

STANDARD TEE BLOCKING

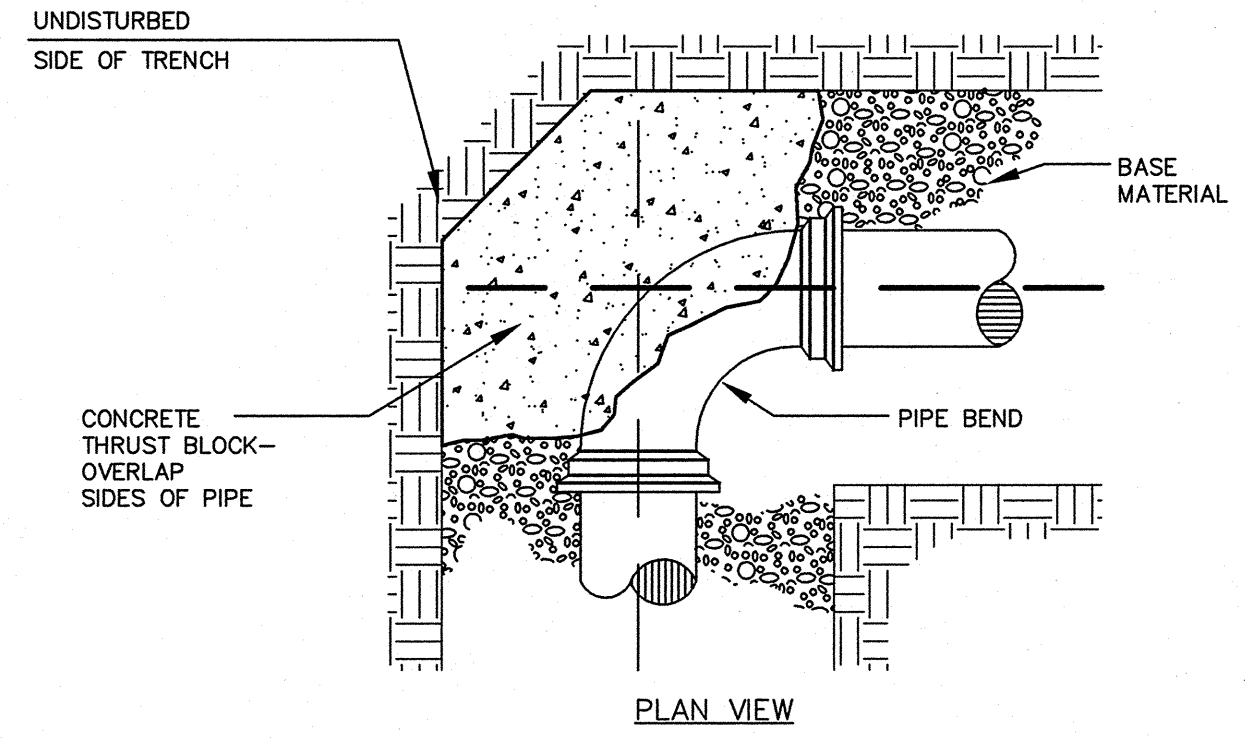
1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS

PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/CAPS
4"	1.8	3.6	7.0	12.8	9.1
6"	3.7	7.3	14.3	26.4	8.7
8"	6.4	12.6	24.7	45.5	32.2

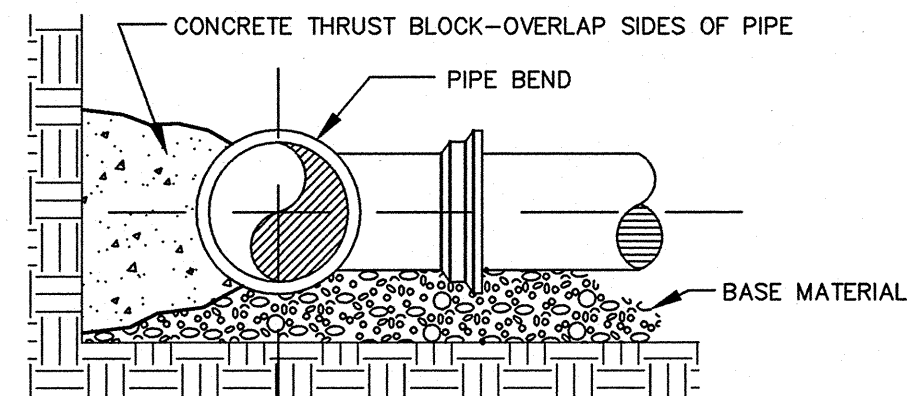
BEARING SURFACE REQUIRED IN SQUARE FEET

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

THRUST BLOCK NOTES



PLAN VIEW



SECTION

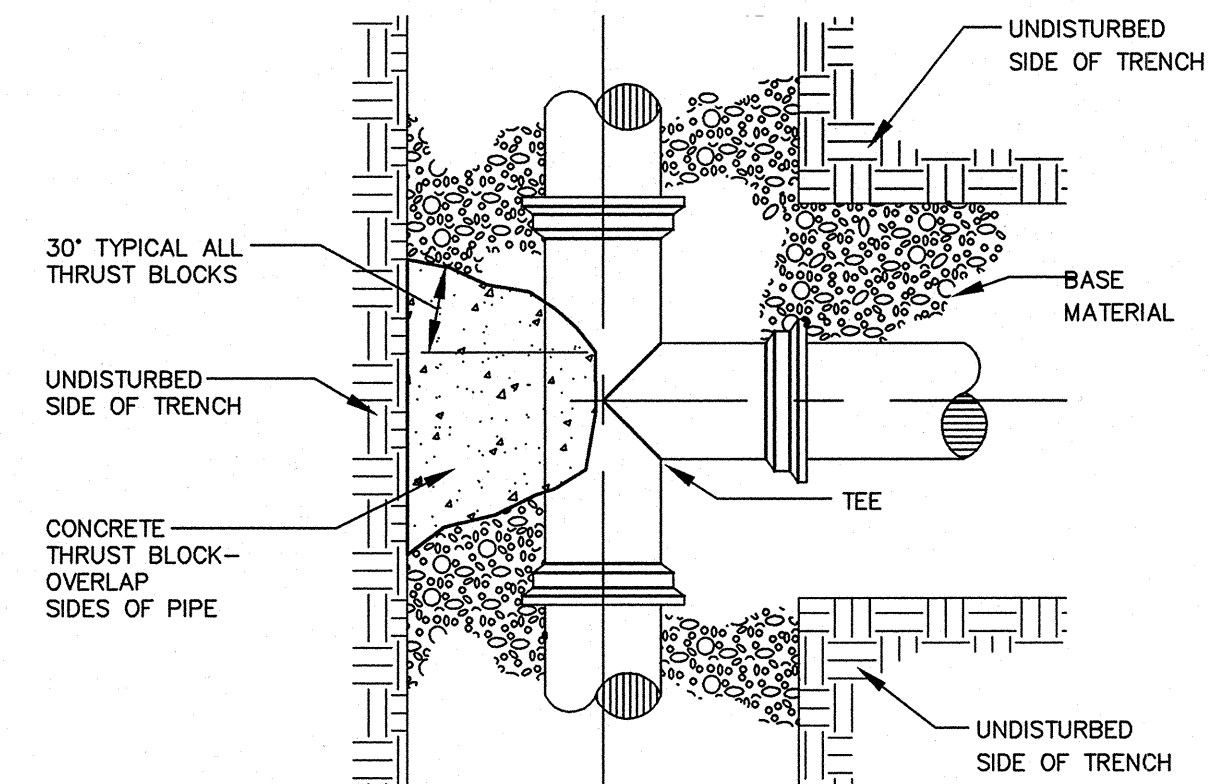
THRUST/RETAINER GLAND SCHEDULE		
1/4 BEND (90°)	USE POURED-IN-PLACE THRUST BLOCK w/RETAINERS	
1/8 BEND (45°)	THRUST BLOCK w/RETAINERS	
1/16 BEND (22 1/2°)	THRUST BLOCK	
1/32 BEND (11 1/4°)	THRUST BLOCK	

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

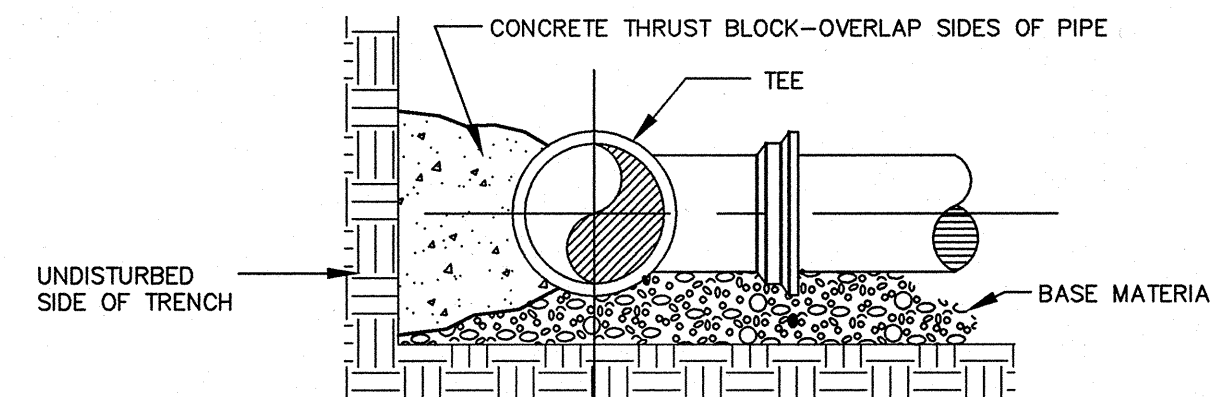
TYPICAL THRUST BLOCK PLACEMENT ON BENDS

THRUST BLOCKS

N.T.S.

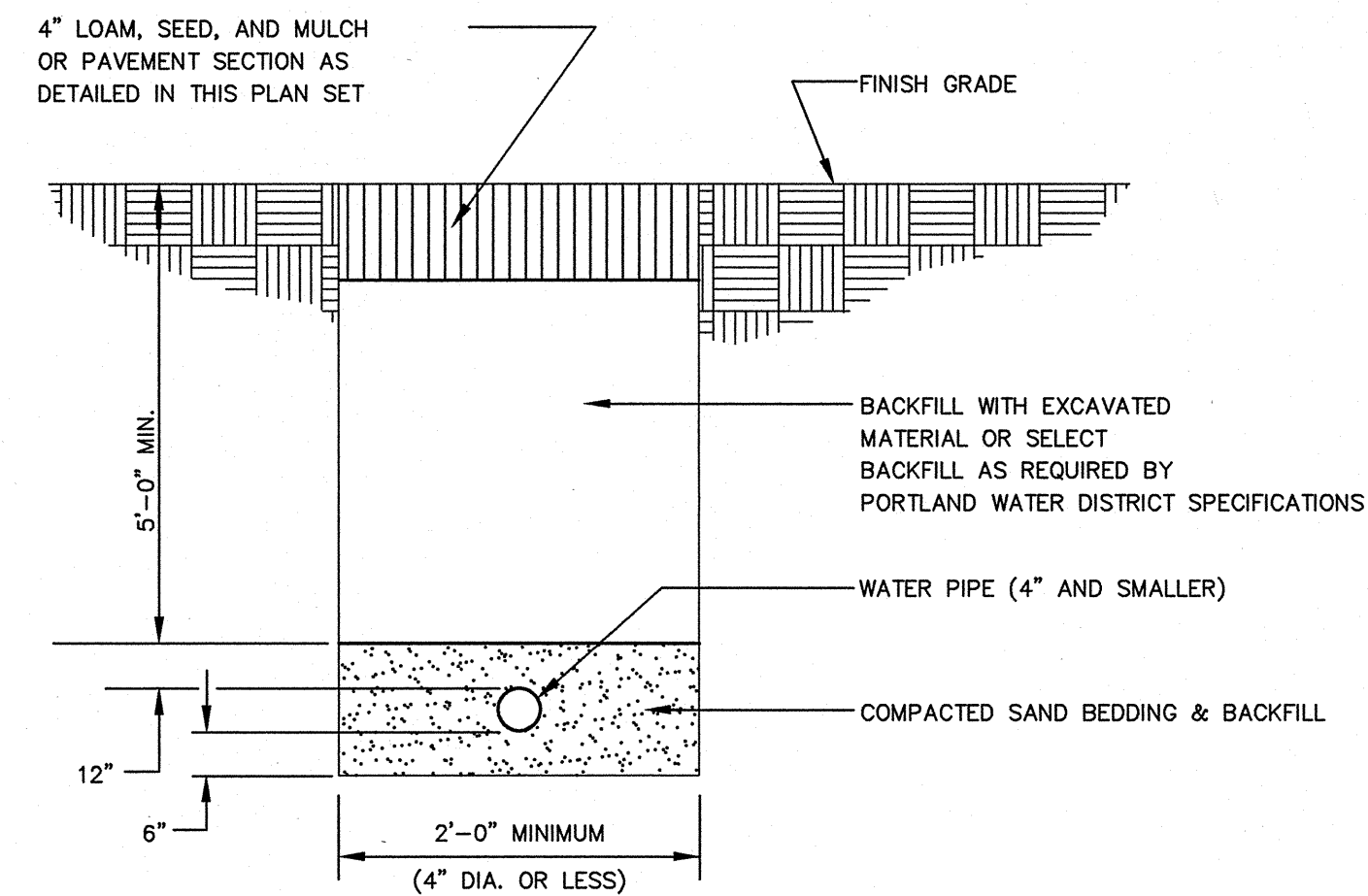


PLAN VIEW



SECTION

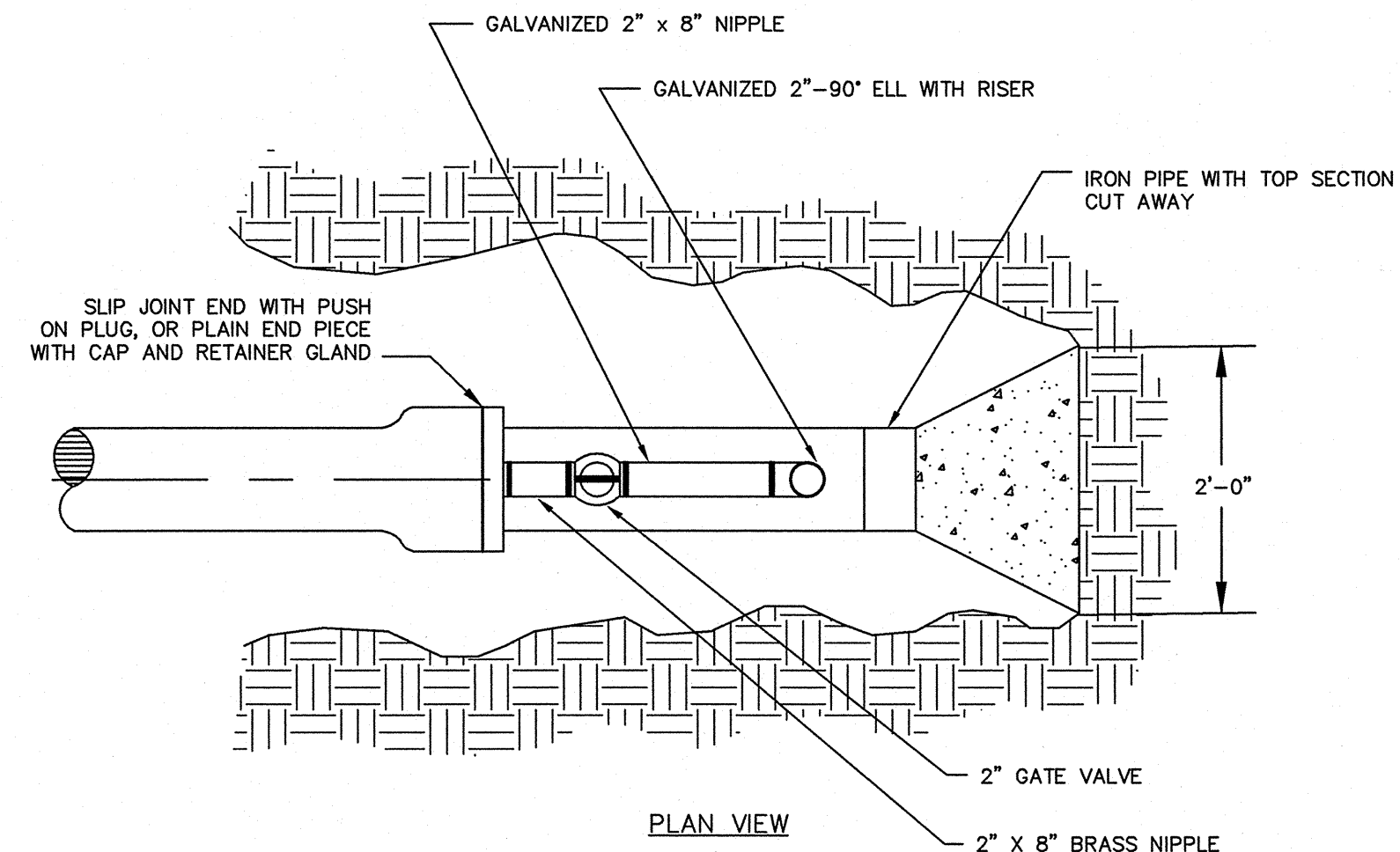
TYPICAL THRUST BLOCK PLACEMENT ON TEES



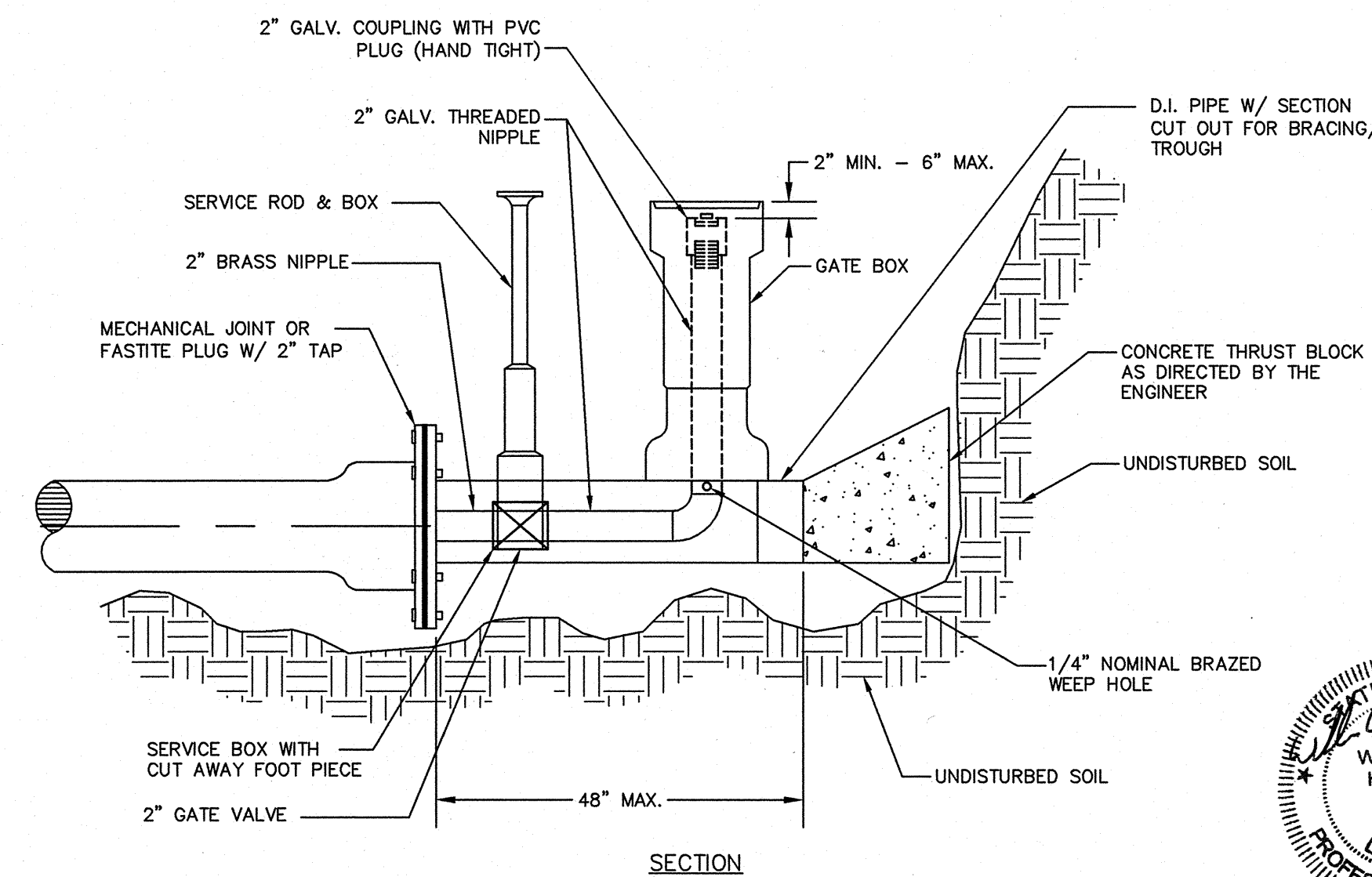
SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

WATER SERVICE TRENCH SECTION

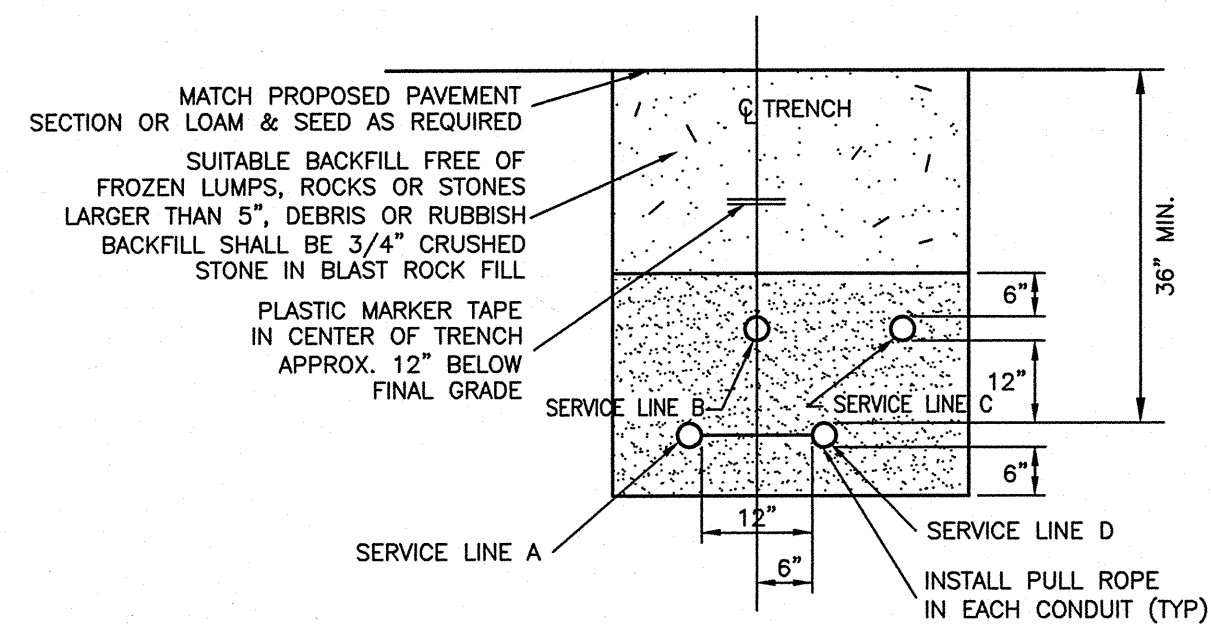
N.T.S.



PLAN VIEW



SECTION

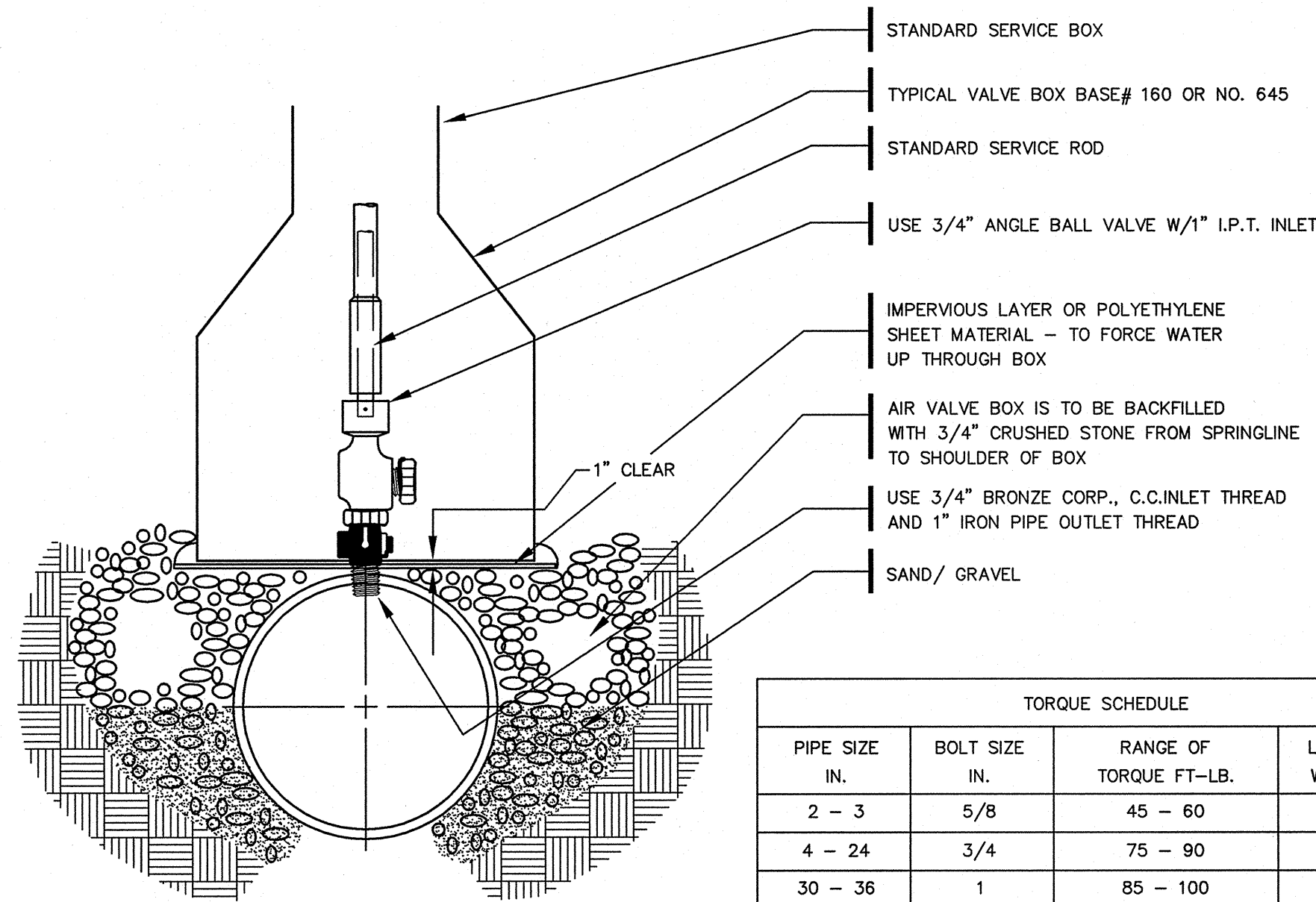


SERVICE	CONDUIT SIZE	CONDUIT TYPE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE		PRIMARY POWER	SEE NOTE
B	2-4"	SCHEDULE 40 PVC		TELEPHONE	SEE NOTE
C	2-4"	SCHEDULE 40 PVC		CABLE	SEE NOTE
D	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE		FIRE ALARM	SEE NOTE

NOTE: ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS

UTILITY TRENCH - PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

N.T.S.



TORQUE SCHEDULE			
PIPE SIZE IN.	BOLT SIZE IN.	RANGE OF TORQUE FT.-LB.	LENGTH OF WRENCH IN *
2 - 3	5/8	45 - 60	8
4 - 24	3/4	75 - 90	10
30 - 36	1	85 - 100	12
42 - 48	1 1/4	105 - 120	14

\*THE TORQUE LOADS MAY BE APPLIED WITH TORQUE MEASURING OR TORQUE INDICATING WRENCHES, WHICH MAY ALSO BE USED TO CHECK THE APPLICATION OF APPROXIMATE TORQUE LOADS APPLIED BY A PERSON TRAINED TO GIVE AN AVERAGE PULL ON A DEFINITE LENGTH OF REGULAR SOCKET WRENCH.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL

TYPICAL AIR VALVE SECTION (1")

N.T.S.

Mitchell & Associates LANDSCAPE ARCHITECTS

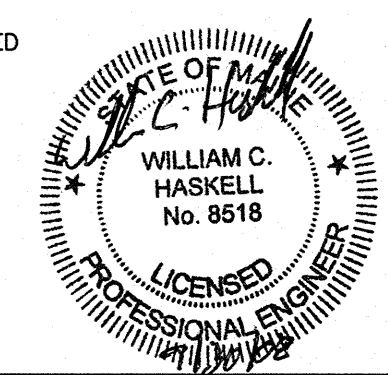
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**AVESTA HOUSING**

**FLORENCE HOUSE**  
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PORTLAND, MAINE

**Preble Street**

REVISIONS		
#	DATE	DESCRIPTION
1	12.7.07	MAINE HOUSING 50% REVIEW SET
2	5.2.08	90% MAINE HOUSING REVIEW SET
3	7.31.08	100% MAINE HOUSING REVIEW SET
4	9.2.08	100% BID DOCUMENTS

DATE:	12.7.07
PROJECT #	100405
DRAWN BY:	CAP
CHECKED BY:	WH
DRAWING SCALE	N.T.S.

SHEET TITLE

UTILITY DETAILS

C 303

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