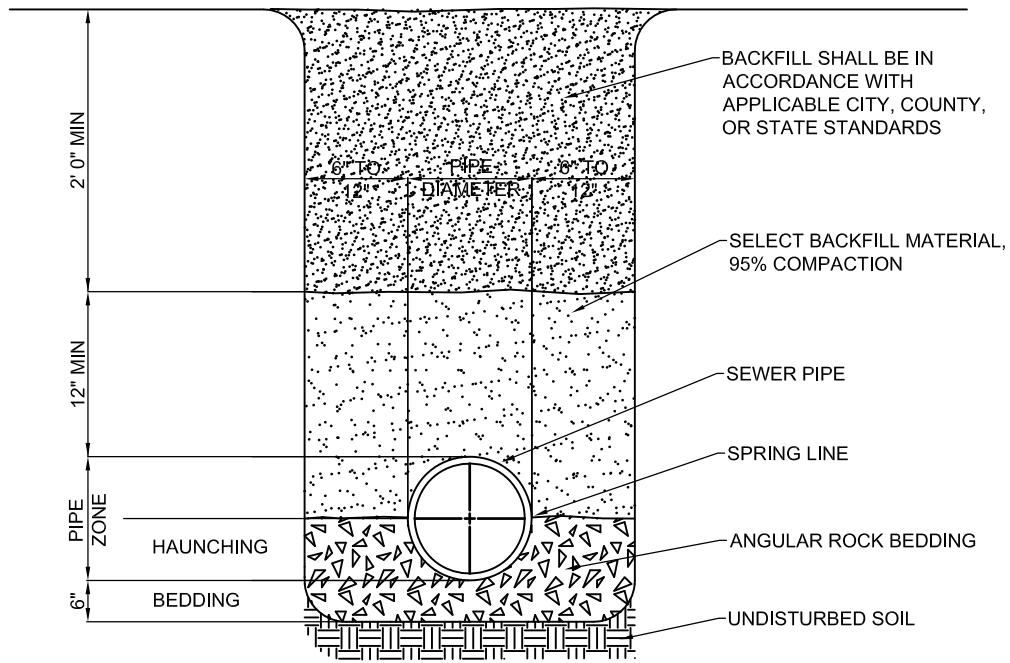
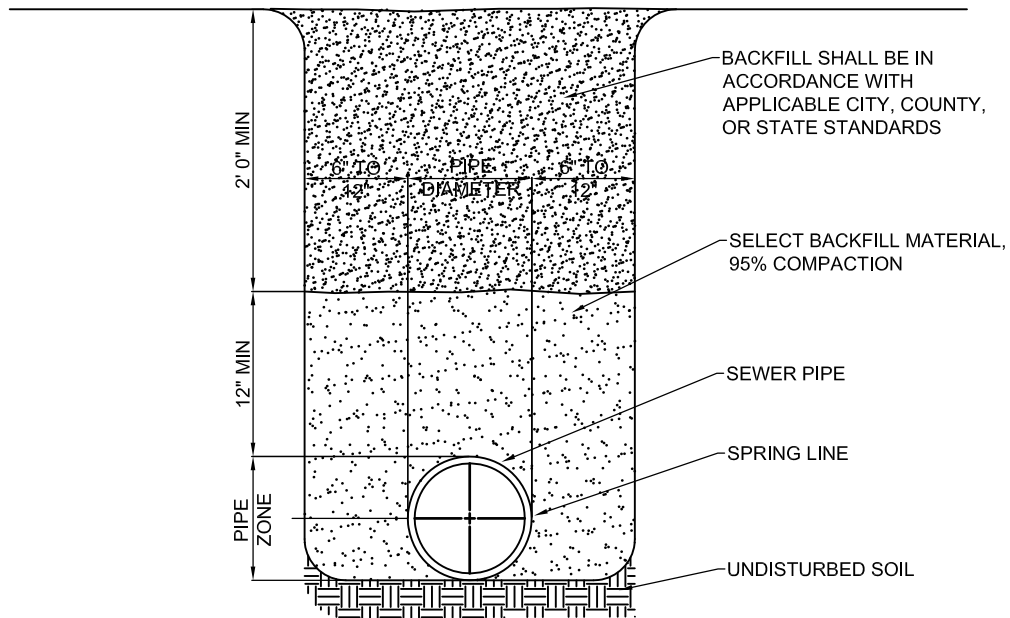


**TYPICAL STREET CROSS SECTION FOR  
RIGHT OF WAY WITH CURB & GUTTER**

**TYPICAL STREET CROSS SECTION**



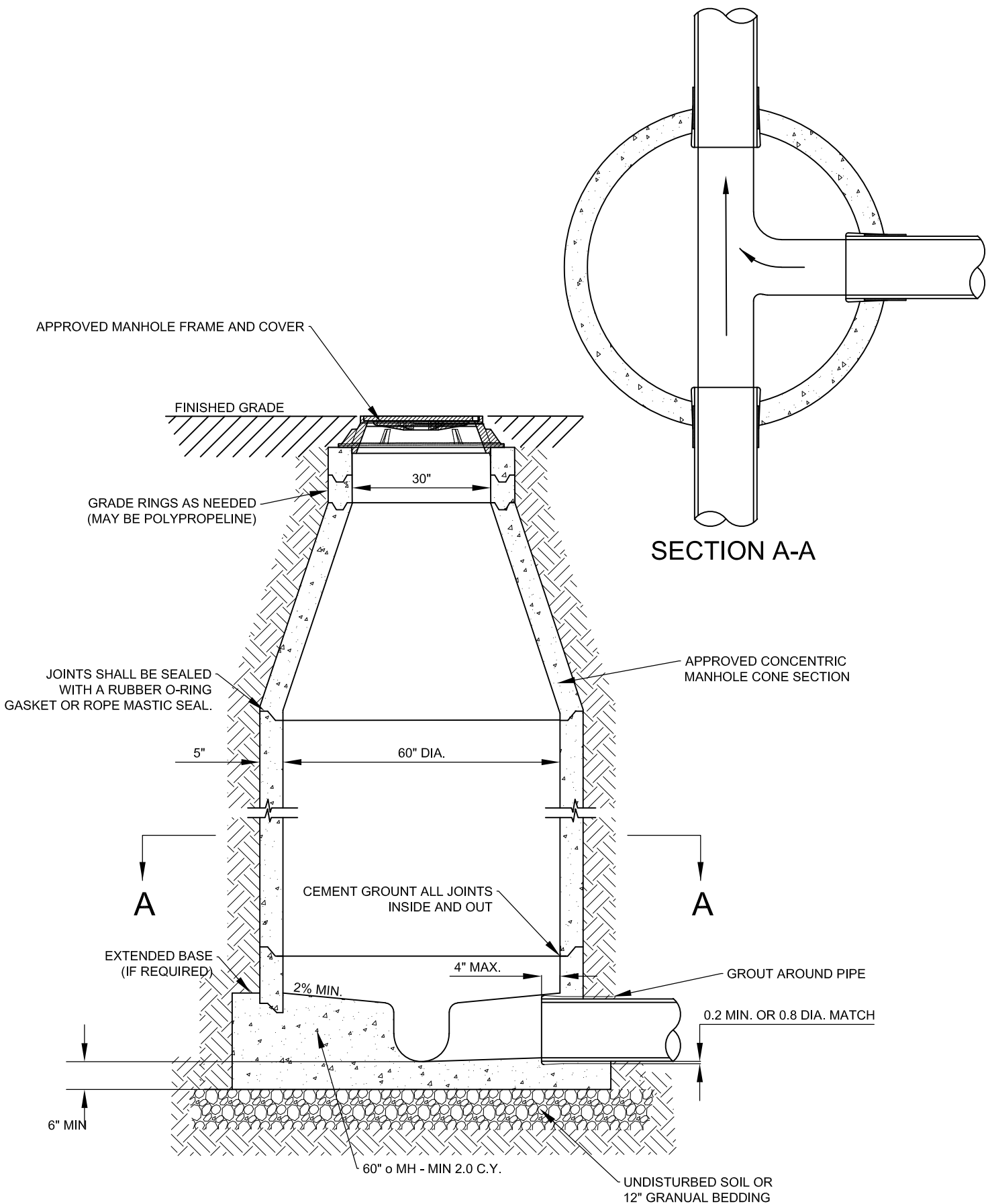
## FLEXIBLE PIPE AND RIGID PIPE ON UNSUITABLE SUBGRADE



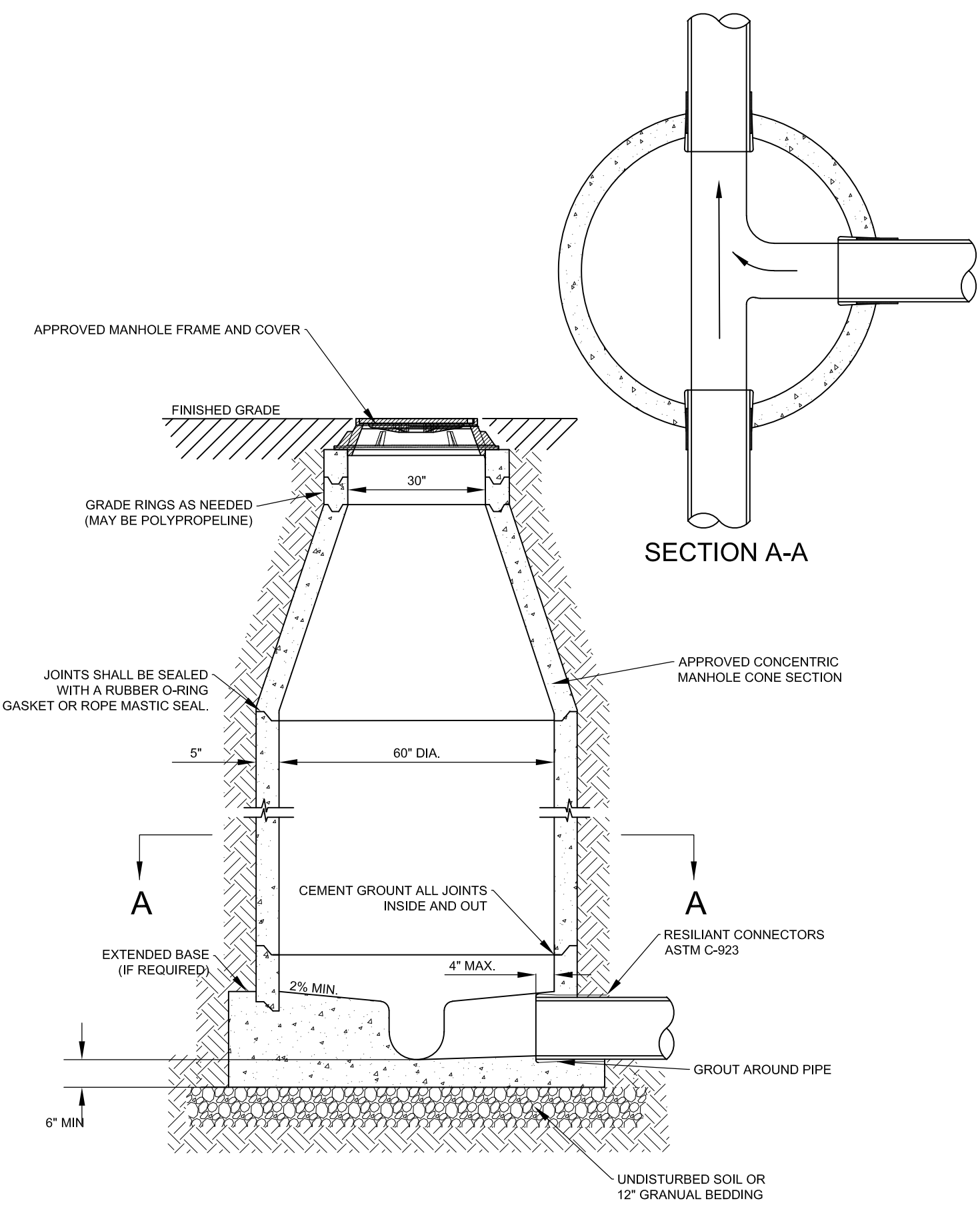
## RIGID PIPE ON SUITABLE SUBGRADE

DETERMINATION OF SUBGRADE IS BY THE FIELD INSPECTOR

# PIPE INSTALLATION DETAIL

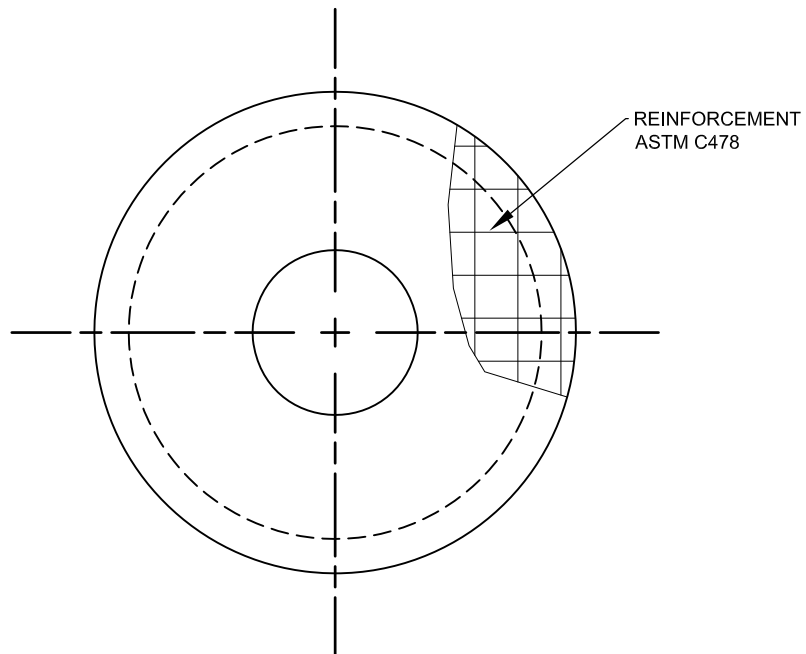
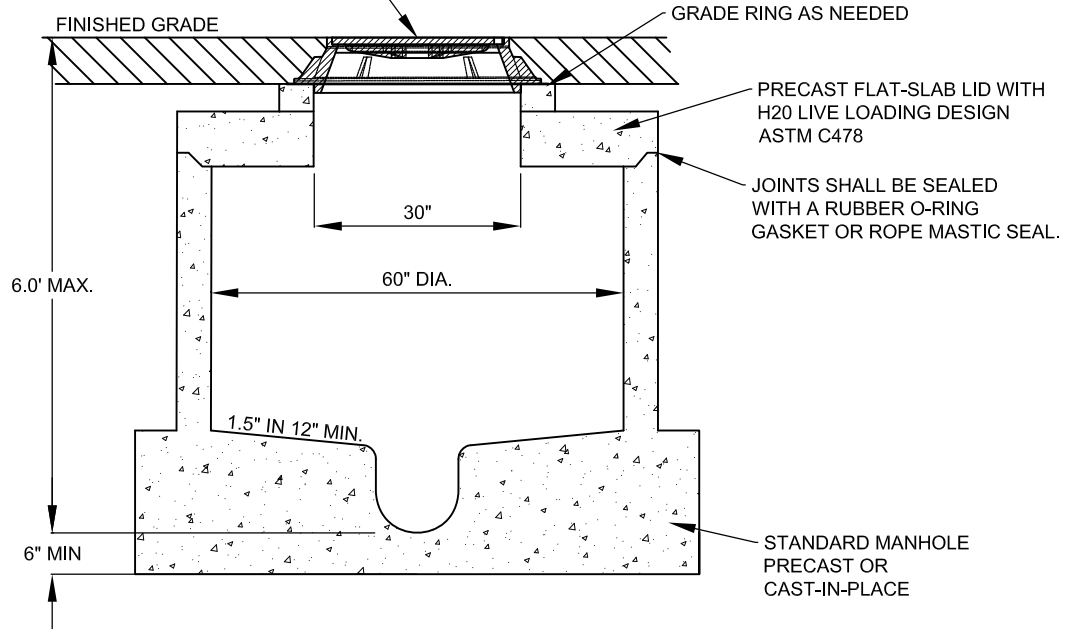


# CONCENTRIC CAST-IN-PLACE MANHOLE

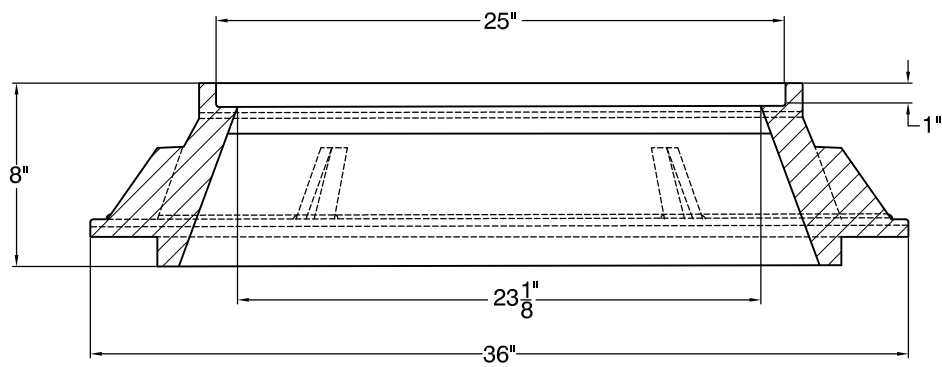
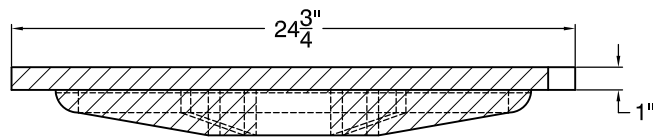
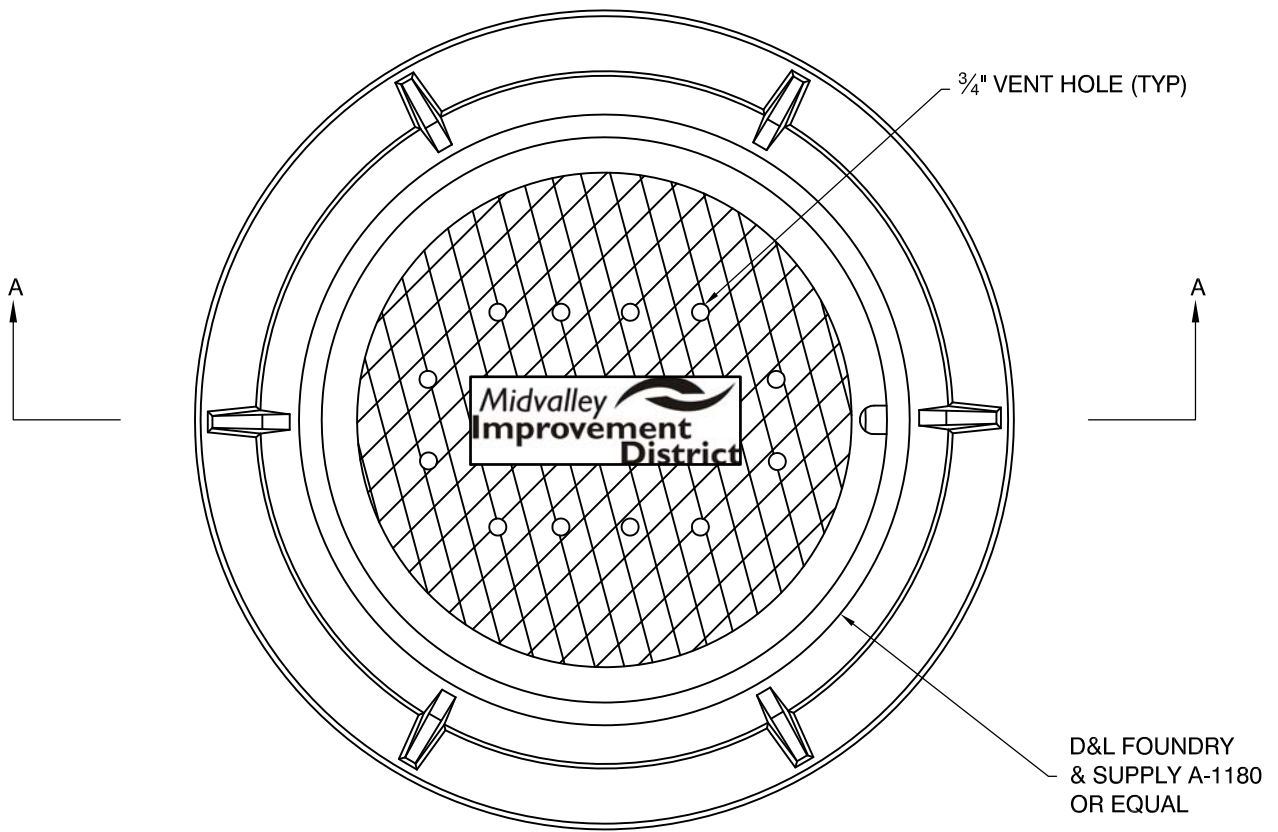


# CONCENTRIC PRECAST MANHOLE

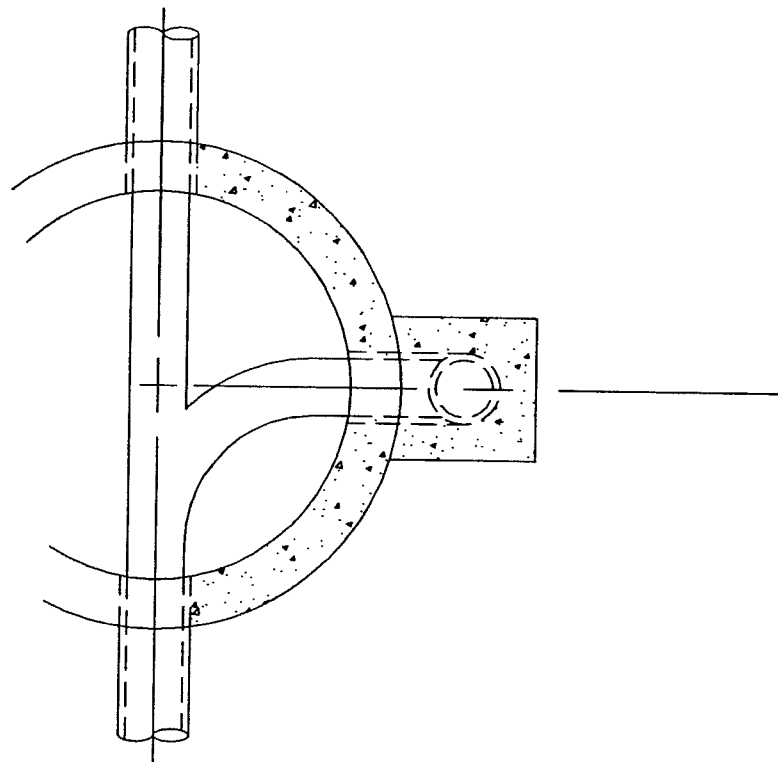
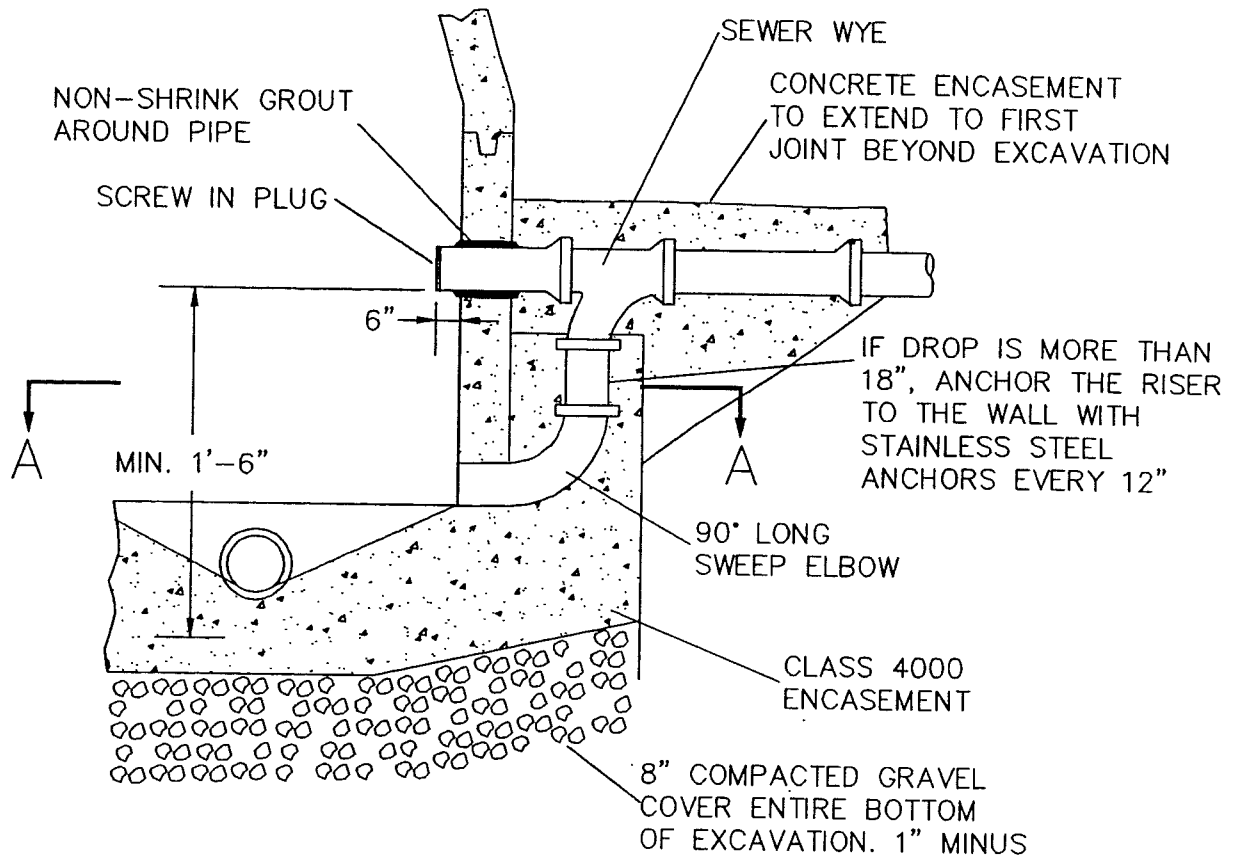
APPROVED MANHOLE FRAME AND COVER



# SHALLOW MANHOLE

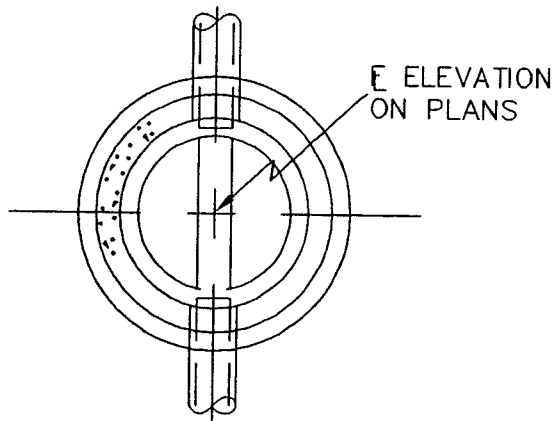


# MANHOLE FRAME AND COVER

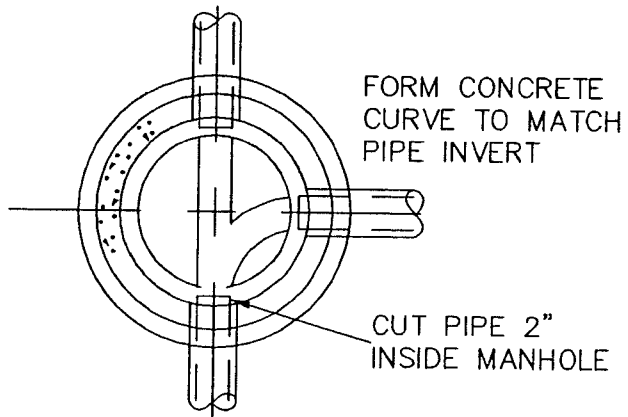


SECTION A-A

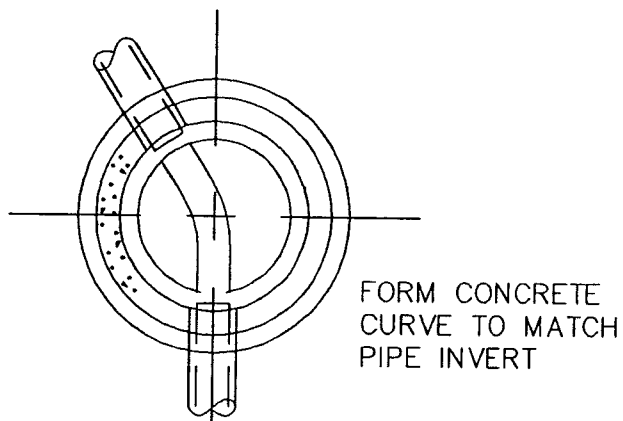
# DROP MANHOLE CONNECTION



TYPICAL INVERT



TYPICAL INVERT FOR  
PIPE INTERSECTIONS

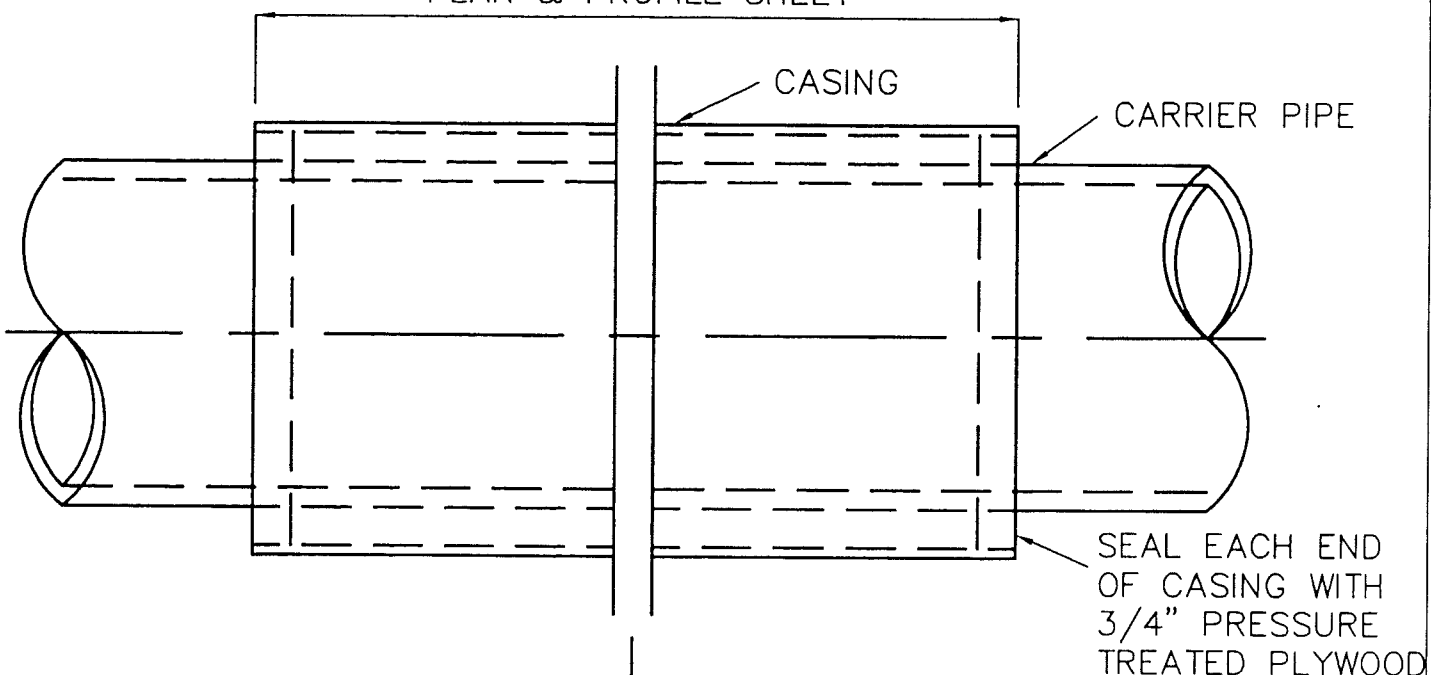


TYPICAL INVERT FOR  
HORIZONTAL DEFLECTION

PIPE INTERSECTIONS

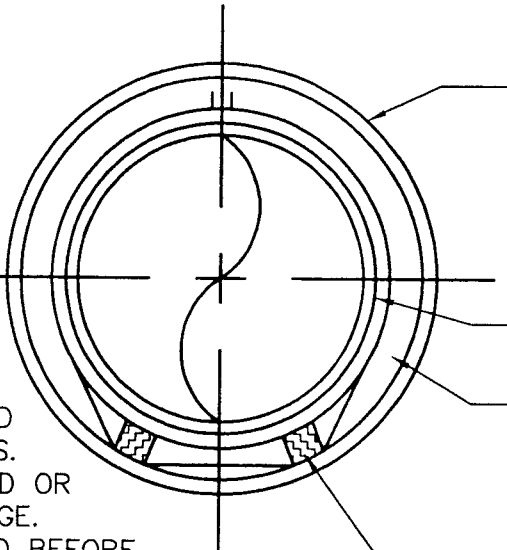


FOR CASING LENGTH SEE  
PLAN & PROFILE SHEET



NOTES;

1. CARRIER PIPE SHALL BE TESTED BEFORE FILLING CASING WITH SAND.
2. SKIDS SHALL BE SECURELY ATTACHED TO CARRIER PIPE WITH STEEL BANDS. A MINIMUM OF TWO BANDS PER SKID.
3. SKIDS SHALL BE NOTCHED TO RECEIVE STEEL BANDS.
4. SKIDS SHALL BE ROUNDED OR BEVELED ON LEADING EDGE.
5. SKIDS SHALL BE GREASED BEFORE INSTALLATION.
6. AS AN ALTERNATE TO REDWOOD SKIDS CONTRACTOR MAY USE PREFABRICATED PLASTIC CASING SKIDS ATTACHED AROUND CARRIER PIPE.
7. AS AN ALTERNATE CONTRACTOR MAY USE A STANDARD PULL-ON WRAP-AROUND SYNTHETIC END SEAL.
8. CASING PIPE SHALL BE SMOOTH STEEL WITH MINIMUM YIELD STRENGTH = 35,000 P.S.I.



CASING PIPE  
I.D. OF STEEL CASING SHALL BE 6" MINIMUM GREATER THAN O.D. OF BELL OF CARRIER PIPE.

CARRIER PIPE

FILL ANNULAR SPACE WITH SAND

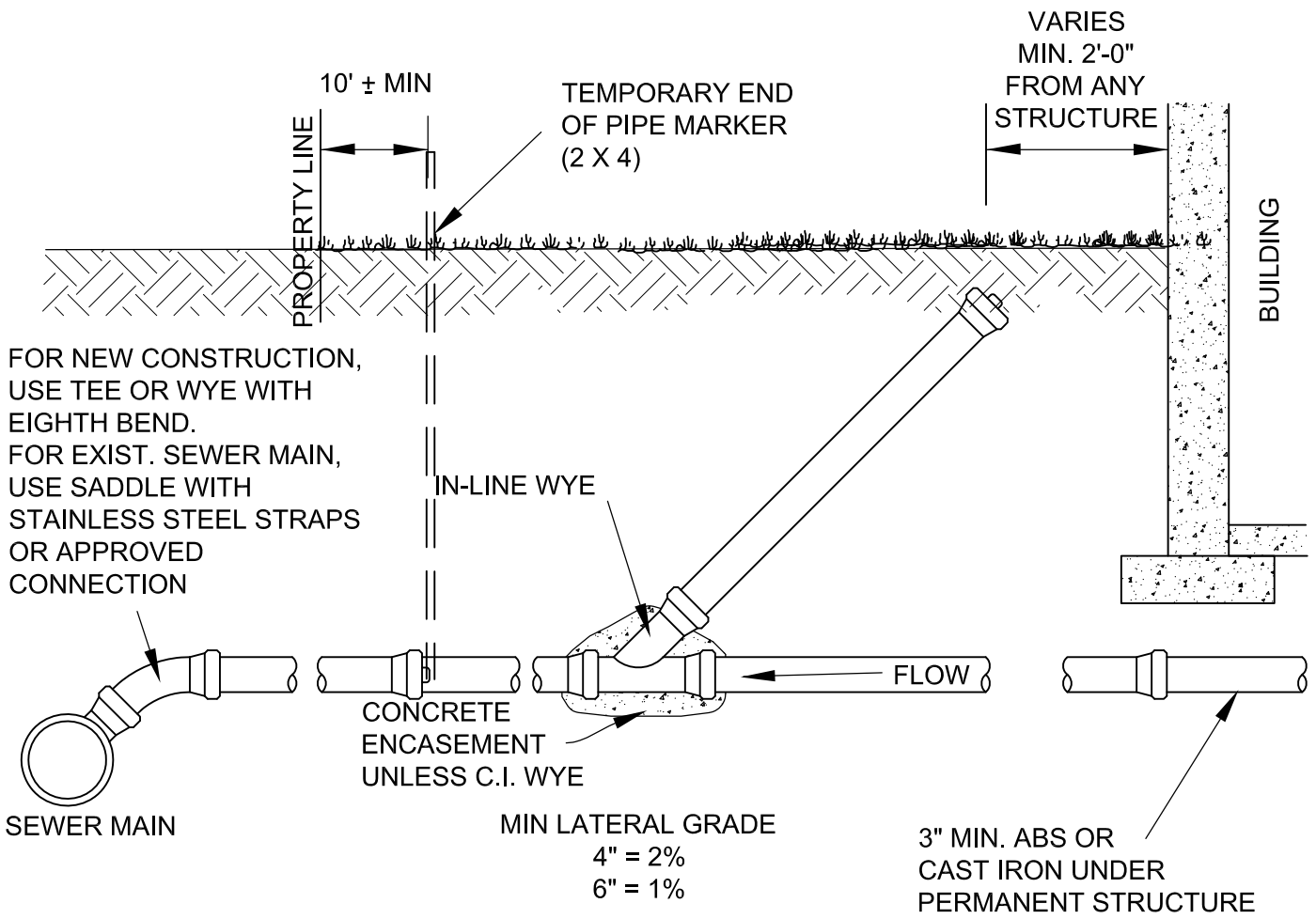
SEE TYPICAL TRENCH SECTION FOR EXCAVATION & BACKFILL REQUIREMENTS

2" x 4" REDWOOD SKIDS 6' LONG. TWO SETS OF SKIDS REQUIRED. EACH PIPE LENGTH PLACED AT QUARTER POINTS.

PLATE THICKNESS OF CASING PIPE

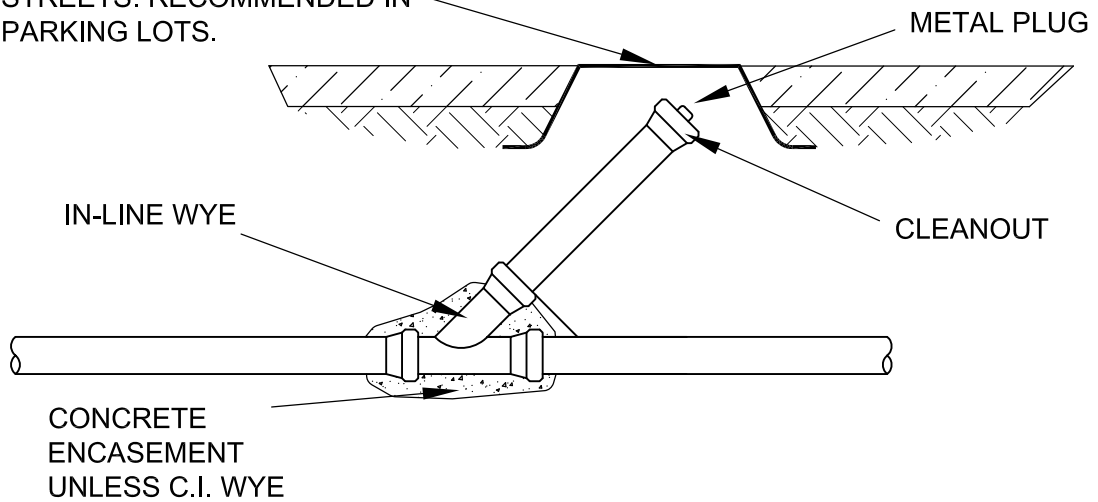
DIAMETER	TO 12"	15" TO 27"
MINIMUM THICKNESS	1/4"	3/8"

# BORING & STEEL CASING DETAIL



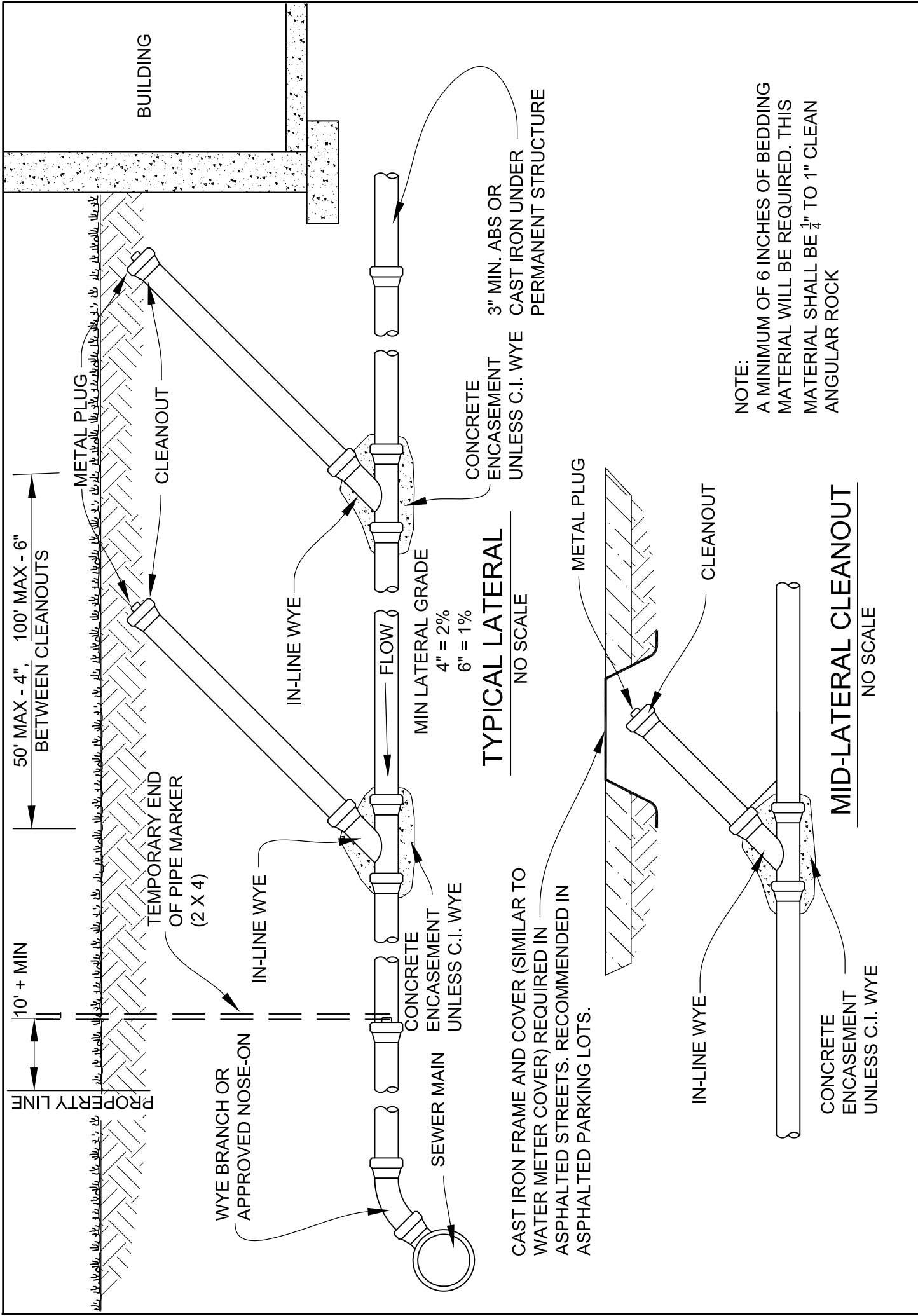
**TYPICAL LATERAL**  
NO SCALE

CAST IRON FRAME AND COVER (SIMILAR TO WATER METER COVER) REQUIRED IN ASPHALTED STREETS. RECOMMENDED IN ASPHALTED PARKING LOTS.

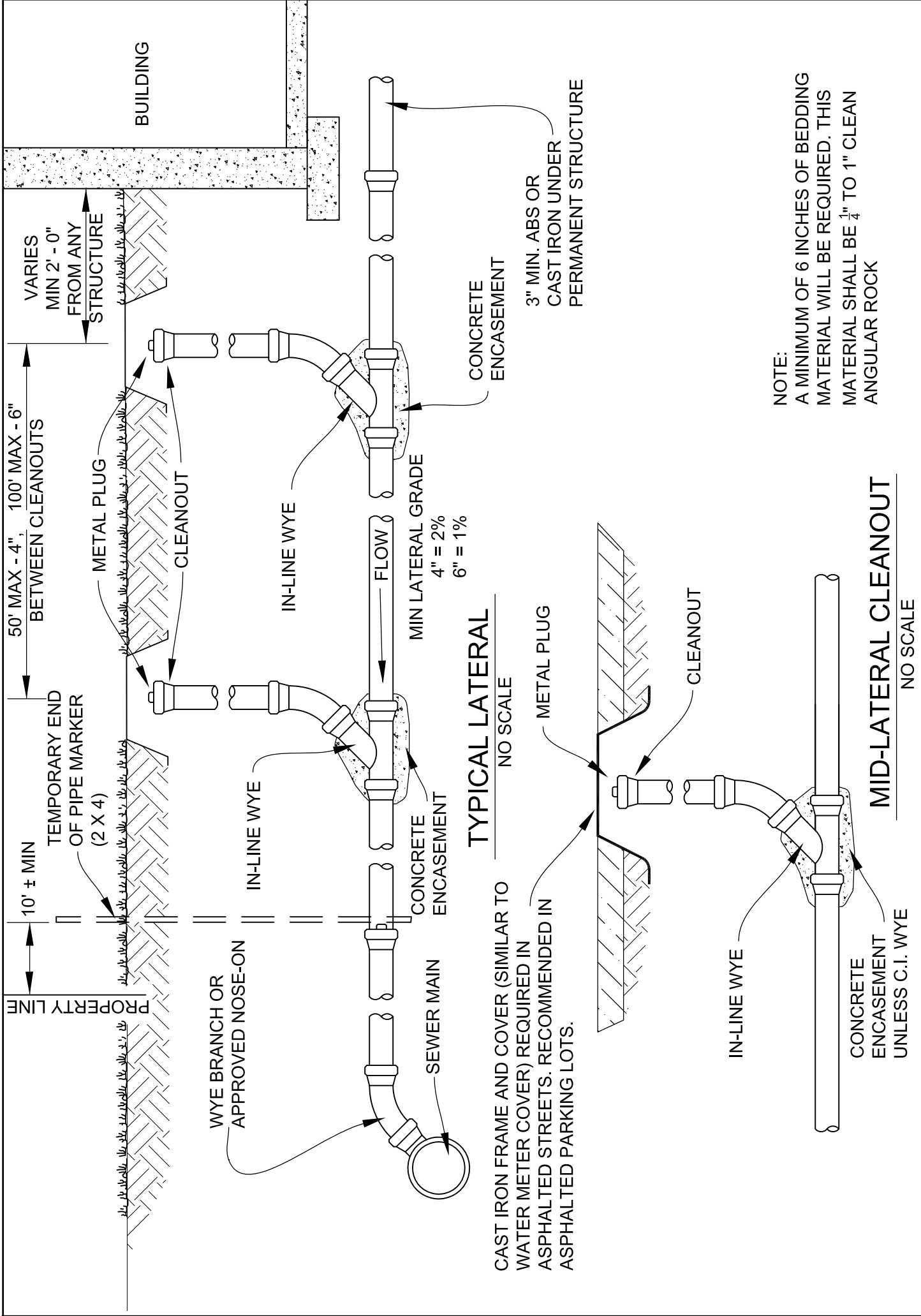


**MID-LATERAL CLEANOUT**  
NO SCALE

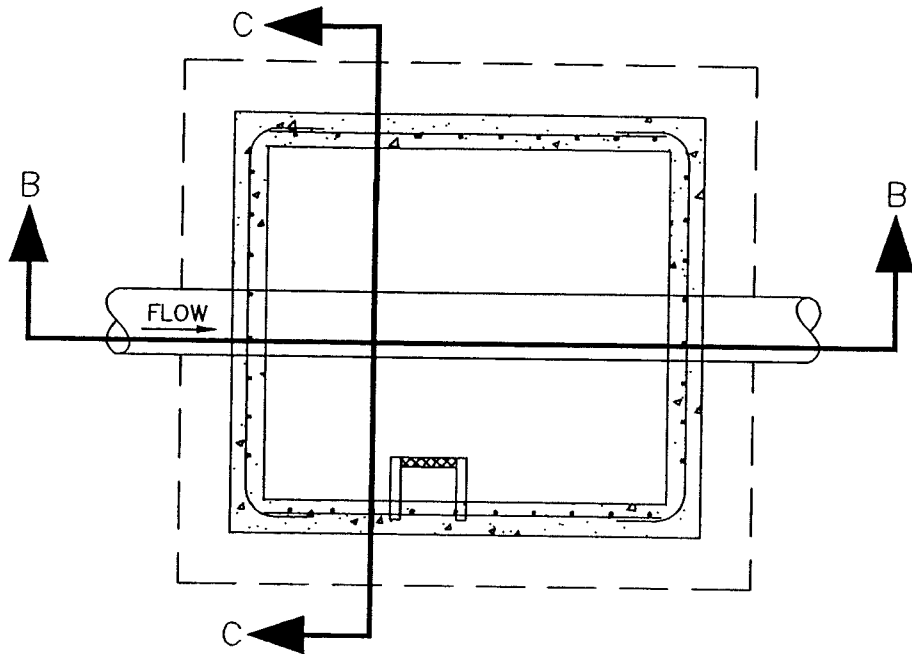
**SANITARY SEWER SERVICE CONNECTION**



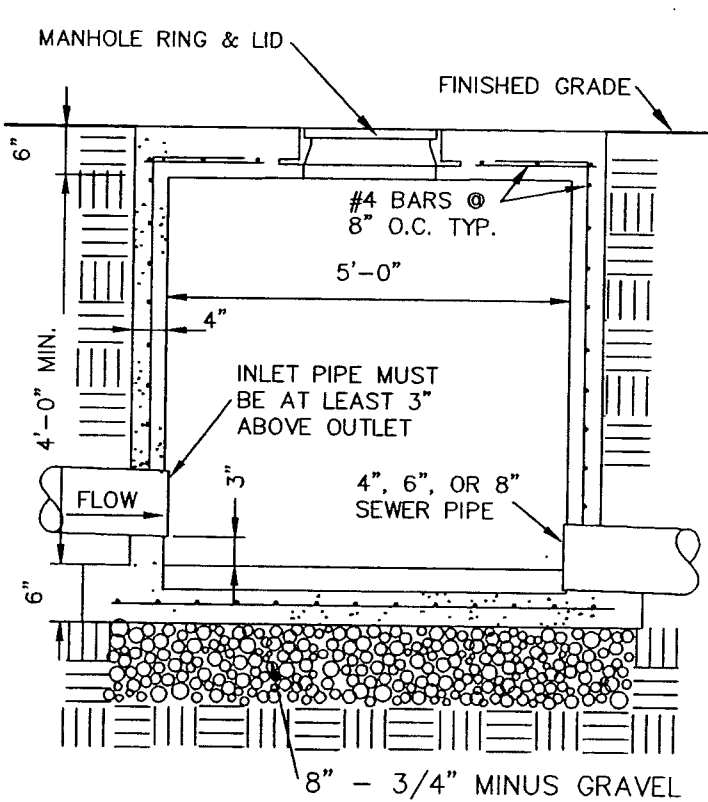
# SANITARY SEWER SERVICE CONNECTION - SLANTED RISER



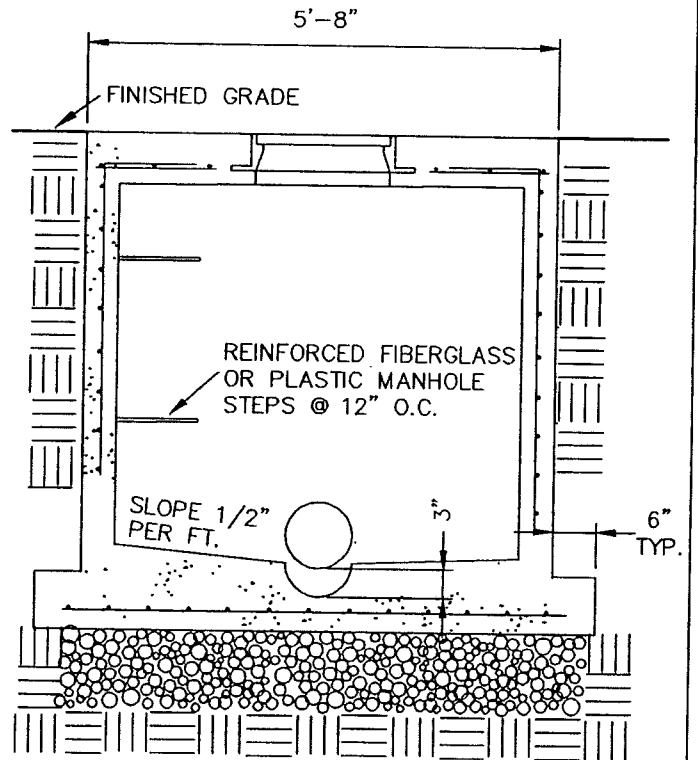
# SANITARY SEWER SERVICE CONNECTION - VERTICAL RISER



PLAN VIEW

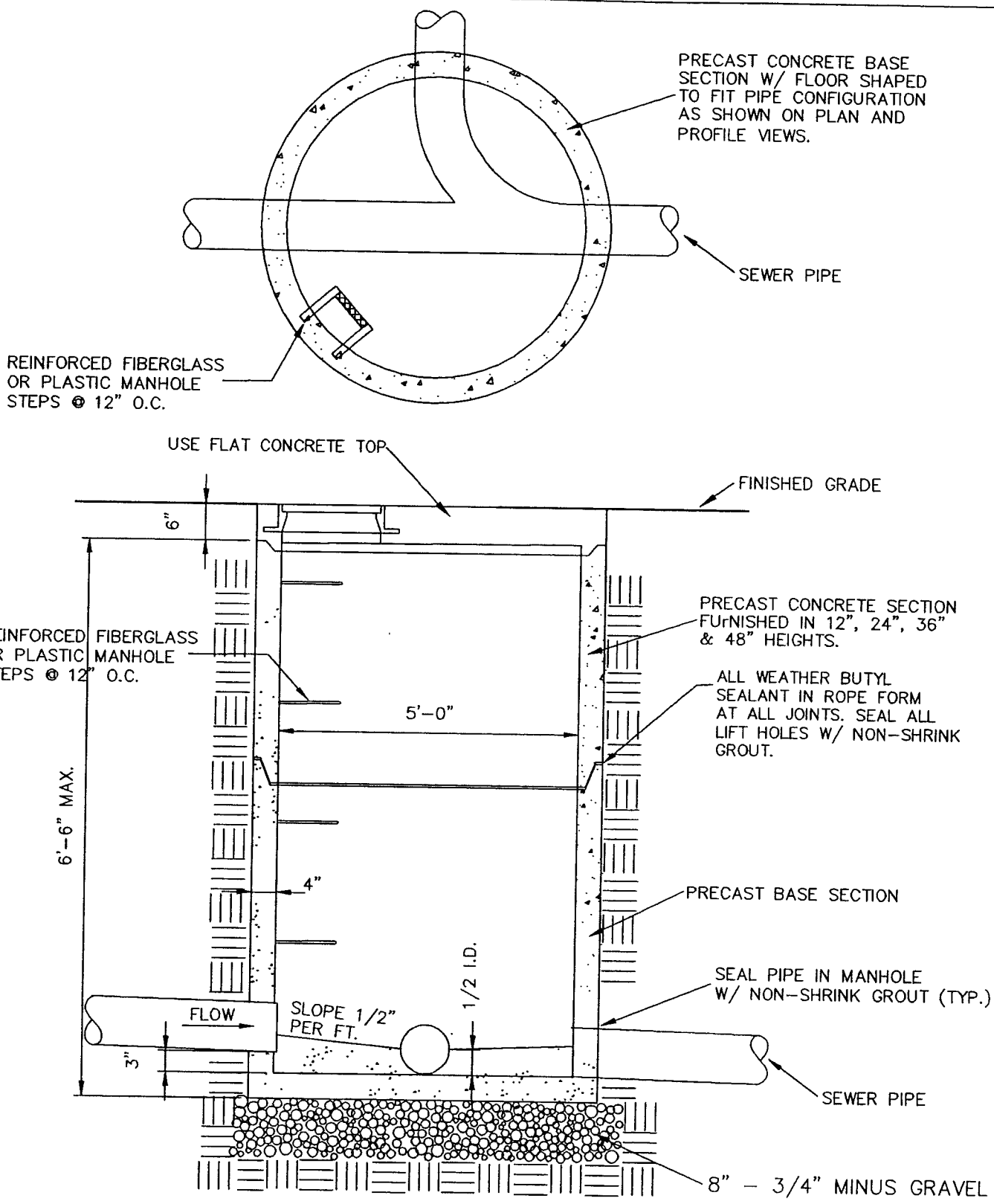


SECTION BB



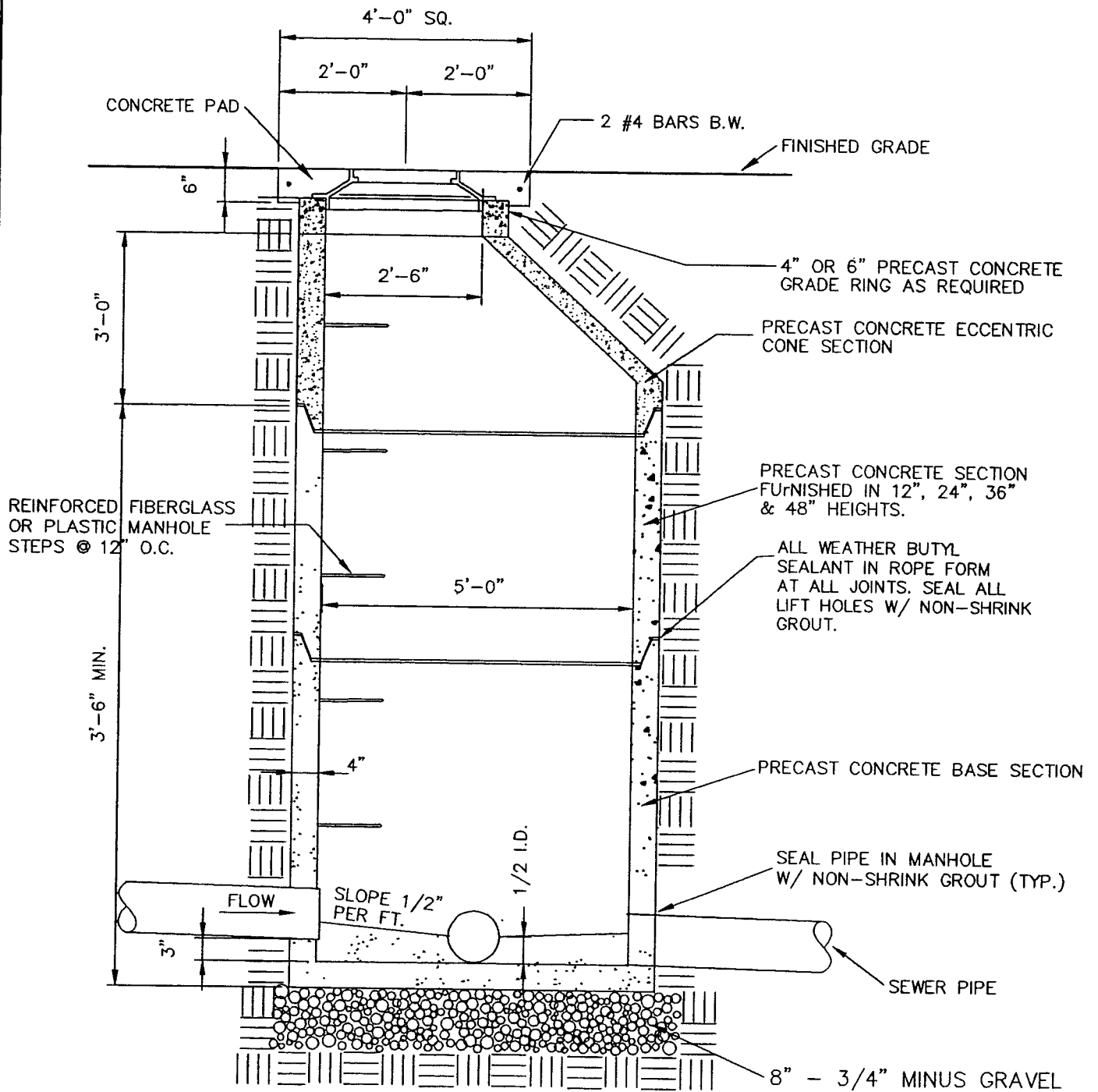
SECTION CC

SAMPLING MANHOLE

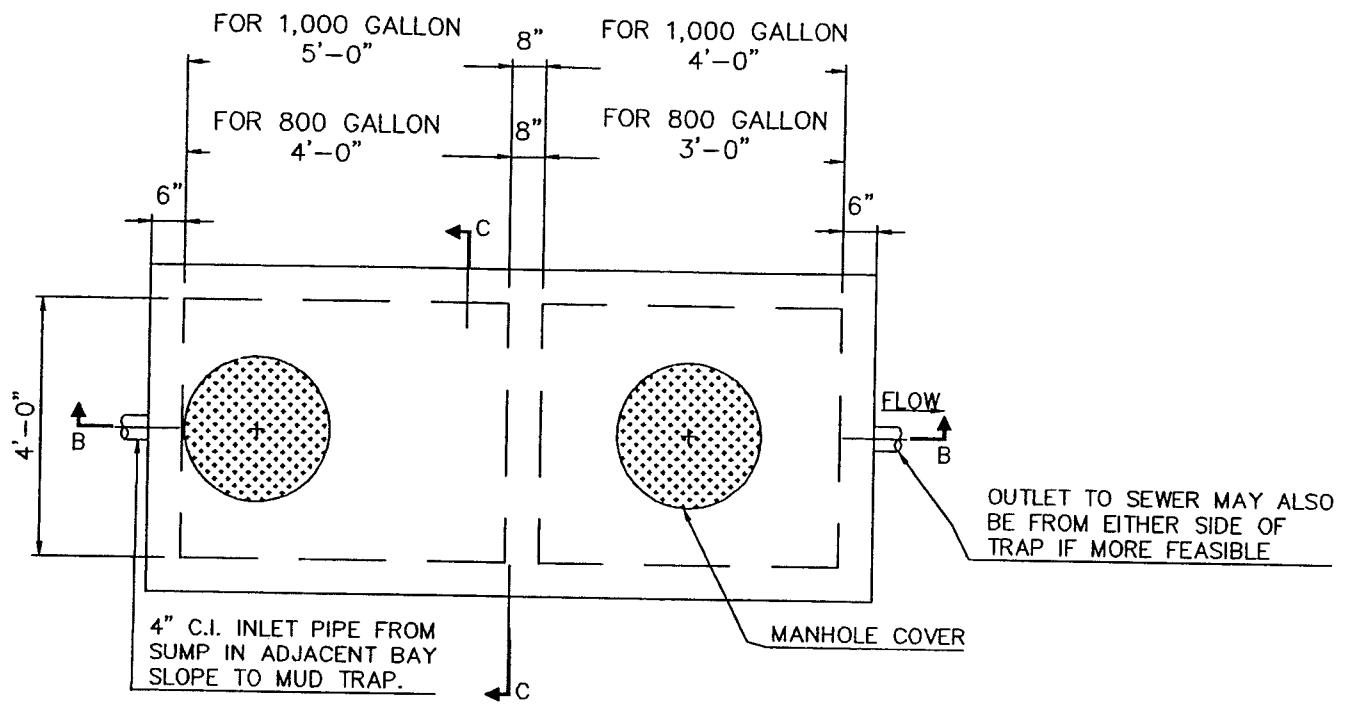


- NOTES: 1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 psi.
2. REINFORCEMENT STEEL SHALL BE ASTW A615 GRADE 60.

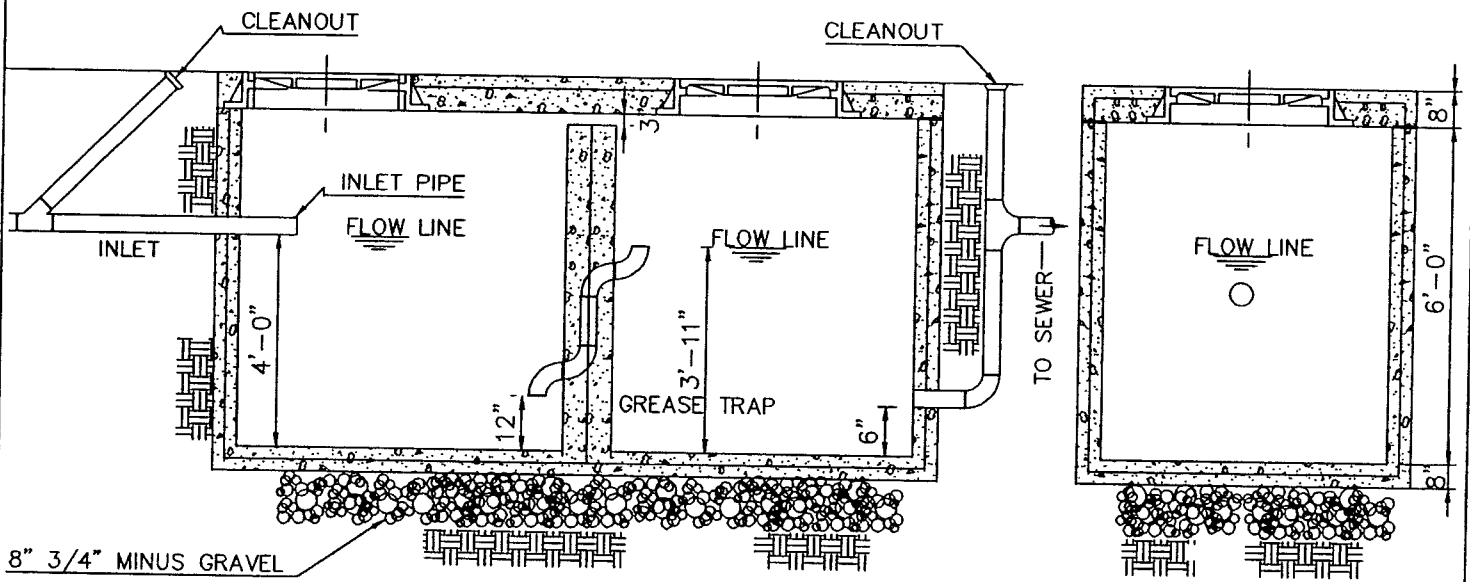
SAMPLING MANHOLE, 4' TO 7' DEEP



SAMPLING MANHOLE, 7' AND DEEPER



(A) PLAN - GREASE TRAP TANK



(B) SECTION - GREASE TRAP TANK

SECTION C-C

# GREASE INTERCEPTOR