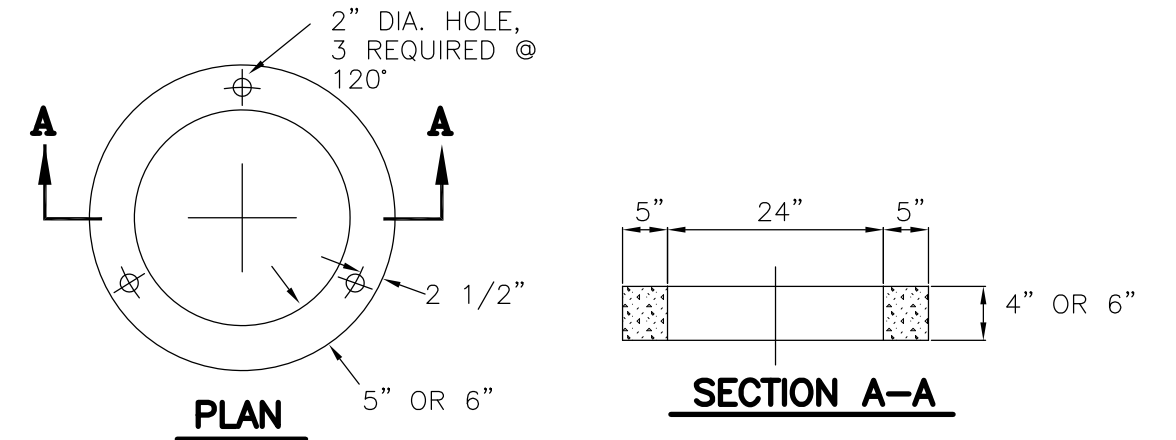
NOTE: ALL BOLTS TO BE 304 STAINLESS STEEL. ALL NUTS TO BE 316 STAINLESS STEEL.



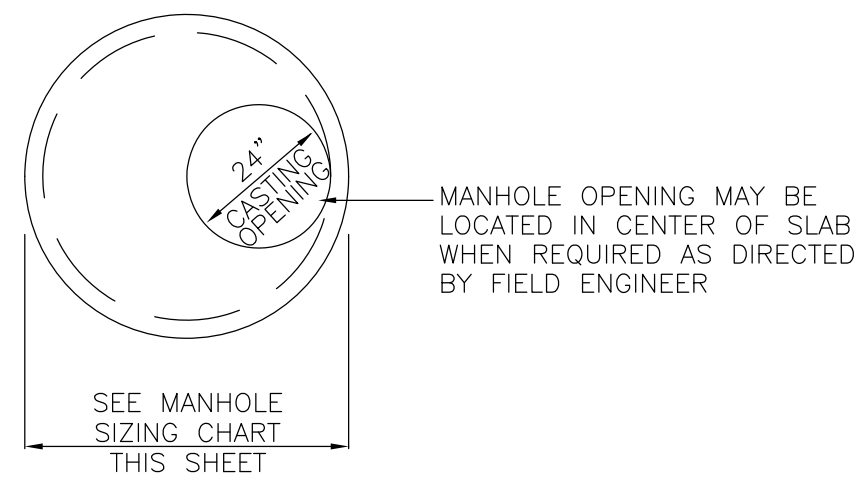
DROP MANHOLE CONNECTION
NOTE: SEE DETAIL ON SHEET 5. N.T.S.

STANDARD MANHOLE CASTINGS

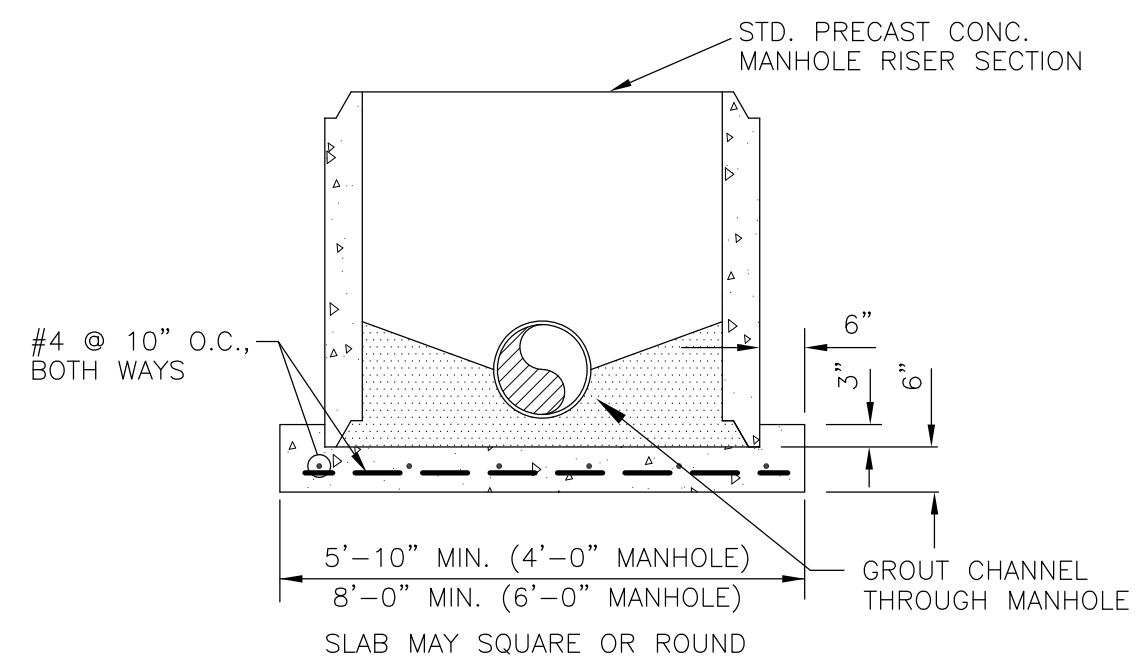
NOTE: IN NO CASE SHALL THE MANHOLE OPENING BE LESS THAN THE DIAMETER OF THE PIPE ENTERING THE MANHOLE.



TYPICAL ADJUSTING RING
N.T.S.

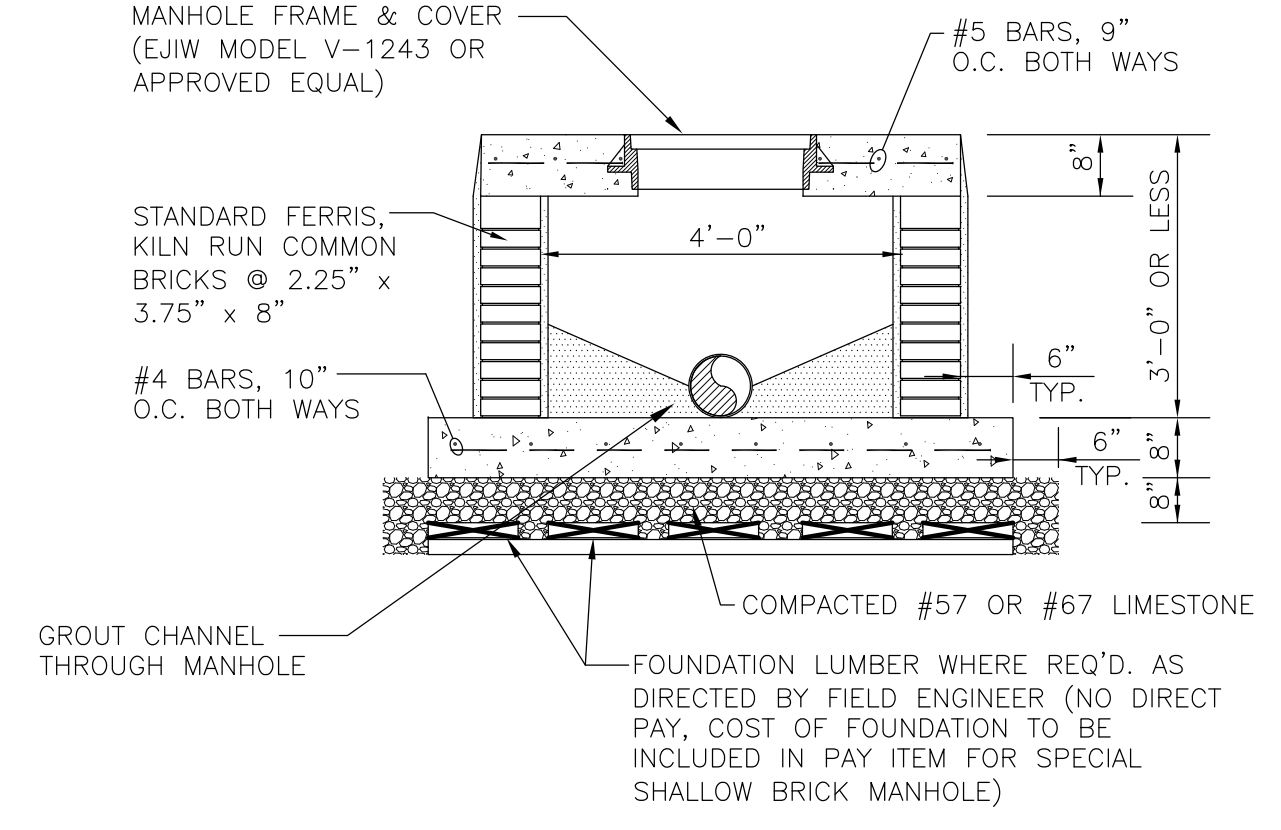


TYPICAL FLAT SLAB TOP
N.T.S.

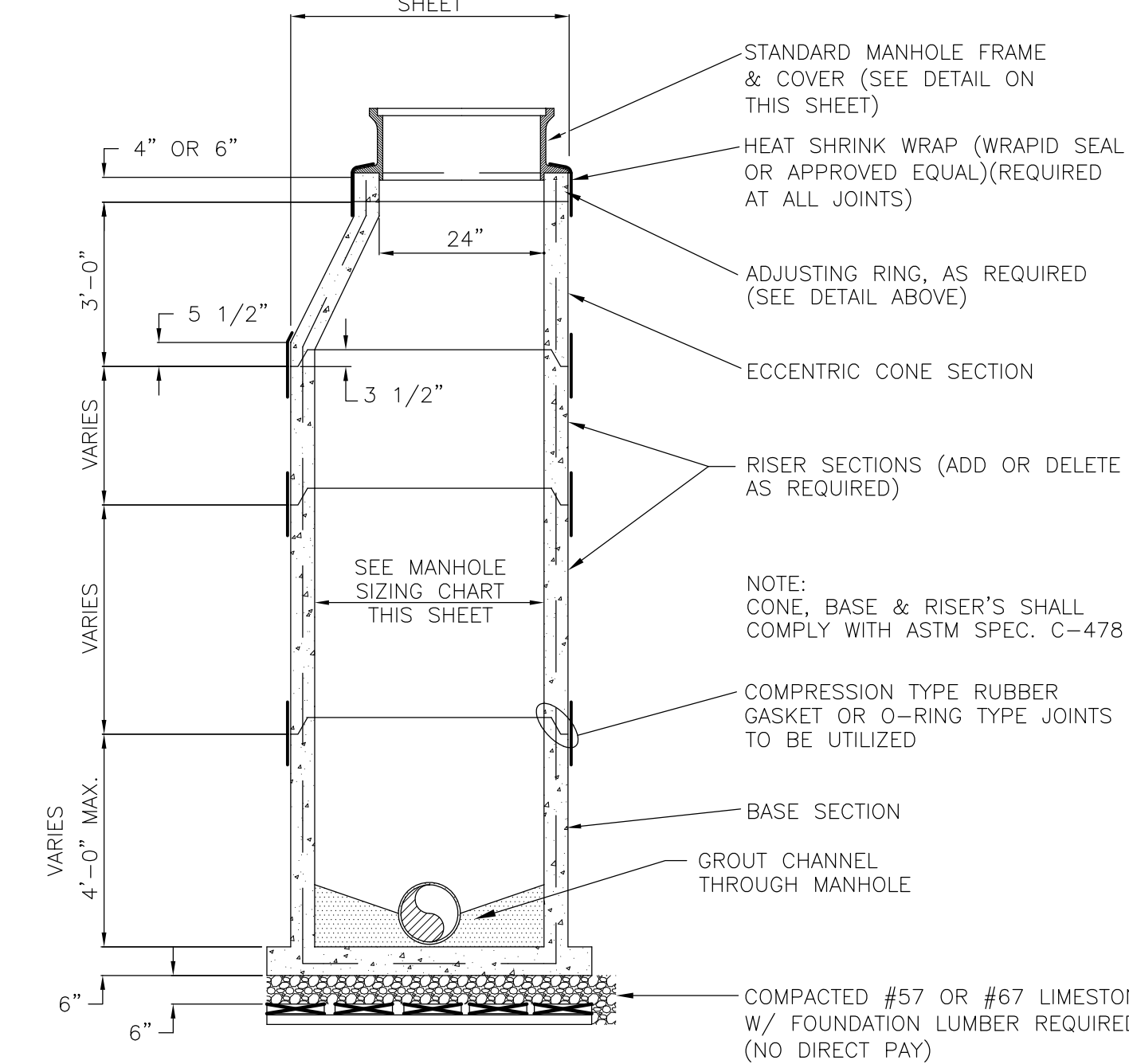


TYPICAL BASE FOR PRECAST SECTION WITHOUT PRECAST BOTTOM
N.T.S.

- NOTES:
1. INTERIOR & EXTERIOR OF BRICKS TO BE COVERED WITH 1/2" THICK CEMENT PLASTER.
 2. COAT INTERIOR OF MANHOLE WITH COAL TAR EPOXY, OR AS SPECIFIED. (SEE GENERAL NOTE 9.)
 3. BRICK MANHOLE IS TO BE USED ONLY WITH ENGINEERS APPROVAL, WHERE A PRECAST MANHOLE CANNOT BE UTILIZED.



SPECIAL SHALLOW BRICK MANHOLE
N.T.S.

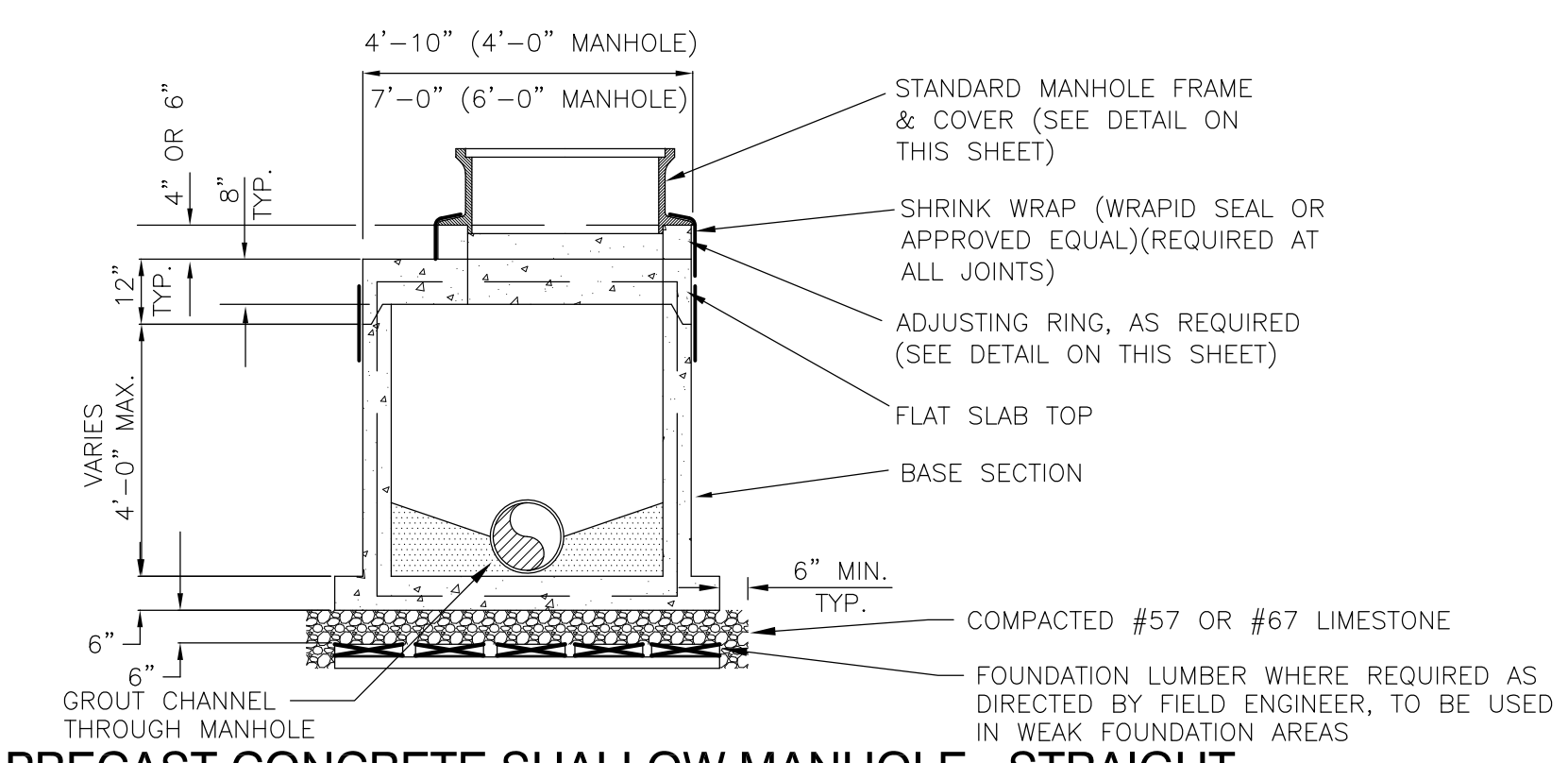


STANDARD PRECAST MANHOLES

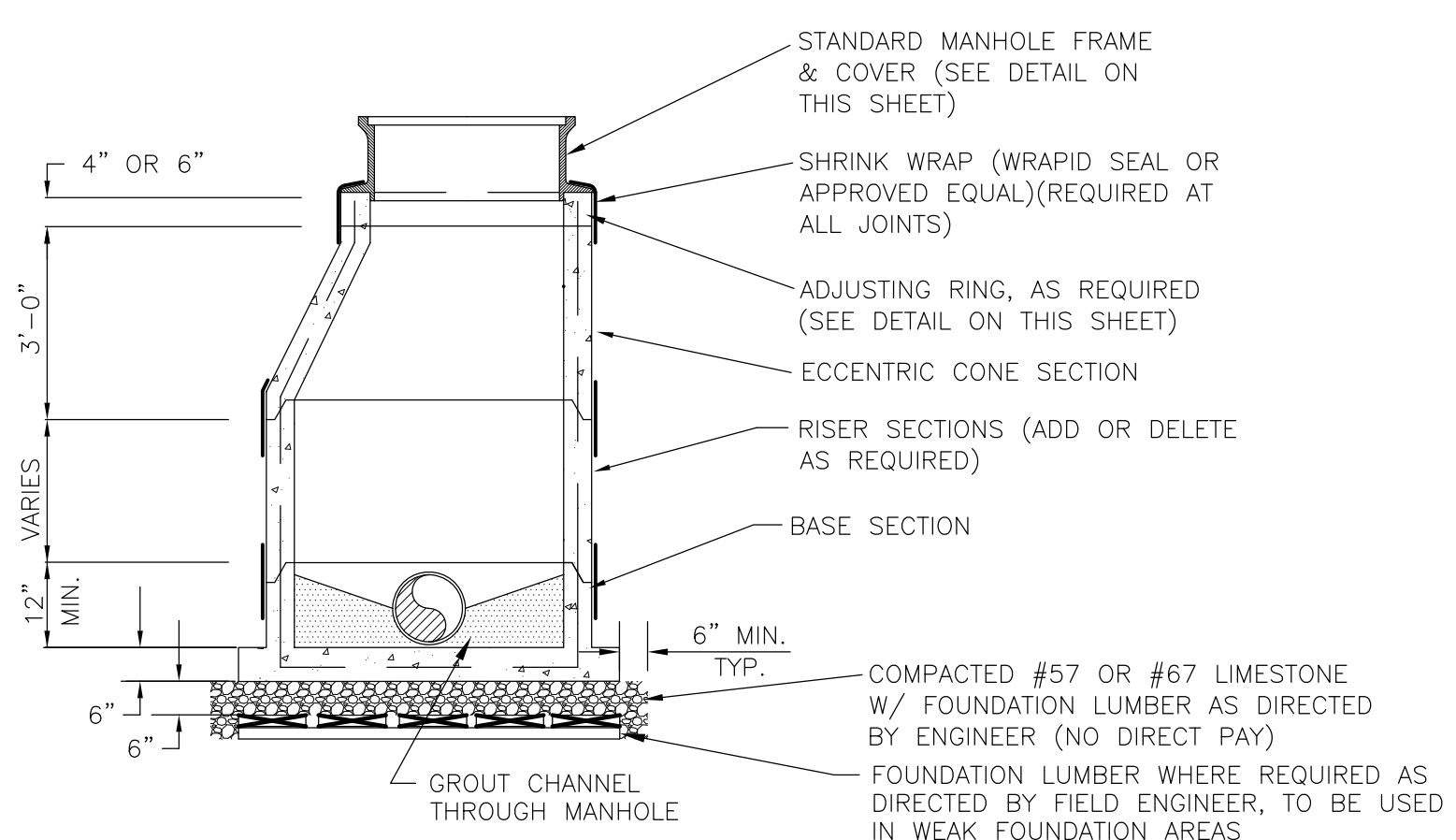
NOTE: PLASTIC "RAIN CAPS" ARE REQUIRED WHERE MANHOLE TOPS COULD BE FLOODED BY RAIN WATER RUN OFF, OR PERSISTENT HIGH WATER. WATERTIGHT MANHOLE COVERS ARE NOT USUALLY REQUIRED, AND WILL BE USED ONLY WITH APPROVAL OF THIS DIVISION.

MANHOLE SIZING		
MANHOLE DIAMETER	WALL THICKNESS	SIZE OF PIPE
48-INCH	5 INCHES	18-INCH
60-INCH	6 INCHES	27-INCH
72-INCH	7 INCHES	30-INCH
84-INCH	8 INCHES	36-INCH
96-INCH	9 INCHES	42-INCH

MANHOLE DIAMETER BASED ON LARGEST PIPE ENTERING MANHOLE.

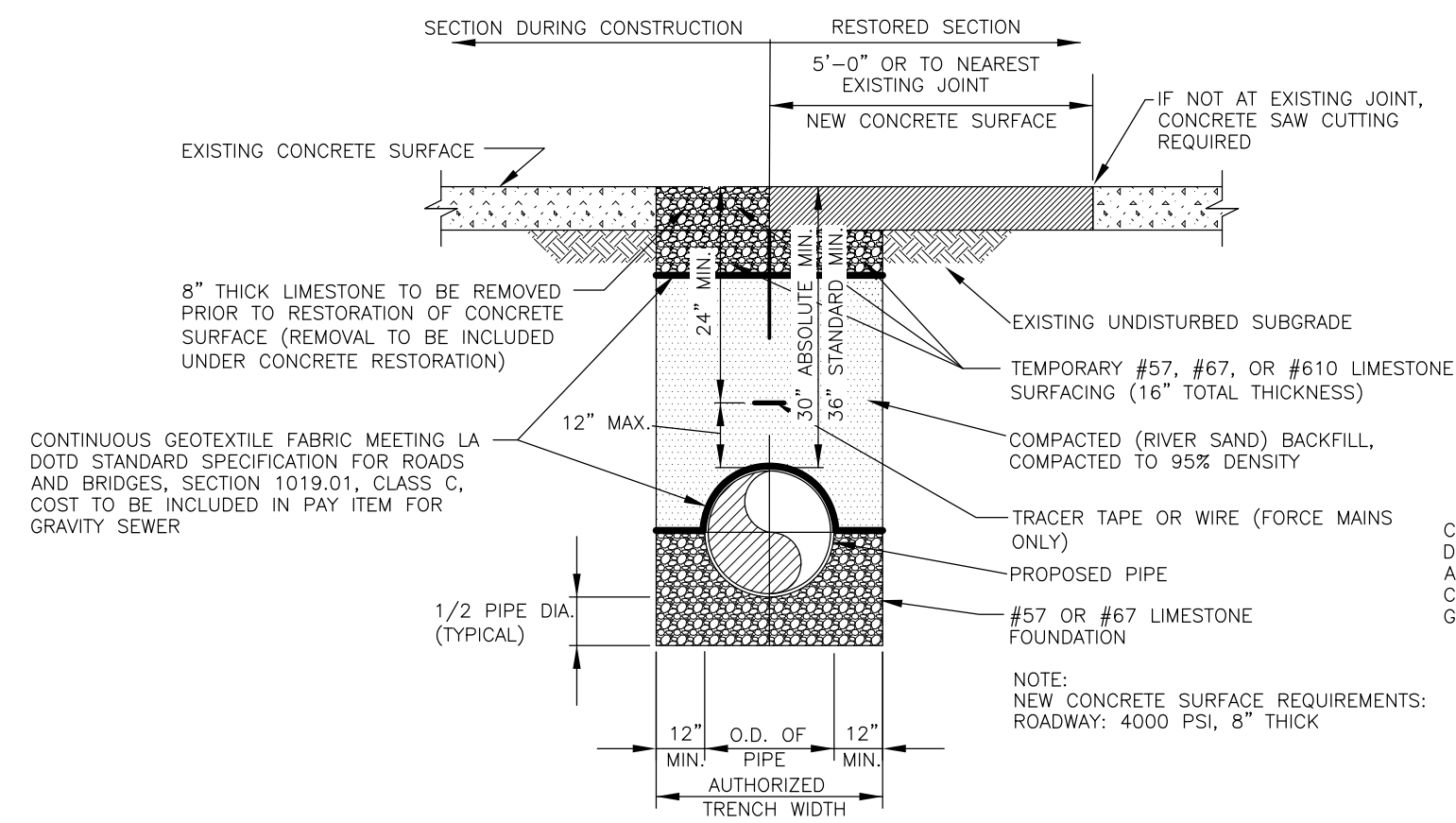


PRECAST CONCRETE SHALLOW MANHOLE - STRAIGHT
N.T.S.



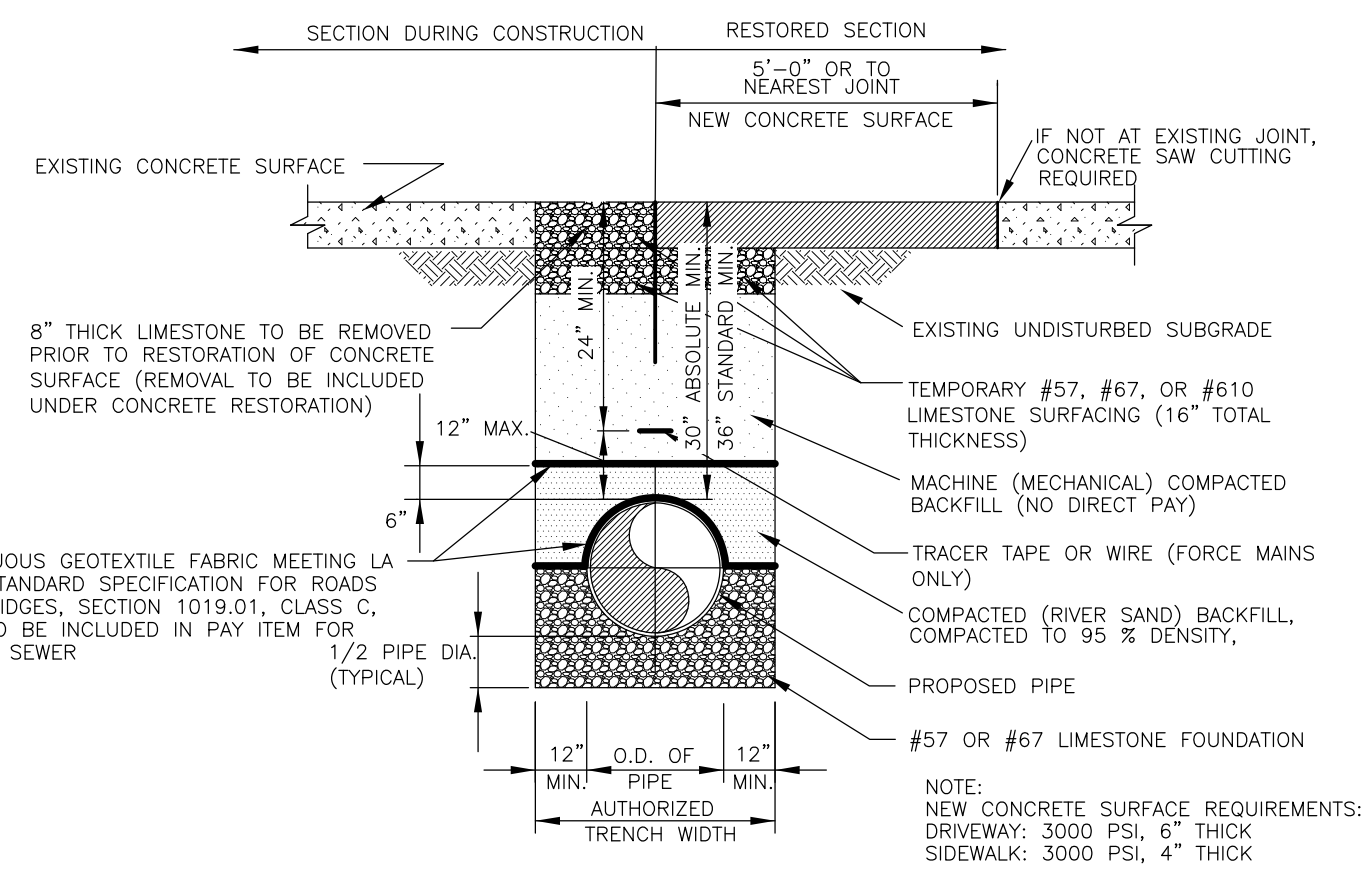
PRECAST CONCRETE SHALLOW MANHOLE - ECCENTRIC
N.T.S.

6/7/18 ADDED HEAT SHRINK WRAP DATE REVISIONS	TERREBONNE PARISH CONSOLIDATED GOVERNMENT SEWER-POLLUTION CONTROL DIVISION STANDARD GRAVITY SEWER MANHOLE DETAILS		
	DRAWN BY: DPM	PROJECT NUMBER 441-105-GSE	SHEET: 3 of 7
	SCALE: AS SHOWN	DATE: 6-30-2016	CAD FILE:
	MAP FILE:		



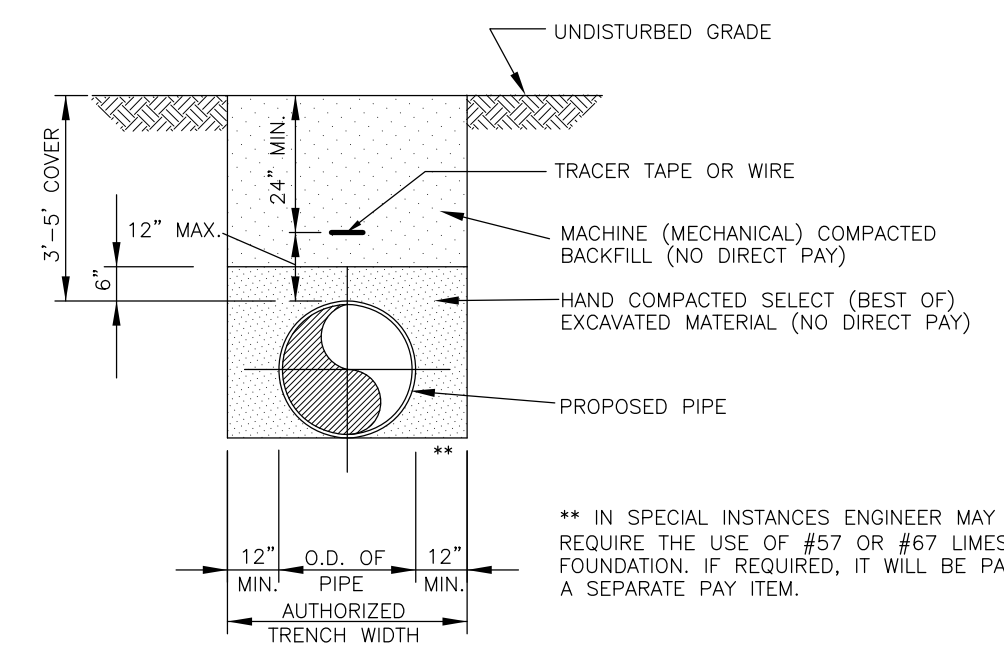
TYPICAL TRENCH SECTION FOR OPEN CUTTING OF CONCRETE ROADWAYS

N.T.S.



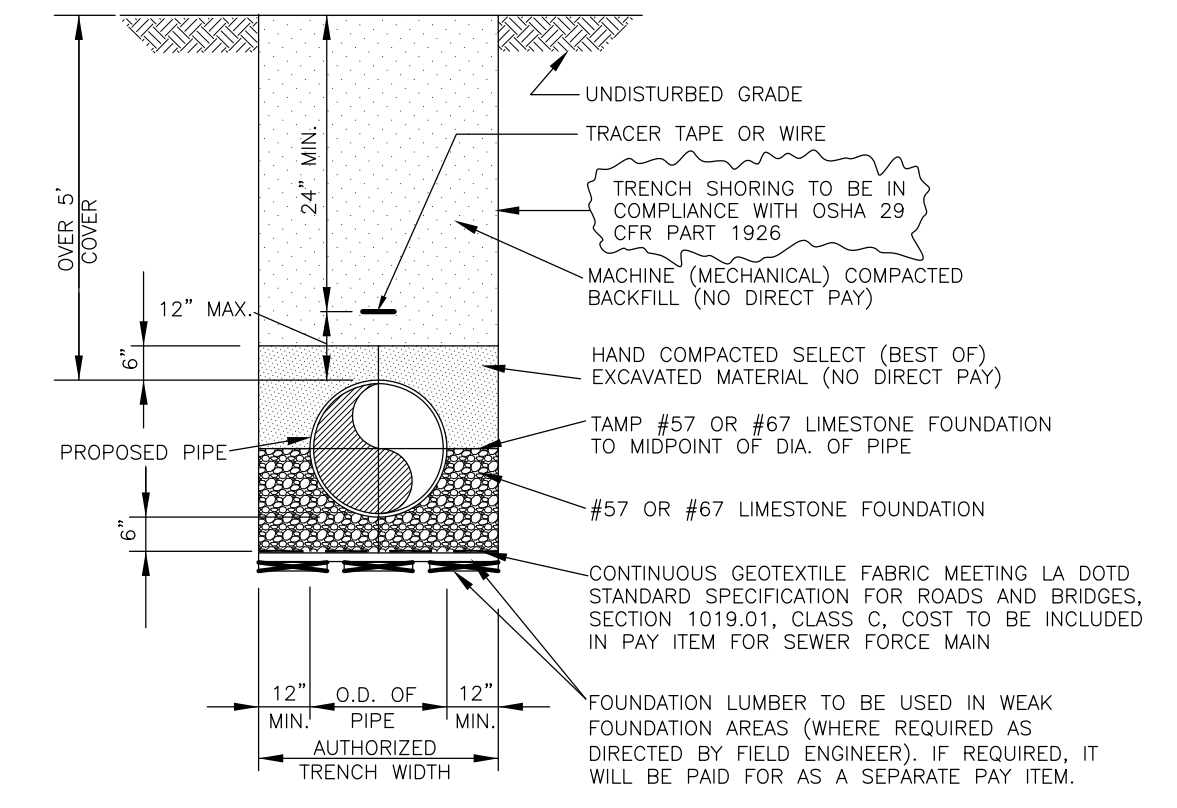
TYPICAL TRENCH SECTION FOR OPEN CUTTING OF CONCRETE DRIVEWAYS & SIDEWALKS

N.T.S.



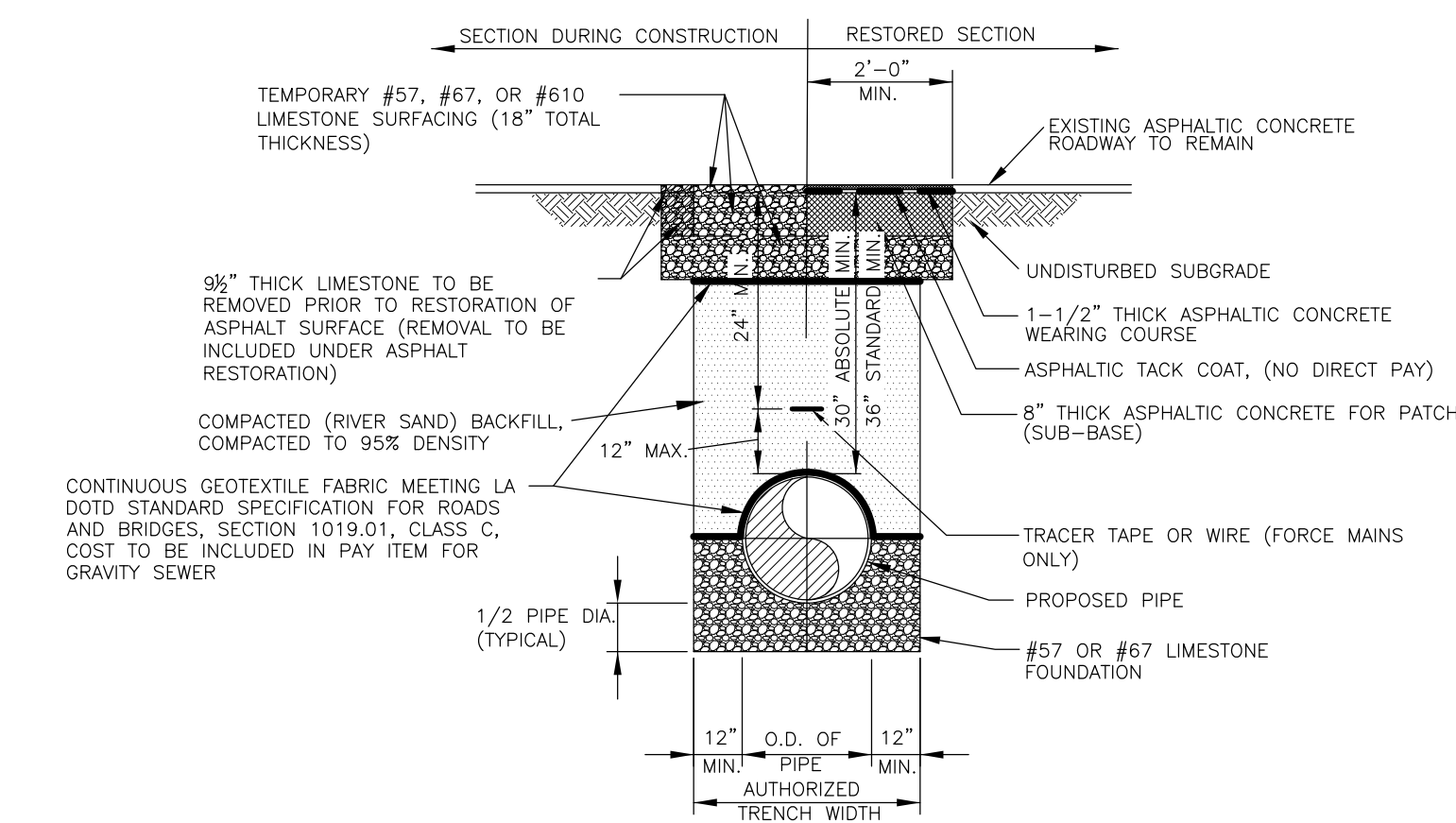
TYPICAL TRENCH SECTION FOR FORCE MAIN 3' TO 5' COVER

N.T.S.



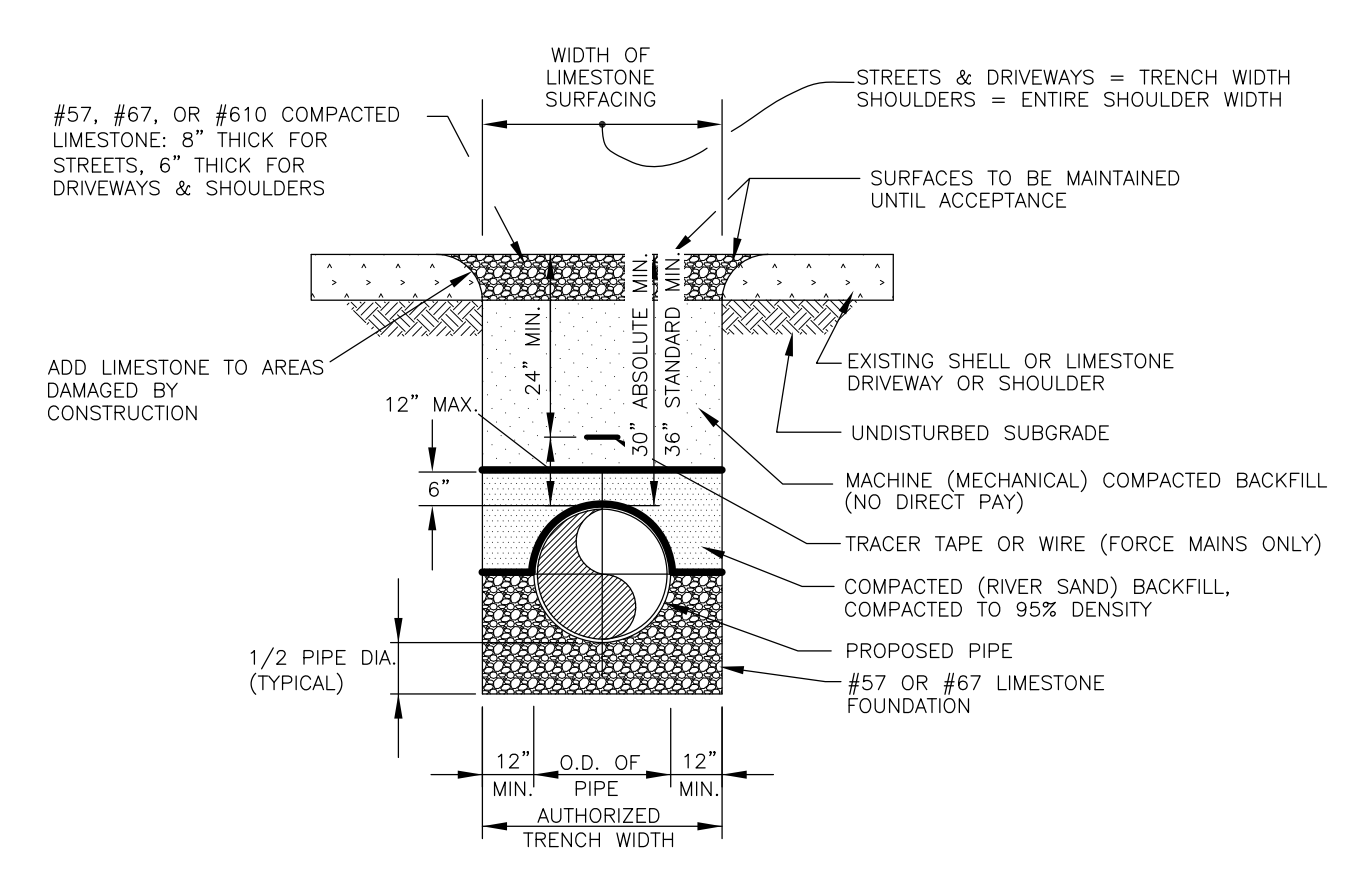
TYPICAL TRENCH SECTION FOR FORCE MAIN OVER 5' COVER

N.T.S.



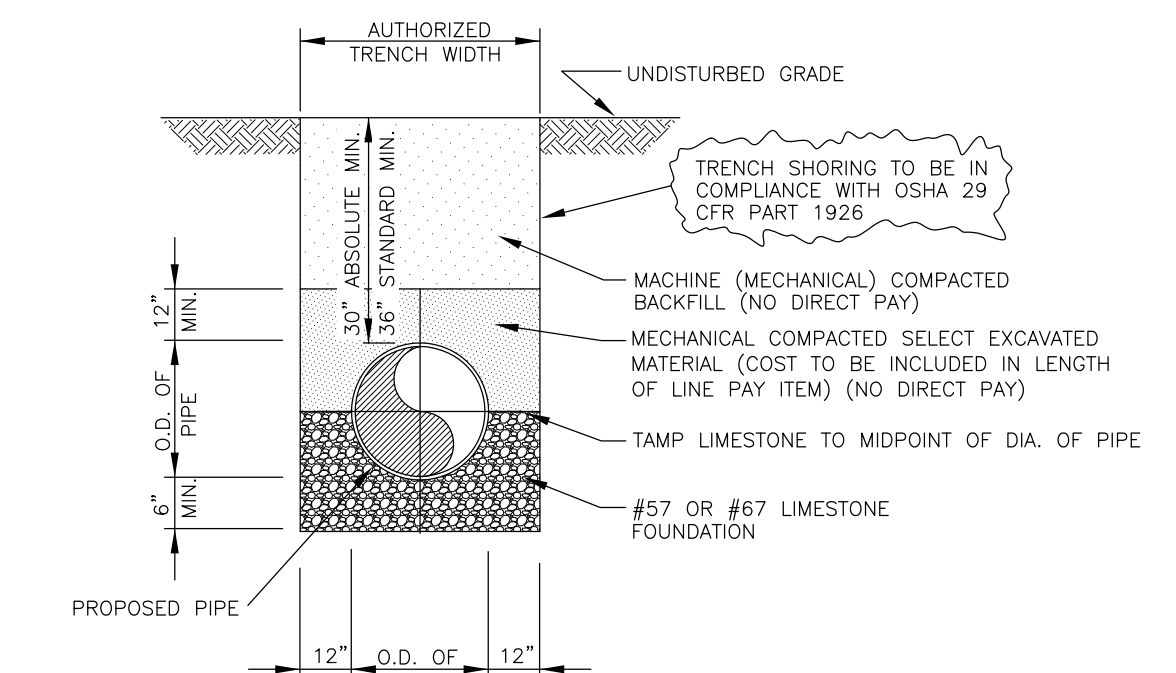
TYPICAL TRENCH SECTION FOR OPEN CUTTING OF ASPHALT SURFACE

N.T.S.



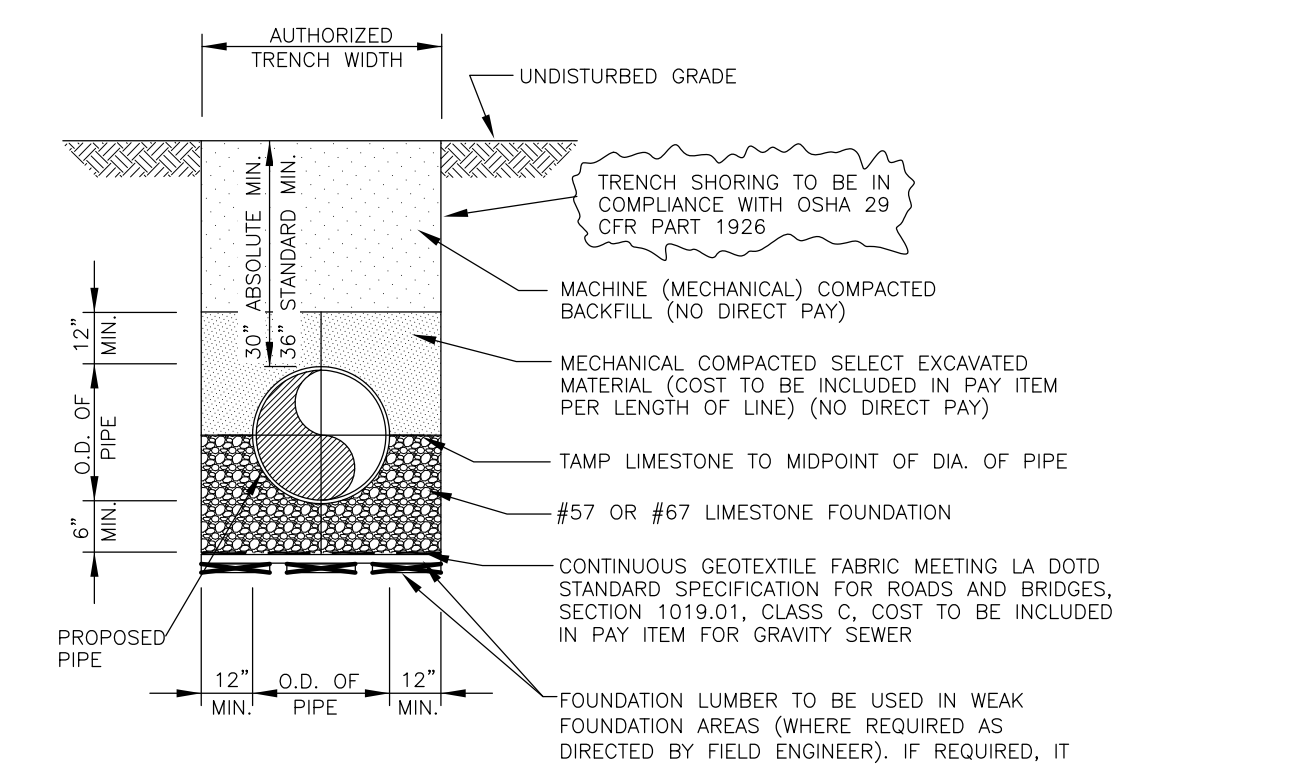
TYPICAL TRENCH SECTION FOR OPEN CUTTING OF LIMESTONE SURFACE

N.T.S.



TYPICAL GRAVITY SEWER PIPE TRENCH SECTION

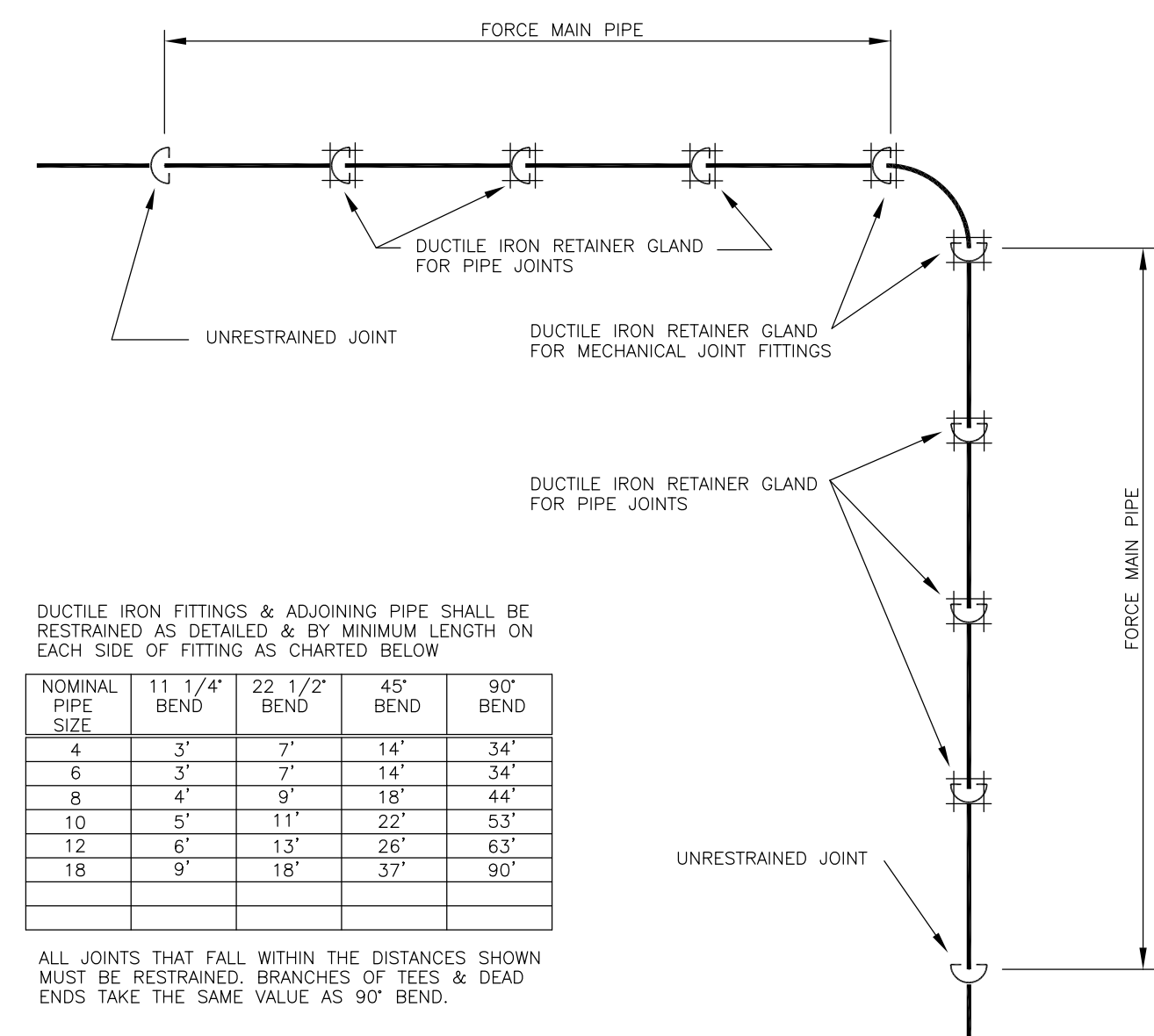
N.T.S.



TYPICAL GRAVITY SEWER PIPE TRENCH SECTION w/ LIMESTONE & BOARD FOUNDATION

N.T.S.

STANDARD TRENCH IN EXISTING ROADWAY DETAILS



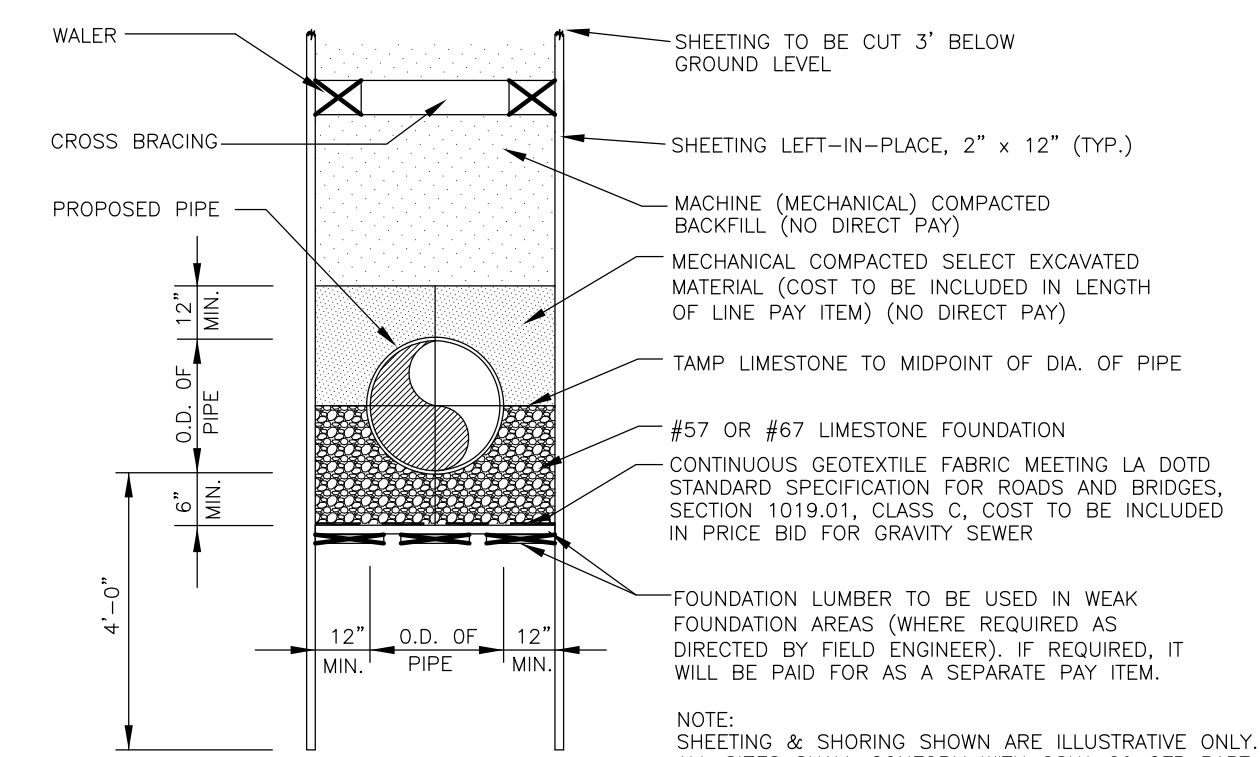
DETAIL OF RESTRAINED PIPE & FITTINGS

N.T.S.

NOTES:

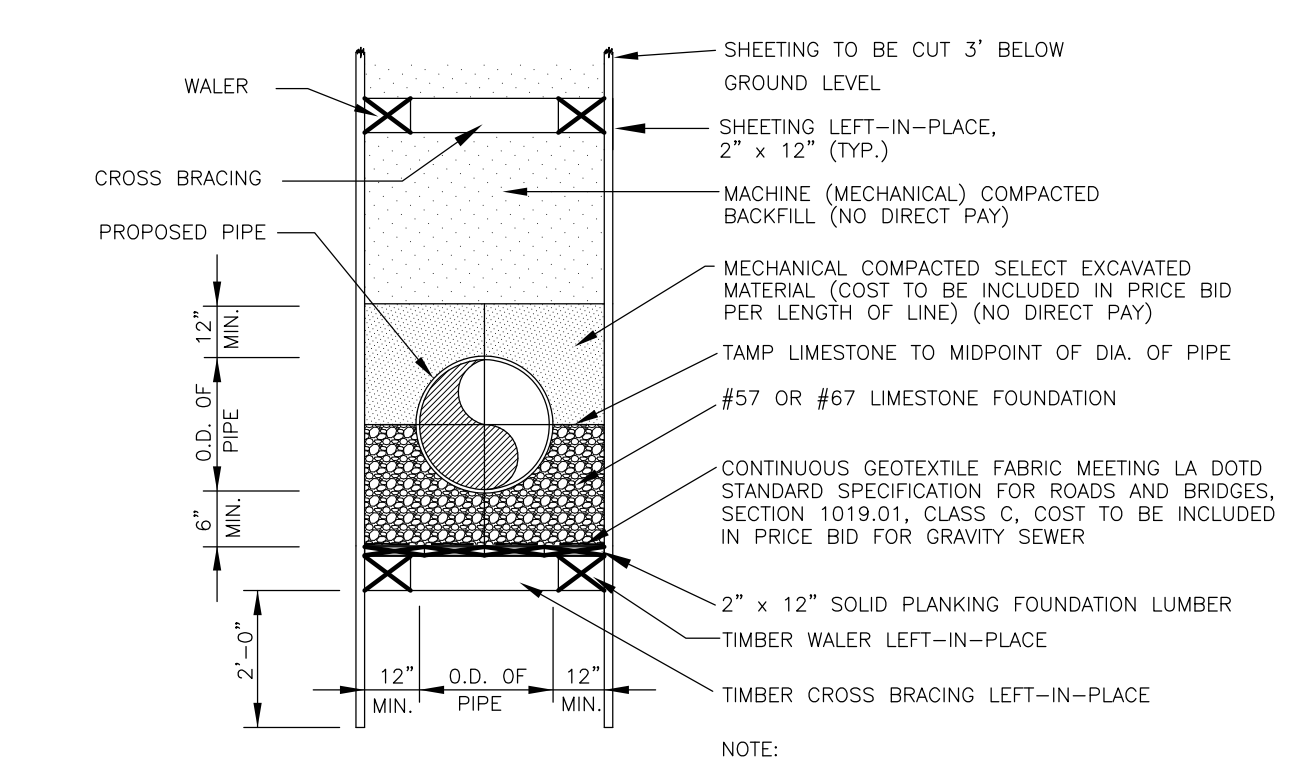
- DISTANCES OF RESTRAINTS SHALL BE REQUIRED ON EVERY JOINT(S) ON EACH SIDE OF FITTING, IN ADDITION TO CONCRETE OR TIMBER BLOCKING.
- RESTRAINTS NOT REQUIRED INSIDE OF CASING WHEN FITTING OR PIPE IS RODDED TO CASING ENDS.
- RESTRAIN TEE WHEN USED AS A 90° BEND, DEAD END, OR AS NOTED ON PLANS.
- AT ALL ROAD CROSSINGS AND WHERE NOTED ON PLANS, FITTINGS SHALL BE RODDED TO THE ENDS OF THE CASING.
- RESTRAINT SYSTEM: EITHER:
 - (A) RODS FOR USE WITH MECHANICAL JOINT FITTINGS - 2 REQUIRED - 5/8" DIA. STAINLESS STEEL FOR 8" PIPE & BELOW
 - (B) RETAINER GLANDS: USE EBBA IRON, MEGA-LUG, OR EQUAL IN COMPLIANCE WITH PIPE MATERIAL USED FOR PIPE GREATER THAN EIGHT INCHES (8") IN DIAMETER

NOTE: #610 LIMESTONE IS NOT ALLOWED FOR FOUNDATION MATERIAL.



TYPICAL GRAVITY SEWER PIPE TRENCH SECTION w/ SOLID SHEETING LEFT-IN-PLACE

N.T.S.



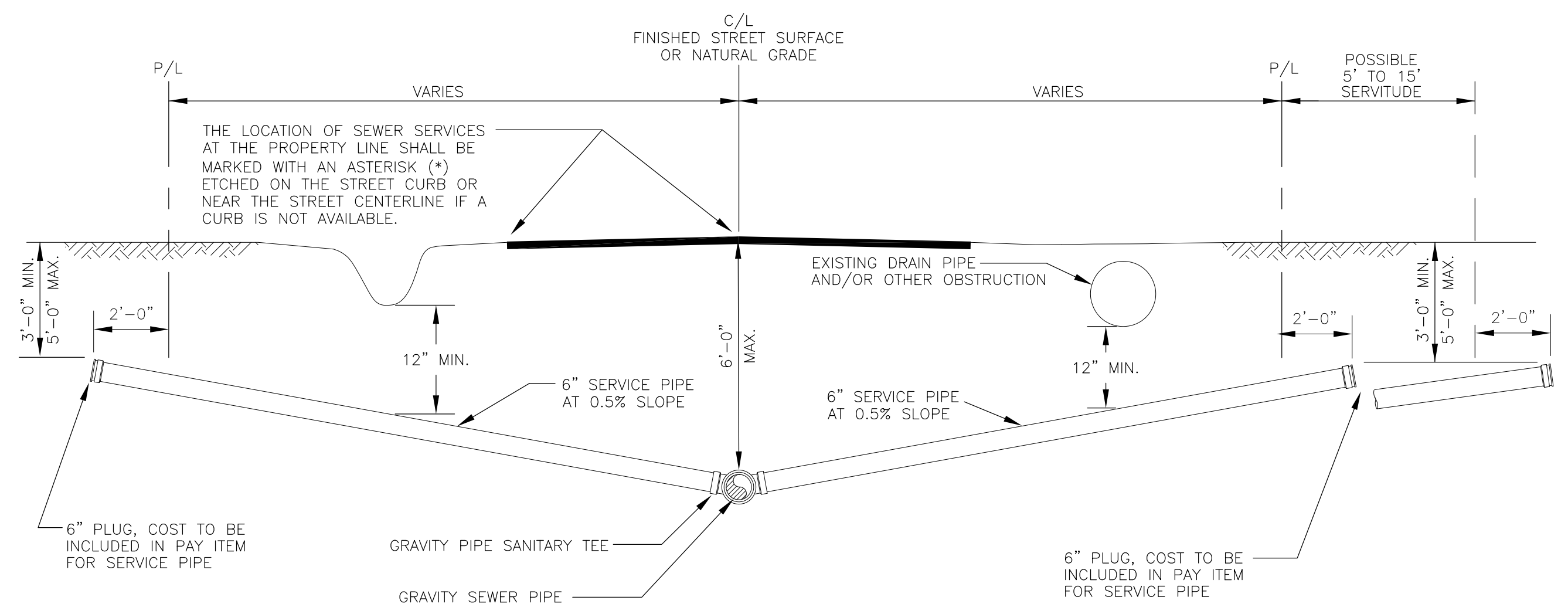
TYPICAL GRAVITY SEWER TRENCH SECTION w/ SPECIAL FOUNDATION

N.T.S.

STANDARD GRAVITY SEWER TRENCH DETAILS

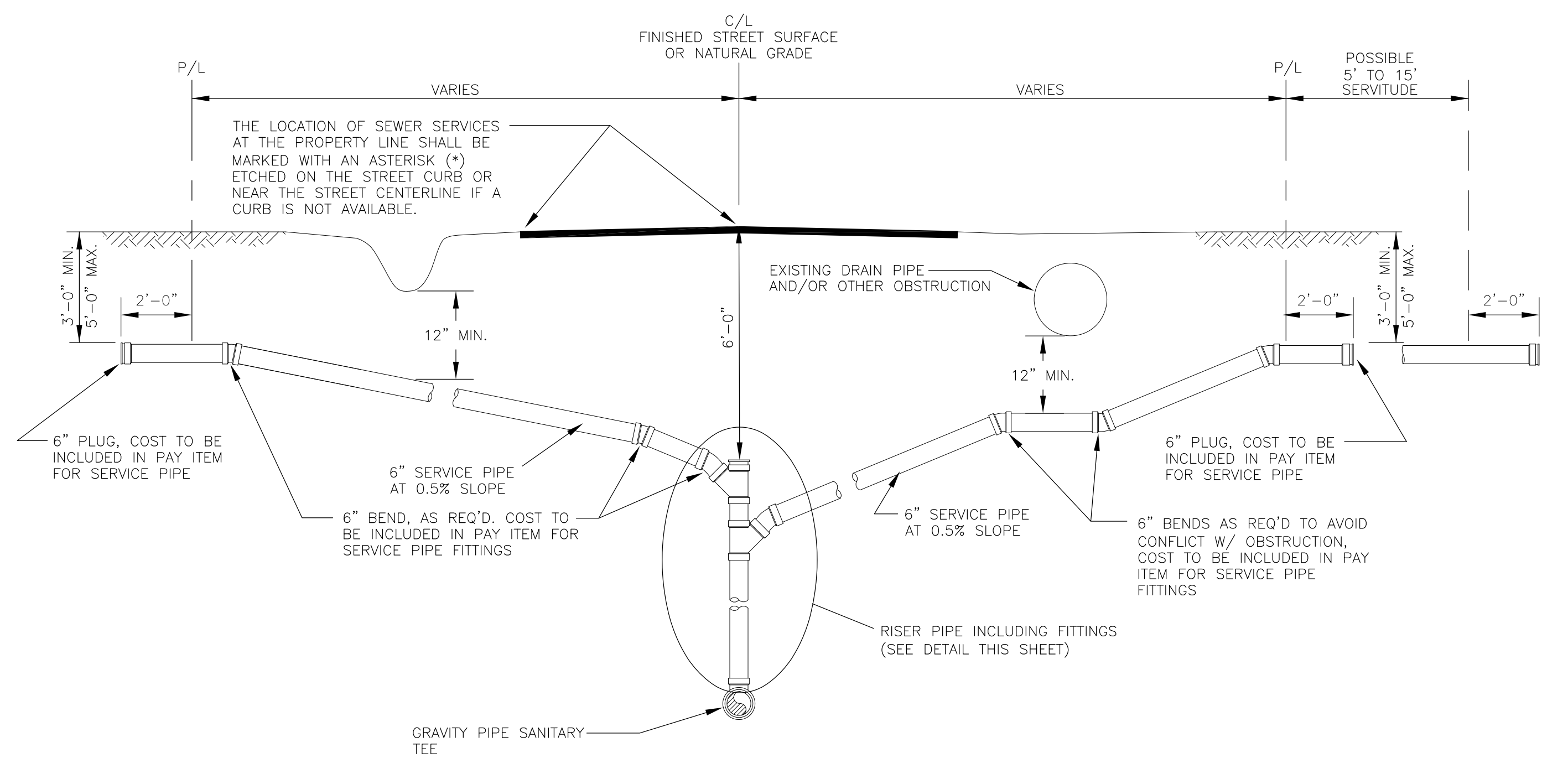
(SHEETING & BRACING SHOWN ARE ILLUSTRATIVE ONLY AND TYPICAL OF THAT GENERALLY USED. ALL SIZES SHALL CONFORM WITH OSHA 29 CFR PART 1926)

TERREBONNE PARISH CONSOLIDATED GOVERNMENT		
SEWER-POLLUTION CONTROL DIVISION		
STANDARD GRAVITY SEWER AND SEWER FORCE MAIN TRENCH DETAILS		
DRAWN BY: DPM	PROJECT NUMBER	SHEET: 4 of 7
SCALE: AS SHOWN	441-105-GSE	CAD FILE:
DATE: 6-30-2016		MAP FILE:



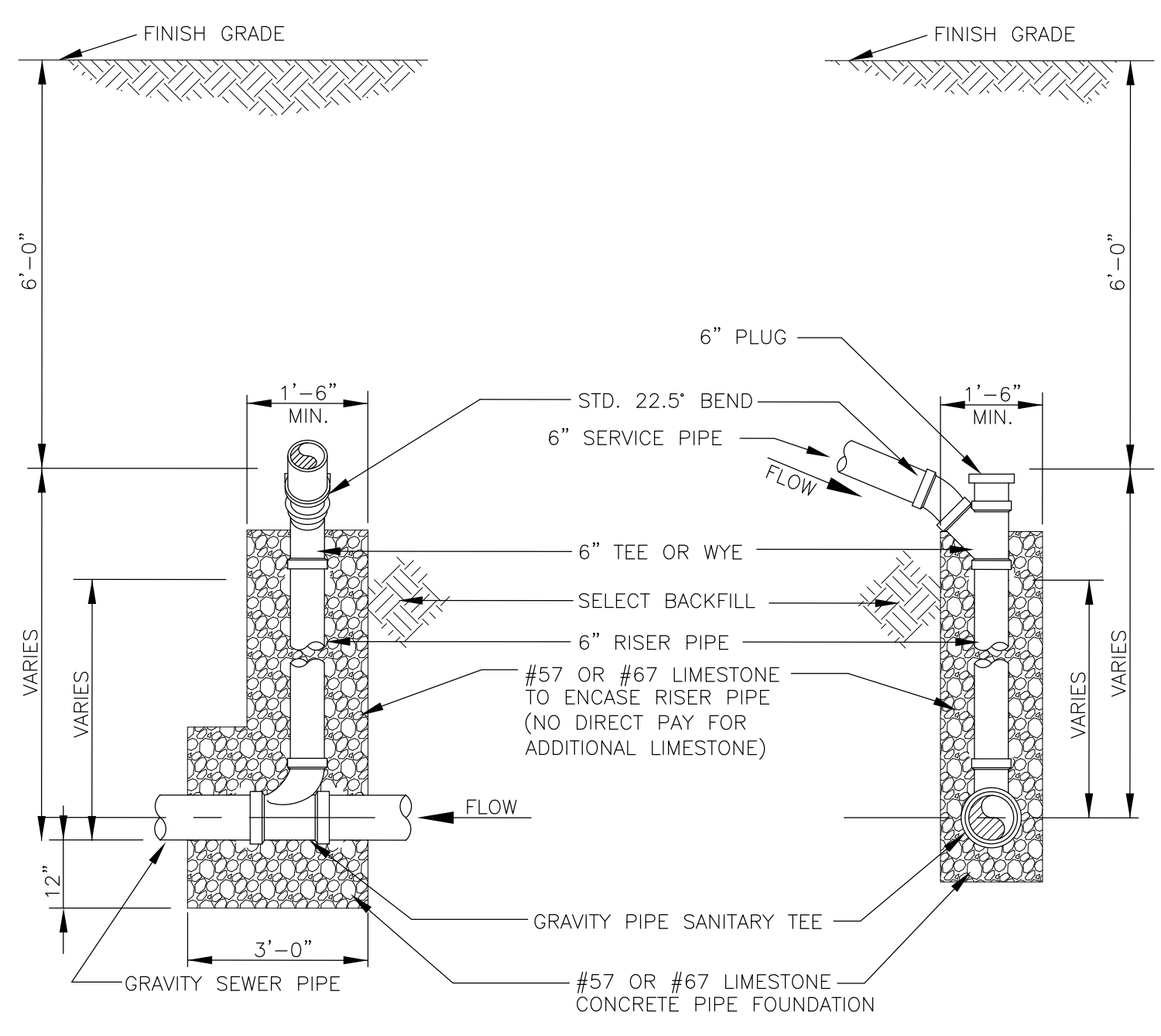
TYPICAL SHALLOW SEWER SERVICE CONNECTION

N.T.S.



TYPICAL DEEP SEWER SERVICE CONNECTION

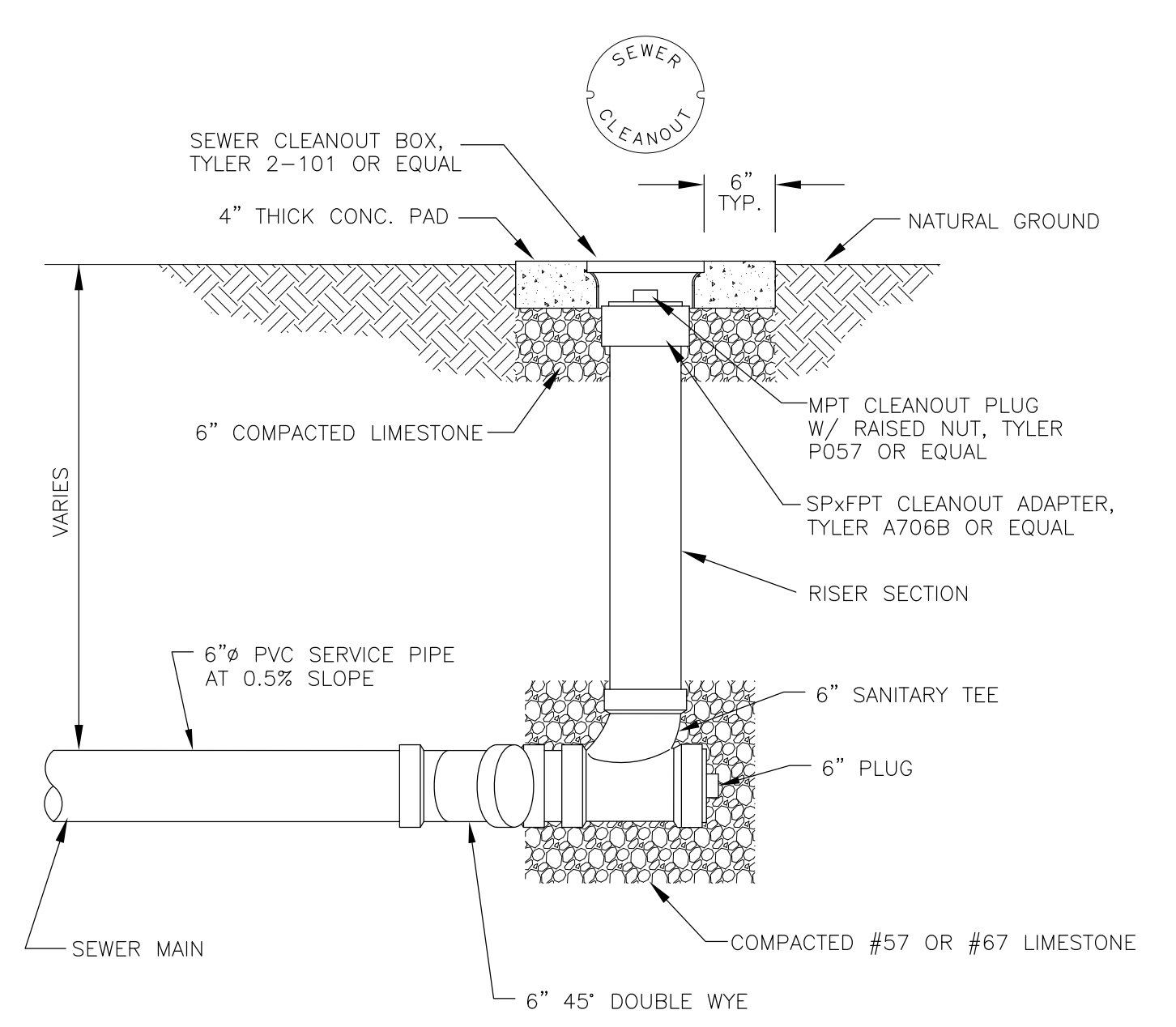
N.T.S.



TYPICAL SERVICE RISER PIPE

ITEMS SHOWN ARE TO BE INCLUDED IN PAY ITEM FOR VERTICAL FOOT OF RISER PIPE UNLESS NOTED OTHERWISE

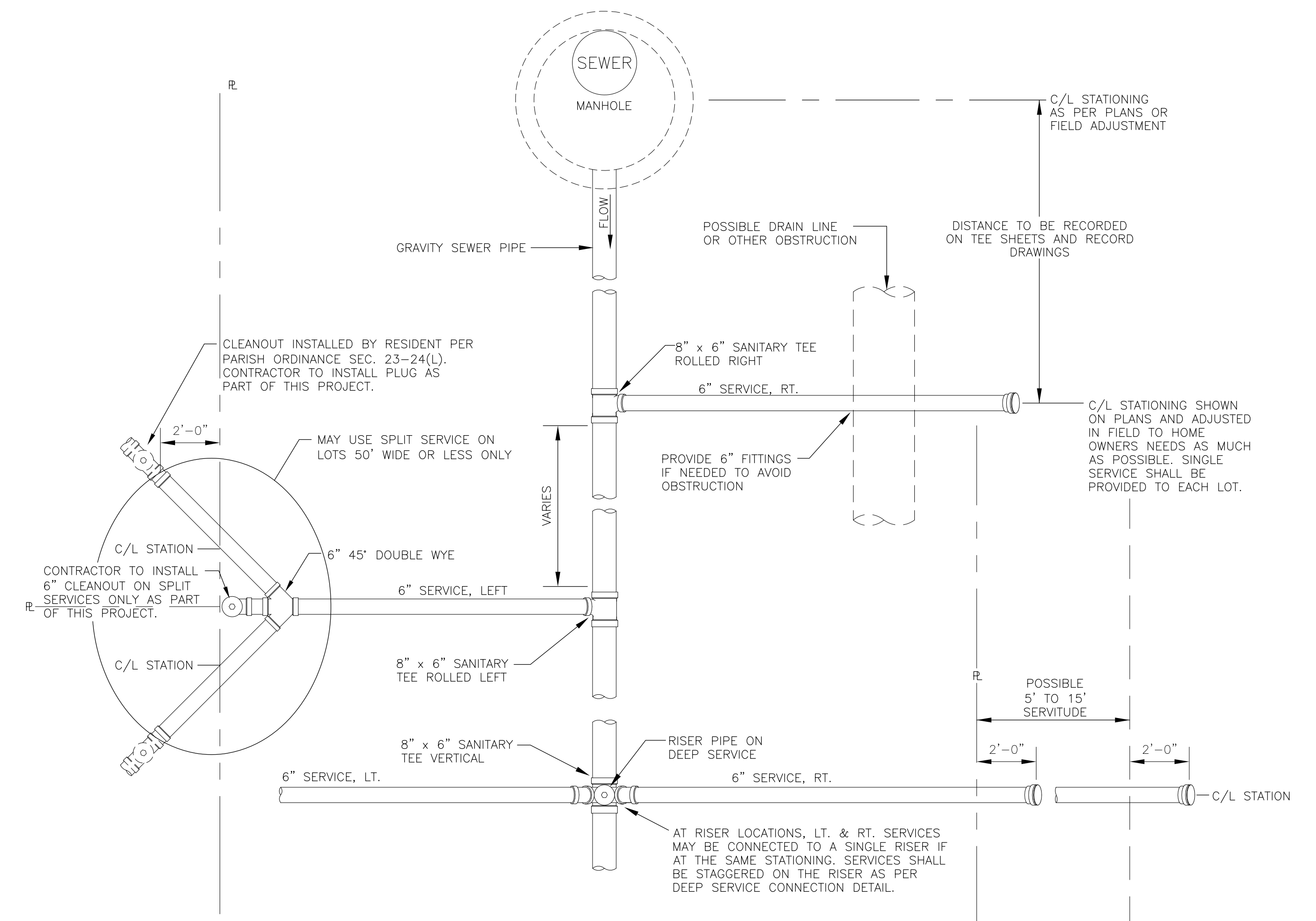
N.T.S.



TYPICAL SEWER CLEANOUT FOR SPLIT SERVICES

ITEMS SHOWN ARE TO BE INCLUDED IN PAY ITEM FOR CLEANOUT

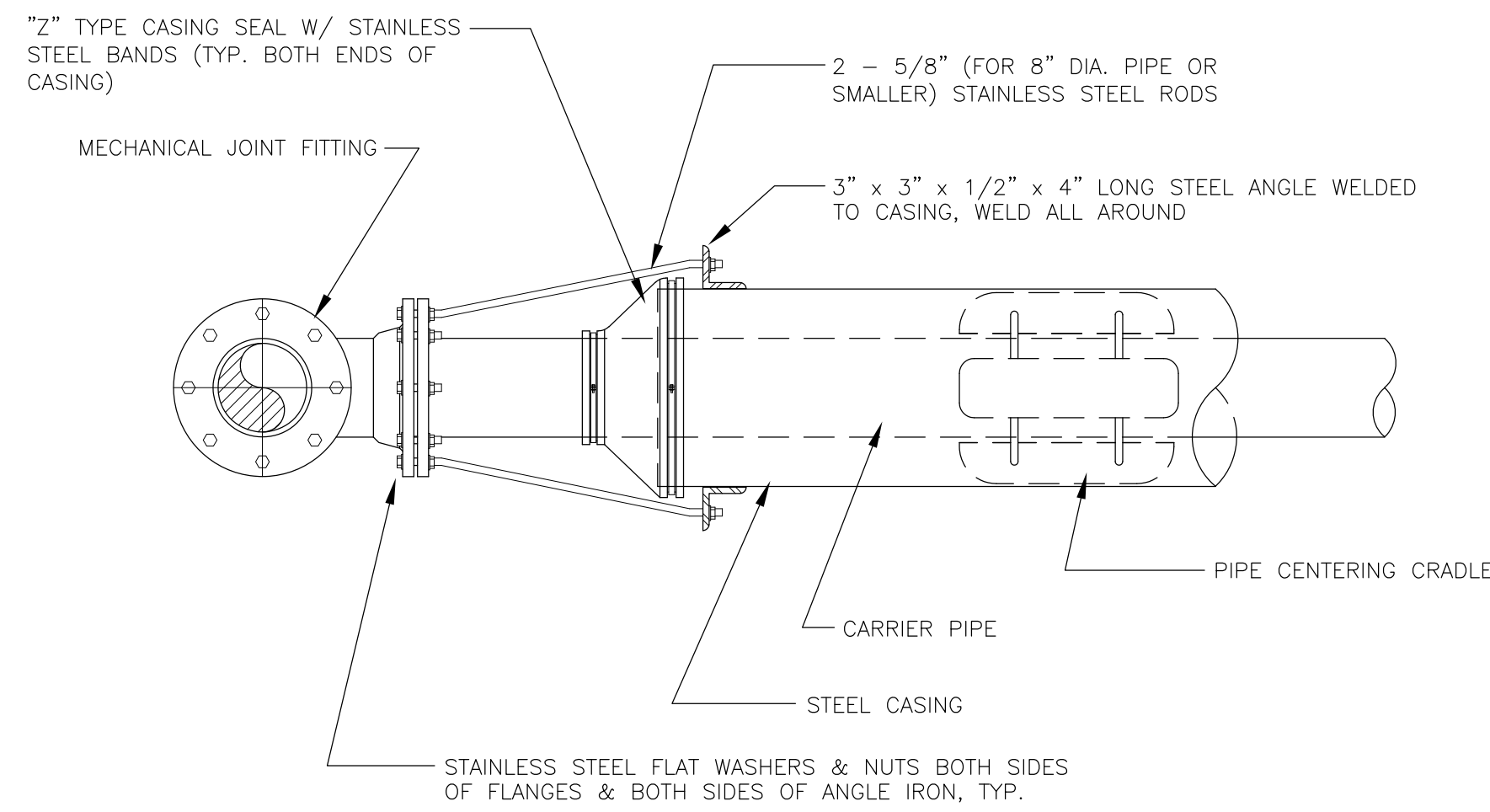
N.T.S.



PLAN VIEW OF TYPICAL SEWER SERVICES

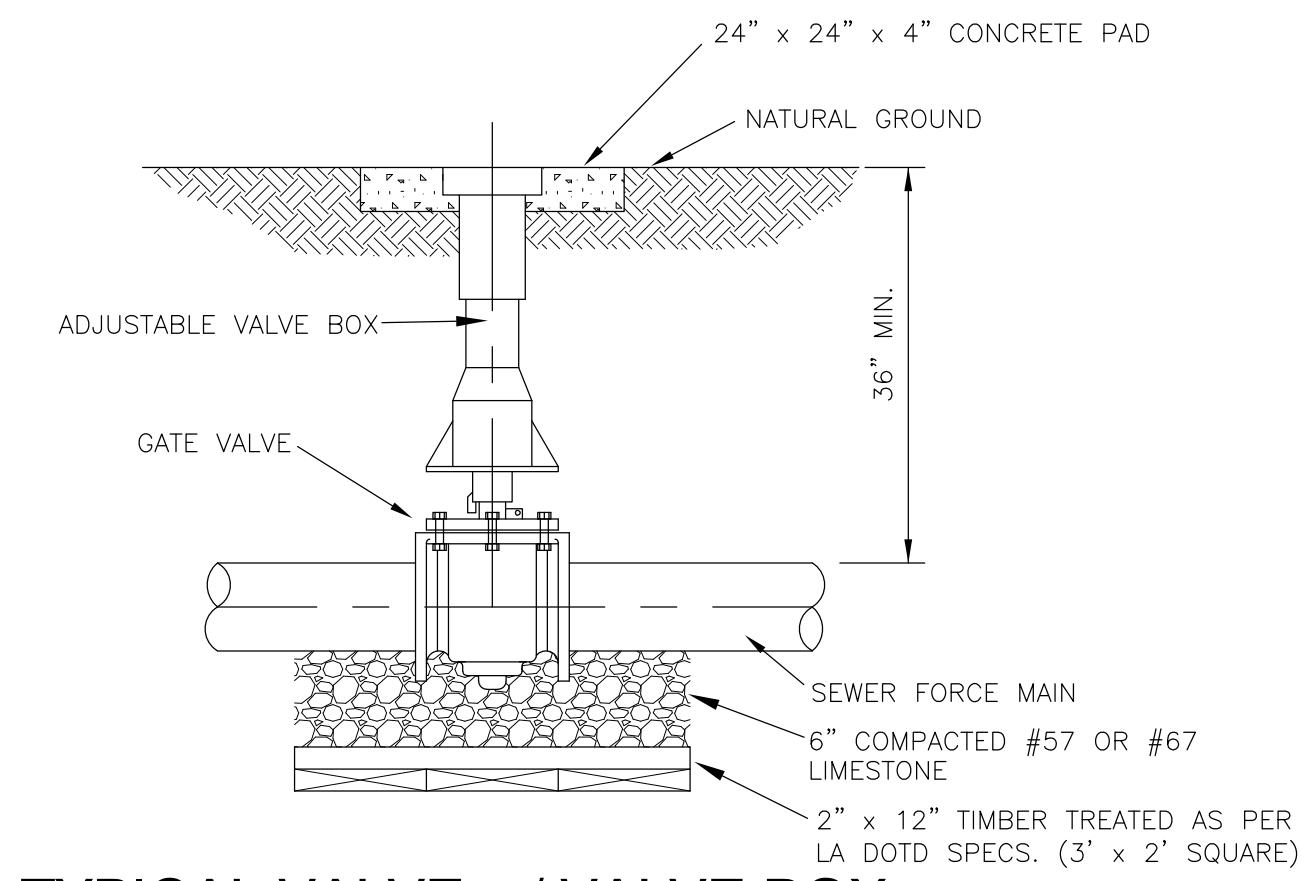
N.T.S.

6/7/18 ADDED MAY TO 30" NOTE DATE: REVISIONS:	TERREBONNE PARISH CONSOLIDATED GOVERNMENT SEWER-POLLUTION CONTROL DIVISION STANDARD GRAVITY SEWER HOUSE CONNECTION DETAILS		
	DRAWN BY: DPM SCALE: AS SHOWN DATE: 6-30-2016	PROJECT NUMBER 441-105-GSE	SHEET: 5 of 7 CAD FILE: MAP FILE:
	TERREBONNE PARISH		
	DATE: 6-30-2016		



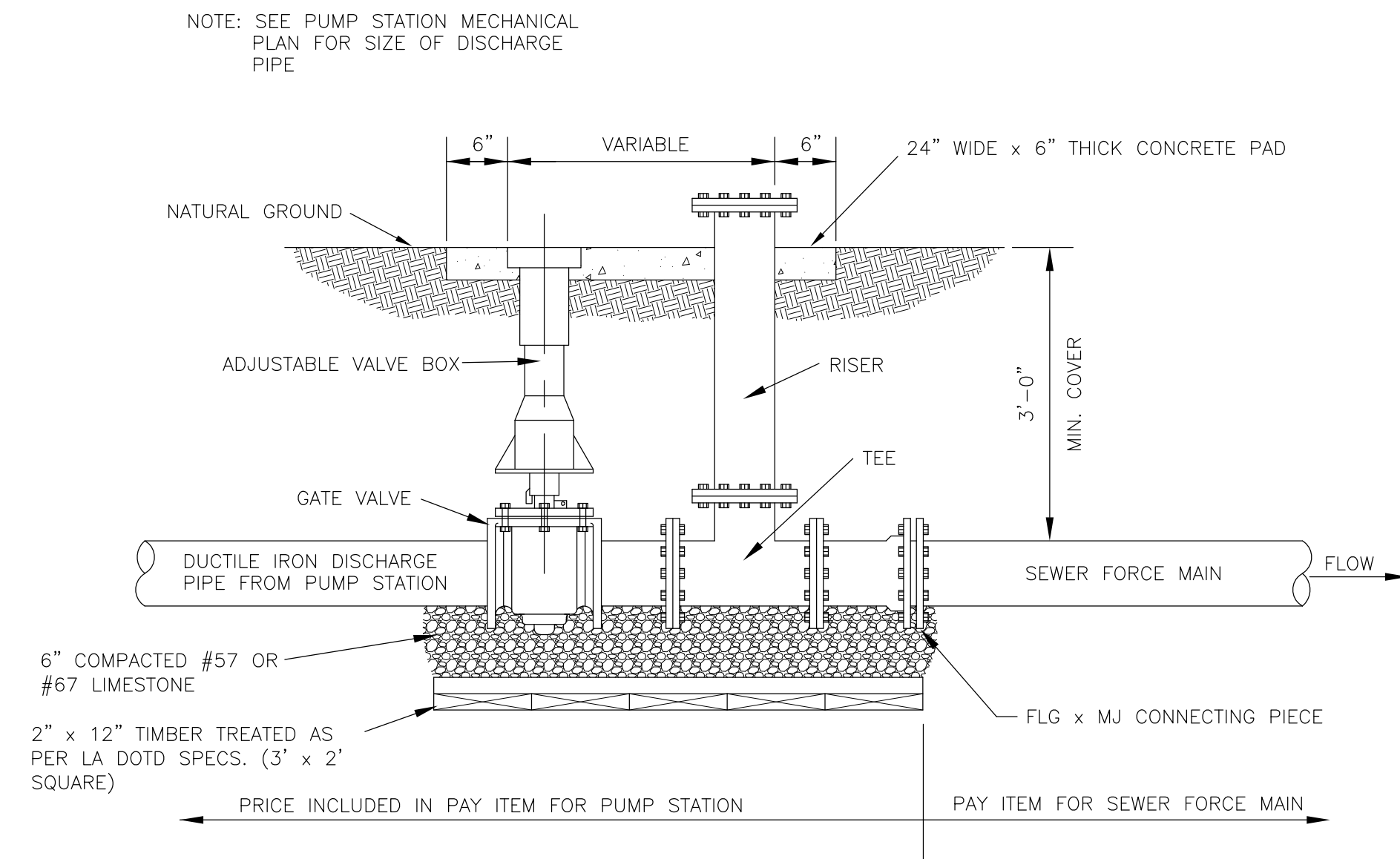
RESTRAIN TO CASING DETAIL

N.T.S.



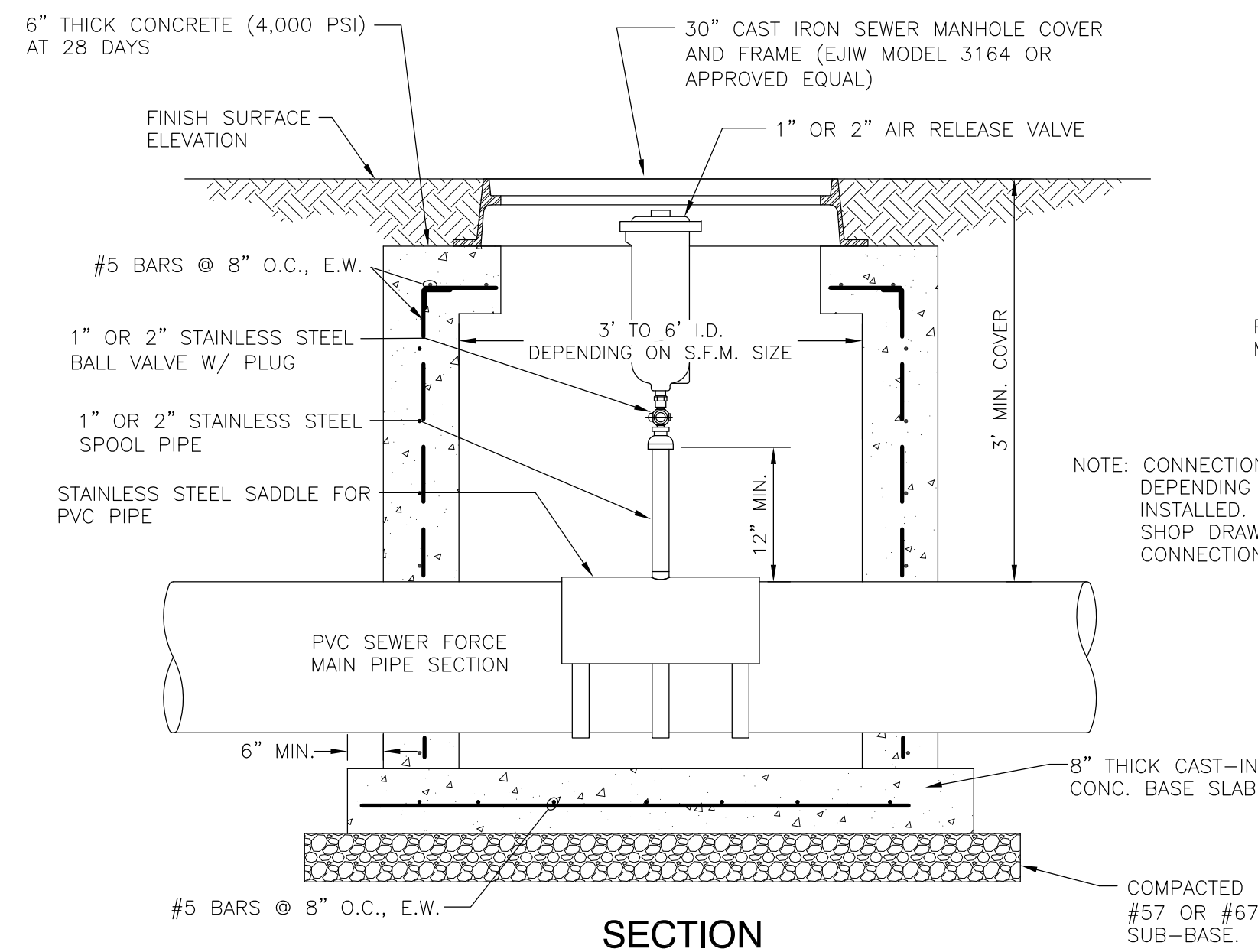
TYPICAL VALVE w/ VALVE BOX INSTALLATION

N.T.S.



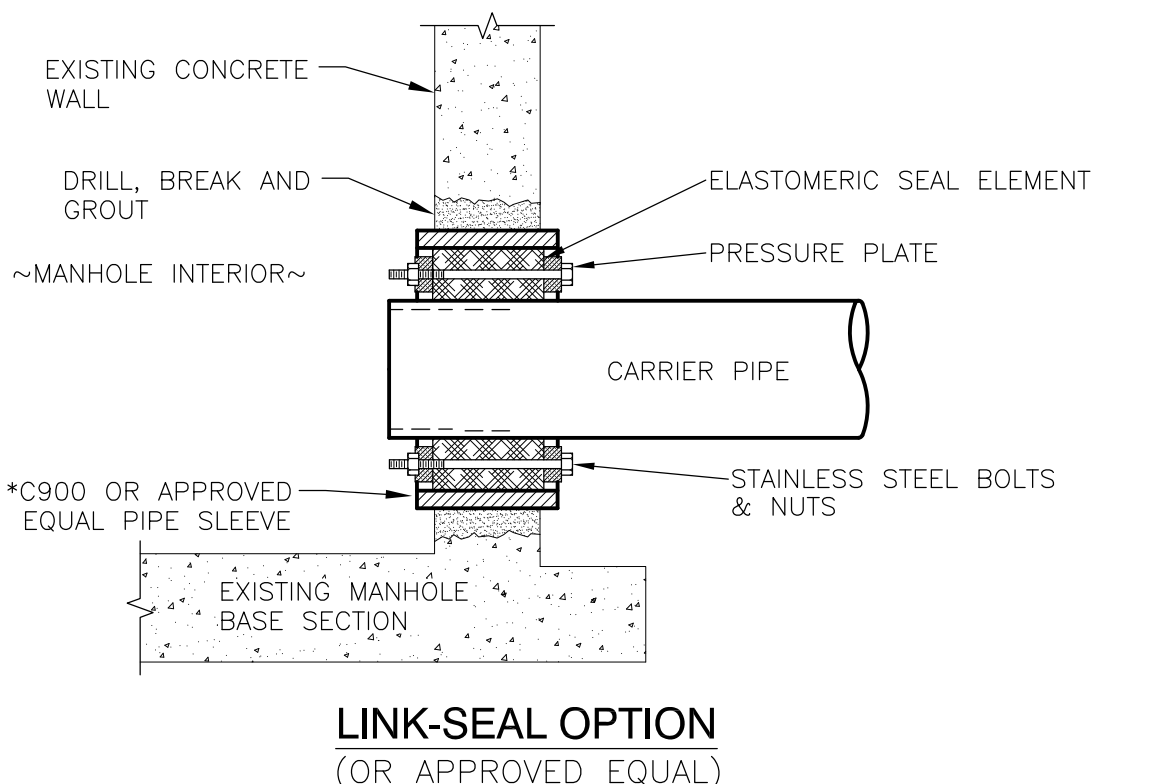
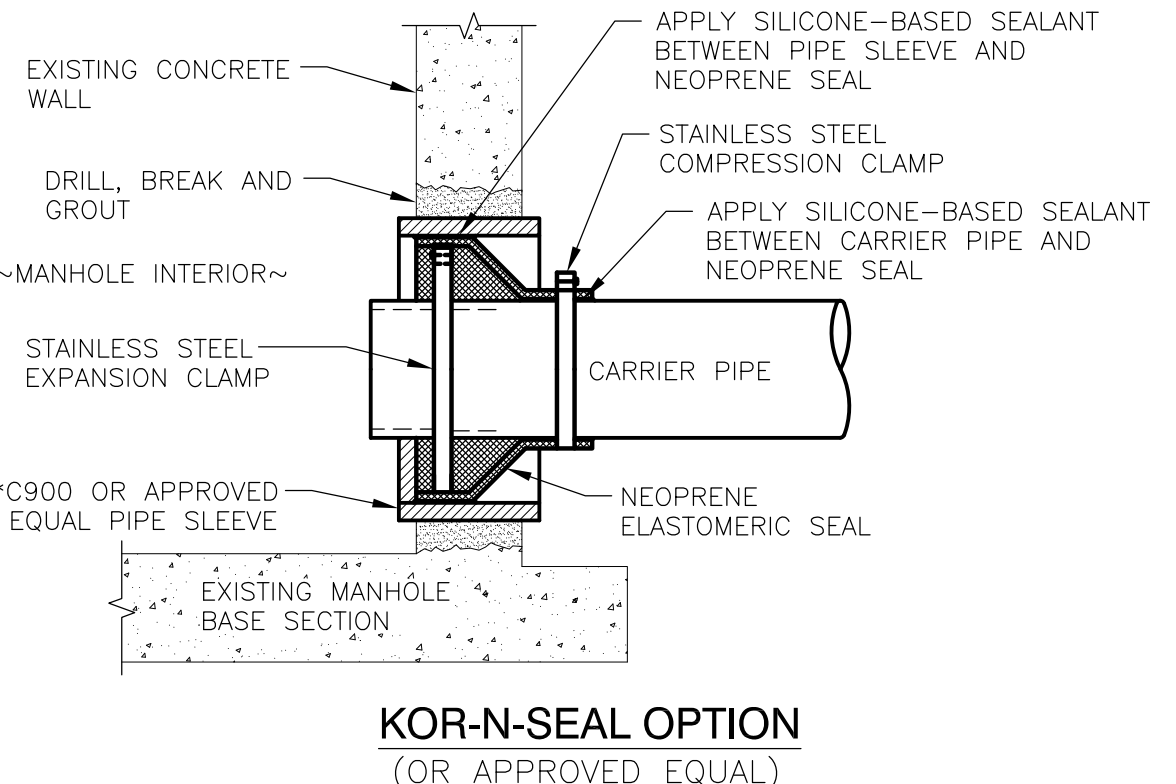
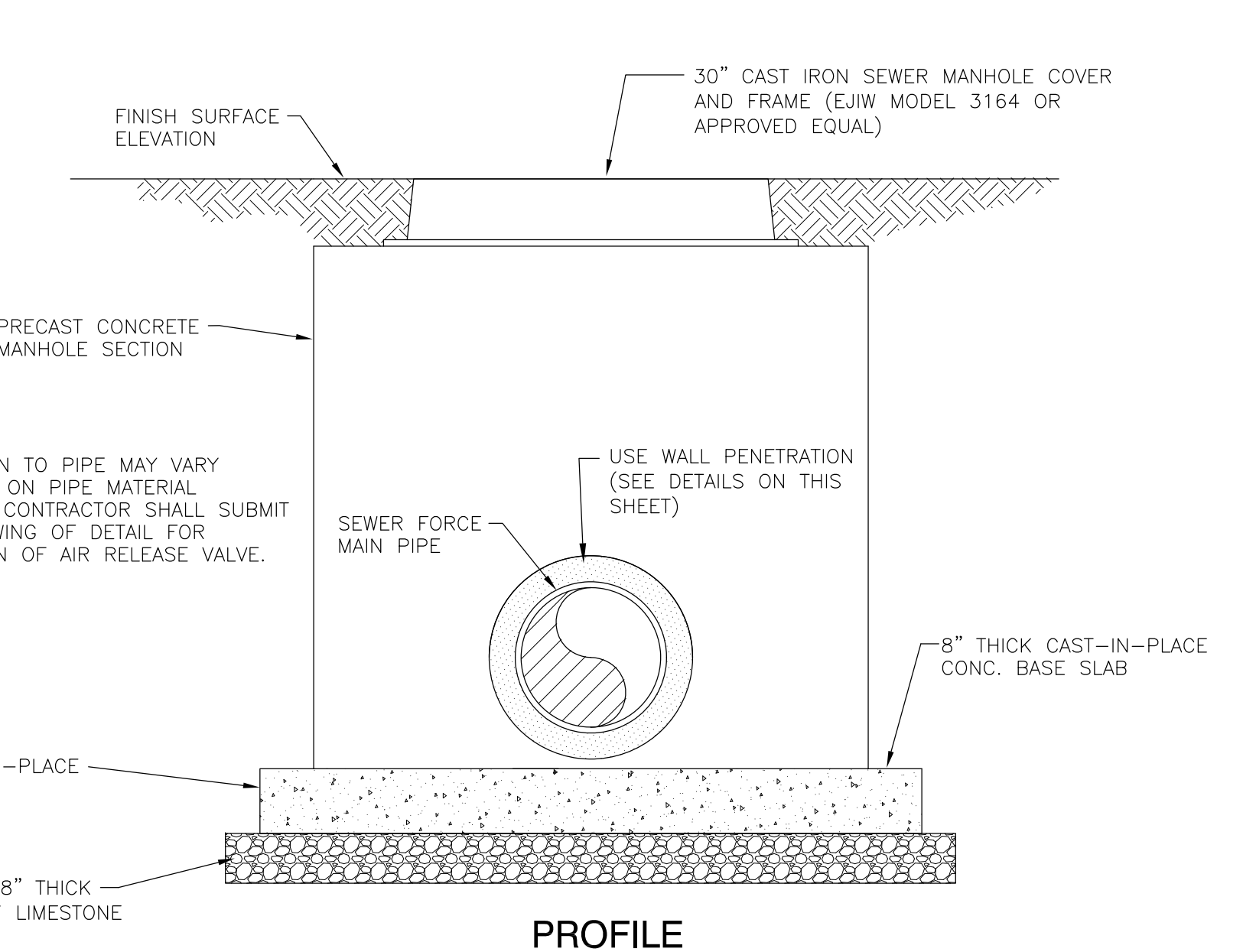
DETAIL - EMERGENCY PUMP DISCHARGE ASSEMBLY

N.T.S.



AIR RELEASE VALVE W/ BOX DETAIL

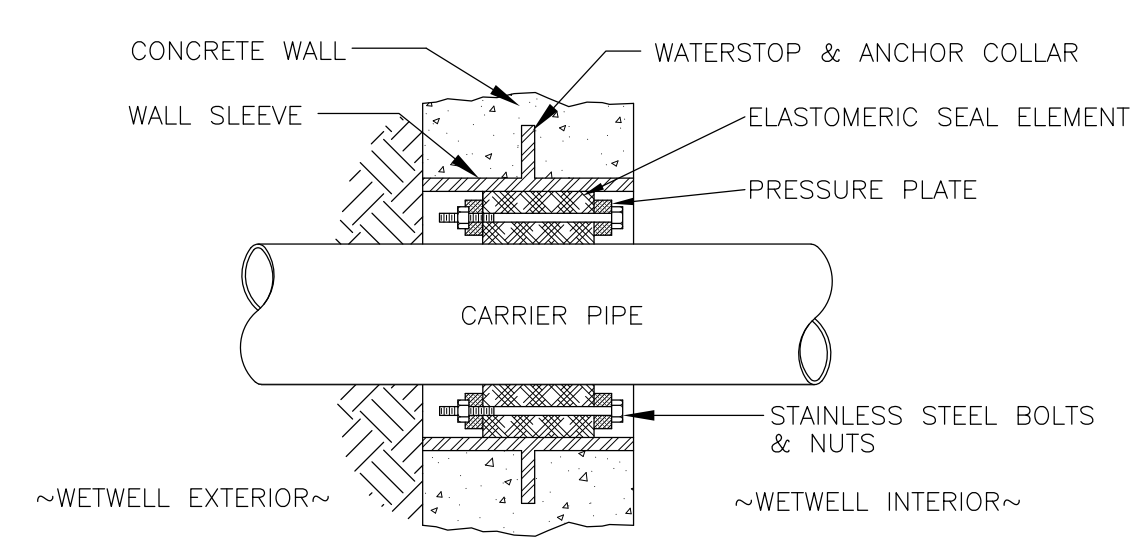
N.T.S.



TYPICAL WALL PENETRATION ON EXISTING WETWELLS, EXISTING MANHOLES AND NEW MANHOLES

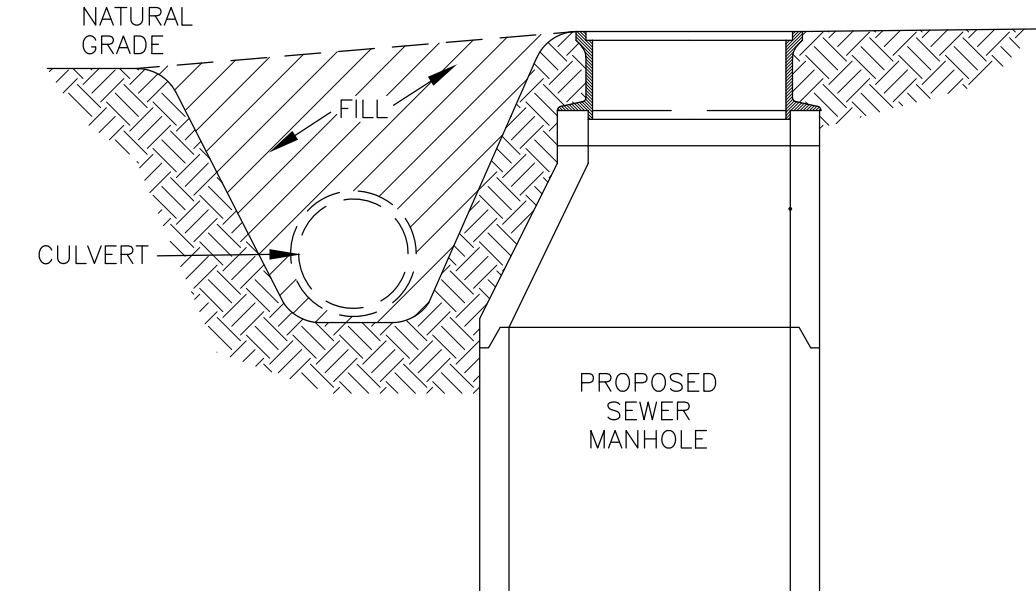
* IF HOLE IS CORED IN CONCRETE WALL, A PIPE SLEEVE MAY NOT BE NECESSARY.

N.T.S.



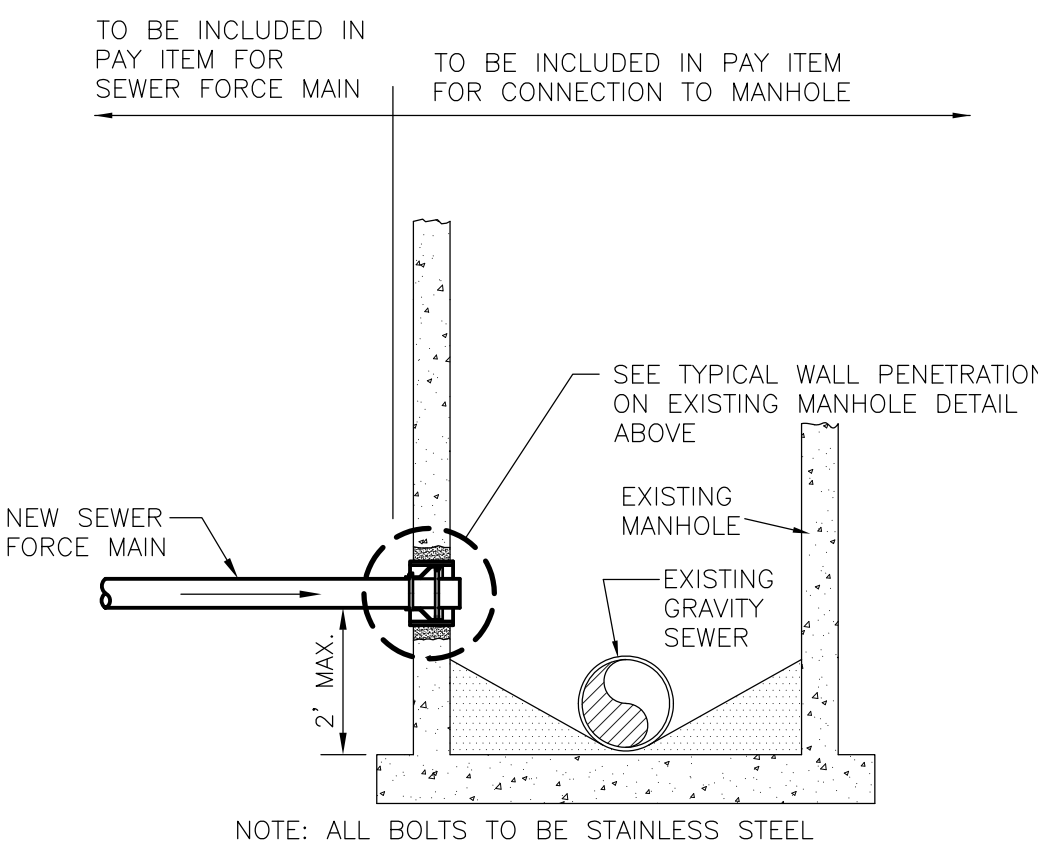
TYPICAL WALL PENETRATION FOR NEW WETWELLS

N.T.S.



TYPICAL MANHOLE AT DITCH EDGE

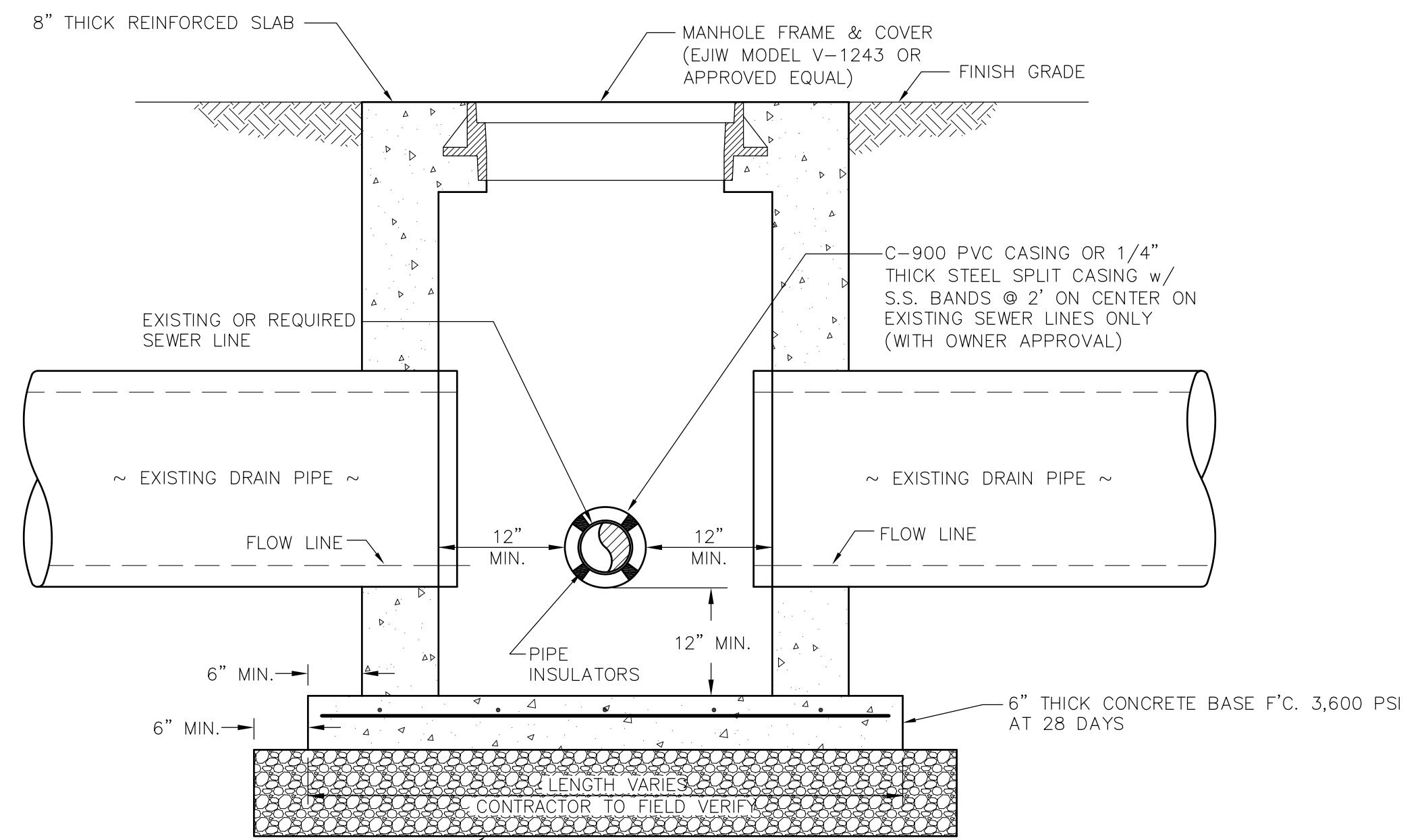
N.T.S.



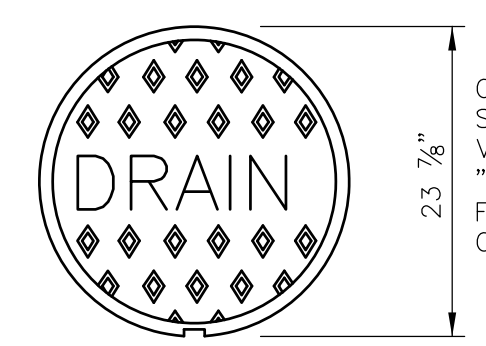
TYPICAL FORCE MAIN CONNECTION TO MANHOLE

N.T.S.

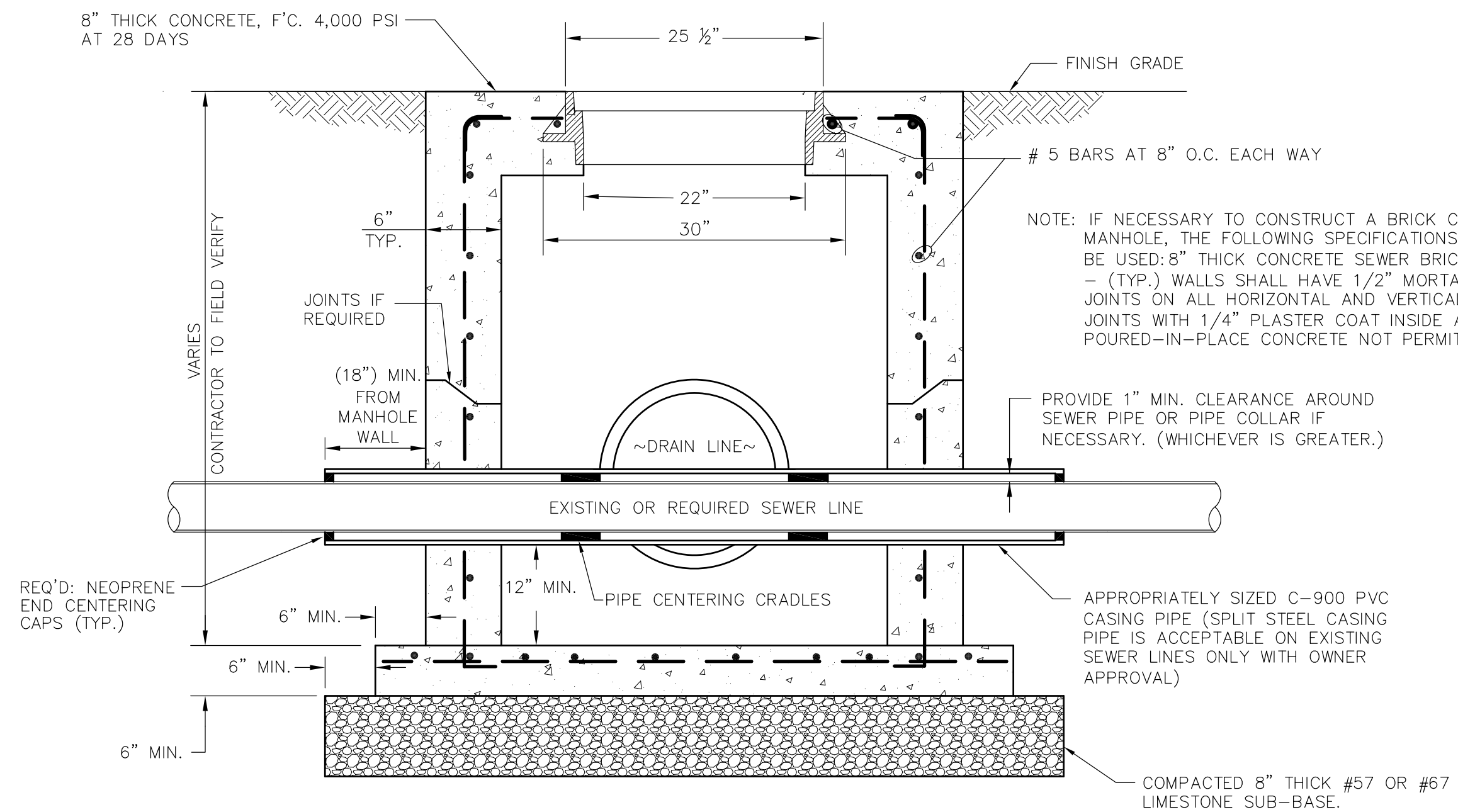
TERREBONNE PARISH CONSOLIDATED GOVERNMENT		
SEWER-POLLUTION CONTROL DIVISION		
STANDARD GRAVITY SEWER AND SEWER FORCE MAIN MISCELLANEOUS DETAILS		
DATE:	DRAWN BY: DPM	PROJECT NUMBER
REVISIONS:	SCALE: AS SHOWN	441-105-GSE
	DATE: 6-30-2016	SHEET: 6 of 7
		CAD FILE:
		MAP FILE:



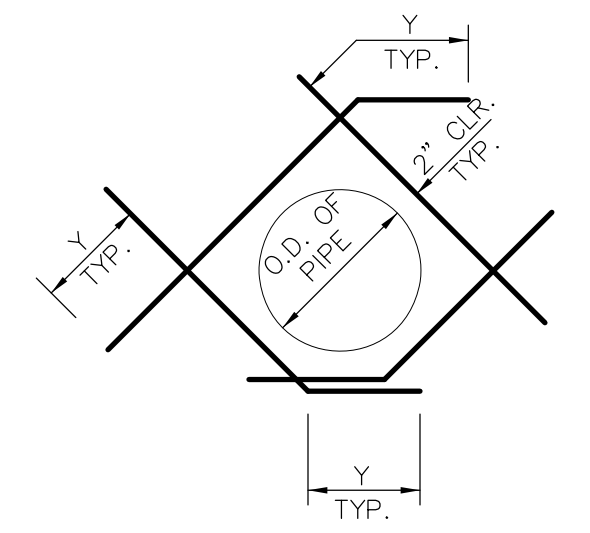
HAND COMPACTED 12" THICK #57 OR #67 LIMESTONE SUB-BASE.



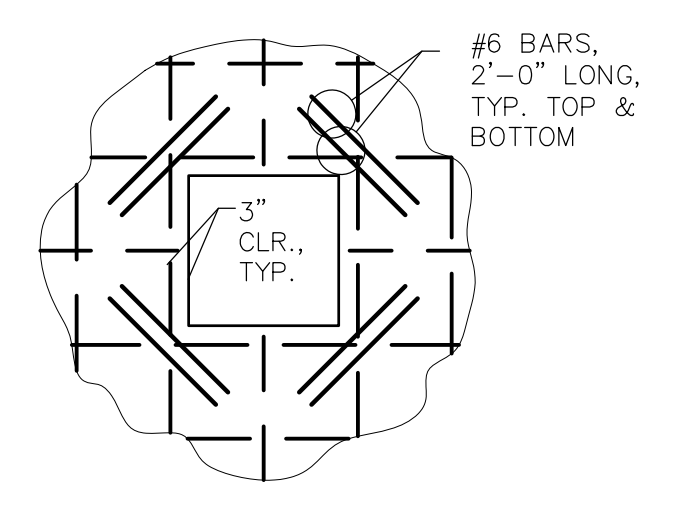
CONFLICT MANHOLE COVER AND FRAME TO BE MACHINE SEATED HEAVY TRAFFIC CONFORMING TO EJW PATTERN NO. V-1243. COVERS SHALL BE EMBOSSED WITH THE LEGEND "DRAIN" USING STD. 4" HIGH RAISED FACE LETTERS. COST FOR GRATE & FRAME TO BE INCLUDED IN UNIT COST FOR CONFLICT MANHOLE. NO DIRECT PAYMENT.



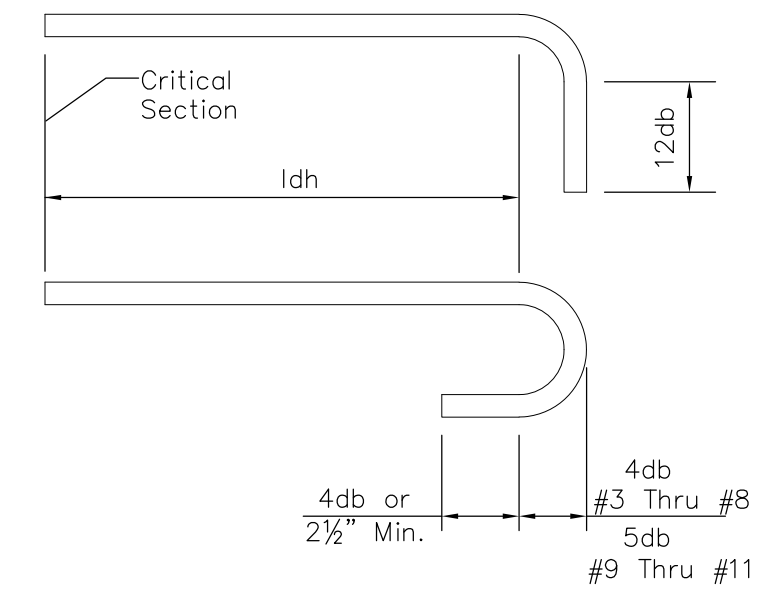
TYPICAL CONFLICT MANHOLE DETAIL
N.T.S.



BAR SIZE	GRADE 60 Y
#3	12"
#4	12"
#5	15"
#6	18"
#7	24"
#8	30"



BAR SIZE	MIN. EMBED. LENGTH		MIN. LAP LENGTH		HOOKED BARS
	TOP BARS	OTHER	TOP BARS	OTHER	
#3	19"	15"	25"	19"	8"
#4	25"	19"	33"	25"	10"
#5	31"	24"	41"	31"	12"
#6	37"	29"	49"	38"	15"
#7	54"	42"	70"	54"	17"
#8	62"	47"	80"	62"	19"
#9	69"	53"	90"	69"	22"



- NOTES:**
- USE BASIC TABLE IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
 - CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 3 BAR DIAMETERS.
 - DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2.5 BAR DIAMETERS.
 - THE ALTERNATE TABLE MAY BE USED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
 - CENTER TO CENTER BAR SPACING IS AT LEAST 5 BAR DIAMETERS.
 - DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2.5 BAR DIAMETERS.
 - TOP BARS ARE HORIZONTAL BARS AND BARS INCLINED LESS THAN 45 DEGREES WITH RESPECT TO A HORIZONTAL PLANE WHICH ARE PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

TERREBONNE PARISH CONSOLIDATED GOVERNMENT		
SEWER-POLLUTION CONTROL DIVISION		
STANDARD GRAVITY SEWER AND SEWER FORCE MAIN TYPICAL CONFLICT MANHOLE DETAIL		
DRAWN BY: DPM	PROJECT NUMBER 441-105-GSE	SHEET: 7 of 7
SCALE: AS SHOWN		CAD FILE:
DATE: 6-30-2016		MAP FILE: