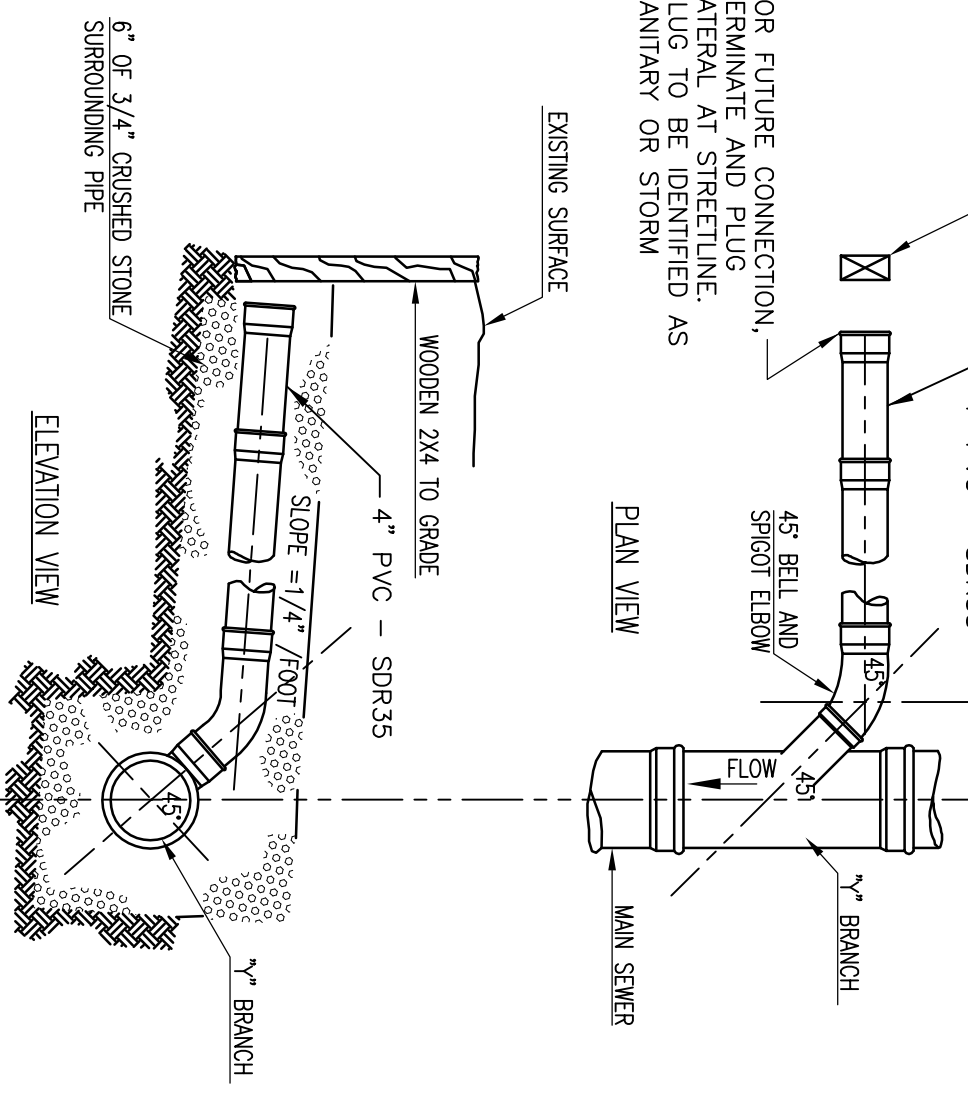


**NOTES:**

1. LOCATION / WARNING HERE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MINIMUM OF 24 INCHES BELOW FINISH GRADE.
2. HOUSE METALS SHALL NOT BE CONNECTED DIRECTLY INTO WARDHOLE.



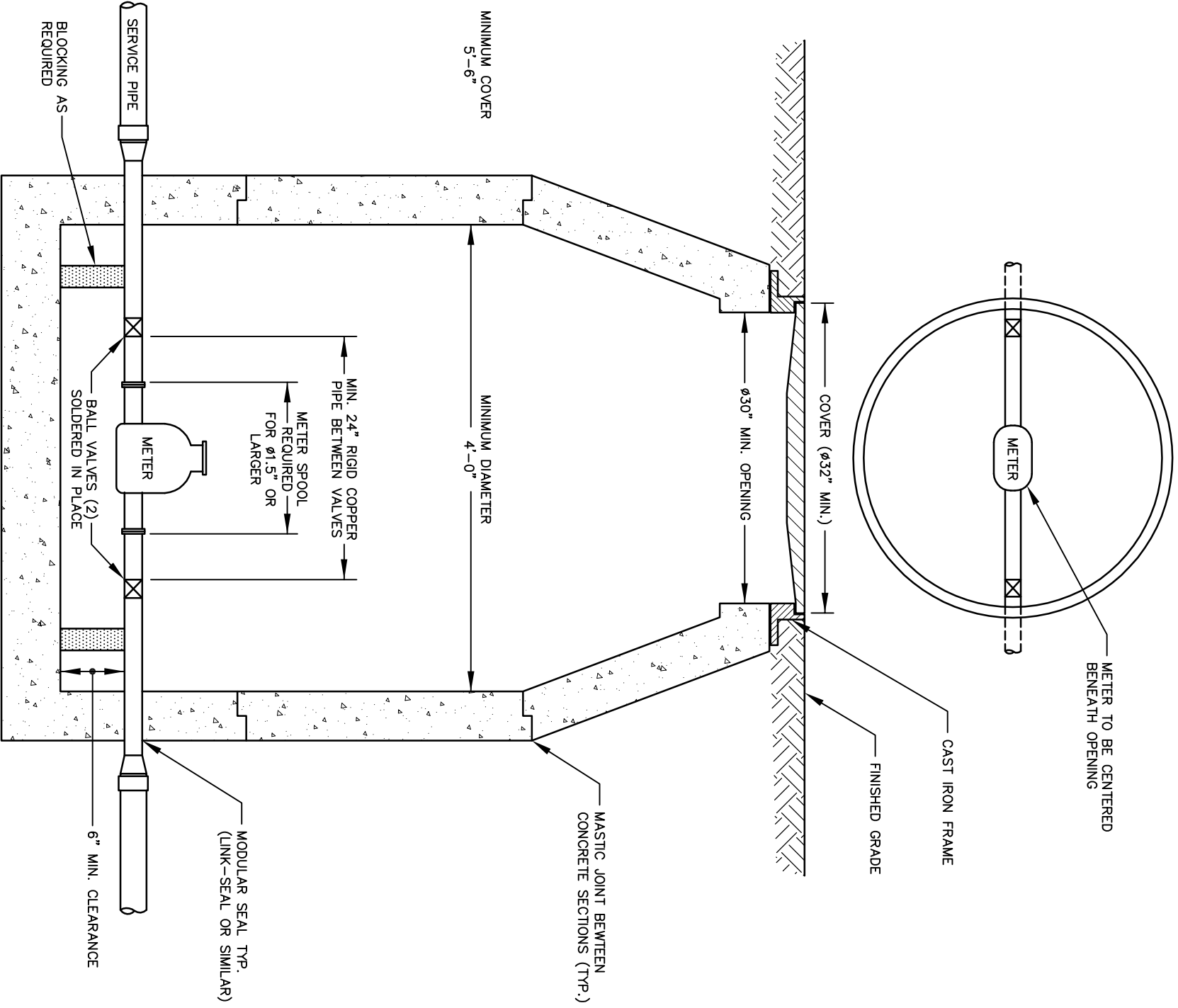
**TYPICAL SANITARY SEWER HOUSE LATERAL "Y" CONNECTION DETAILS**  
NOT TO SCALE

**METER PIT AND COVER NOTES:**

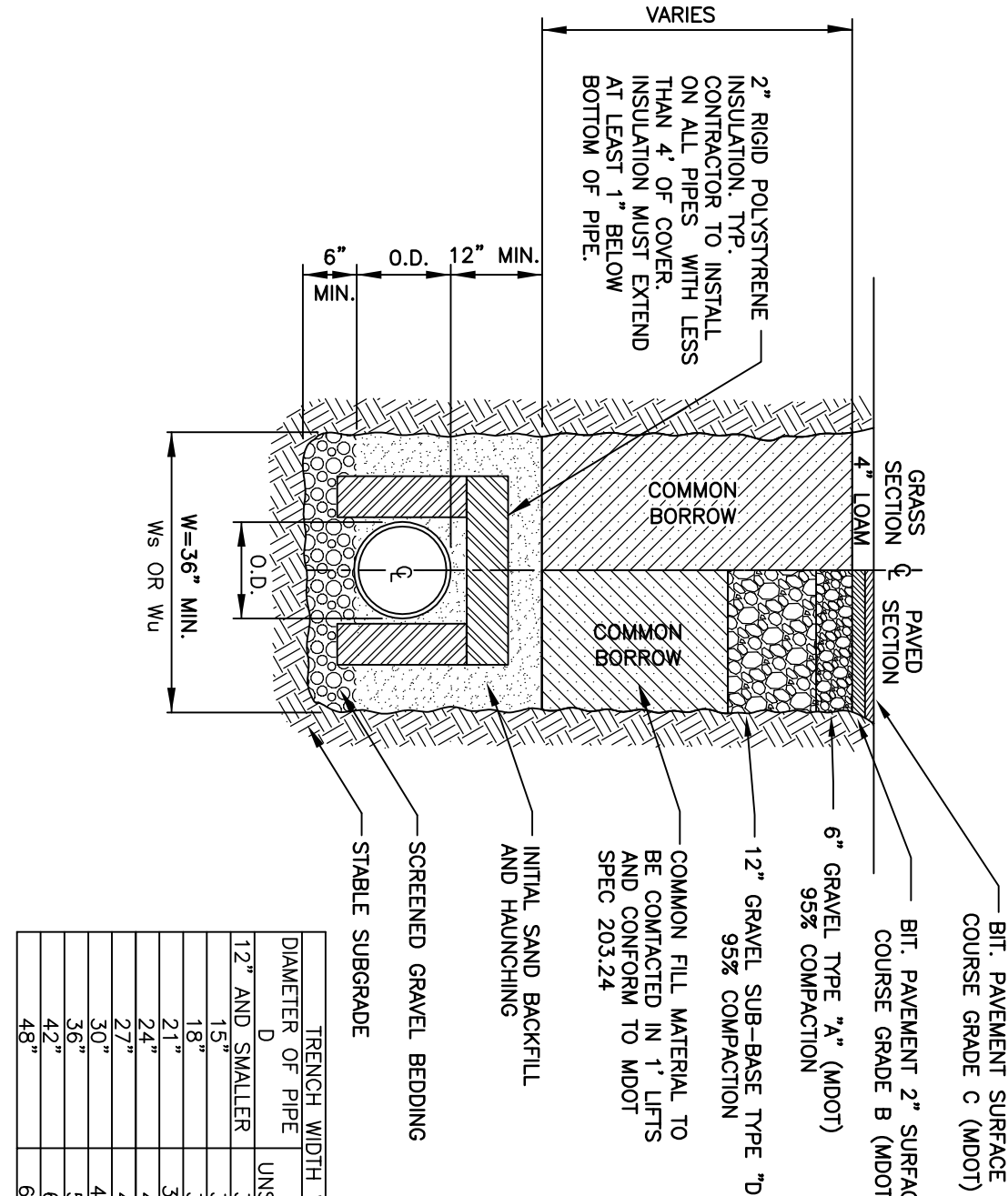
1. THE METER PIT SHALL BE SUPPLIED AND INSTALLED BY THE CUSTOMER AND SHALL BE LOCATED ON PRIVATE PROPERTY BETWEEN 10'-0" AND 20'-0" FROM THE PROPERTY LINE.
2. THE METER PIT SHALL BE MADE OF PRECAST CONCRETE OF SUFFICIENT SIZE TO PROVIDE 5'-4" MINIMUM GROUND COVER FROM FINISHED GRADE TO THE TOP OF THE SERVICE PIPE. ANY SPACES BETWEEN CONCRETE SECTIONS SHALL BE SEALED WITH MASTIC JOINT. ALL OPENINGS IN THE CONCRETE FOR SERVICE PIPING SHALL BE SEALED WITH A WOODRUFF SEAL (LINK-SEAL OR SIMILAR).
3. THE INTERIOR OF THE METER PIT SHALL BE A MINIMUM OF 4'-0" IN DIAMETER, AND THE METER PIT OPENING SHALL BE A MINIMUM OF 30" IN DIAMETER. THE METER PIT SHALL BE LABELED "WATER" OR HAVE NO LABEL. ANY STEEL PLATE MATERIAL SHALL BE COATED WITH A RUST INHIBITOR PAINT.
4. WALL-MOUNTED LADDER RINGS SHOT NOT BE INSTALLED WITHIN METER PIT.
5. METERS SHALL BE PROTECTED THROUGH THE METER PIT WITH A 1/2" OR LARGER, THE CUSTOMER WILL OBTAIN A FLANGED METER SPOOL, PIECE FROM THE PORTLAND WATER DISTRICT. THE CUSTOMER IS RESPONSIBLE FOR OBTAINING THE SPOOL, WHICH IS INSTALLED FROM TO METER INSTALLATION.
6. CUSTOMER SHALL INSURE THE METER PIT AND COVER ARE PROPERLY RAISED FOR TRAFFIC FLOW IF APPLICABLE.

**METER NOTES:**

1. ONLY PORTLAND WATER DISTRICT PERSONNEL ARE AUTHORIZED TO INSTALL WATER METERS. PORTLAND WATER DISTRICT PERSONNEL WILL BE ADDITIONALLY AUTHORIZED TO OPERATE WATER VALVES AS NEEDED FOR INSTALLATION AND MAINTENANCE.
2. PORTLAND WATER DISTRICT WILL SUPPLY THE WATER METERS AND NECESSARY FITTINGS FOR INSTALLATION. IF REQUIRED, A FLANGED METER SPOOL WILL BE AVAILABLE FOR CUSTOMER PICKUP AT DOUGLASS STREET CUSTOMER SERVICE AND MUST BE INSTALLED BY THE CUSTOMER PRIOR TO METER SET. ALL OF THE MATERIALS INCLUDING VALVES SHALL BE SUPPLIED AND INSTALLED BY THE CUSTOMER.
3. CUSTOMER WILL INSTALL TWO (2) BALL VALVES 24" APART FOR METER INSTALLATION, ALLOWING FOR THE WATER METER TO BE CENTERED UNDER THE METER PIT OPENING. BALL VALVES SHALL BE SCHEDULED IN PLACE.
4. FOR A SERVICE PIPE WITH A DIAMETER OF 1" OR LESS, CUSTOMER WILL INSTALL RIGID COPPER PIPE (24" MINIMUM) BETWEEN THE BALL VALVES.
5. FOR PIPING WITH A DIAMETER OF 1 1/2" OR LARGER, THE CUSTOMER WILL OBTAIN A FLANGED METER SPOOL, PIECE FROM THE PORTLAND WATER DISTRICT. THE CUSTOMER IS RESPONSIBLE FOR OBTAINING THE SPOOL, WHICH IS INSTALLED FROM TO METER INSTALLATION.
6. THE METER PIT MAY HOUSE UP TO TWO (2) 1/2" 85, 80, 74" OR 1" METERS. INSTALLATION OF MULTIPLE METERS IN A METER PIT MUST RECEIVE PRIOR APPROVAL FROM THE PORTLAND WATER DISTRICT.



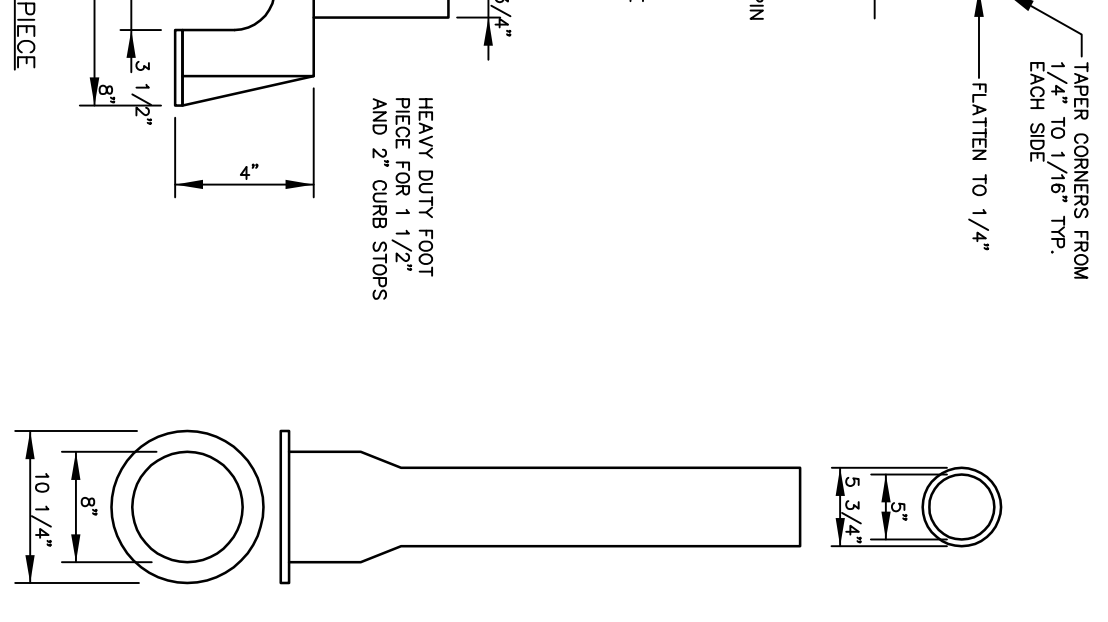
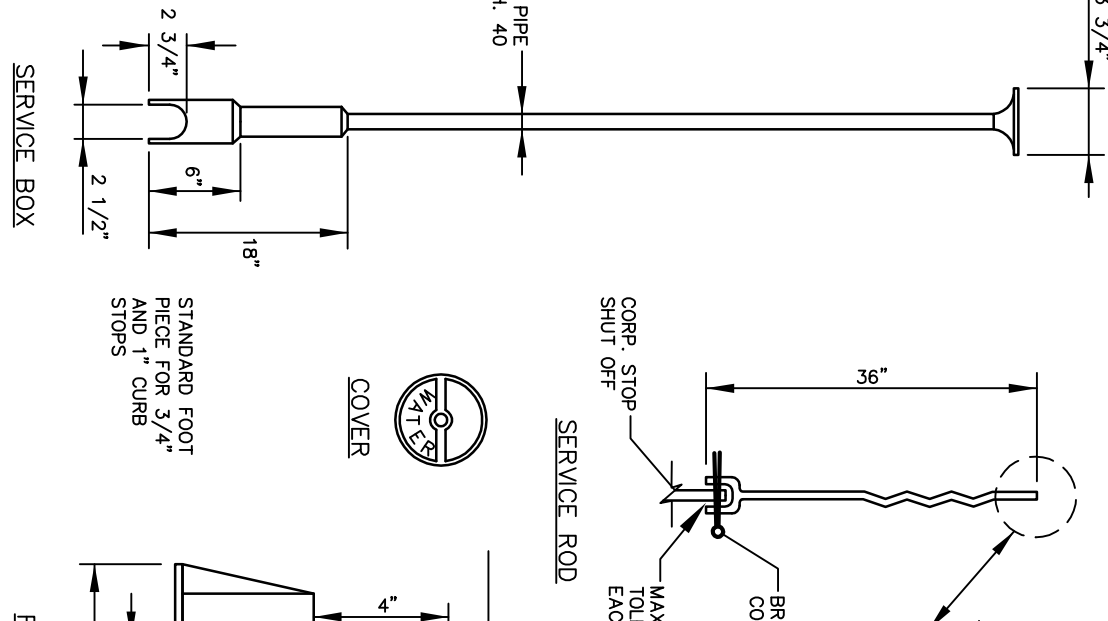
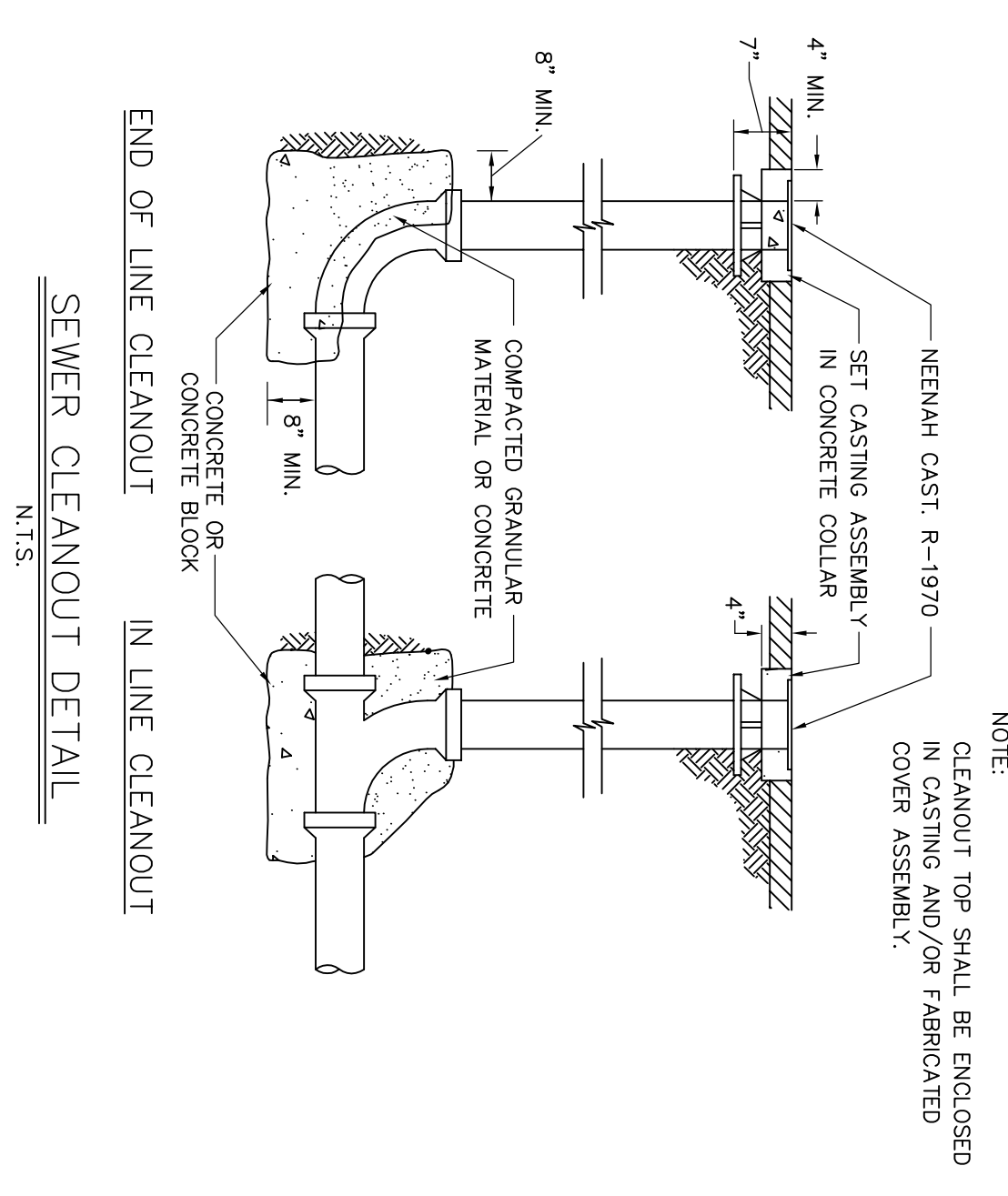
**TYP. METER PIT DETAIL (5/8" TO 2" METER)**  
NOT TO SCALE



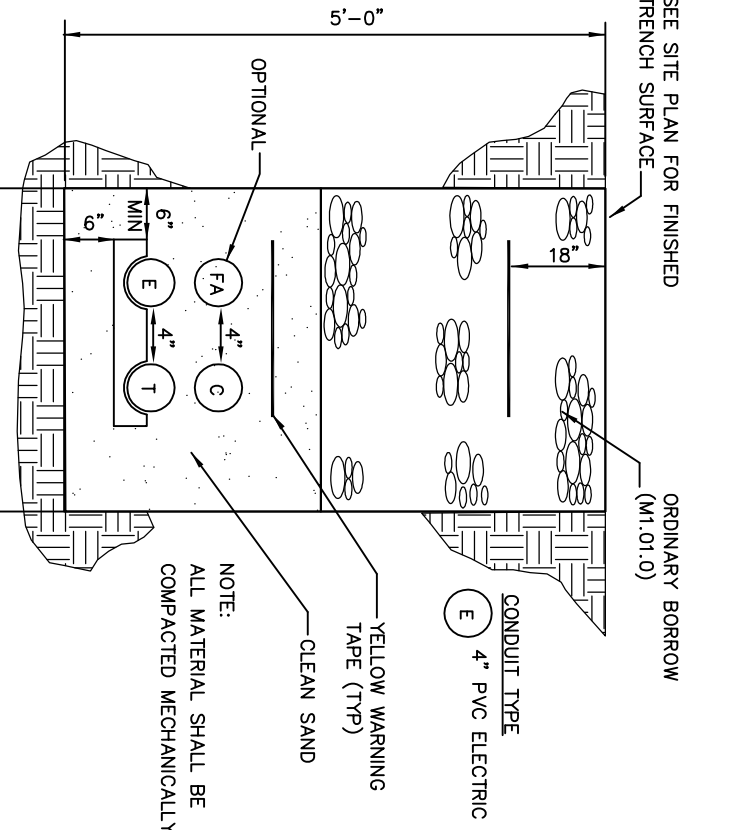
**SEWER TRENCH SECTION**  
N. T. S.

**TRENCH WIDTH DATA**

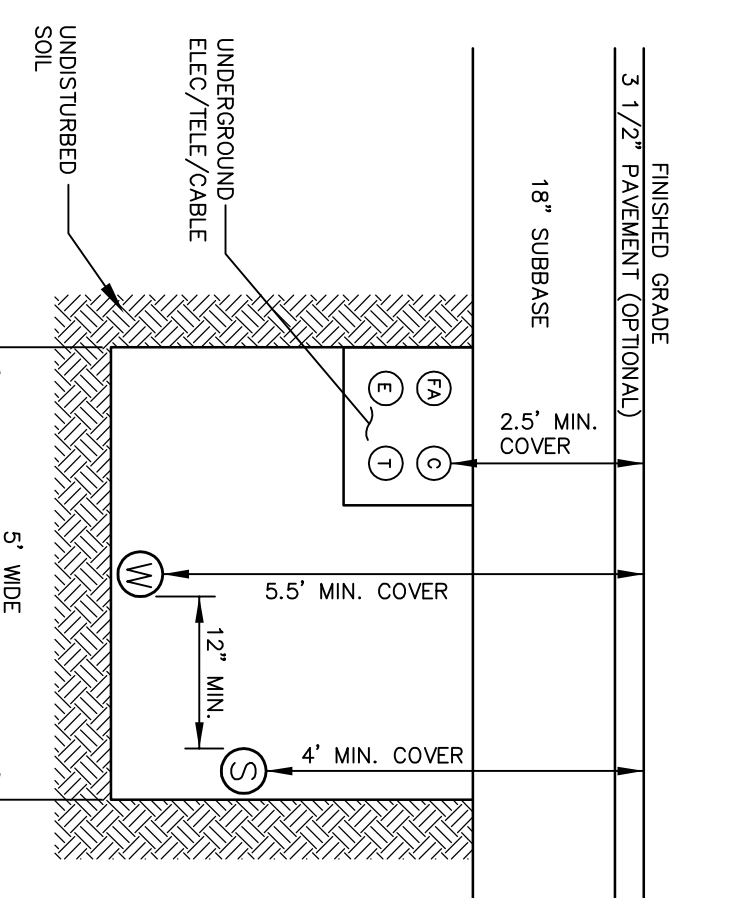
TRENCH WIDTH, Ws OR Ww	DIAMETER OF PIPE, D	Ws OR Ww	UNSHIELDED SHEET PILING
18"	18"	3'-0"	4'-2"
21"	21"	3'-10"	4'-8"
24"	24"	4'-2"	5'-4"
27"	27"	4'-6"	5'-10"
30"	30"	4'-10"	6'-6"
33"	33"	5'-2"	7'-2"
36"	36"	5'-6"	7'-8"
39"	39"	5'-10"	8'-4"
42"	42"	6'-2"	9'-0"
45"	45"	6'-6"	9'-6"
48"	48"	6'-10"	10'-2"



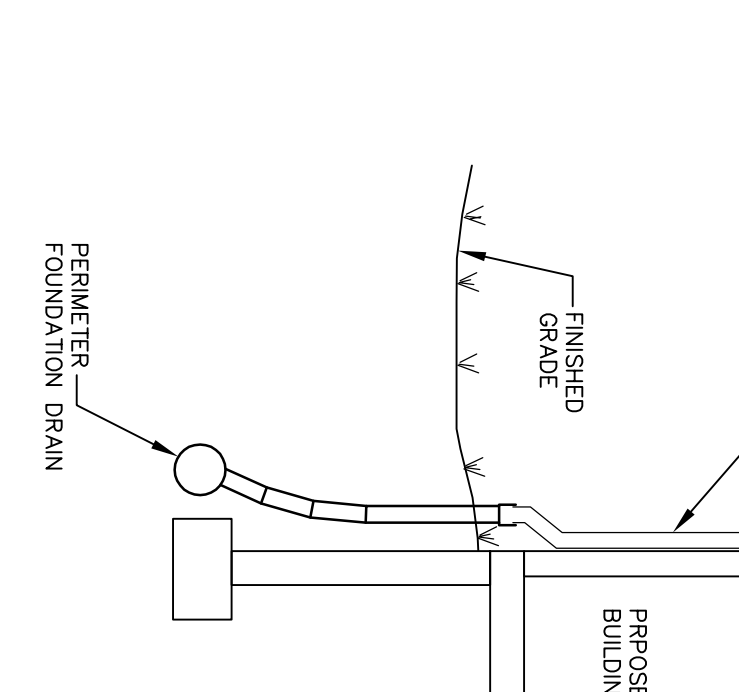
**VALVE BOX & COVER**  
NOT TO SCALE



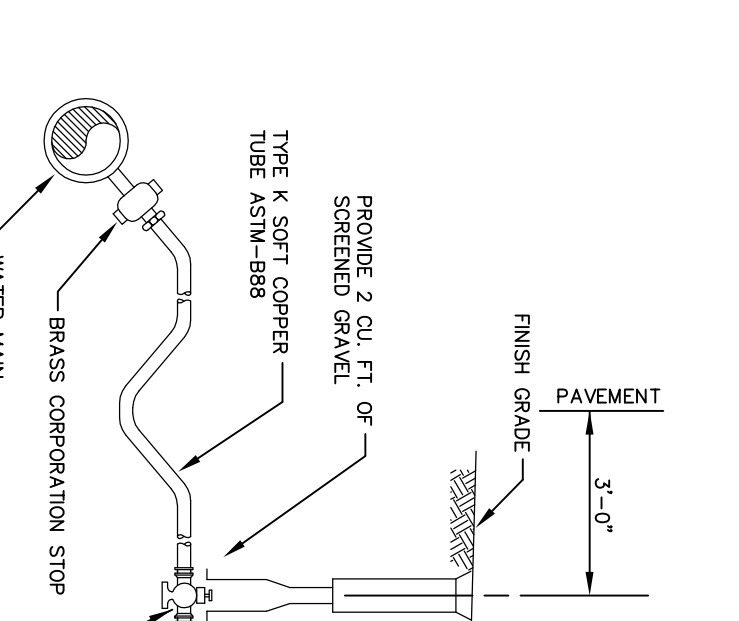
**COMMON TRENCH DETAIL**  
ELECTRIC/TELEPHONE/FIRE ALARM/CABLE



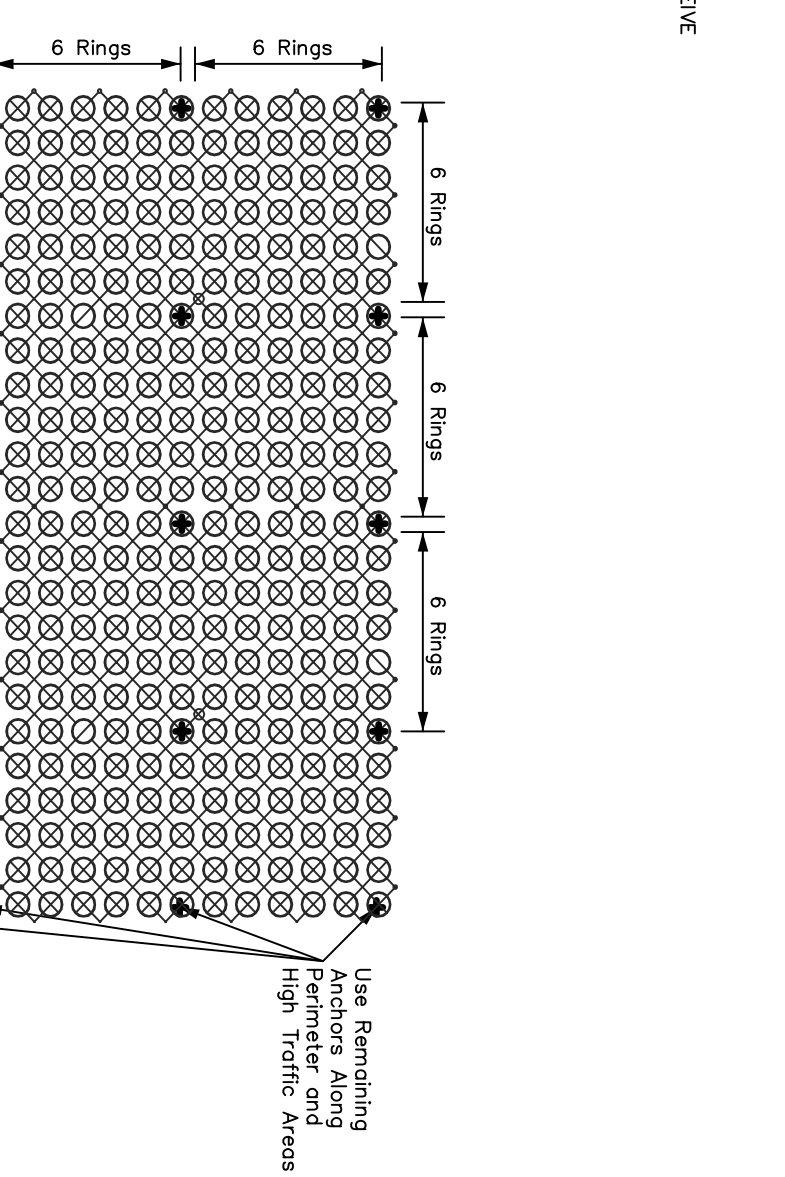
**UTILITY TRENCH SECTION**  
N.T.S.



**FOUNDATION DRAIN CONNECTION DETAIL**  
NOT TO SCALE



**TYPICAL WATER SERVICE CONNECTION**  
NOT TO SCALE



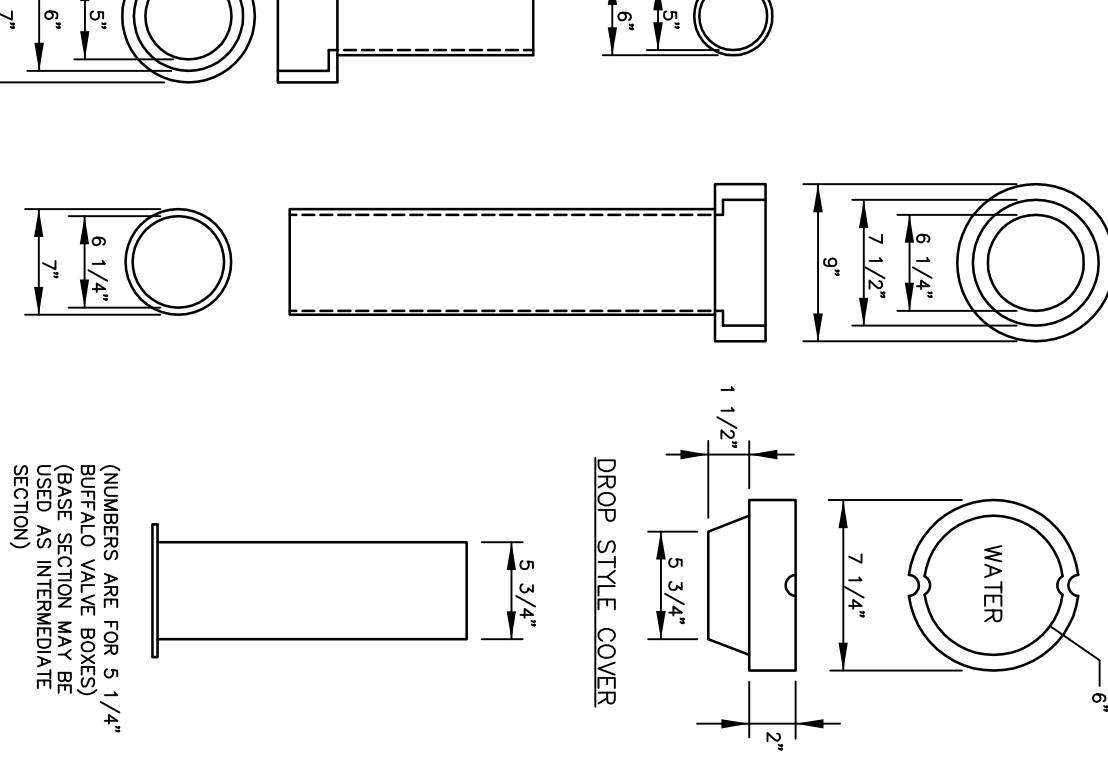
**Gravelpave2 Pinning Instructions**

60 anchors supplied per 108 sq ft (10 sq m)  
Size and type of anchor may vary

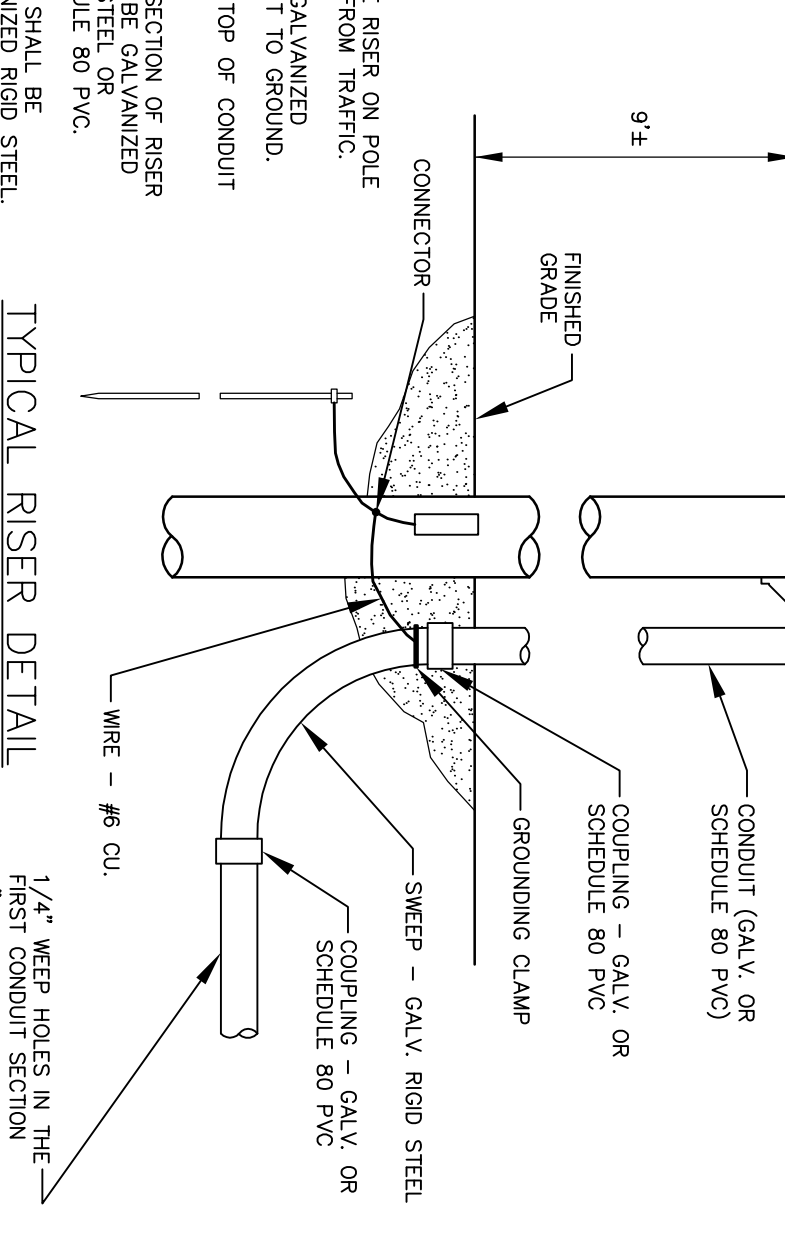
1. Place one anchor (minimum) in every six rings
2. Place anchor inside rings, in one of the four open spaces (do not puncture grid).
3. Place remaining anchors around perimeter of site and in high traffic areas

**GRAVELPAVE2 PINNING INSTRUCTIONS**

NOT TO SCALE  
Invisible Structures, Inc.  
1000 Jackson St. Suite 100  
Boulder, Colorado 80501  
Tel: 303.440.2222  
Fax: 303.440.2222  
www.invisiblestructures.com



**TYPICAL RISER DETAIL**  
NOT TO SCALE



**THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR RECORDING**

**PROJECT NUMBER: 33471**    **SCALE: AS NOTED**    **DATE: MAY 1, 2013**

**ADDD FILE: 33471-DETAILS.DWG**

**CONSTRUCTION DETAILS**

Project Name: **SINGLE FAMILY RESIDENCE**  
780 OCEAN AVE, PORTLAND, MAINE 04103

Owner/Architect: **SONIA BARRANTES & JACOB STAUB**  
780 OCEAN AVE, PORTLAND, MAINE 04103

Professional Seal: **Professional Engineer**  
Alicia M. Allen, License No. 10000  
Alicia M. Allen, License No. 10000

**NCS** **Northeast Civil Solutions**  
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**SHEET 7 OF 9**