



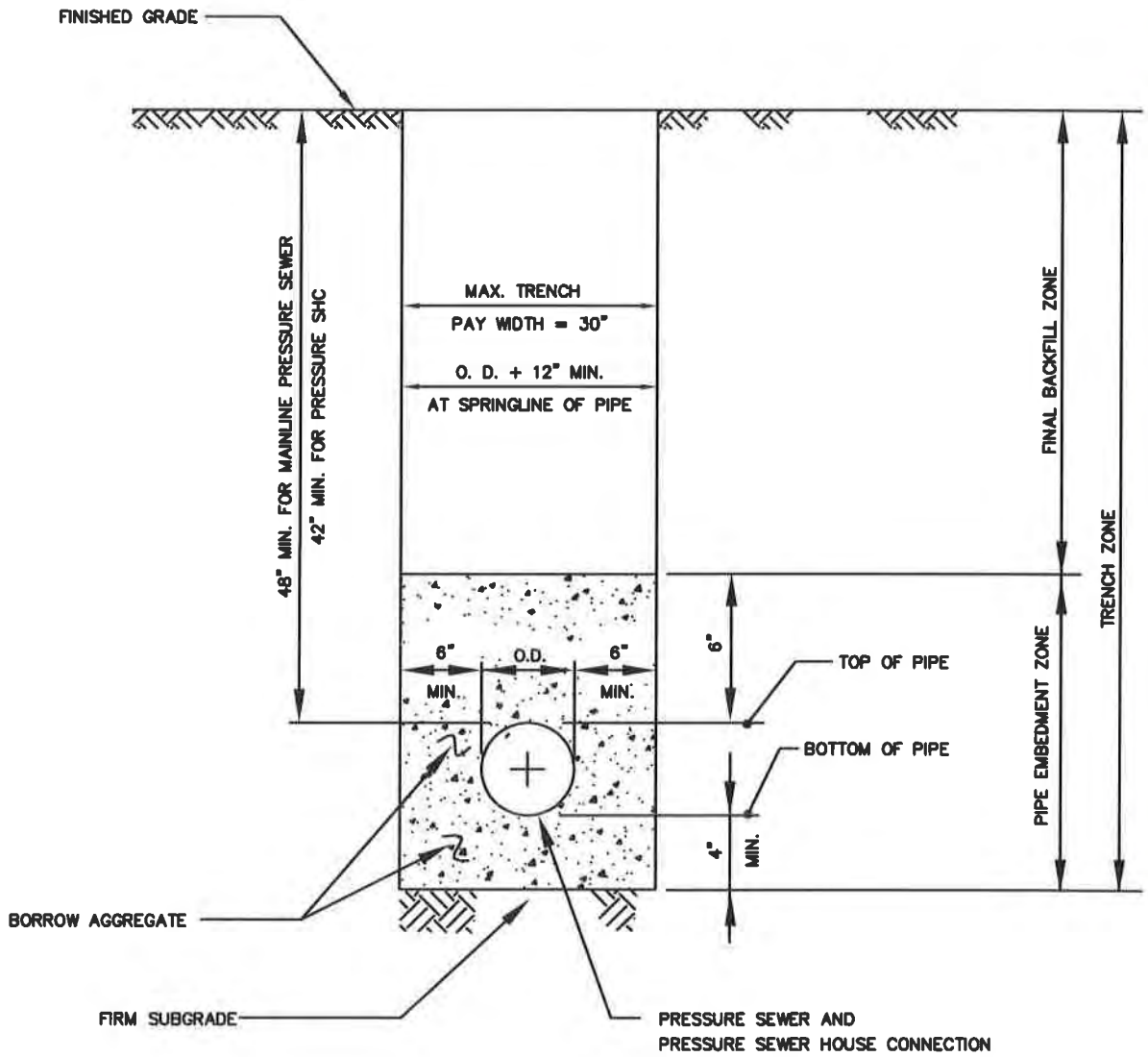
SECTION VII

PRESSURE SEWER DETAILS


SECTION VII-PRESSURE SEWER DETAILS**TABLE OF CONTENTS**

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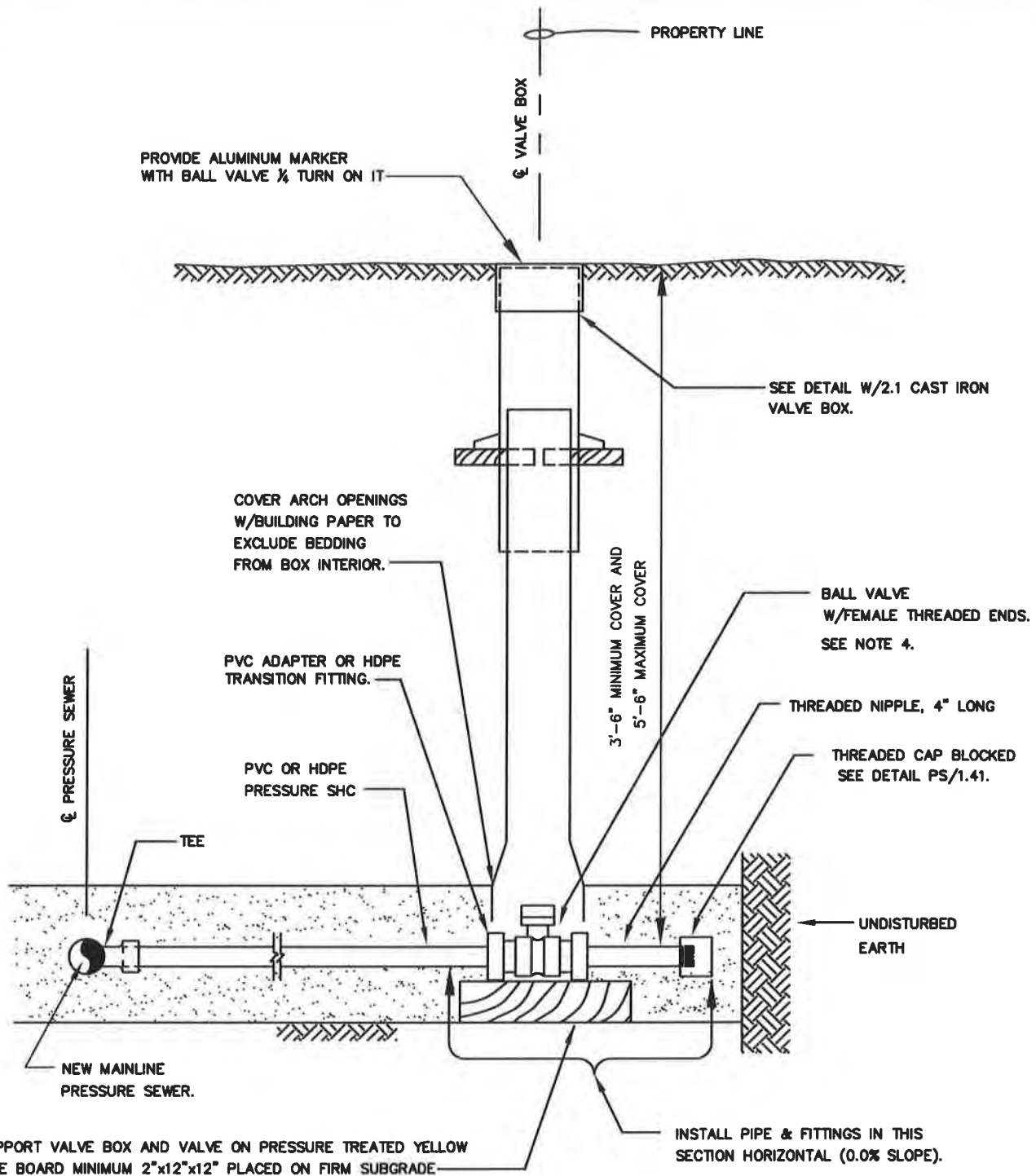


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Chief Engineer

STANDARD DETAIL
TRENCH DETAIL - FLEXIBLE PIPE
PVC AND HDPE
PRESSURE SEWER

PS
1.0



NOTES:

1. SERVICE VALVE TO BE LEFT IN THE OPEN POSITION.
2. UNLESS OTHERWISE NOTED ALL 1 1/4" DIAMETER PVC PIPE SHALL HAVE SOLVENT CEMENT JOINTS AND HDPE WILL HAVE BUTT FUSED JOINTS.
3. FITTINGS SHALL BE BLOCKED OR ANCHORED IN ACCORDANCE WITH DETAILS PS/1.4, 1.41 & 1.42.
4. BALL VALVE SHALL HAVE A 2" BY .5" OPERATING NUT FOR USE WITH A CURB KEY.

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STANDARD DETAIL
PRESSURE SHC WITH
SERVICE VALVE
ASSEMBLY

PS
1.1

BALL VALVE WITH FEMALE THREADED ENDS.

TYP. PVC UNION ON EACH SIDE OF EACH VALVE.

PRESSURE SEWER (PVC OR HDPE)

BRONZE TEE LINE SIZE x 1 1/2" W/THREADED PLUG AND THREADED ENDS W/PVC ADAPTERS SxMPT.

MANHOLE

48" PRECAST CONCRETE MANHOLE, SEE DETAIL S/1.0.

HANDLE (TYP.)

EQ.

EQ.

FLEXIBLE GASKET CONNECTOR (TYP.)

EQ.

EQ.

6" (MIN.)

BRICK OR CONCRETE PIER (TYP.)

SCH 80 PVC ADAPTER S x MPT (TYP.)

IN-LINE FLUSHING CONNECTION
(LESS THAN 2 1/2" Ø LINE)

BRONZE TEE LINE SIZE x 1 1/2" WITH THREADED PLUG AND THREADED ENDS W/PVC ADAPTERS S x MPT.

THREADED CAP. (PVC).

2 LAYERS ROOFING FELT.

BLOCK TO MANHOLE WALL WITH MORTARED BRICK

48" PRECAST CONCRETE MANHOLE, SEE DETAIL S/1.0.

2 LAYERS ROOFING FELT.

MANHOLE

TYP. PVC UNION ON EACH SIDE OF EACH VALVE.

BALL VALVE W/FEMALE THREADED ENDS

HANDLE

FLEXIBLE GASKET CONNECTOR (TYP.)

PRESSURE SEWER (PVC OR HDPE)

6"

6"

(MIN.)

BRICK OR CONCRETE PIER (TYP.)

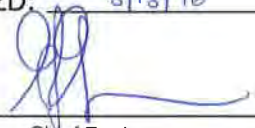
SCH 80 PVC ADAPTER S x MPT (TYP.)

TERMINAL FLUSHING CONNECTION

NOTES:

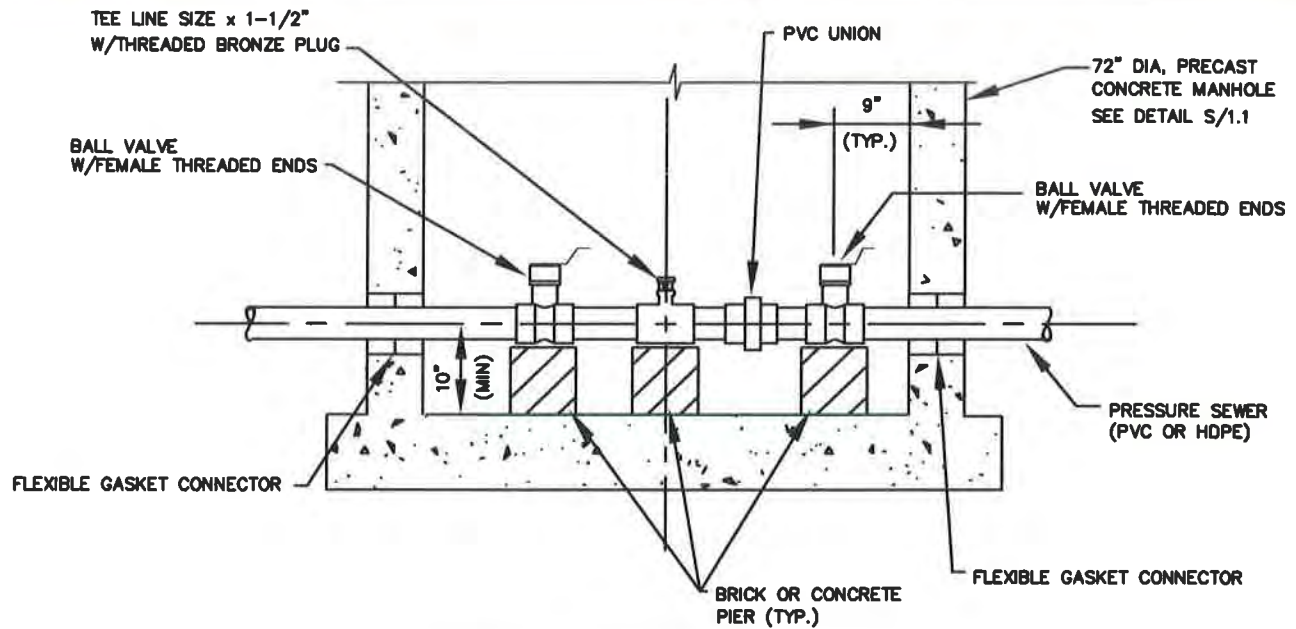
1. ALL JOINTS SHOWN SHALL BE SOLVENT CEMENT UNLESS OTHERWISE NOTED.
2. FOR OTHER MANHOLE DETAILS, SEE DETAIL S/1.0.
3. FOR 1 1/4" Ø LINE, BUSH UP AS NECESSARY TO ACCOMMODATE 1 1/2"x1 1/2" TEE
4. ALLOW SUFFICIENT SPACE FOR UNSCREWING UNIONS.
5. FOR HDPE PIPE, PROVIDE TRANSITION FITTING AT CONNECTION TO PVC UNION.

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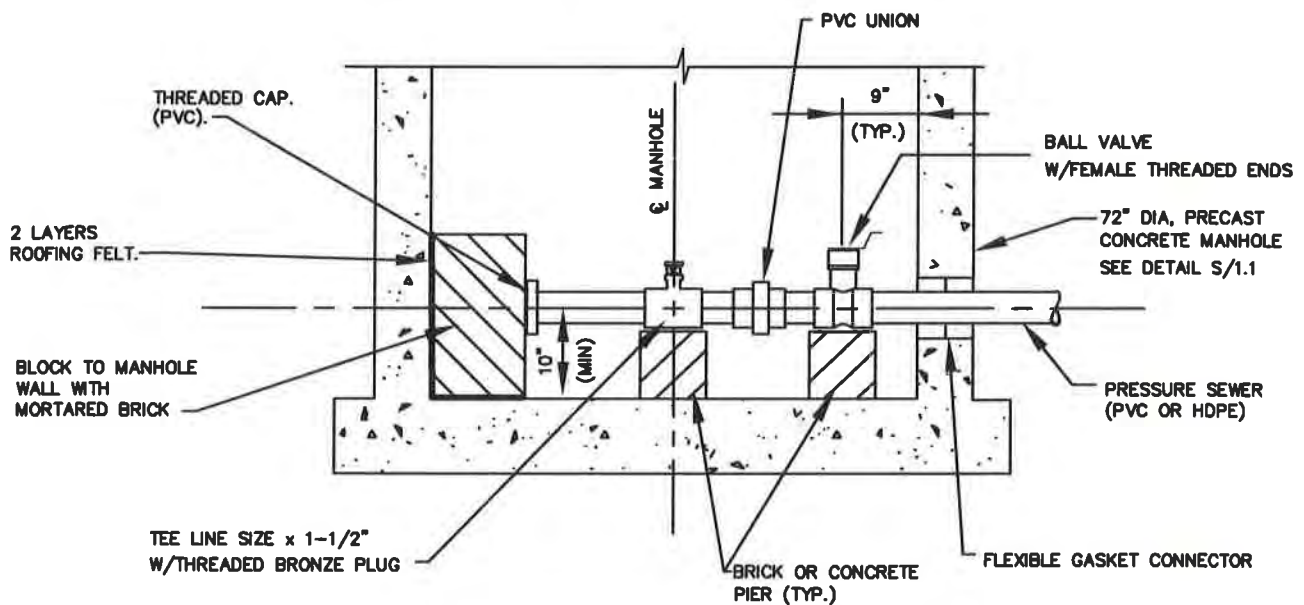
STANDARD DETAIL
FLUSHING CONNECTION
LESS THAN 2-1/2"

PS
1.2



IN-LINE FLUSHING CONNECTION

(2 1/2" THROUGH 4")



TERMINAL FLUSHING CONNECTION

(2 1/2" THROUGH 4")

NOTES:

1. ALL JOINTS SHOWN SHALL BE SOLVENT CEMENT UNLESS OTHERWISE NOTED.
2. FOR OTHER MANHOLE DETAILS, SEE DETAIL S/1.2.
3. ALLOW SUFFICIENT SPACE FOR UNSCREWING UNION.
4. FOR HDPE PIPE, PROVIDE TRANSITION FITTING AT CONNECTION TO BALL VALVE.

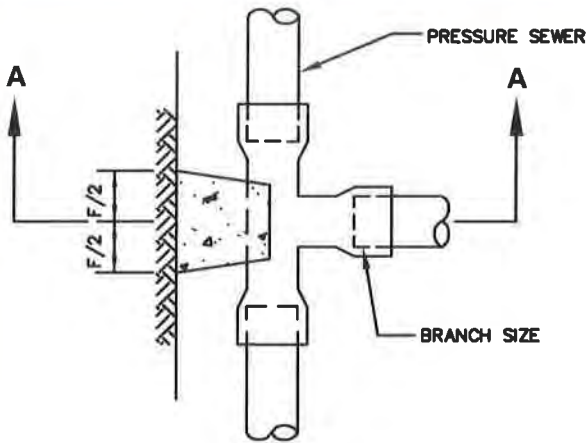
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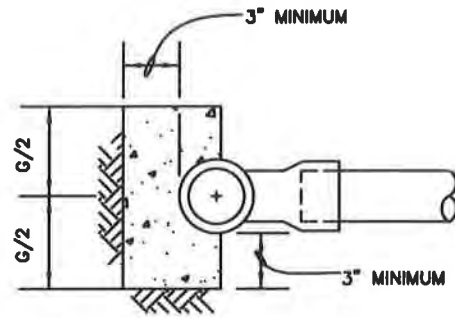
STANDARD DETAIL
FLUSHING CONNECTION
2-1/2" THROUGH 4"

PS
1.3

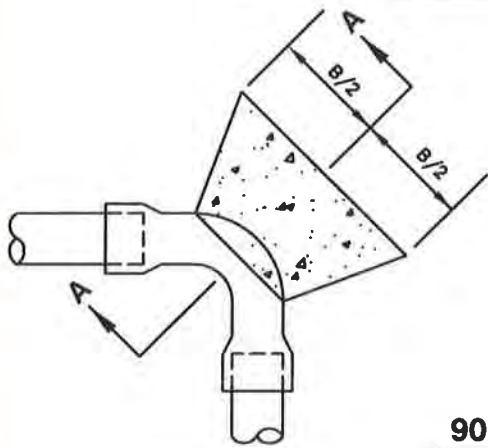


PLAN

TEES, INCLUDING PRESSURE SHC'S

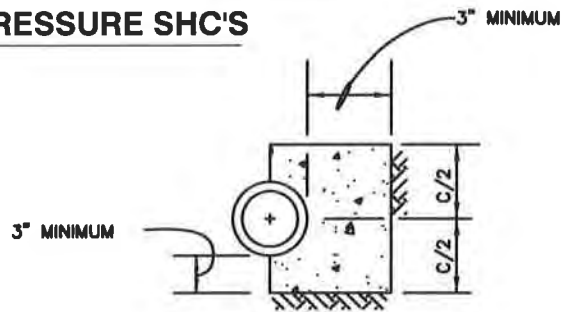


SECTION A-A

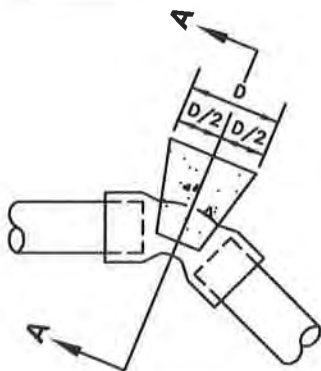


PLAN

90 ° HORIZONTAL BENDS

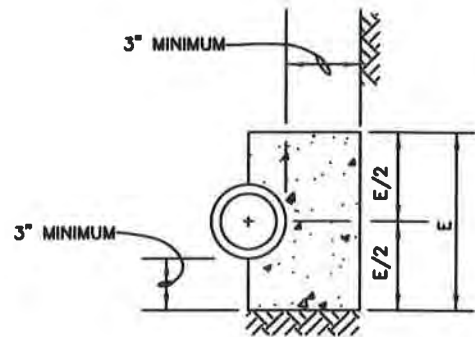


SECTION A-A



PLAN

11-1/4°, 22-1/2°, 45° HORIZONTAL AND LOWER VERTICAL BENDS



SECTION A-A

PIPE SIZE	B	C	D	E	F	G
1-1/4" AND 1-1/2"	8"	8"	5"	5"	6"	6"
2"	10"	10"	7"	7"	10"	10"
2-1/2"	10"	10"	7"	7"	10"	10"
3"	12"	12"	9"	9"	12"	12"
4"	26"	12"	12"	12"	18"	12"

NOTES:

1. $f'_c=3000$ psi @ 28 DAYS.
2. CARRY ALL BEARING SURFACES TO UNDISTURBED GROUND OR FIRM SUBGRADE.
3. BUTTRESS SIZED FOR 150 psi.
4. SEE DETAIL PS/1.42 FOR UPPER VERTICAL BENDS.
5. DO NOT ENCASE JOINTS.

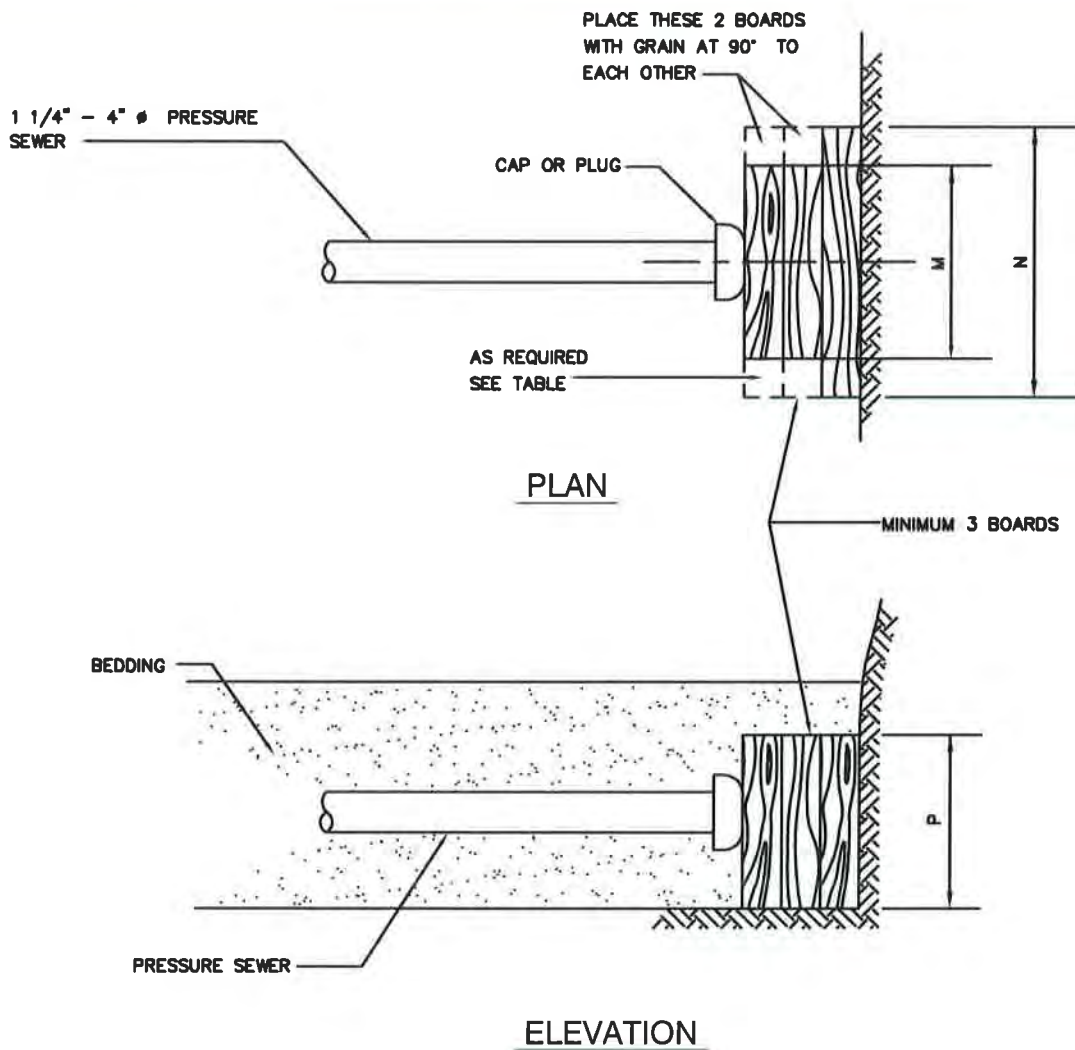
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STANDARD DETAIL
PRESSURE SEWER
BLOCKING DETAILS

PS
1.4



PIPE SIZE	M	N	P
1 1/4"	6"	6"	8"
1 1/2"	6"	6"	8"
2"	6"	8"	8"
2 1/2"	8"	8"	10"
3"	12"	18"	12"
4"	12"	18"	12"

NOTES:

1. CARRY ALL BEARING SURFACES TO UNDISTURBED EARTH OR FIRM SUBGRADE.
2. BUTTRESS SIZED FOR 150 psi.
3. NOMINAL THICKNESS OF ALL BOARDS IS 2".
4. ALL BOARDS TO BE PRESSURE TREATED YELLOW PINE.

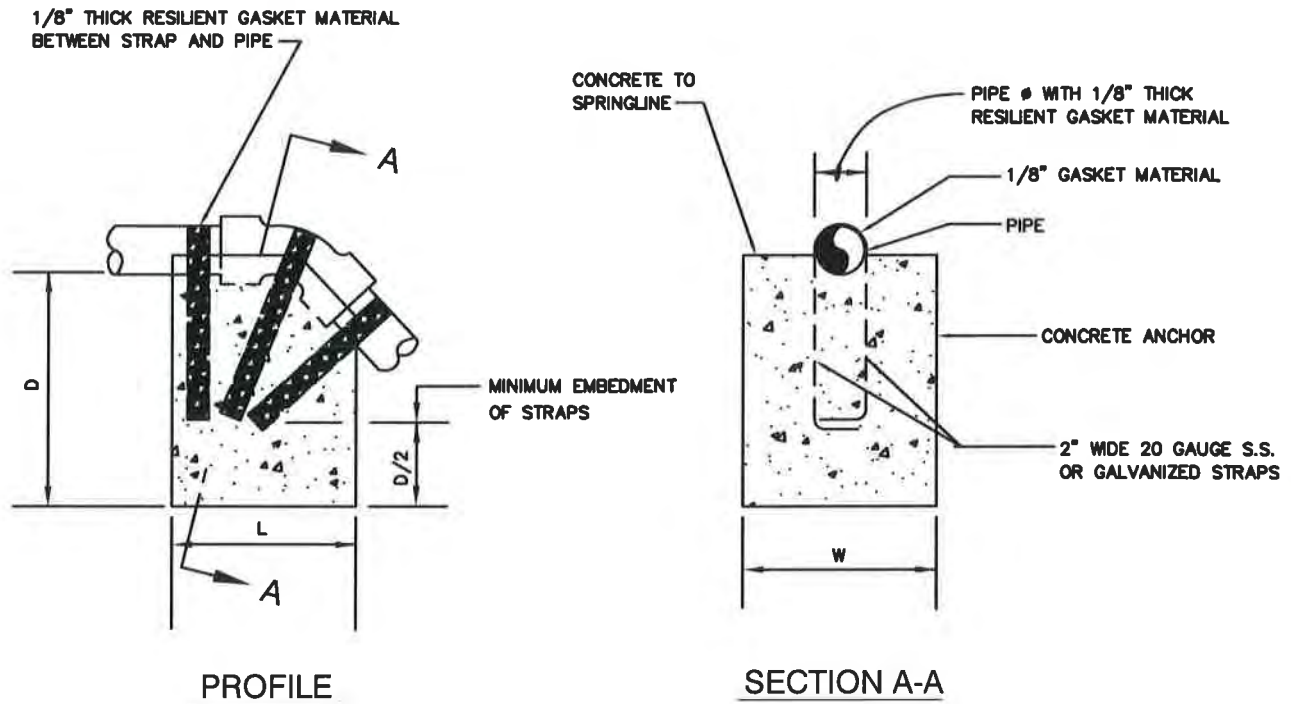
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STANDARD DETAIL
PRESSURE SEWER AND
HOUSE CONNECTION
BLOCKING DETAILS
FOR CAPS AND PLUGS

PS
1.41

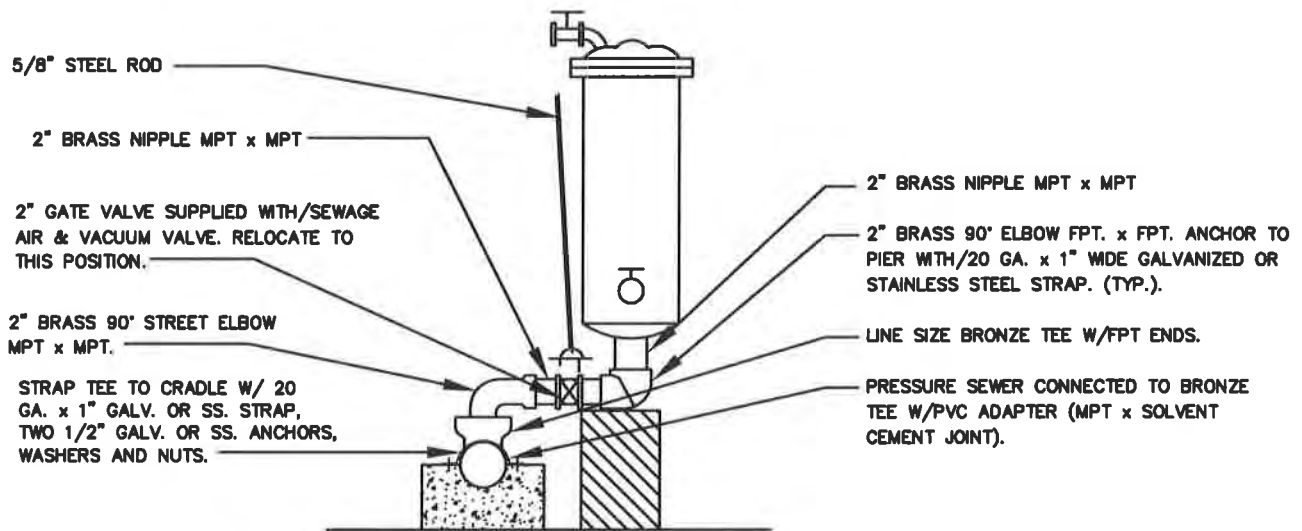
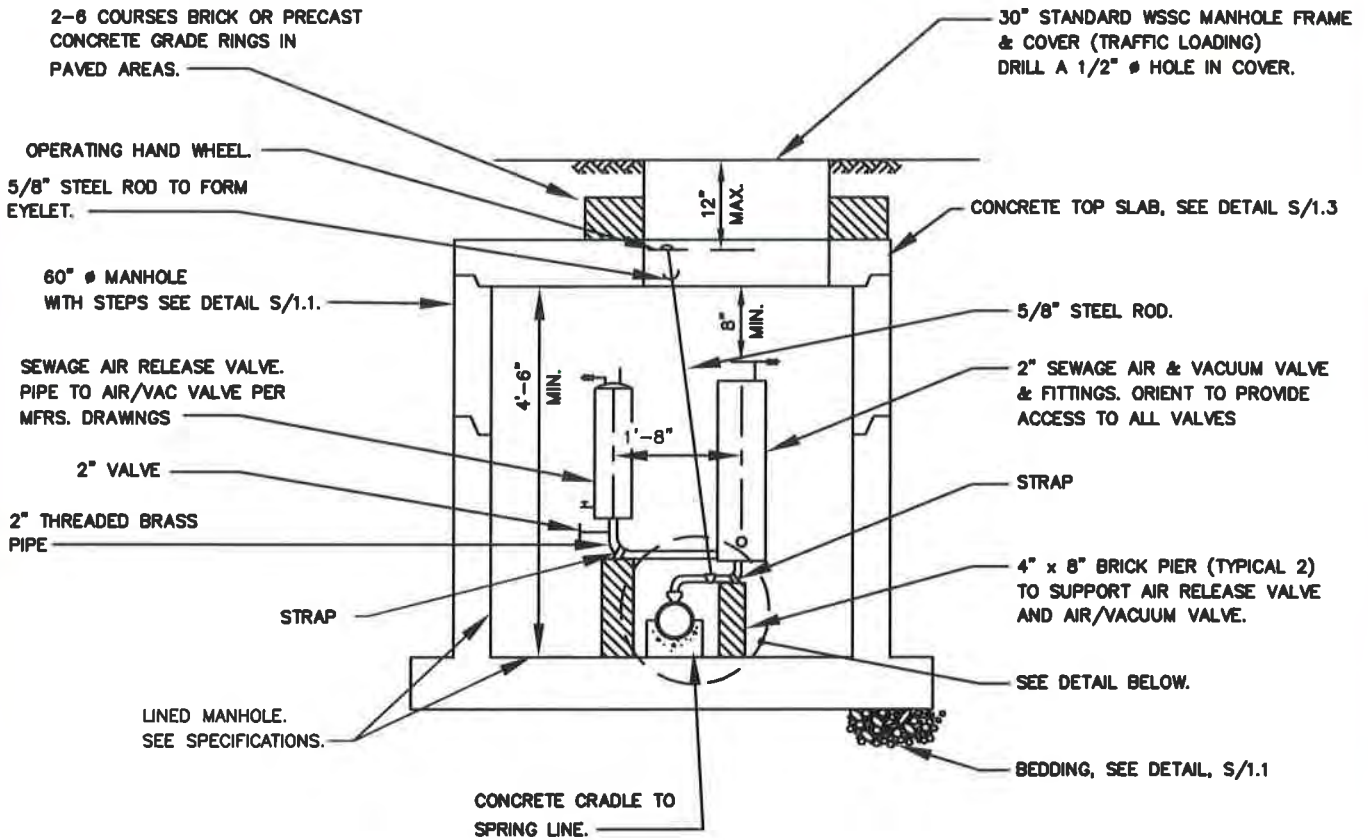


BEND		SIZE IN INCHES			
		1-1/4, 1-1/2	2, 2-1/2	3	4
11 1/4 °	L	12	15	18	18
	W	10	12	15	18
	D	10	15	15	18
22 1/2 °	L	15	20	20	24
	W	15	20	20	24
	D	12	12	18	20
45 °	L	20	24	24	30
	W	20	20	24	30
	D	12	20	24	26

NOTES:

1. COAT EXPOSED GALVANIZED STRAPS WITH FIELD APPLIED COATING, SEE SPECIFICATIONS.
2. $f'_c=3000$ psi @ 28 DAYS.
3. CARRY ALL BEARING SURFACE TO UNDISTURBED EARTH OR FIRM SUBGRADE.
4. CONCRETE ANCHORAGE DIMENSIONS ARE BASED ON TOTAL PRESSURE OF 150 psi.

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**DETAIL OF CONNECTION OF AIR/VAC. VALVE
TO MAINLINE PRESSURE SEWER**

NOTE:

1. SEE DETAIL PS/1.5a FOR ADDITIONAL INFORMATION AND NOTES.

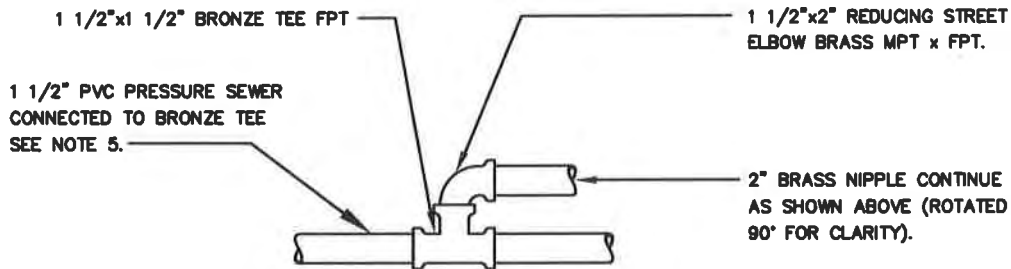
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STANDARD DETAIL
**SEWAGE AIR/VACUUM
AND RELEASE VALVE
INSTALLATION**

PS
1.5




CONNECTIONS FOR 1 1/2"
PRESSURE SEWER

NOTES:

1. COAT EXPOSED GALVANIZED STRAPS WITH FIELD APPLIED COATING, SEE SPECIFICATIONS.
2. INSTALL COMPLETE SET OF MANUFACTURER—FURNISHED BACKWASH ACCESSORIES ON EACH VALVE, SEE SPECIFICATIONS.
3. FOR DETAILS OF PIPE PENETRATION THROUGH MANHOLE WALL, SEE DETAILS PS/1.2 AND PS/1.3.
4. FOR 1 1/2" PRESSURE SEWER, SEE CONNECTION DETAIL THIS SHEET.
5. FOR PVC PRESSURE SEWER CONNECT TO BRONZE TEE WITH PVC ADAPTER x SOLVENT CEMENT JOINT. FOR 1 1/2" USE SCHED 80 PVC ADAPTER. FOR HDPE PRESSURE SEWER CONNECT TO BRASS TEE WITH TRANSITION FITTING.

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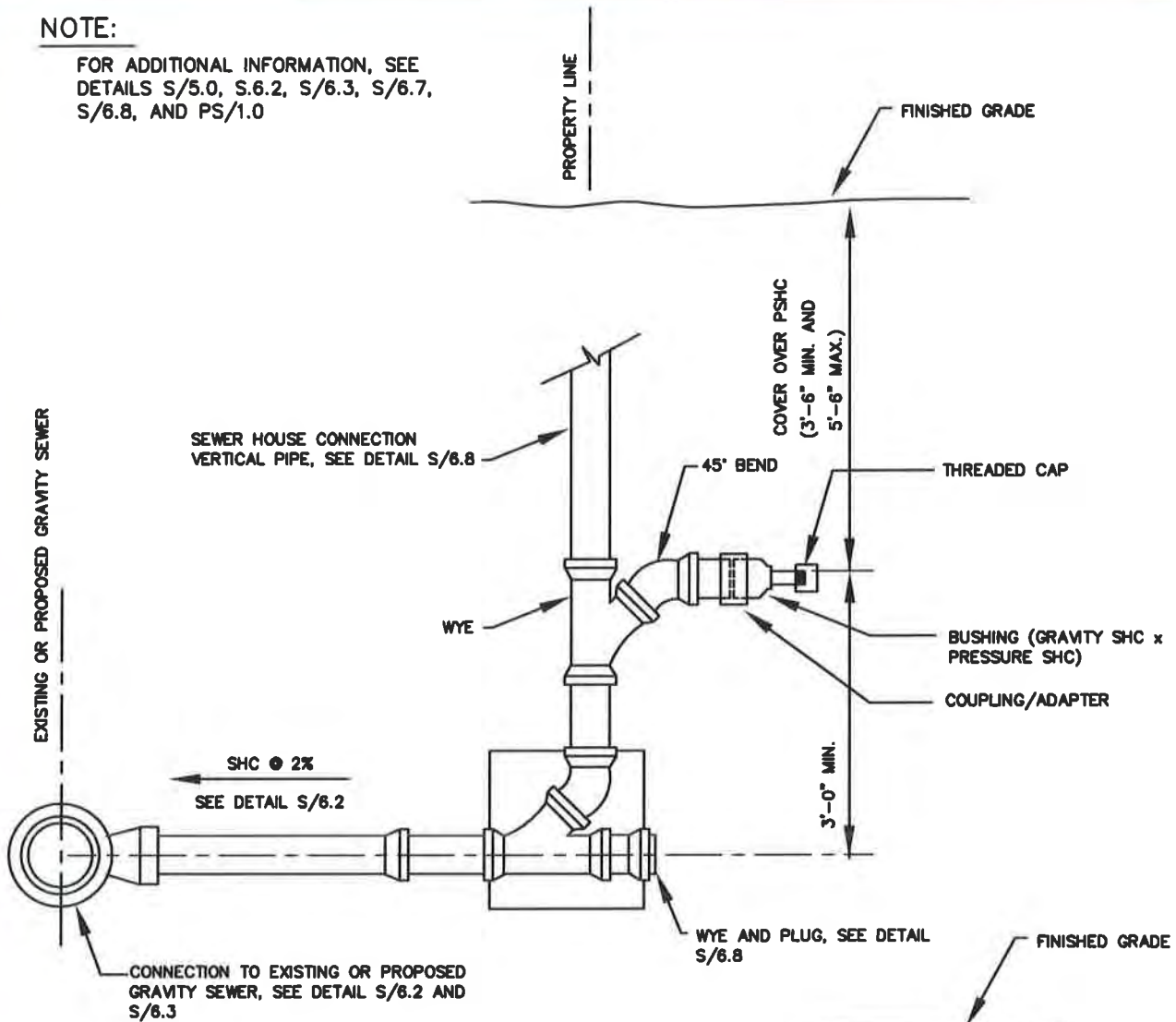
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STANDARD DETAIL
SEWAGE AIR/VACUUM
AND RELEASE VALVE
INSTALLATION

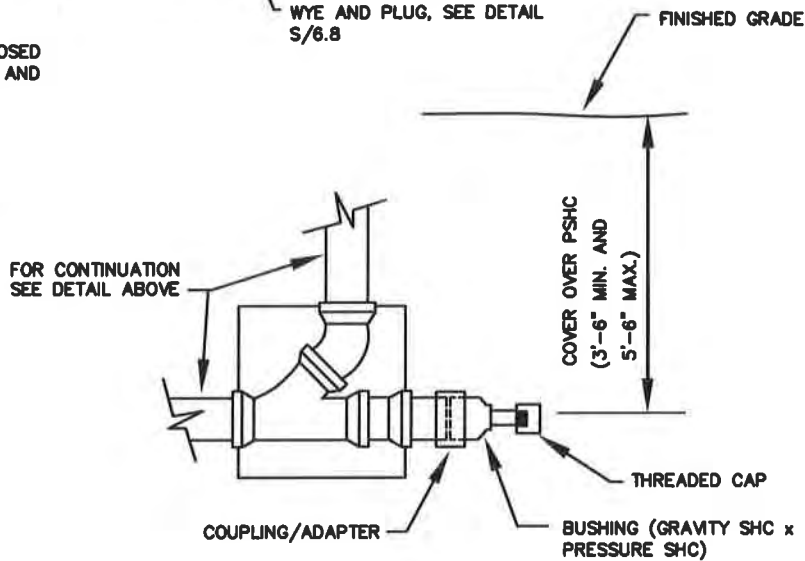
PS
1.5a

NOTE:

FOR ADDITIONAL INFORMATION, SEE
 DETAILS S/5.0, S.6.2, S/6.3, S/6.7,
 S/6.8, AND PS/1.0



ELEVATION



ALTERNATE METHOD FOR SHALLOW GRAVITY SHC

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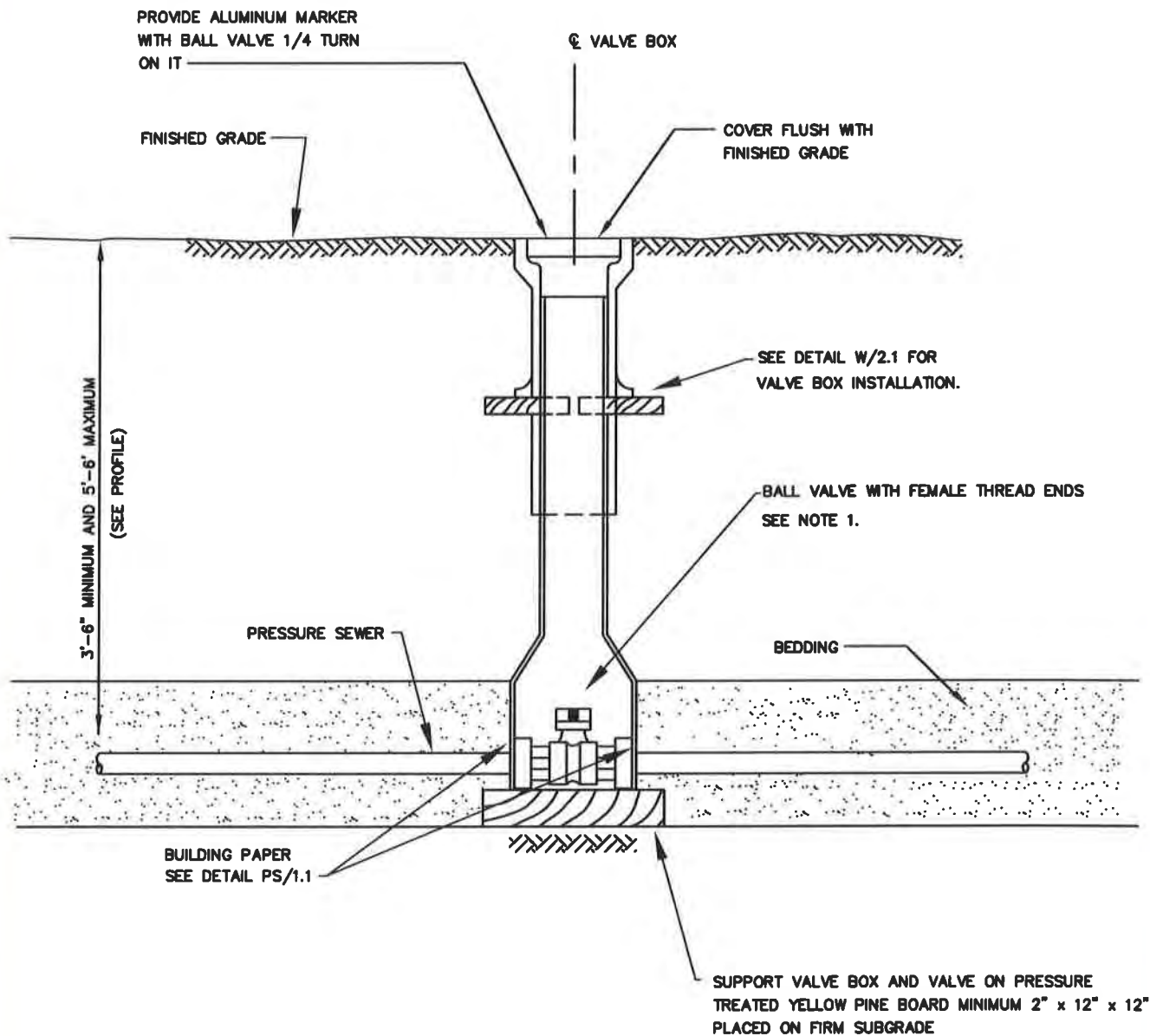
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STANDARD DETAIL
 PRESSURE SEWER
 HOUSE CONNECTION TO
 NEW OR EXISTING
 GRAVITY SEWER

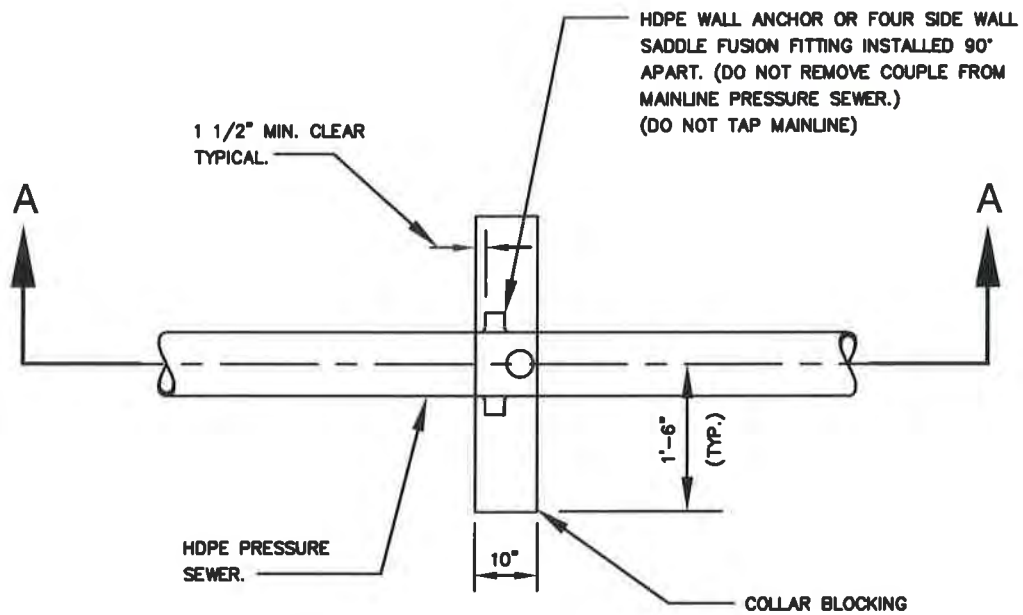
PS
 1.6



NOTES:

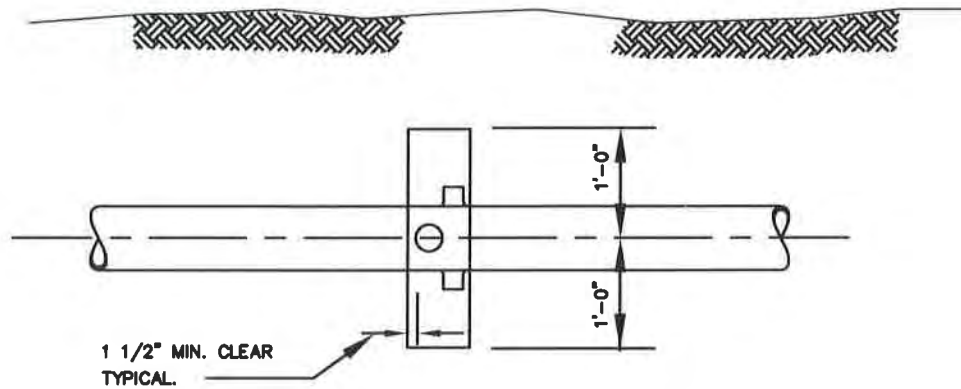
1. BALL VALVE SHALL HAVE A 2" BY .5" OPERATING NUT FOR USE WITH A CURB KEY.

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PLAN

NOTE: SIZE OF SIDE WALL SADDLE SHALL HAVE MIN. 1 1/2" I.P.S. OUTLET.




SECTION A-A

NOTES:

1. $f'c = 3000 \text{ PSI} \oplus 28 \text{ DAYS.}$
2. CARRY ALL BEARING SURFACE TO UNDISTURBED GROUND OR FIRM SUBGRADE.

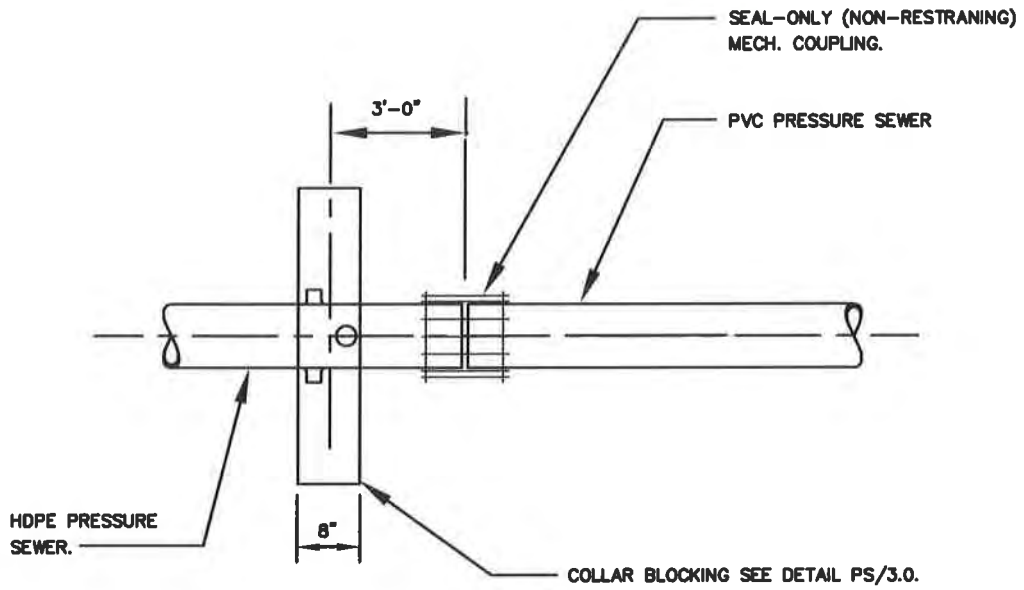
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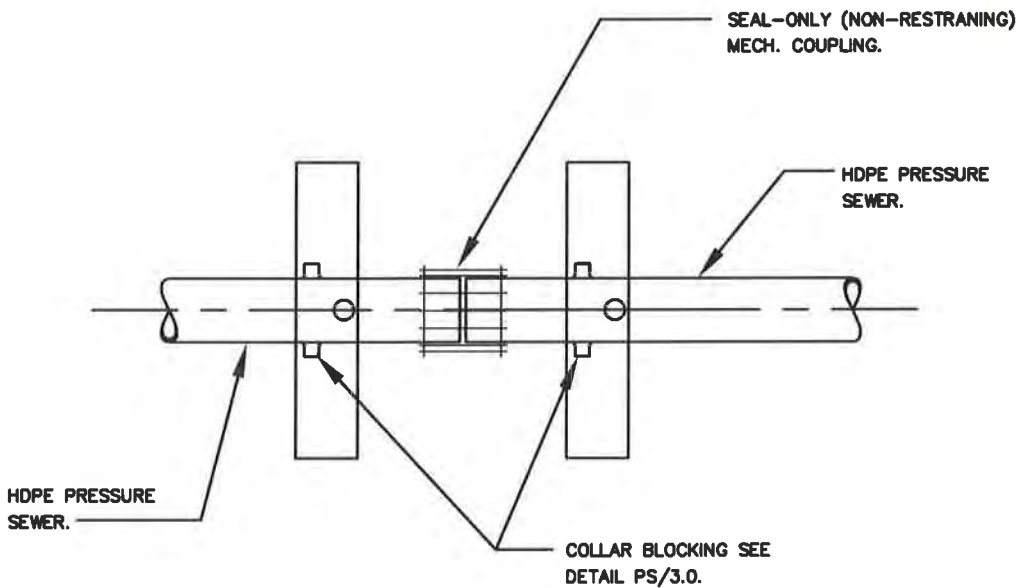
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STANDARD DETAIL
PRESSURE SEWER
BLOCKING DETAIL FOR
H.D.P.E. PIPE.

PS
3.0




PLAN
HDPE x PVC CONNECTION



PLAN
HDPE x HDPE CONNECTION

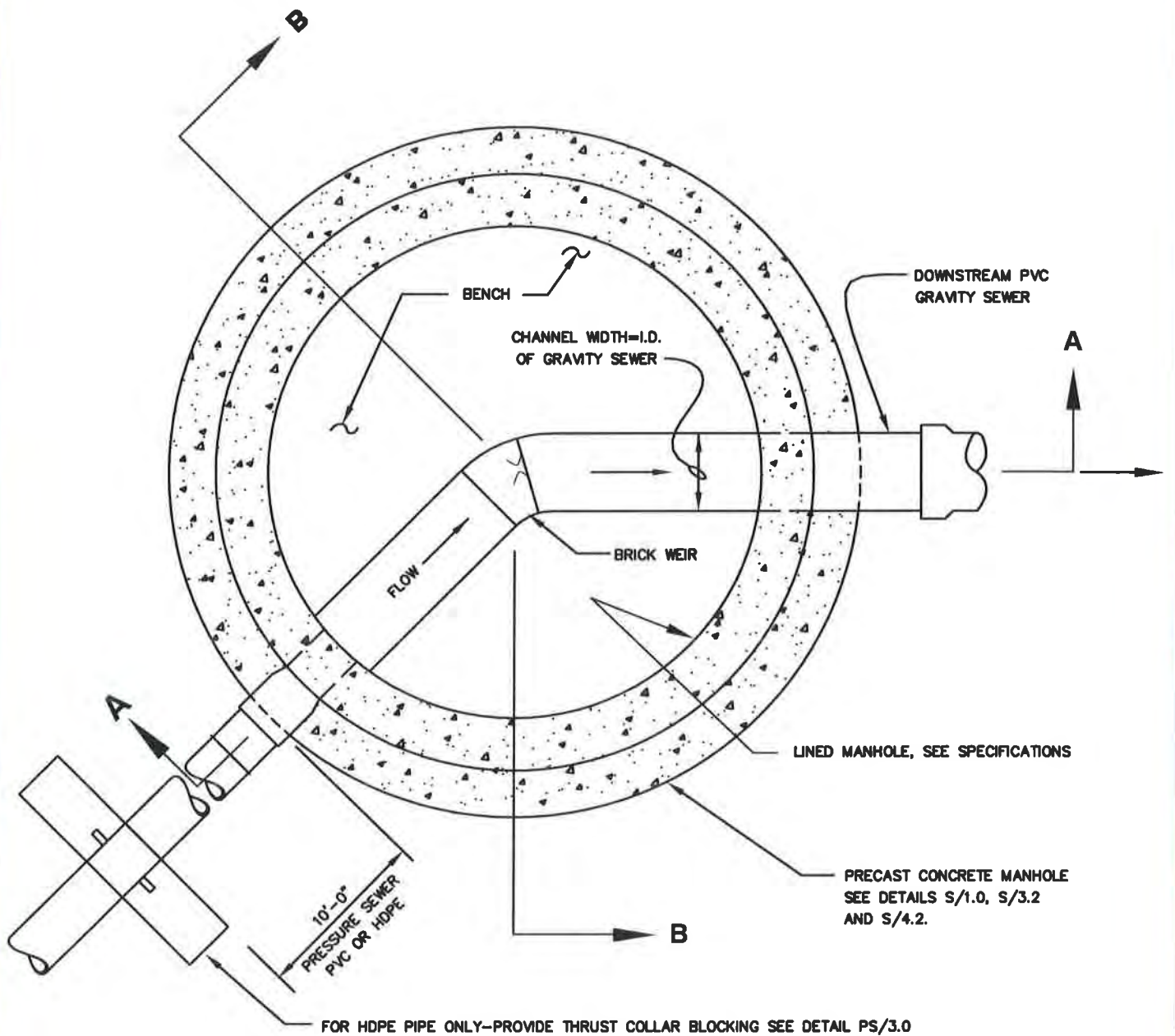
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STANDARD DETAIL
RESTRANING SEAL
ONLY MECHANICAL
COUPLINGS

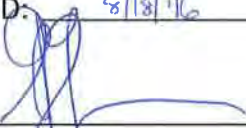
PS
3.1

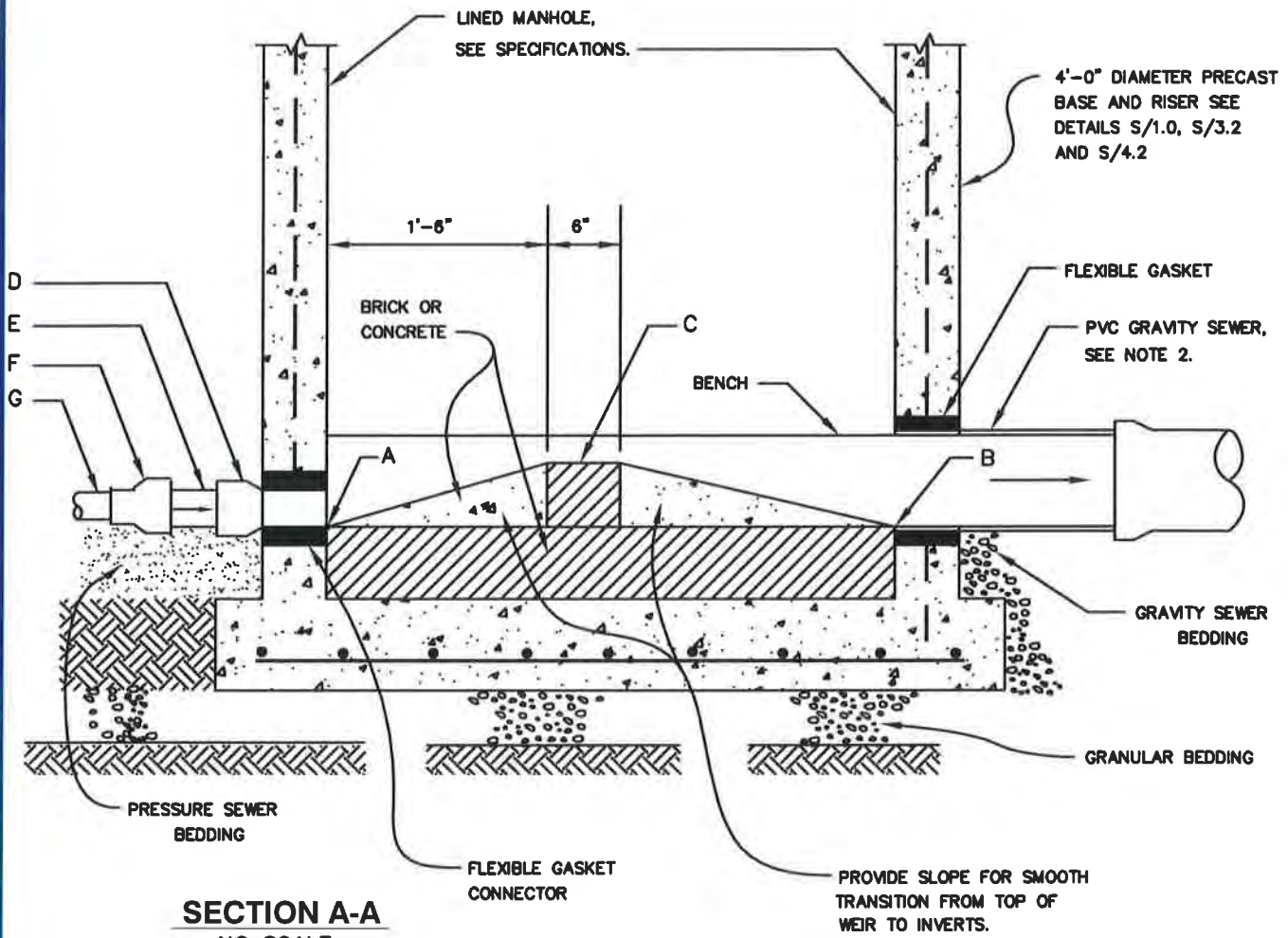


PLAN VIEW

NOTES:

1. FOR SECTION A-A, SEE DETAIL PS/4.1
2. FOR SECTION B-B, SEE DETAIL PS/4.2

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ELEVATION AND FITTING SCHEDULE

A	PRESSURE SEWER INFLUENT INVERT ELEVATION
B	GRAVITY SEWER INVERT ELEVATION
C	WEIR TOP ELEVATION 1" HIGHER THAN CROWN OF PRESSURE SEWER
D	P.V.C. BELL-END SECTION-4" MINIMUM SIZE
E	P.V.C. NIPPLE-4"
F	P.V.C. REDUCERS-INCREASE TO 4"
G	P.V.C. PRESSURE SEWER

NOTE:

1. SEE DETAIL PS/4.0 FOR PLAN VIEW.
2. FOR D.I.P. SEWER, SEE SPECIFICATIONS FOR SPECIAL INTERIOR LININGS.

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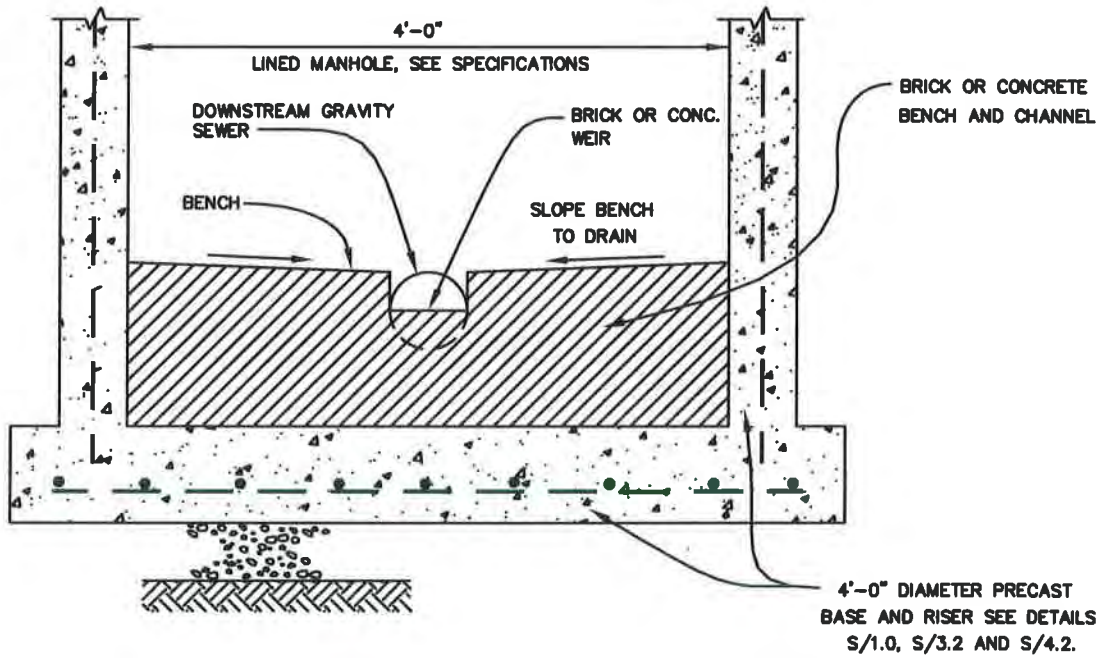
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STANDARD DETAIL

TRANSITION MANHOLE
SECTION A-A

PS
4.1




SECTION B-B
NO SCALE

NOTE:

1. SEE DETAIL PS/4.0 FOR PLAN VIEW

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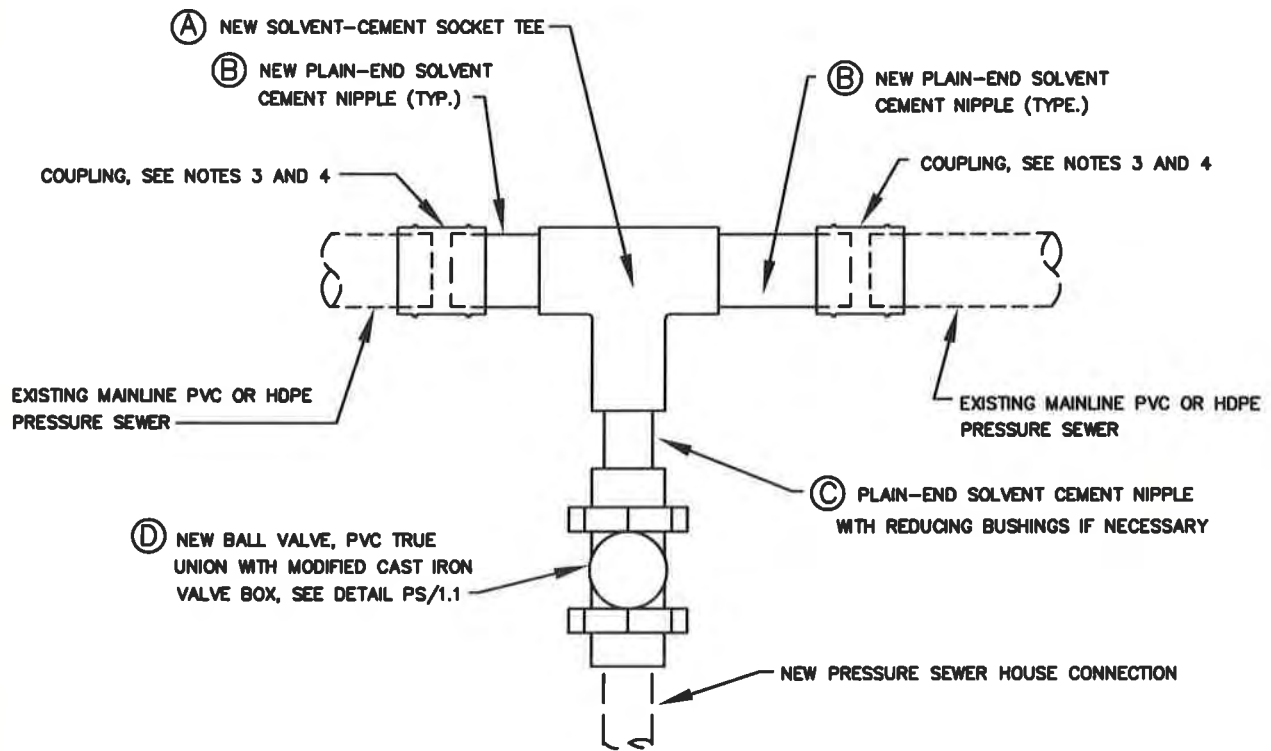
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STANDARD DETAIL

TRANSITION MANHOLE
SECTION B-B

PS
4.2

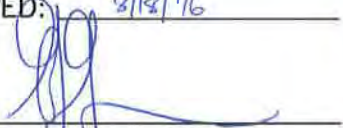


NOTES:

1. FOR PIPE SIZES, SEE DRAWINGS.
2. SOLVENT CEMENT PARTS A, B, C AND D TOGETHER PRIOR TO CUTTING EXISTING MAINLINE PRESSURE SEWER.
3. CONNECTION TO EXISTING PVC, O-RING GASKET DOUBLE BELL PVC COUPLING.
4. CONNECTION TO EXISTING HDPE, SEAL AND RESTRAINT TYPE MECHANICAL COUPLING, SEE SPECIFICATIONS.

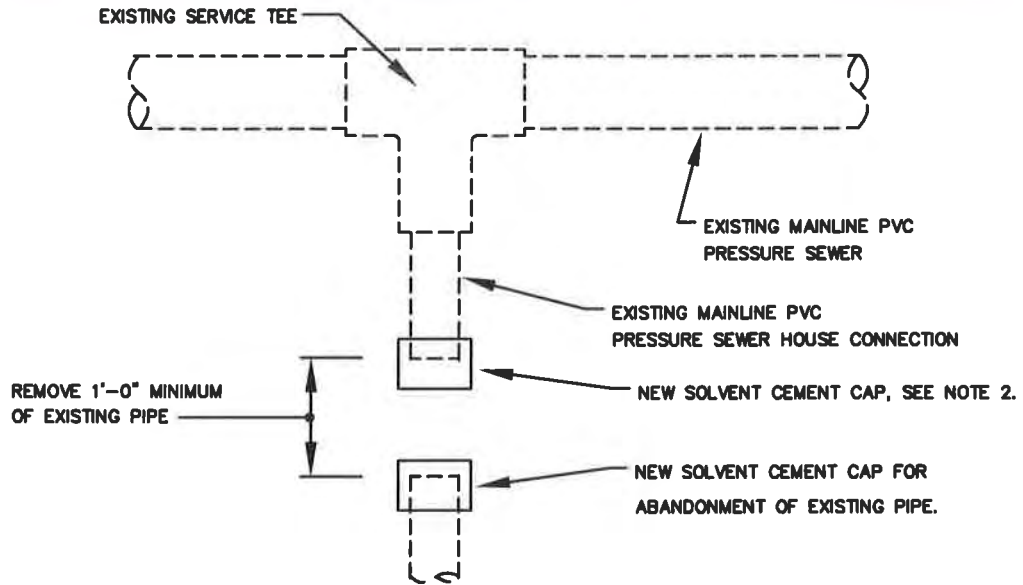
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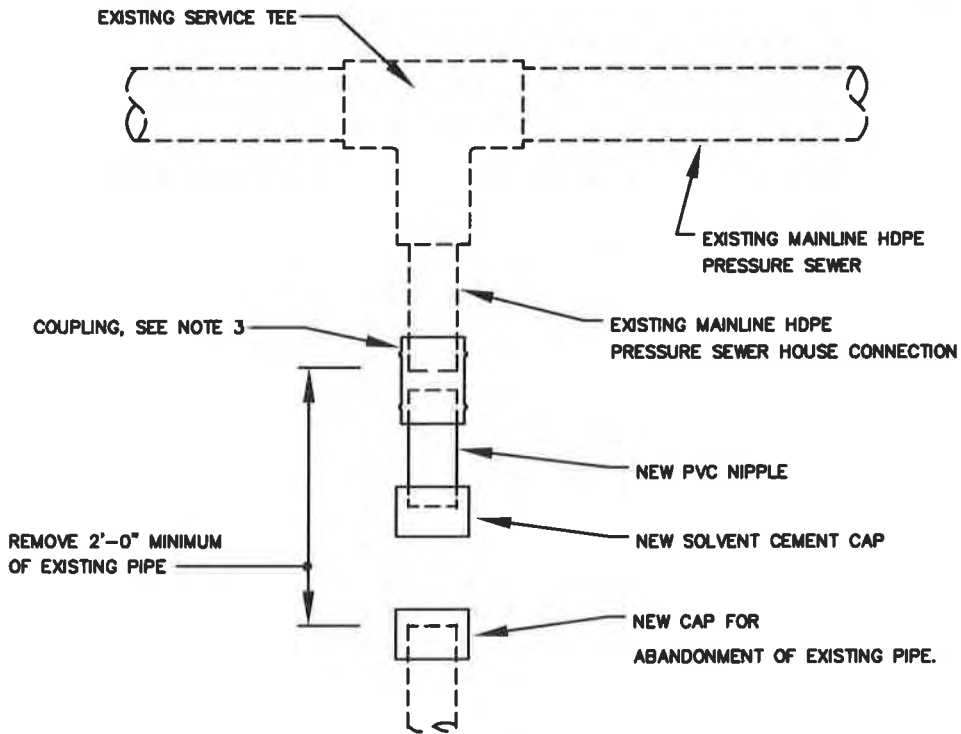
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STANDARD DETAIL
CONNECTION OF NEW
MAINLINE PRESSURE SEWER OR
PSHC TO EXISTING
PRESSURE SEWER

PS
5.0




PVC PRESSURE SEWER HOUSE CONNECTION



HDPE PRESSURE SEWER HOUSE CONNECTION

NOTES:

1. FOR PIPE SIZES, SEE DRAWINGS.
2. IF EXISTING SERVICE TEE HAS GASKET TYPE JOINTS, PROVIDE BLOCKING FOR CAP, SEE DETAIL 1.41.
3. COUPLING FOR EXISTING HDPE, SEAL AND RESTRAINT TYPE MECHANICAL COUPLING, SEE SPECIFICATIONS.

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CONNECTION WITH MANHOLE
WALL AND PIPE SLEEVE TO
BE NON-SHRINK GROUT
1" PIPE SLEEVE WITH MASTIC
BETWEEN DETECTION WIRE
AND PIPE.

DETECTION WIRE

HDPE PRESSURE SEWER

FLEXIBLE GASKET CONNECTOR

STANDARD FRAME
& COVER.

18"

LOCATOR STATION SEE
MOUNTING DETAIL

PRECAST
MANHOLE

MANHOLE STEPS

SECTION

PRECAST
MANHOLE

MANHOLE
STEPS

9"
CLEAR

LOCATOR
STATION

**PARTIAL PLAN AT
LOCATOR STATION**

LOCATOR STATION

PIPE CONDUIT
CONNECTED
TO LOCATOR
STATION

STRAP PIPE CONDUIT
TO INSIDE MANHOLE
WALL W/20 ga. x
1" S.S STRAPS AND
2-1/4" S.S. ANCHORS
WASHERS AND NUTS.

12" MIN.

DETECTION WIRE

1" PIPE SLEEVE
THRU MANHOLE
WALL.

6"
MIN.

MOUNTING DETAIL

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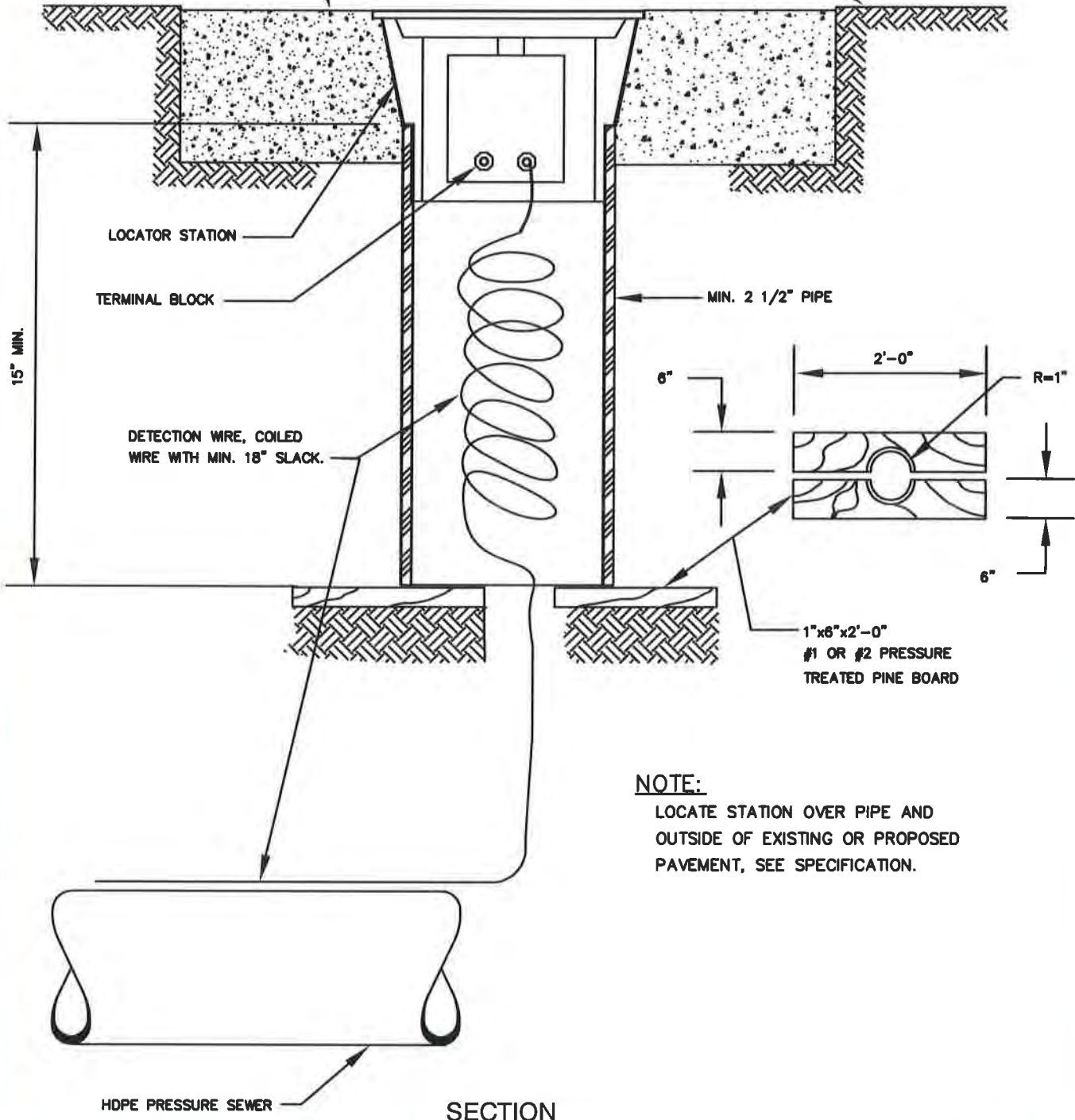
STANDARD DETAIL

LOCATOR STATION
MOUNTED IN
MANHOLE

PS
8.0

MIN. 15"x15"x4"- 3000 psi CONCRETE PAD. TYPICAL FOR ALL FLUSH LOCATOR STATIONS.

FINISHED GRADE



NOTE:

LOCATE STATION OVER PIPE AND OUTSIDE OF EXISTING OR PROPOSED PAVEMENT, SEE SPECIFICATION.

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STANDARD DETAIL
LOCATOR STATION
UNDERGROUND FLUSH
MOUNTED

PS
8.1