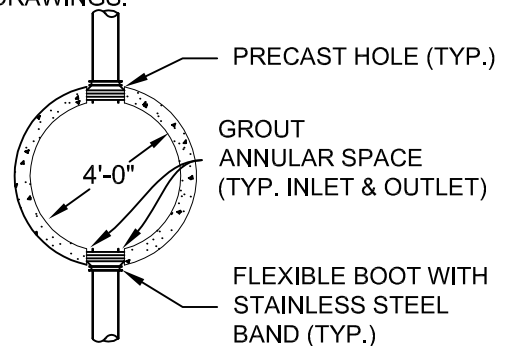


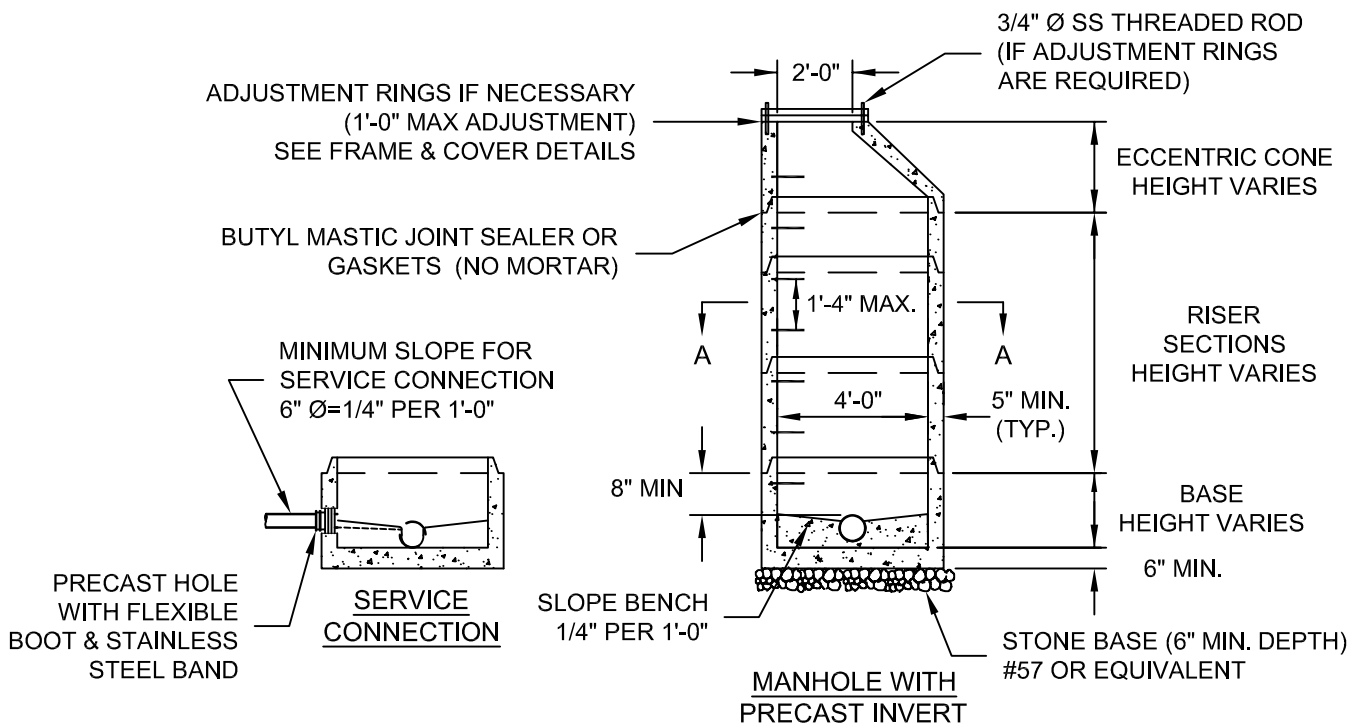
LIST OF SEWER DETAIL DRAWINGS

<u>S#</u>	<u>TITLE</u>
S-1	4' STANDARD MANHOLE FOR PIPE 15" OR SMALLER (FOR DEPTHS UP TO 15')
S-2	STRADDLE MANHOLE
S-3	INSIDE DROP MANHOLE
S-4	MANHOLE FRAME
S-5	STANDARD MANHOLE COVER
S-5A	LOCKING MANHOLE COVER
S-6	SANITARY SEWER LATERAL
S-6A	SANITARY SEWER LATERAL ABANDONMENT
S-6B	LATERAL CONNECTION TO REHABILITATED (CIPP) MAIN
S-7	DOUBLE LATERAL COMBINED 6" BY TWO 4" LATERALS
S-8	FORCE MAIN TO GRAVITY LATERAL CONNECTION
S-9	FORCE MAIN FLUSHING ASSEMBLY
S-10	PRESSURE LATERAL ASSEMBLY
S-11	JOINING DISSIMILAR PIPE FOR USE WITH EXISTING PIPE
S-12	MANHOLE VENT - ADJACENT
S-13	MANHOLE VENT - OFFSET
S-14	COMBINATION AIR VALVE ASSEMBLY FOR USE ON SEWER FORCE MAIN
S-15	SANITARY SEWER PIPE ABANDONMENT AT A MANHOLE
S-16	SANITARY SEWER MANHOLE ABANDONMENT
S-17	GREASE INTERCEPTOR
S-18	LOW-PRESSURE AIR TESTING TABLE
S-19	FORCE MAIN DISCHARGE

1. WHEN USED AS SAMPLING MANHOLE FLOW SHALL PASS STRAIGHT THROUGH, i.e., 180°.
2. STEPS SHALL BE VERTICALLY ALIGNED. FIRST STEP SHALL BE WITHIN 24" OF COVER, BOTTOM STEP SHALL BE WITHIN 24" OF BOTTOM OF MANHOLE.
3. FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2 FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.
4. FLAT TOP MANHOLES MAY ONLY BE SUBSTITUTED WITH THE PERMISSION OF THE PARTICIPATING UTILITY. FLAT TOP MANHOLES ARE PREFERRED IN AND AROUND STREAM OR STEEP SLOPES DUE TO ACCESSIBILITY ISSUES.
5. FLEXIBLE JOINT MANHOLE CONNECTION SHALL BE USED AT ALL PIPE TO MANHOLE CONNECTIONS.
6. GROUT ANNULAR SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE. DO NOT GROUT BOOTS.
7. WHEN REPLACING AN EXISTING MANHOLE OR INSTALLING A NEW PRECAST MANHOLE ON AN EXISTING SEWER, A MINIMUM OF SIX FEET (6') OF EXISTING PIPE SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL ON INLET AND OUTLET OF MANHOLE.
8. MANHOLES WHERE THE INVERT IS LOWER THAN THE NORMAL GROUNDWATER ELEVATION (I.E., ALONG CREEKS, RIVERS, LOW-LYING AREAS, ETC.) SHALL HAVE A FULL EXTERIOR COATING AND JOINT WRAP APPLIED IN ADDITION TO JOINT SEALANT. SEE NOTES 9 & 10.
9. EXTERIOR VERTICAL WALL SURFACES SHALL BE FACTORY COATED, WHERE INDICATED IN THE DESIGN DRAWINGS.
10. MANHOLES SHALL UTILIZE AN EXTERNAL FRAME AND JOINT SEAL AT ALL JOINTS AND AT THE FRAME/CHIMNEY INTERFACE, WHERE INDICATED IN THE DESIGN DRAWINGS.
11. FOR PIPE LARGER THAN 15 INCHES IN DIAMETER, THE MINIMUM INSIDE DIAMETER OF THE MANHOLE SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS BASED ON PIPE SIZE AND ANGLE BETWEEN INLET AND OUTLET PIPING.
12. A BEND WITHIN 36" OF MANHOLE MAY BE USED ON STEEP LINES TO ENTER OR EXIT A MANHOLE WITH PARTICIPATING UTILITY APPROVAL.
13. MANHOLE BASES THAT ARE REQUIRED TO BE GREATER THAN 4' DIAMETER MAY TRANSITION TO 4' AFTER 6' VERTICAL DEPTH.
14. INSIDE DROP MANHOLE REQUIRED WHEN DISTANCE FROM INCOMING PIPE INVERT TO MANHOLE BOTTOM EXCEEDS 24".



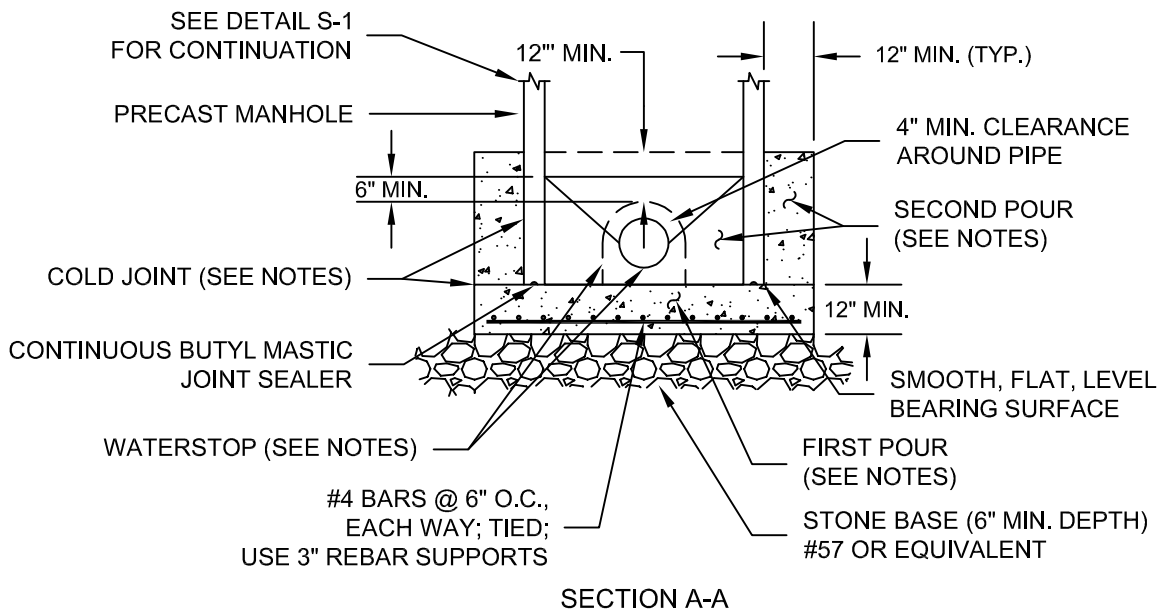
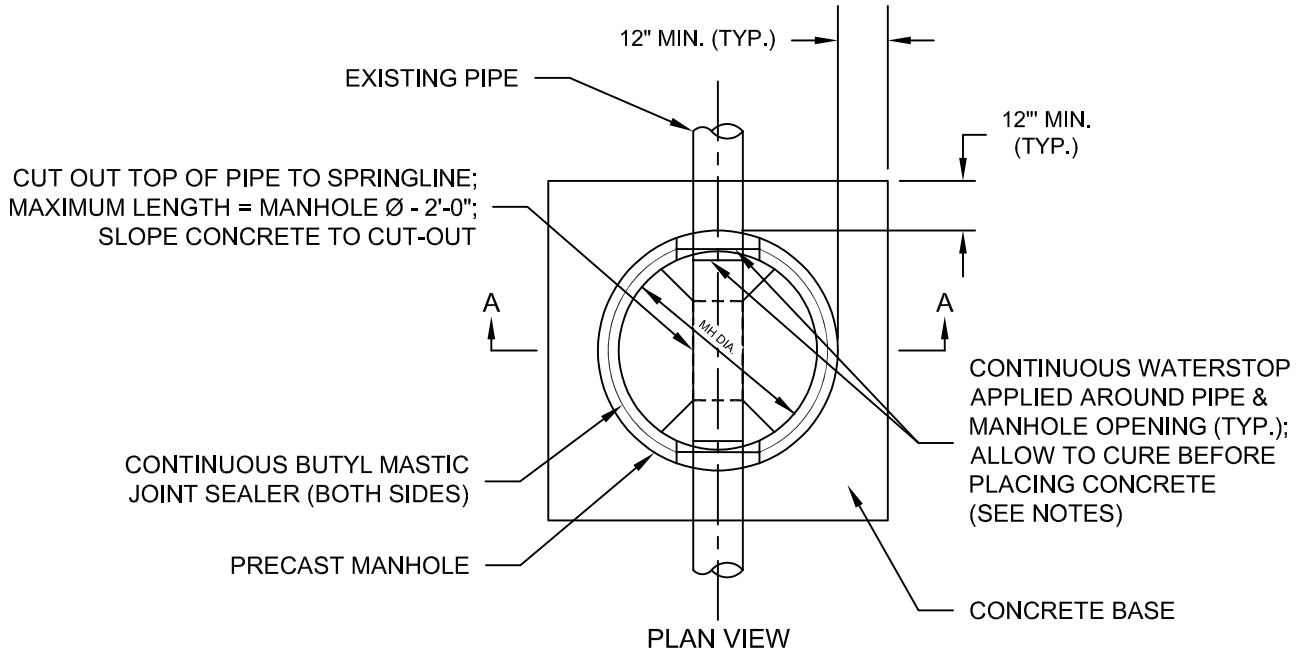
SECTION A-A



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**4' STANDARD MANHOLE
FOR PIPE 15" OR SMALLER
(FOR DEPTHS UP TO 15 FEET)**

1. STRADDLE MANHOLE NOT ACCEPTABLE UNLESS APPROVED BY PARTICIPATING UTILITY.
2. SEE DETAIL S-1 FOR ADDITIONAL MANHOLE REQUIREMENTS.
3. WATERSTOP MUST BE ALLOWED TO FULLY CURE BEFORE CONTACT WITH WET CONCRETE IS ALLOWED.
4. FIRST POUR: TOP SURFACE OF FIRST POUR SHALL CREATE A SMOOTH, FLAT, LEVEL BEARING SURFACE TO FACILITATE A WATERTIGHT SEAL BETWEEN POURED BASE AND PRECAST MANHOLE SECTION. CONCRETE SHALL BE 3,000 PSI CONCRETE AND MUST CURE 7-DAYS BEFORE SETTING MANHOLE SECTION.
5. SECOND POUR: MANHOLE SHALL BE COMPLETELY SET INCLUDING FRAME AND COVER BEFORE PLACING SECOND POUR. CONCRETE BONDING AGENT SHALL BE APPLIED TO ALL SURFACES/COLD JOINTS WHERE NEW CONCRETE IS TO BE POURED AGAINST EXISTING. CONCRETE SHALL BE 3,000 PSI AND SHALL BE ALLOWED TO CURE FOR 3-DAYS PRIOR TO PLACING BACKFILL.



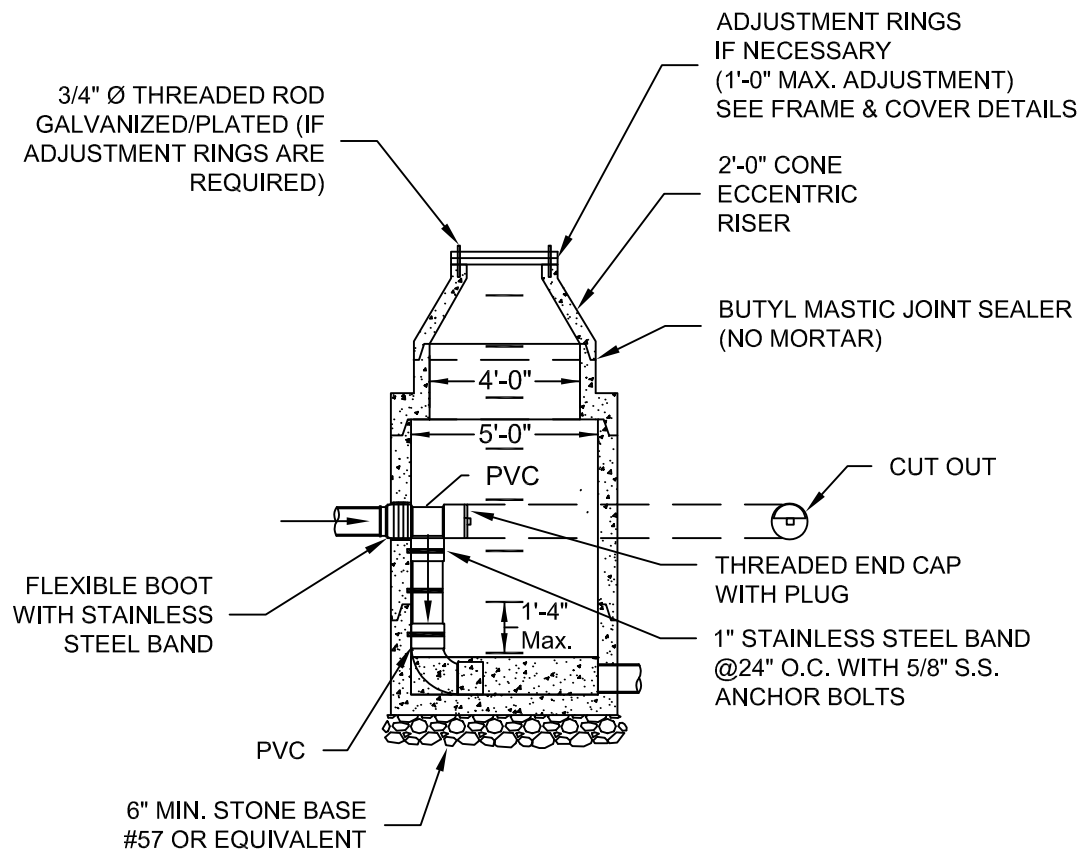
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

STRADDLE MANHOLE

S-2

09/2024

1. STEPS SHALL BE VERTICALLY ALIGNED. FIRST STEP SHALL BE WITHIN 24" OF COVER, BOTTOM STEP SHALL BE WITHIN 24" OF BOTTOM OF MANHOLE.
2. THE FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2 FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.
3. GROUT ANNULAR SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE. DO NOT GROUT BOOTS.
4. STEPS SHALL BE A MINIMUM OF 90 DEGREES FROM DROP & ALIGNED VERTICALLY.
5. 6' MINIMUM DIAMETER MANHOLE REQUIRED FOR TWO OR MORE INSIDE DROP CONNECTIONS (MAIN LINE OR LATERAL).
6. SEE FRAME AND COVER DETAIL.
7. SEE DETAIL S-01 FOR EXTERIOR COATING AND JOINT SEAL REQUIREMENTS.



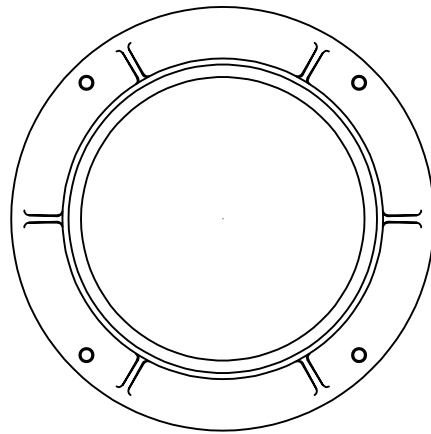
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

INSIDE DROP MANHOLE

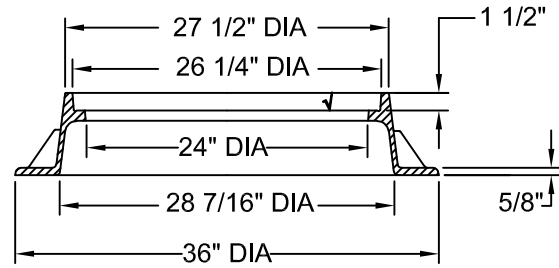
S-3

09/2024

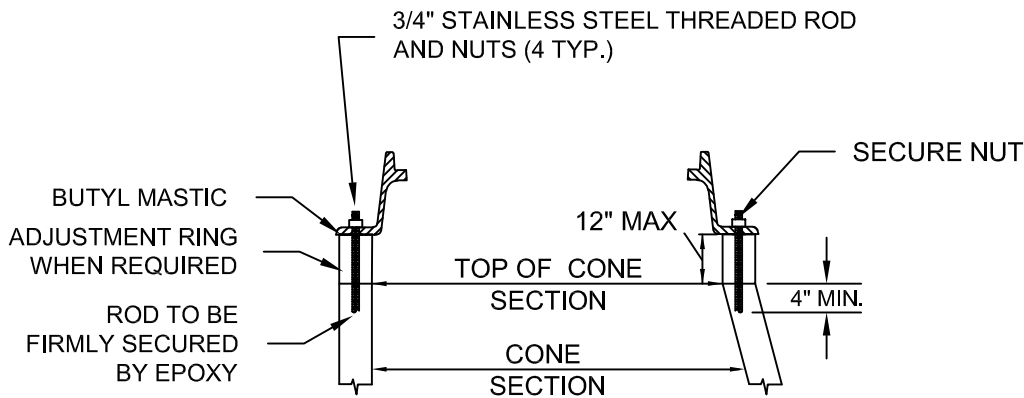
1. CONCRETE ADJUSTMENT RINGS SHALL MEET H-20 LOAD RATING AND UTILIZE BUTYL MASTIC JOINT SEALANT BETWEEN EACH RING AND FRAME AN COVER TO FORM A WATERTIGHT JOINT.
2. FRAME HEIGHT SHALL BE 4" FOR MANHOLES WITHIN OR ADJACENT TO STREAMS AND 7" IN ALL OTHER LOCATIONS.
3. 12" MAXIMUM ADJUSTMENT USING CONCRETE GRADE RING.
4. METAL GRADE RINGS BETWEEN FRAME AND LID ARE NOT ALLOWED.



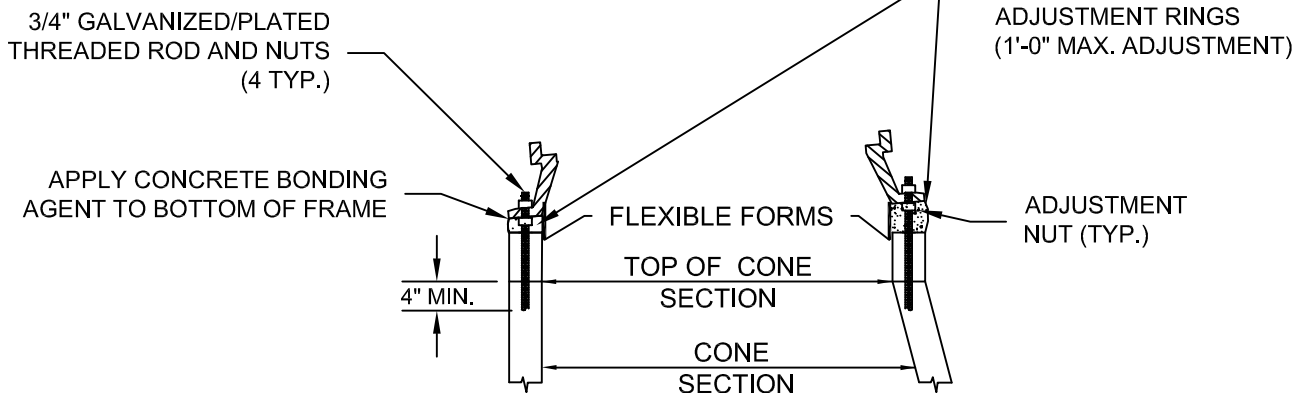
√ MACHINED SURFACE



FRAME SECTION



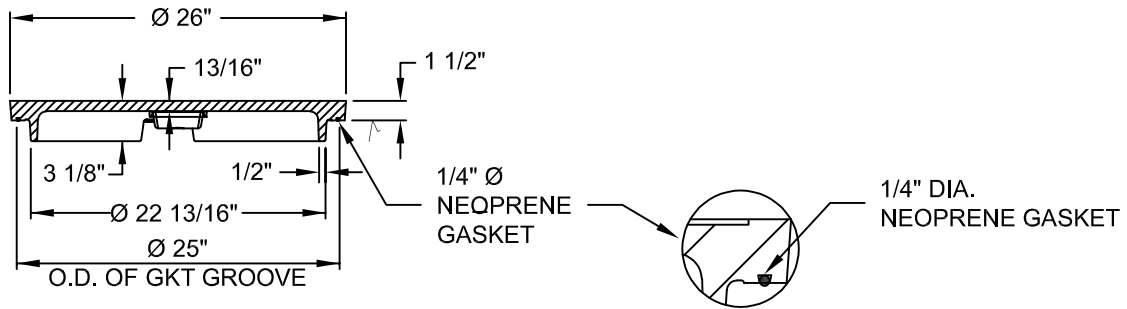
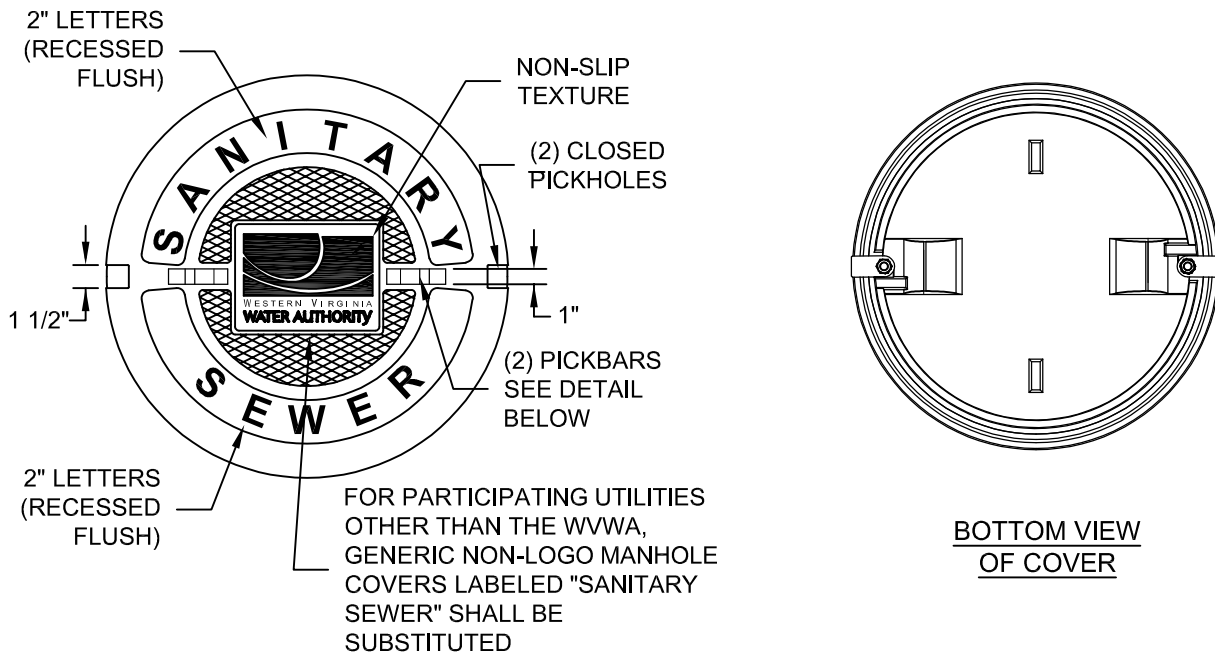
INSTALLATION DETAIL FOR ALL FRAMES AND COVERS



INSTALLATION DETAIL FOR SLOPE ADJUSTMENT

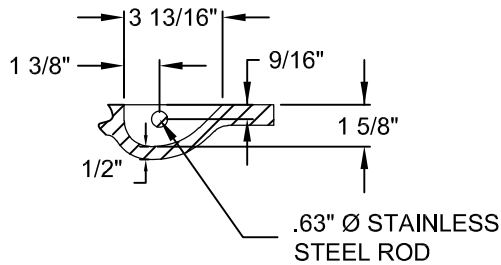
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

1. MANHOLE COVERS FOR THE CITY OF SALEM WILL NOT INCLUDE THE WVA LOGO. COVERS SHALL HAVE "SANITARY SEWER" ONLY.



SECTION VIEW

√MACHINED SURFACE



PICKBAR DETAIL

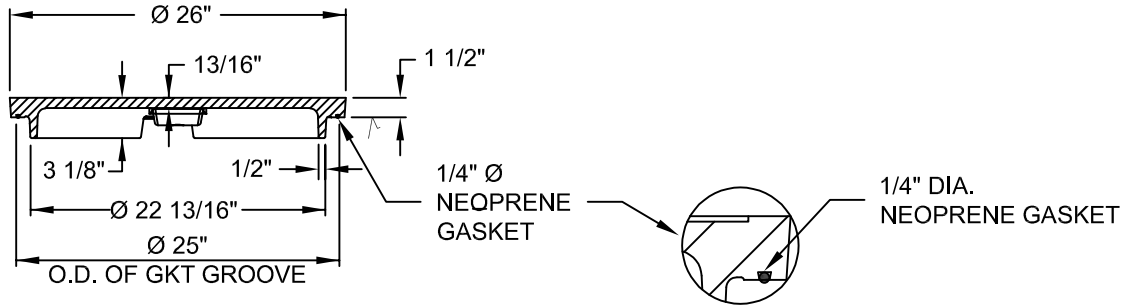
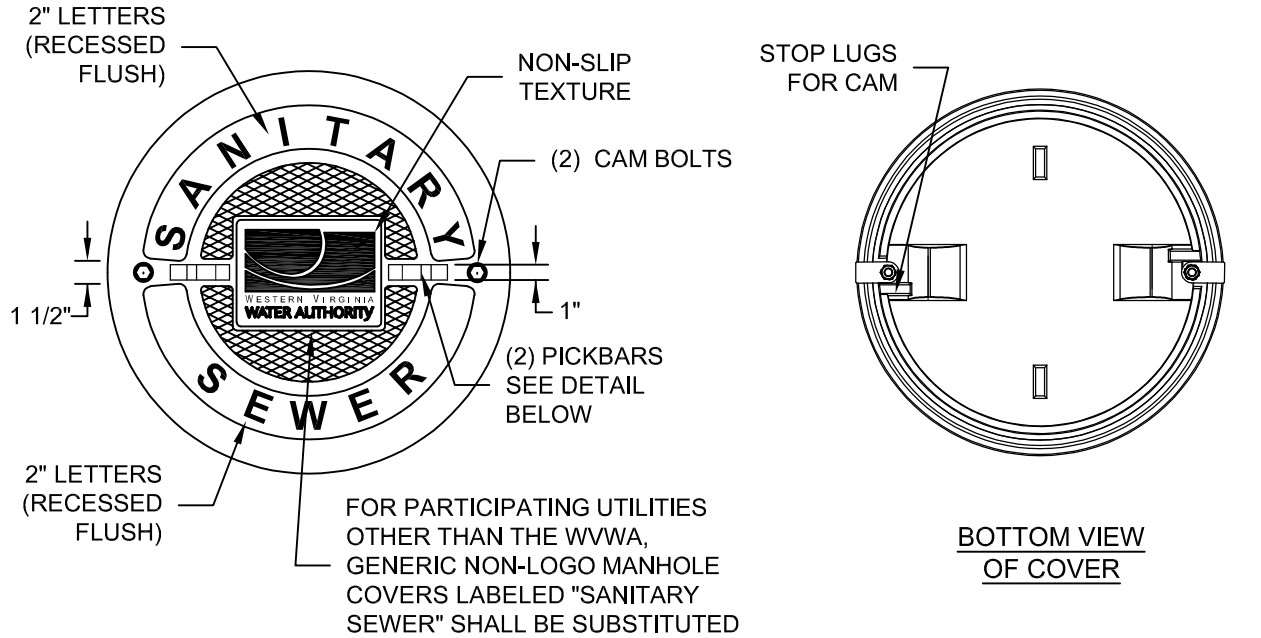
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**STANDARD
MANHOLE COVERS**

S-5

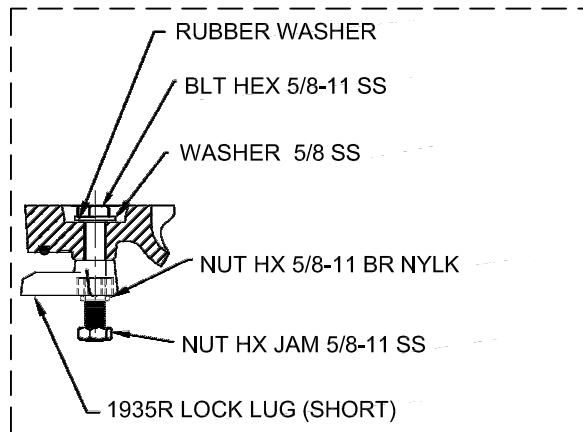
09/2024

1. CAM LOCK MANHOLE COVERS SHALL BE USED WHEN SHOWN ON PLANS OR AS DIRECTED BY THE PARTICIPATING UTILITY.
2. MANHOLE COVERS FOR THE CITY OF SALEM WILL NOT INCLUDE THE WWA LOGO. COVERS SHALL HAVE "SANITARY SEWER" ONLY.



SECTION VIEW

√MACHINED SURFACE



LOCK LUG ASSEMBLY

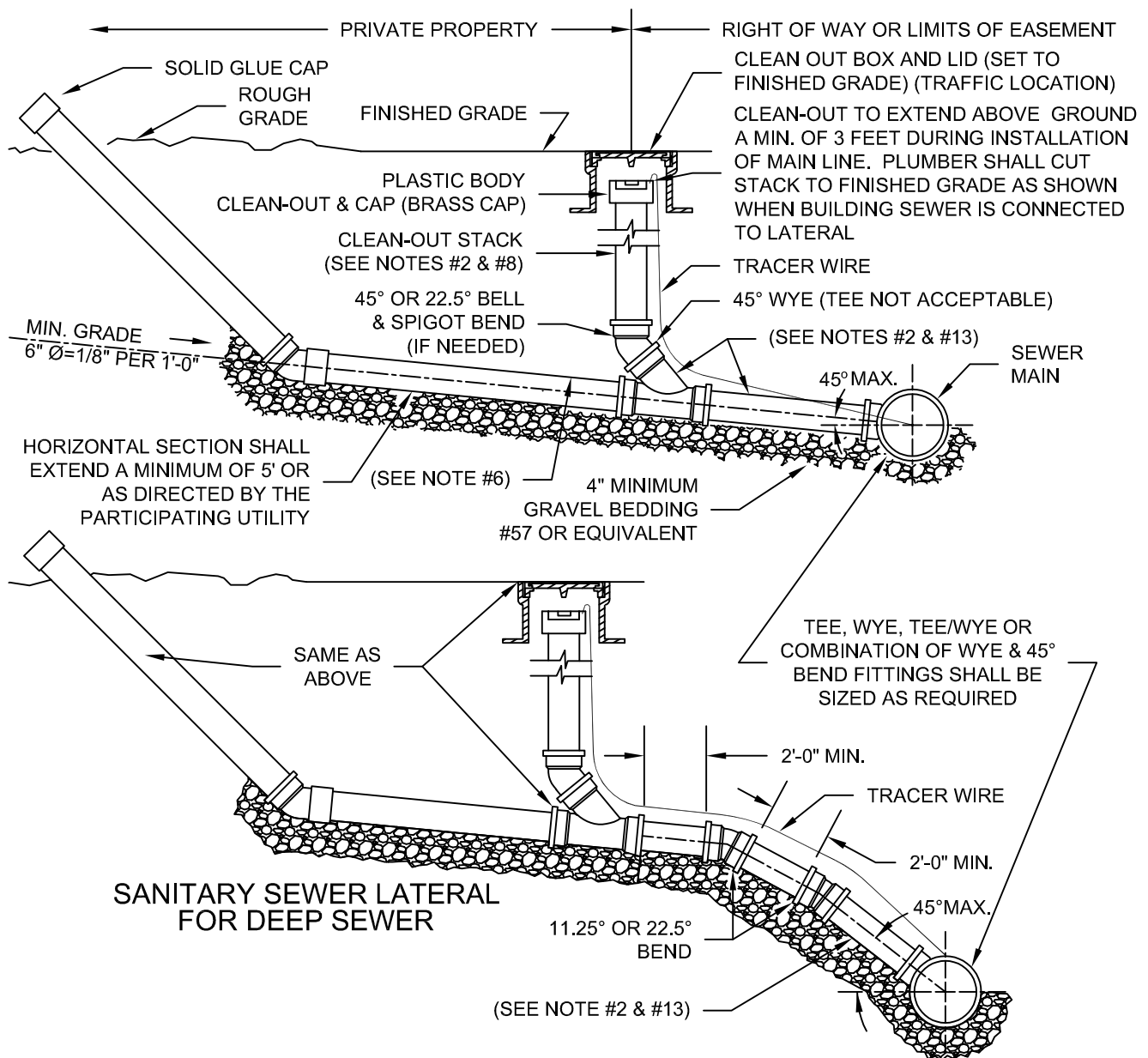
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**LOCKING
MANHOLE COVERS**

S-5A

09/2024

1. TRAFFIC BEARING BOX AND LID REQUIRED IN TRAFFIC AREAS.
2. SEWER LATERAL FITTINGS SHALL BE OF SAME SDR RATING AS THE SEWER MAIN.
3. ALL PIPES SHALL BE OF SAME SIZE.
4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEANOUT STACK WYE. (EXCEPT FOR DEEP SEWER, AS SHOWN BELOW).
5. ALL MAIN LINE TAPS ON ACTIVE MAINS SHALL BE PERFORMED BY PARTICIPATING UTILITY.
6. PIPING ON PRIVATE SIDE OF CLEANOUT TO BE INSTALLED PER GOVERNING JURISDICTION REQUIREMENTS.
7. MINIMUM LATERAL SIZE: 6" MINIMUM FOR ALL SERVICES.
8. SEWER CLEANOUTS SHALL BE SAME SIZE AS SEWER LATERAL.
9. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3') FEET.
10. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE (IN ACCORDANCE WITH THIS DETAIL) WHEN MAINTENANCE OCCURS.
11. LOWEST SERVED FINISHED FLOOR ELEVATION SHALL BE A MINIMUM OF THREE FEET (3') ABOVE THE TOP OF THE MAIN AT THE POINT WHERE THE SERVICE LATERAL CONNECTS TO THE MAIN.
12. WHEN CONNECTING TO EXISTING LATERAL USE FLEXIBLE COUPLING.
13. CONNECTIONS TO THE MAIN MAY BE MADE WITH A 6" BRANCH TEE OR WYE.
14. ATTEMPT TO AVOID DRIVEWAYS AND SIDEWALKS FOR CLEANOUT LOCATIONS.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

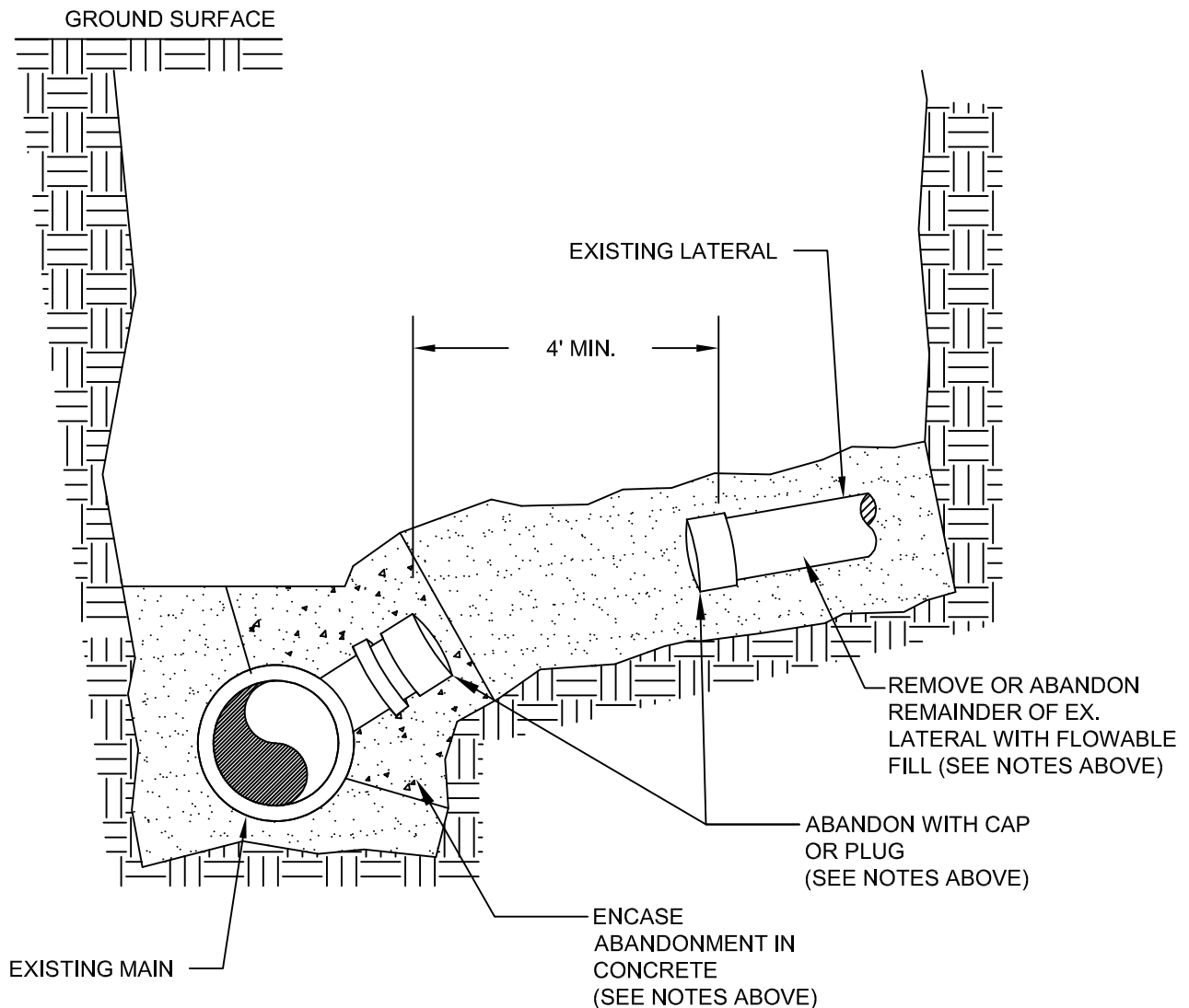
SANITARY SEWER LATERAL

S-6

09/2024

NOTES:

1. FOR VCP, CONCRETE, OR CI LATERALS, ABANDONED BY CUTTING THE PIPE NEAR THE WYE OR TEE AND INSTALLING AN EXTERNAL GRIPPER PLUG WITH CONCRETE ENCASEMENT INCLUDING THE WYE OR TEE AS DIRECTED BY THE AUTHORITY.
2. IF CONNECTION TO MAIN IS NOT WITH A WYE OR TEE (E.G., BREAK IN), AN APPROPRIATELY SIZED SADDLE WITH SHIELD AND SST BANDS MUST BE INSTALLED OVER OPENING. PLUG SADDLE WITH AN APPROVED PLUG IN COORDINATION WITH THE AUTHORITY.
3. ANY REMAINING EXISTING LATERAL IN THE PUBLIC ROW SHALL BE EITHER REMOVED AND CAPPED OR ABANDONED BY FILLING WITH A FLOWABLE FILL. FLOWABLE FILL SHALL BE CONCRETE, SLURRY OR APPROVED EQUAL.
4. IF LATERAL IS PVC AND APPEARS TO BE IN GOOD CONDITION, LATERAL MUST BE INSPECTED BY THE AUTHORITY USING CCTV TO CONFIRM LATERAL CONDITION, INCLUDING CONNECTION TO MAIN, IS SUITABLE FOR ABANDONMENT WITHOUT REQUIRING ADDITIONAL WORK. IF ACCEPTABLE, THE LATERAL CAN BE TERMINATED WITH A GLUED PVC CAP WITH MINIMUM SEPARATION AND ENCASEMENT AS SHOWN IN DETAIL.
5. IF LATERAL CONNECTION TO MAIN IS DEEP (GREATER THAN OR EQUAL TO 12'), LATERAL MUST BE INSPECTED BY THE AUTHORITY USING CCTV TO CONFIRM LATERAL CONDITION, INCLUDING CONNECTION TO MAIN, IS SUITABLE FOR ABANDONMENT WITHOUT REQUIRING ADDITIONAL WORK. IF ACCEPTABLE, THE LATERAL CAN BE TERMINATED WITH APPROPRIATELY SIZED EXTERNAL GRIPPER PLUG, ENCASED IN CONCRETE AT A POINT AGREEABLE TO THE AUTHORITY.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**SANITARY LATERAL ABANDONMENT
AT EXISTING MAIN**

S-6A

09/2024

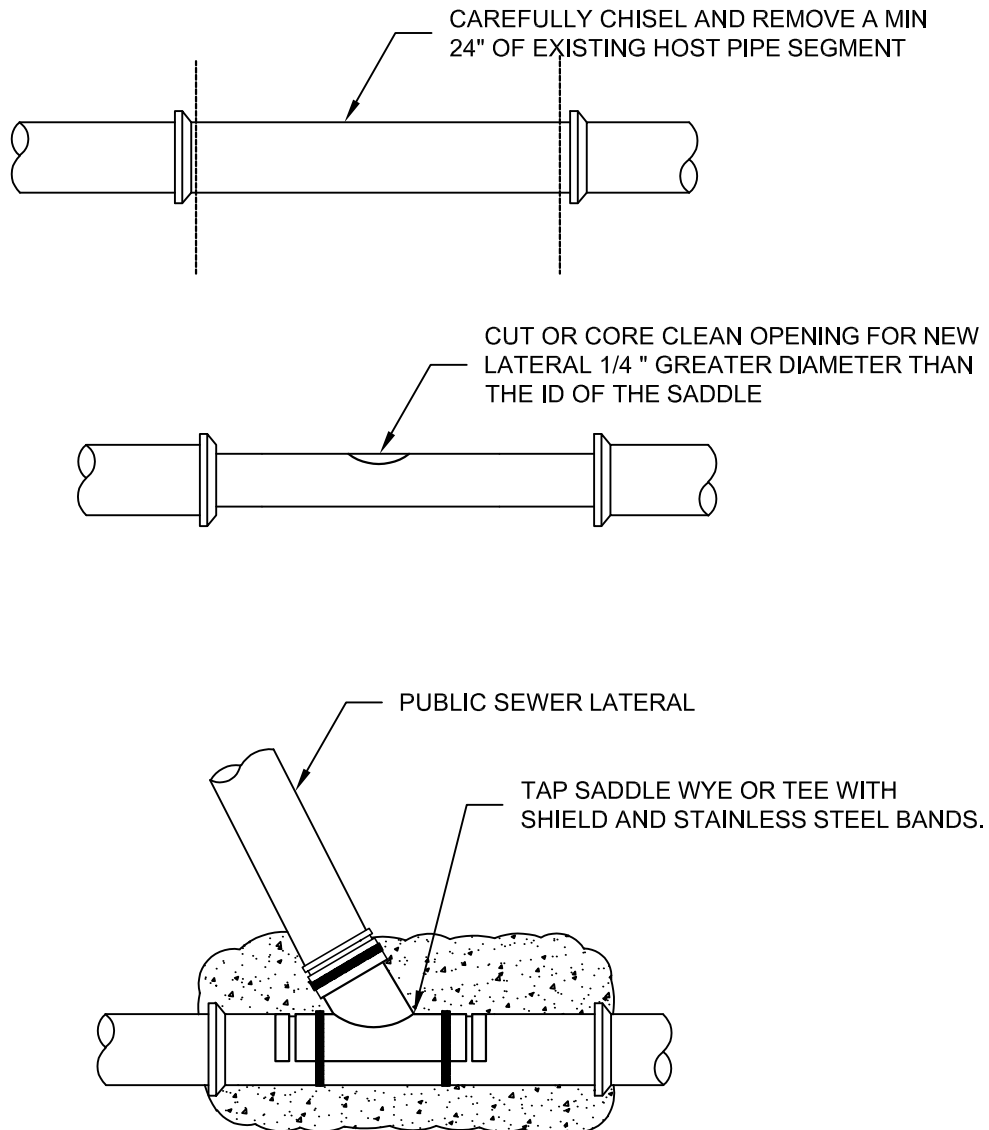
1. ALL LATERAL CONNECTION INSTALLATIONS/REPLACEMENTS REQUIRE A WWA INSPECTOR ONSITE.

MATERIALS:

2. FLEXIBLE TAP SADDLE SHALL BE USED TO REPLACE OR INSTALL NEW CONNECTION ON CIPP MAINLINES.
3. CONCRETE FOR ENCASEMENT SHALL BE MIN 4000 PSI AVERAGE COMPRESSIVE STRENGTH.

CONSTRUCTION:

4. IN NEW WYE, CORE HOLE SAME DIAMETER AS ID OF LATERAL PLUS 1/4 INCH. IF EXISTING, CLEAN OUT HOLE, MAKE 1/4 INCH GREATER THAN ID.
5. APPLY SEALANT BETWEEN RUBBER SADDLE CIPP/PVC FOLD-FORMED LINER PRIOR TO SECURING STAINLESS STEEL BANDS.
6. SADDLE SHALL BE COMPLETELY ENCASED IN CONCRETE AFTER CONNECTION OF LATERAL AND INSPECTED PRIOR TO BACKFILL.



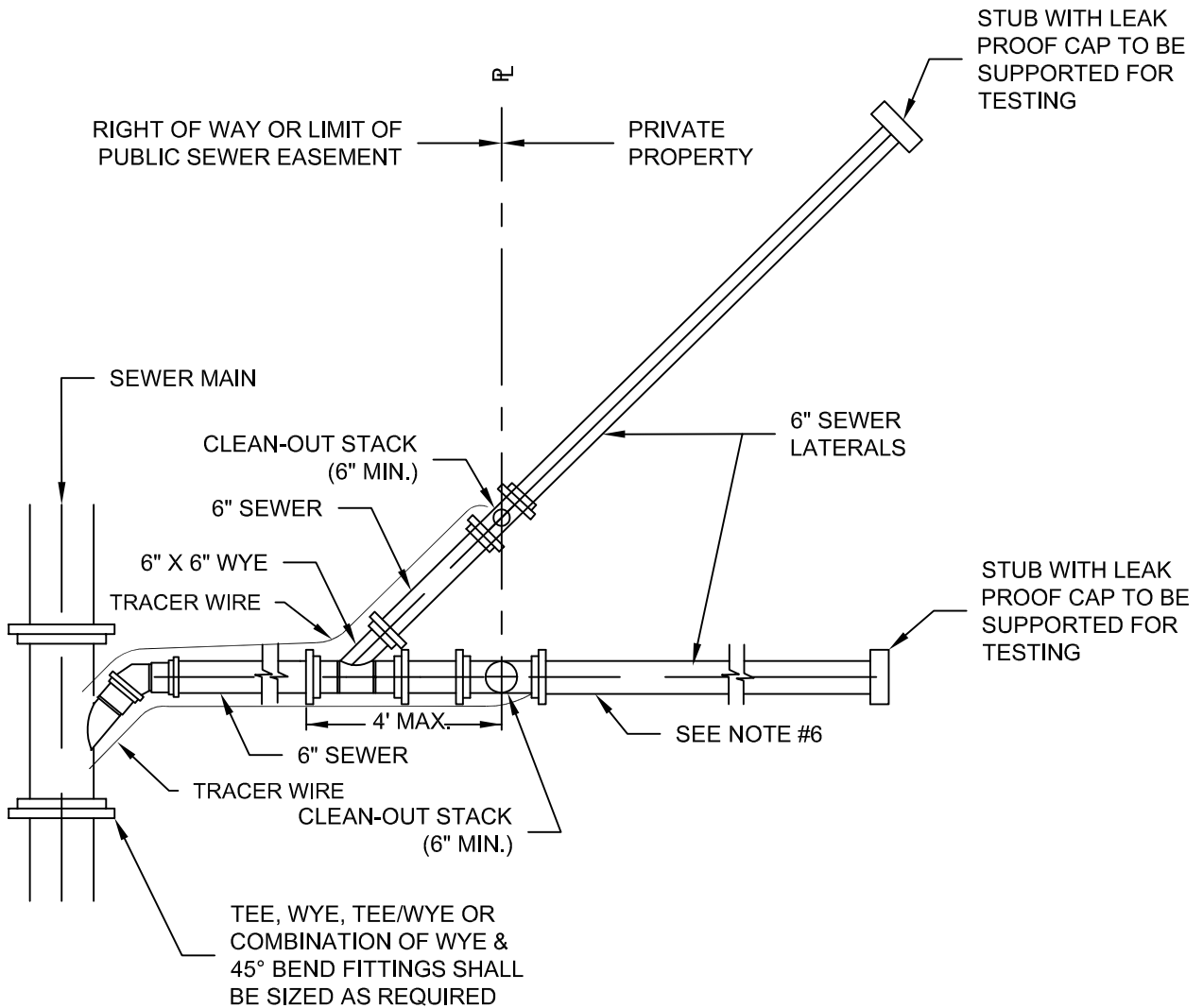
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

LATERAL CONNECTION TO
REHABILITATED (CIPP) MAIN

S-6B

09/2024

1. TRAFFIC BEARING BOX REQUIRED IN TRAFFIC AREAS.
2. ALL PIPES SHALL BE MINIMUM OF 6".
3. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEAN-OUT STACK WYE. (EXCEPT AS NOTED.)
4. ALL MAIN LINE TAPS ON ACTIVE MAIN SHALL BE PERFORMED BY PARTICIPATING UTILITY.
5. PIPING ON PRIVATE SIDE OF CLEANOUT TO BE INSTALLED PER GOVERNING JURISDICTION REQUIREMENTS.
6. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3') FEET.
7. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS, IN ACCORDANCE WITH THIS DETAIL.
8. LOWEST SERVED FINISHED FLOOR ELEVATION SHALL BE A MINIMUM OF THREE FEET (3') ABOVE THE TOP OF THE MAIN AT THE POINT WHERE THE SERVICE LATERAL CONNECTS TO THE MAIN.
9. WHEN CONNECTING TO EXISTING LATERAL USE FLEXIBLE COUPLING.
10. ATTEMPT TO AVOID DRIVEWAYS AND SIDEWALKS FOR CLEANOUT LOCATIONS.



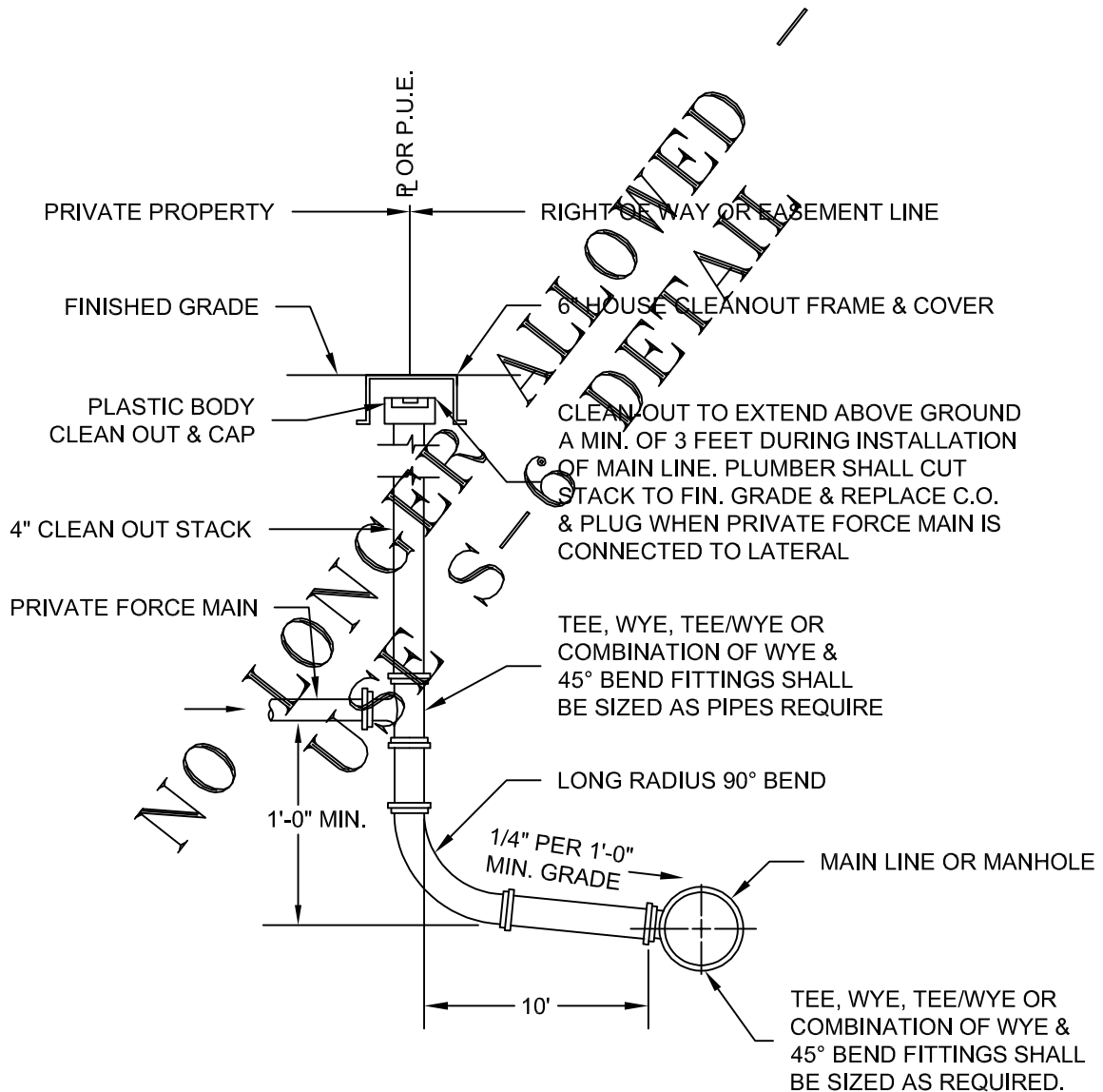
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

DOUBLE LATERAL

S-7

09/2024

1. TRAFFIC BEARING BOX REQUIRED IN TRAFFIC AREAS.
2. ALL PIPES AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
3. ALL PIPES SHALL BE OF SAME SIZE WITH THE EXCEPTION OF THE FORCE MAIN.
4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEAN-OUT STACK WYE (EXCEPT AS NOTED.)
5. ALL MAIN LINE TAPS ON ACTIVE MAINS WILL BE PERFORMED BY THE PARTICIPATING JURISDICTION.
6. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3') FEET.
7. GRAVITY SECTION AND CLEANOUT SHALL BE 6" DIAMETER FOR PUBLIC FORCE MAINS AND 4" DIAMETER FOR PRIVATE FORCE MAINS.
8. PUBLIC FORCE MAINS SHALL CONNECT TO SEWER MANHOLES.
9. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS, IN ACCORDANCE WITH THIS DETAIL.



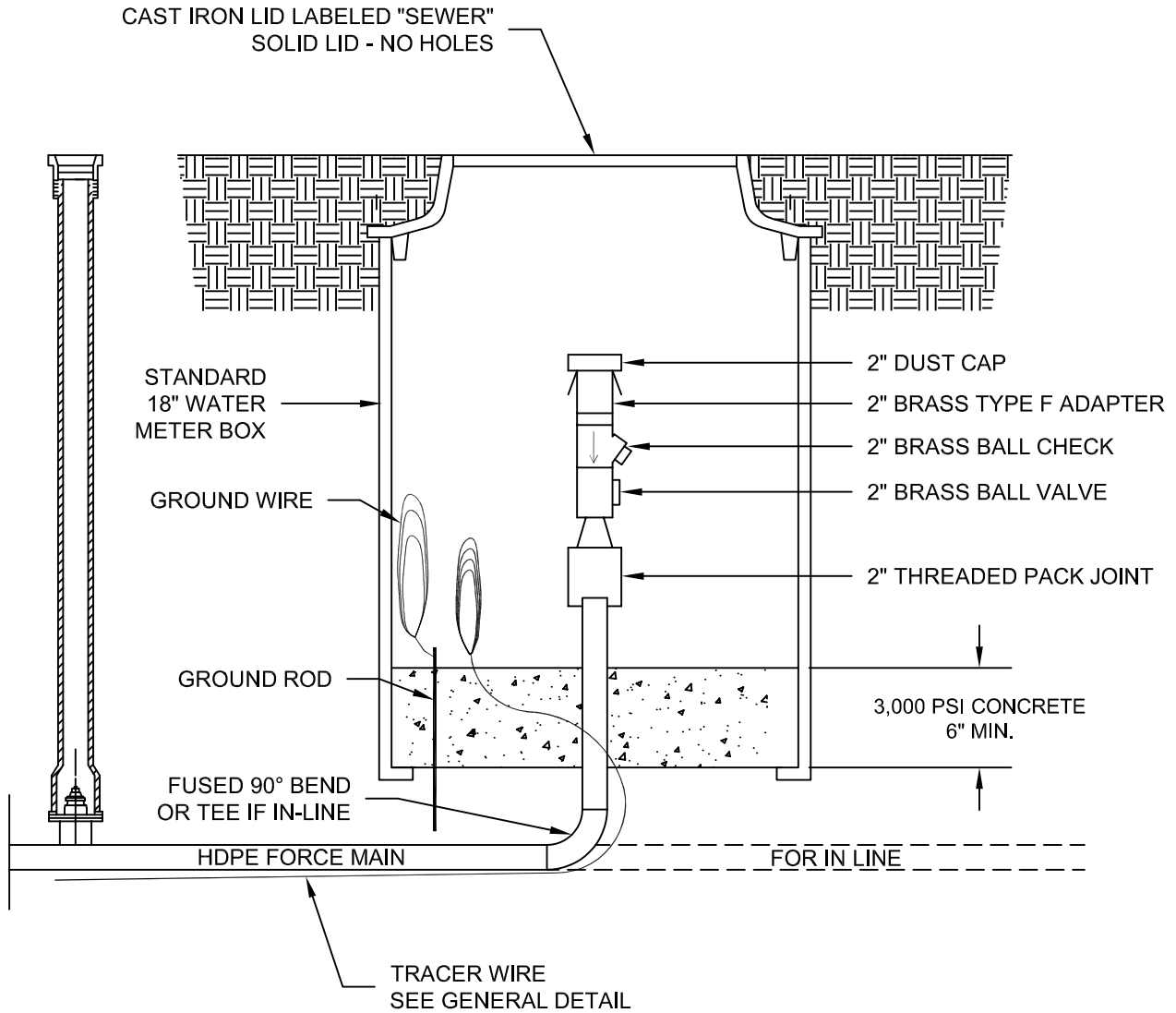
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**FORCE MAIN TO
GRAVITY LATERAL CONNECTION**

S-8

09/2024

1. INSTALL AT END OF LINES AND AT 1,000 FOOT INTERVALS.



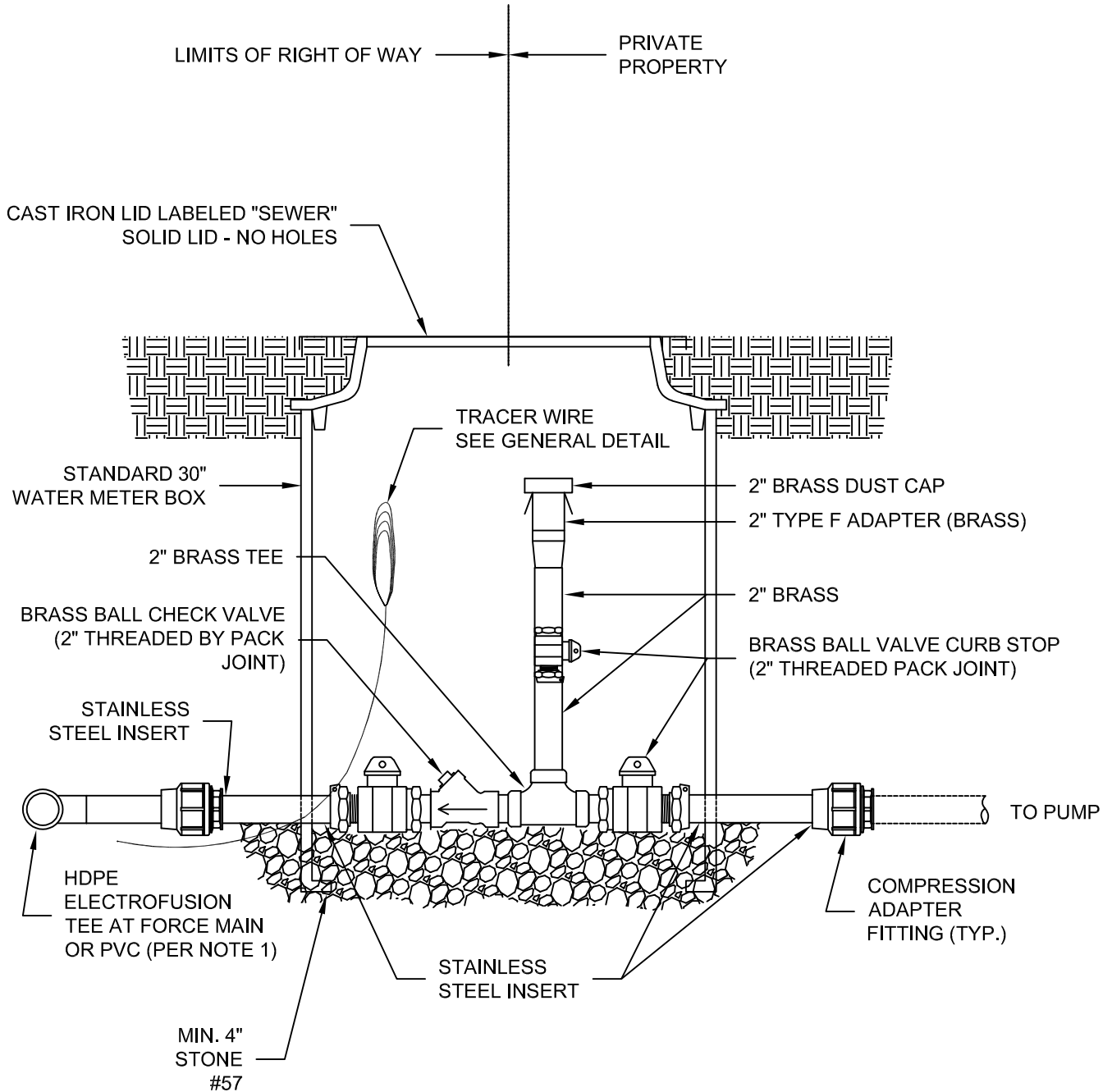
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**FORCE MAIN
FLUSHING ASSEMBLY**

S-9

09/2024

1. ALL CONNECTIONS BETWEEN FORCE MAIN AND BALL VALVE SHALL BE PVC SCH40 (PRESSURE RATED) OR ELECTRO FUSED HDPE, DR-9.
2. USE ELECTRO FUSION TEE TO CONNECT TO HDPE FORCE MAIN.
3. USE 2" TAPPING SADDLE TO CONNECT TO PVC OR DUCTILE IRON FORCE MAIN.



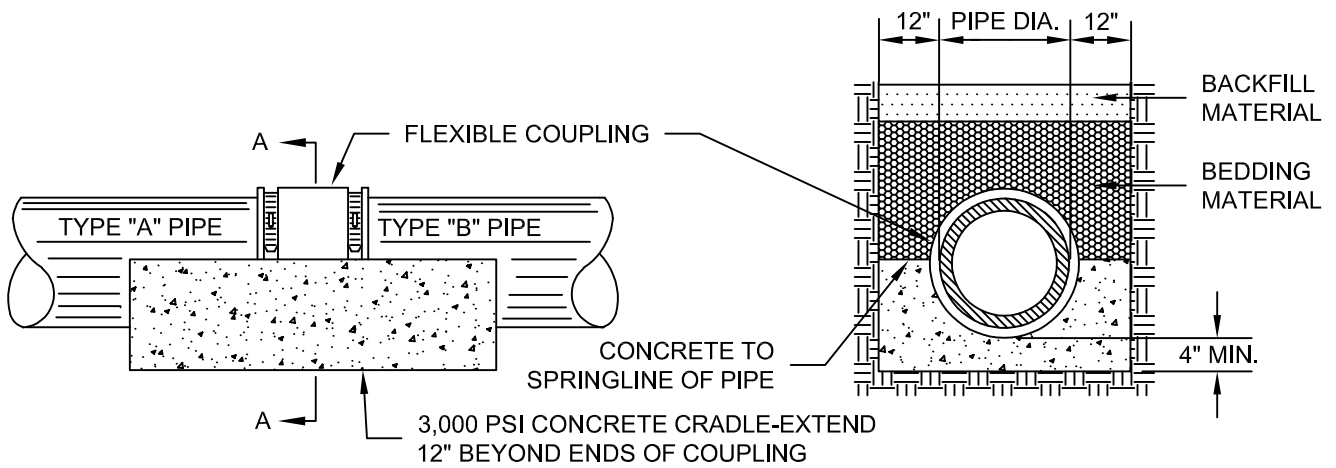
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

PRESSURE LATERAL ASSEMBLY

S-10

09/2024

1. WITH APPROVAL OF THE PARTICIPATING UTILITY.



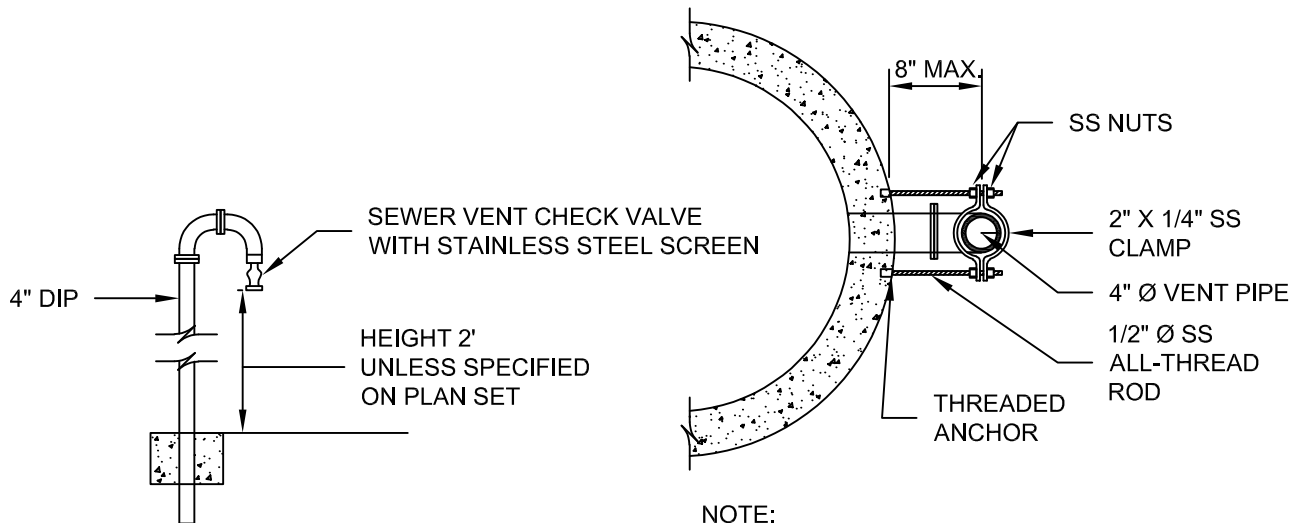
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**JOINING DISSIMILAR PIPE
FOR USE WITH EXISTING PIPE**

S-11

09/2024

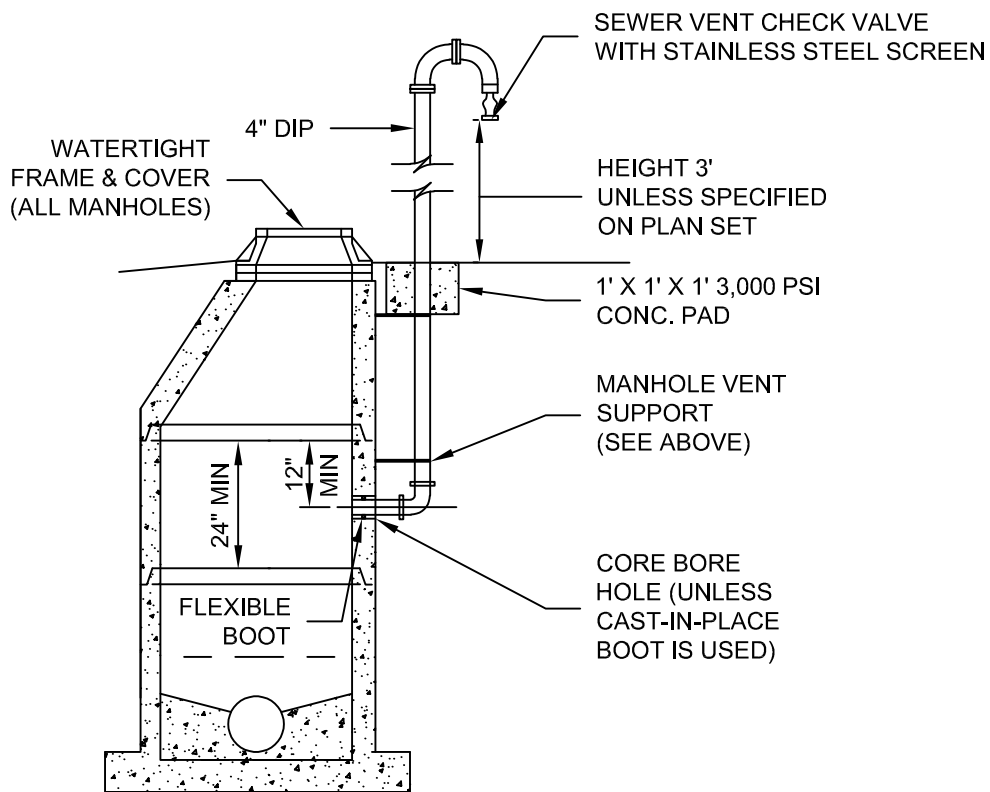
1. SEE DETAIL S-1.
2. PAINT VENT PIPE WITH BLACK EPOXY PAINT.
3. DUCTILE IRON VENT PIPE TO HAVE SAME INTERNAL EPOXY COATING AS DUCTILE IRON PIPE.
4. SEE STANDARD DETAIL S-13 FOR CORE HOLE DETAIL SEWER PIPE.



SIPHON BOX VENT

NOTE:
1. ANCHOR HOLES SHALL NOT EXTEND THROUGH MANHOLE WALL.

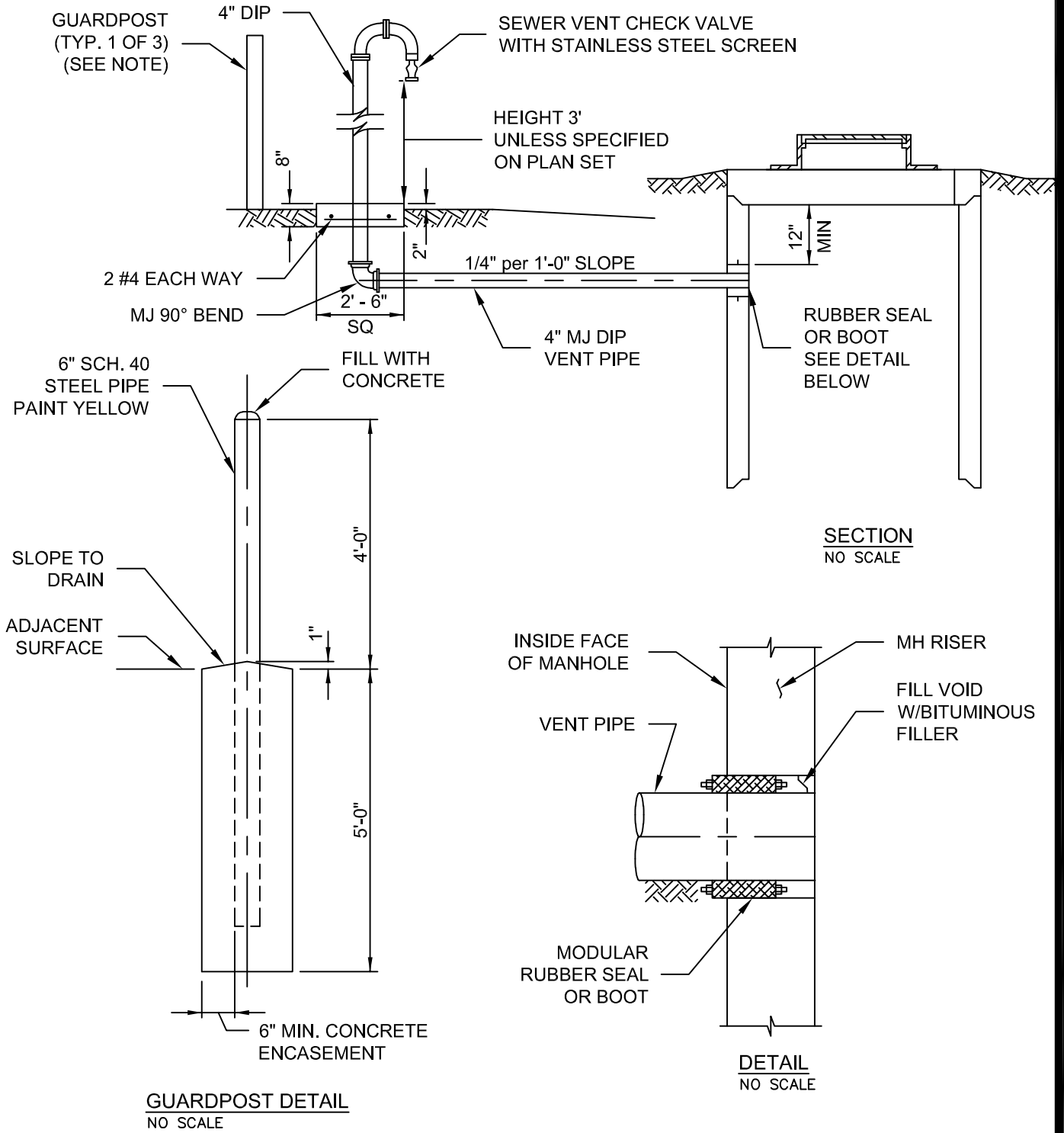
MANHOLE VENT SUPPORT



MANHOLE VENT SUPPORT

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

1. PLACE THREE GUARDPOSTS 2'-6" UPSTREAM OF CENTERLINE OF VALVE ASSEMBLY SPACED 2'-0" ON CENTERS.
2. PAINT VENT PIPE WITH BLACK EPOXY PAINT.
3. ORIENT VENT PIPE THAT IT IS "IN LINE" WITH STREAM IF NEXT TO STREAM.
4. DIP VENT PIPE TO HAVE INTERNAL EPOXY COATING.

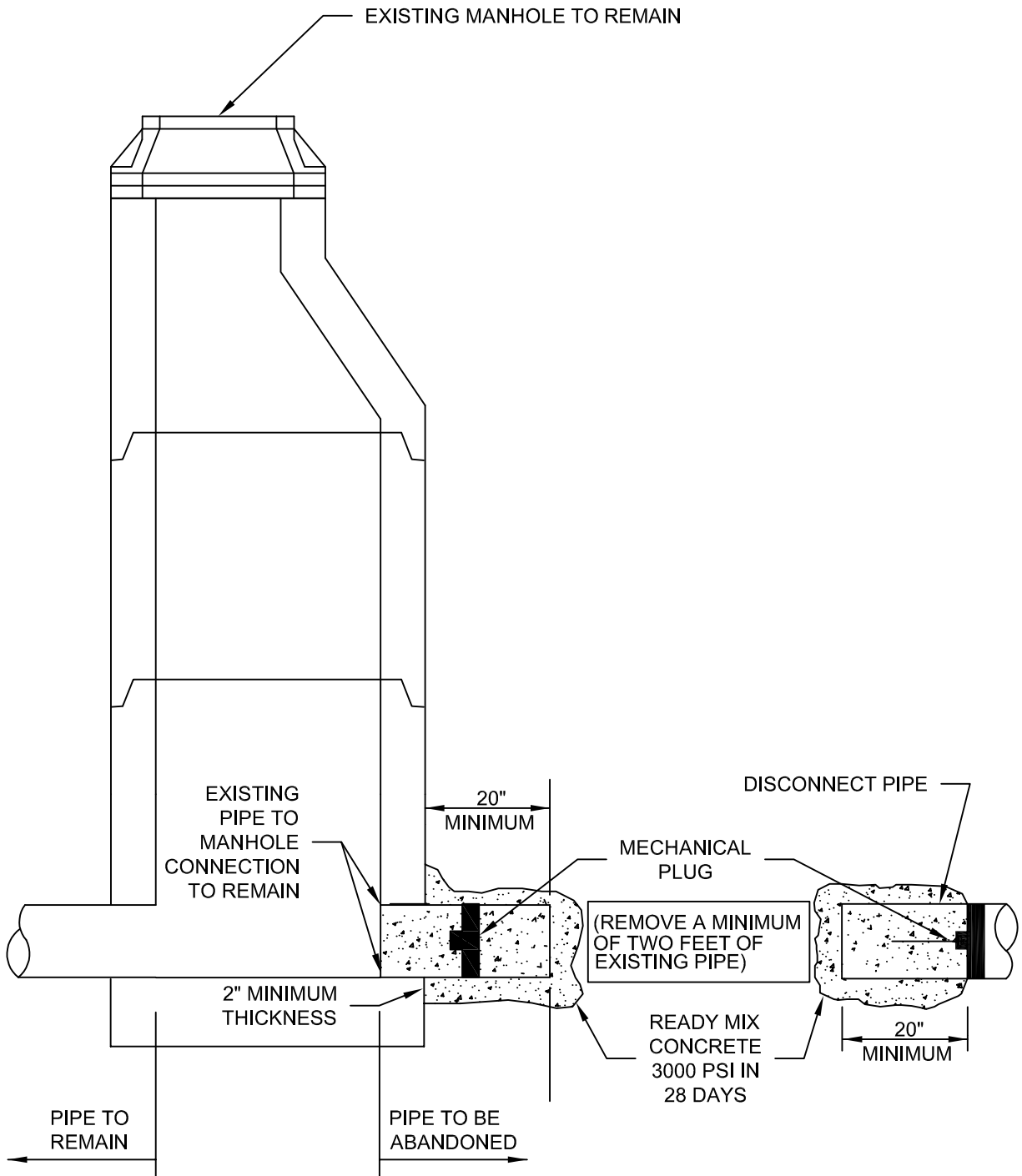


WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

MANHOLE VENT - OFFSET

S-13

1. FOR PIPES 18" AND LARGER PROVIDE A MASONRY BULKHEAD IN LIEU OF MECHANICAL PLUGS.



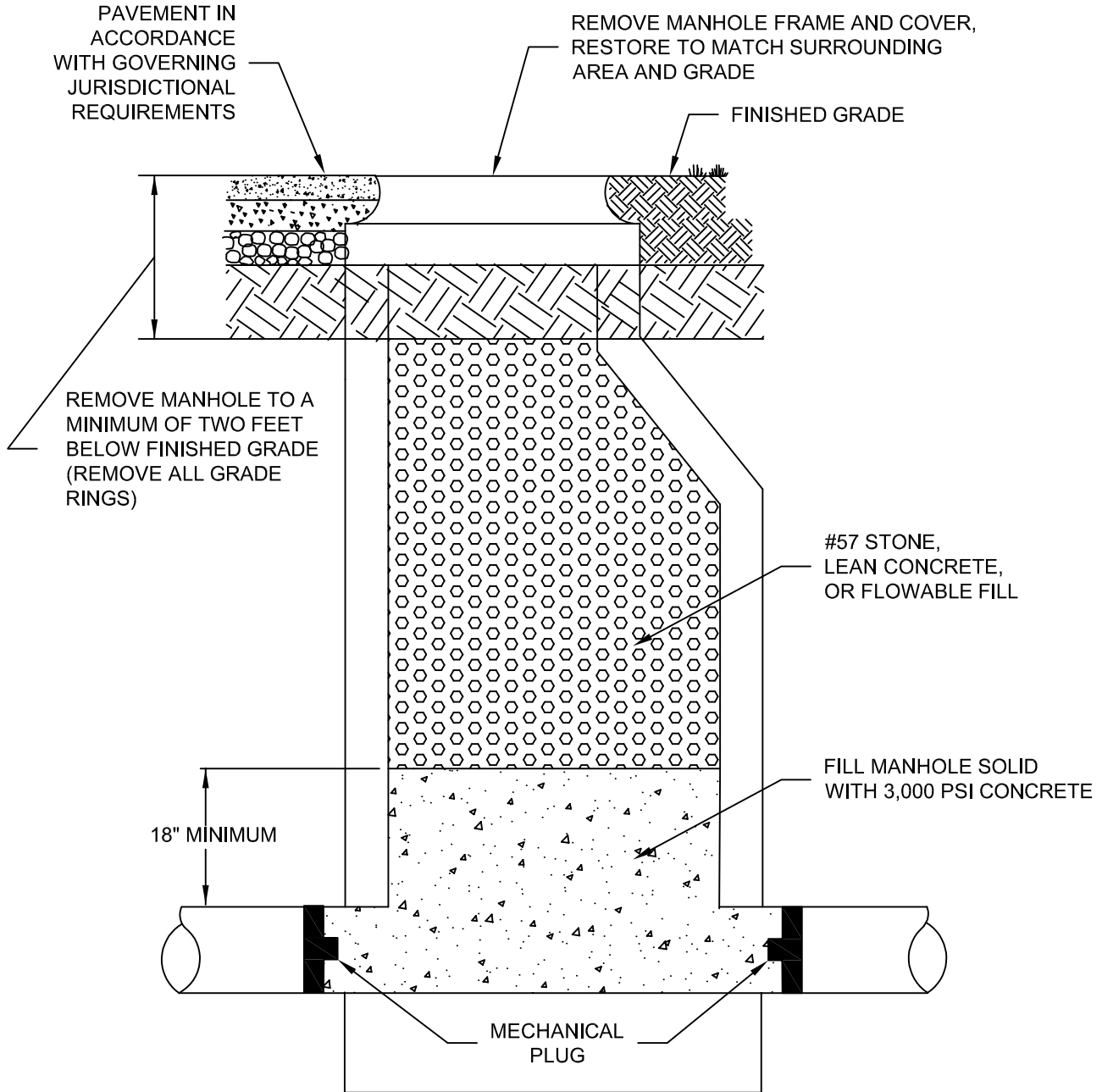
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**SANITARY SEWER PIPE
ABANDONMENT AT A MANHOLE**

S-15

09/2024

1. FOR PIPES 18" IN DIAMETER AND SMALLER SET MECHANICAL PLUGS INTO ALL PIPES ENTERING MANHOLE.
2. FOR PIPES 18" AND LARGER PROVIDE A MASONRY BULKHEAD IN LIEU OF MECHANICAL PLUGS.
3. DOWNSTREAM PIPE TO BE PLUGGED IN ACCORDANCE WITH PIPE ABANDONMENT DETAIL.



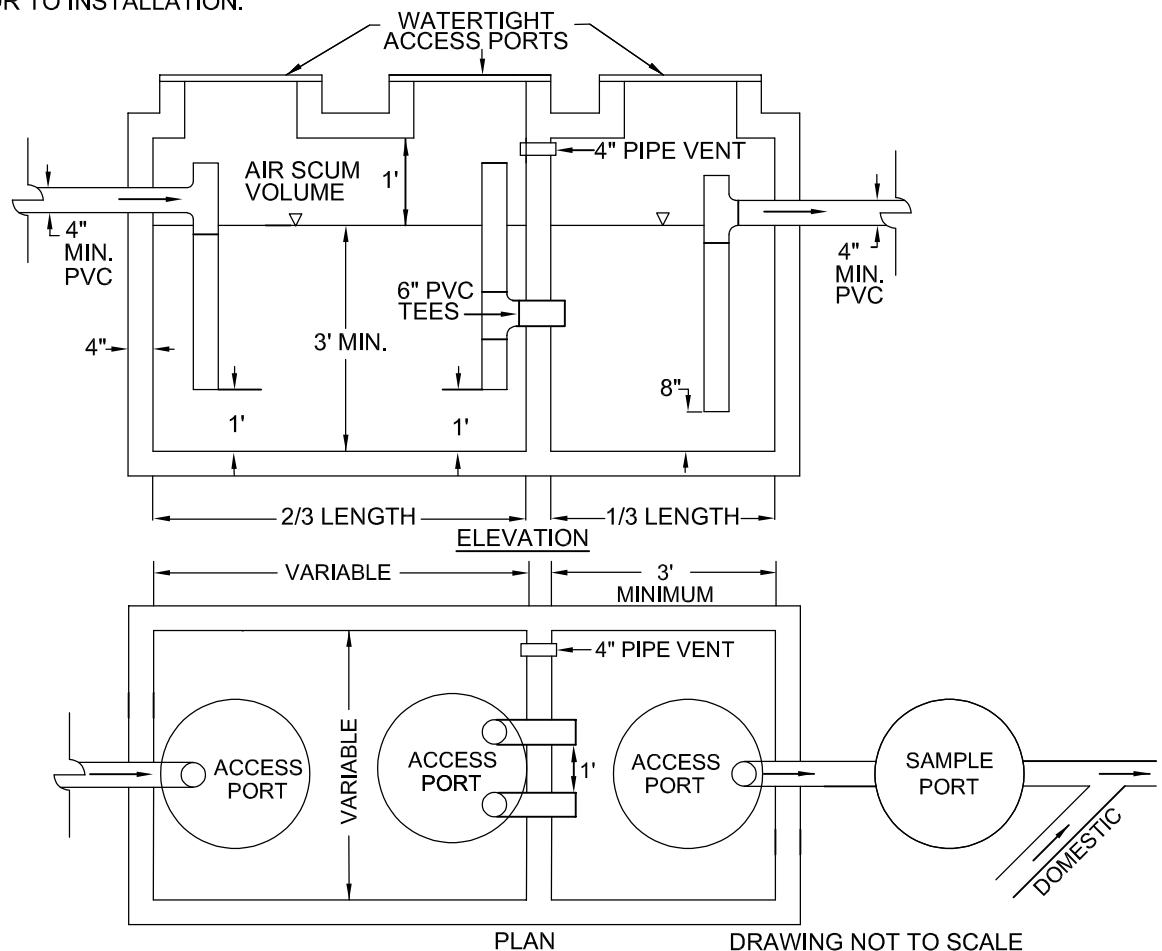
WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

**SANITARY SEWER
MANHOLE ABANDONMENT**

S-16

09/2024

1. DURING THE DESIGN PHASE, THE FOLLOWING SHALL BE SUBMITTED AS PART OF FOG (FATS, OILS AND GREASE) APPLICATION. A COMPLETED FOG APPLICATION, PLANS SHOWING KITCHEN EQUIPMENT LAYOUT AND PLUMBING, PROPOSED GREASE INTERCEPTOR DETAIL, MENU AND CIVIL SITE SHEETING SHOWING LOCATION AND PLUMBING OF INTERCEPTOR.
2. MINIMUM RETENTION TIME SHOULD BE 30 MINUTES AT PEAK FLOW.
3. FRAMES AND COVERS SHALL BE CAST IRON & WATERTIGHT. "GREASE" SHALL BE CAST INTO COVER. NO PLASTIC COVERS SHALL BE ALLOWED.
4. A NON - MONOLITHIC UNIT SHALL HAVE THE FOLLOWING INSTALLED PER MANUFACTURER'S SPEC:
 - A.) A BUTYL RUBBER SEALANT IN THE JOINT
 - B.) 24" POLYOLEFIN BACKED EXTERIOR WRAP CENTERED OVER THE EXTERIOR OF THE JOINT.
5. GREASE INTERCEPTOR SHALL BE INSPECTED AND APPROVED BY THE PARTICIPATING UTILITY PRIOR TO SITE RECEIVING WATER SERVICE CONNECTION.
6. SEVENTY-TWO (72) WORK DAY HOURS PRIOR TO INSTALLATION, THE CONTRACTOR SHALL COMPLETE THE FOLLOWING:
 - A.) CONTACT PARTICIPATING UTILITY TO DETERMINE PROPER SUBMITTAL AND INSPECTION PROCEDURE.
 - B.) FOR UNITS INSTALLED INTO THE WESTERN VIRGINIA WATER AUTHORITY'S SYSTEM:
 - 1.) SUBMIT SHOP DRAWINGS TO Cassandra.altice@westernvawater.org
 - 2.) CALL (540) 400-4079 TO SCHEDULE GREASE INTERCEPTOR INSPECTION. THE INSPECTION SHALL OCCUR PRIOR TO THE CONTRACTOR COVERING THE GREASE INTERCEPTOR.
7. ALL CONCRETE SHALL BE TYPE III AND CONFORM TO ASTM C150.
8. ALL OTHER DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM C1613.
9. ALL PVC PIPES SHALL EXTEND 5" ABOVE WATER SURFACE.
10. IF APPLICABLE, GREASE INTERCEPTOR SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADS AND ACCESS FOR BAFFLE TEES SHALL BE A TRAFFIC RATED CAST IRON FRAME AND COVER.
11. A SAMPLE PORT SHALL BE PLACE ON THE EFFLUENT SIDE OF THE GREASE INTERCEPTOR PRIOR TO ANY CONNECTION BEING MADE TO THE SEWER LATERAL. IF SAMPLE PORT IS SUBJECTED TO TRAFFIC, IT MUST BE A H-20 RATED MANHOLE (SEE S-1, S-4 AND S-5). SAMPLE PORT SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48" AND BE AIR AND WATER TIGHT. UNIT MUST BE APPROVED PRIOR TO INSTALLATION. SUBMITTAL SHALL BE MADE 72 HOURS PRIOR TO INSTALLATION.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TYPICAL GREASE INTERCEPTOR

S-17

**MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP
FOR A SIZE AND LENGTH OF PIPE INDICATED FOR Q = 0.0015**

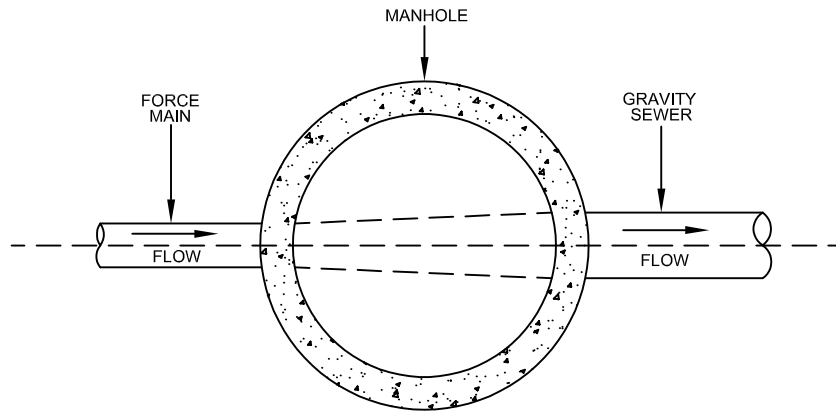
1 PIPE DIAMETER (IN)	2 MINIMUM TIME (MIN:SEC)	3 LENGTH FOR MINIMUM TIME (FT)	4 TIME FOR LONGER LENGTH (SEC)	SPECIFICATION TIME FOR LENGTH (L) SHOWN (MIN:SEC)										
				100 FT	150 FT	200 FT	250 FT	300 FT	350 FT	400FT	450 FT			
4	3:46	597	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:40	5:40	5:40	5:40	5:40
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:34	7:34	7:34	7:34	7:34	7:34	7:34
10	9:26	239	2.374 L	9:26	9:26	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48	19:47
12	11:20	199	3.418 L	11:20	11:20	11:20	11:20	11:20	14:15	17:05	19:56	22:47	25:38	28:29
15	14:10	159	5.342 L	14:10	14:10	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04	44:31
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41	64:06	70:31	76:56
21	19:50	114	10.470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31	87:15	95:58	104:42
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33	113:57	125:21	136:45
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48	144:13	158:38	173:13
30	28:20	80	21.366 L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15	178:03	195:51	213:40
33	31:10	72	25.852 L	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53	215:25	237:00	258:35
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46	256:25	282:04	307:43
42	39:48	57	41.883 L	69:48	104:42	139:37	174:30	209:24	244:19	279:13	314:07	349:02	383:56	418:51
48	45:34	50	54.705 L	91:10	136:45	182:21	227:55	273:31	319:06	364:42	410:17	455:53	501:28	547:03
54	51:02	44	69.236 L	115:24	173:05	230:47	288:29	346:11	403:53	461:34	519:16	577:00	634:42	692:24
60	56:40	40	85.476 L	142:28	213:41	284:55	356:09	427:23	498:37	569:50	641:04	712:18	783:32	854:46

NOTE: IF THERE HAS BEEN NO LEAKAGE (ZERO PSIG DROP) AFTER ONE HOUR OF TESTING, THE TEST SHALL BE ACCEPTED AND THE TEST COMPLETE.

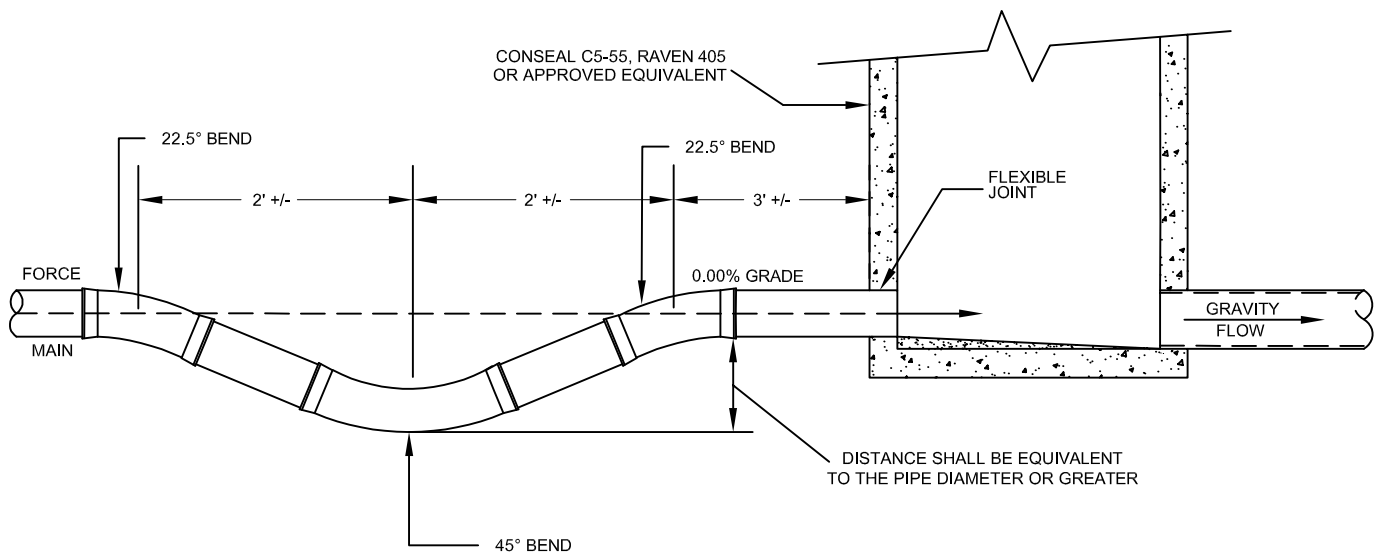
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WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

LOW-PRESSURE AIR TESTING TABLE



PLAN



SECTION

NOTE: THIS DETAIL SHALL NOT BE UTILIZED IF THE TERMINAL MANHOLE IS THE FIRST HIGH POINT ON THE FORCE MAIN AND ACTS AS AN AIR RELEASE FOR THE FORCE MAIN. IN THIS CASE, POSITIVE GRADE SHALL BE MAINTAINED TO THE MANHOLE. IF POSSIBLE, THE FIRST 22.5 DEGREE BEND (FURTHEST FROM MANHOLE) SHOULD BE ELIMINATED AND THE REMAINDER OF THE DETAIL UTILIZED.

WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

FORCE MAIN DISCHARGE

S-19

09/2024