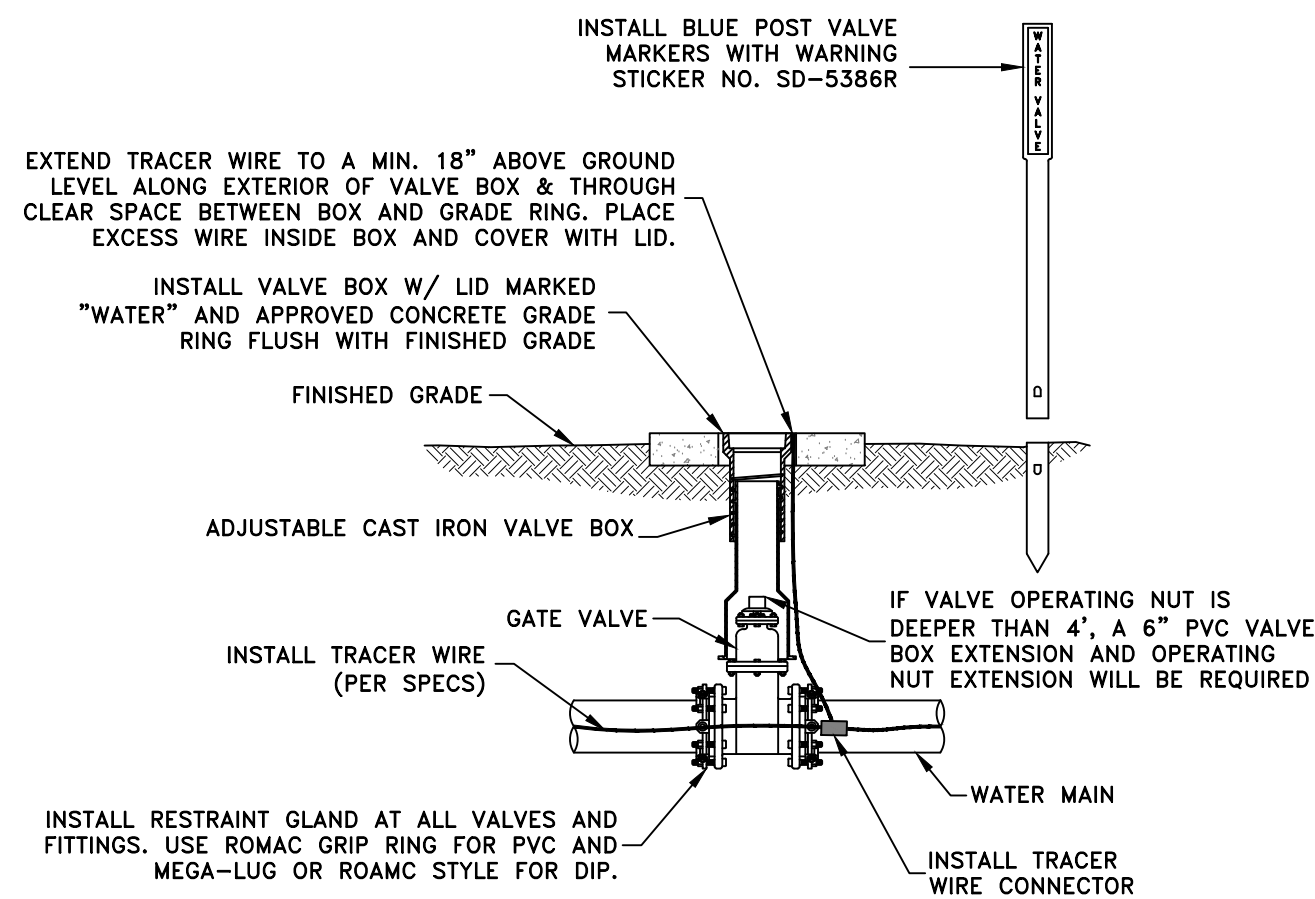
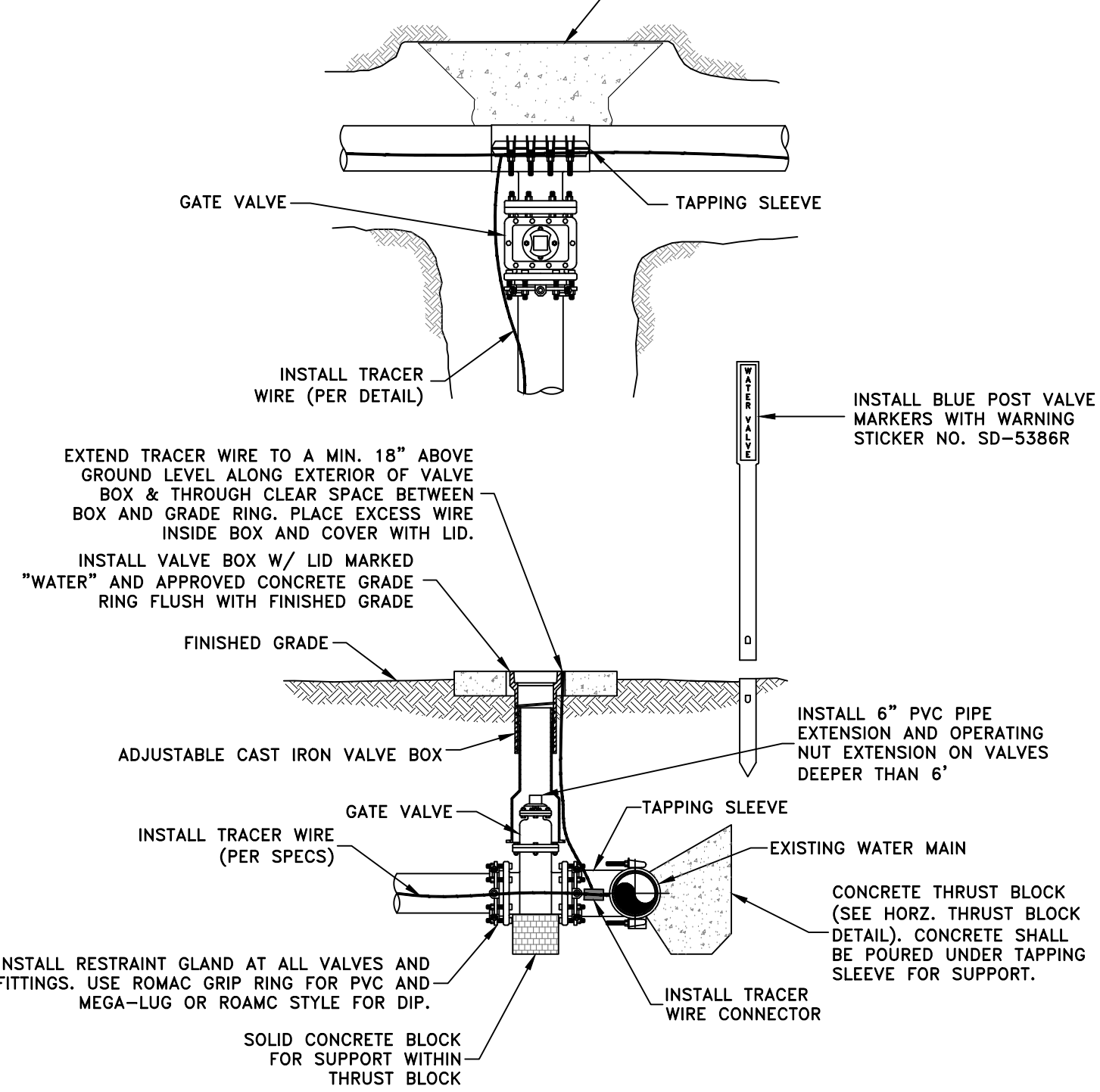


NOTES:
1.) VALVE INSTALLATIONS SHALL BE BEDDED AND BACKFILLED WITH CRUSHED STONE.



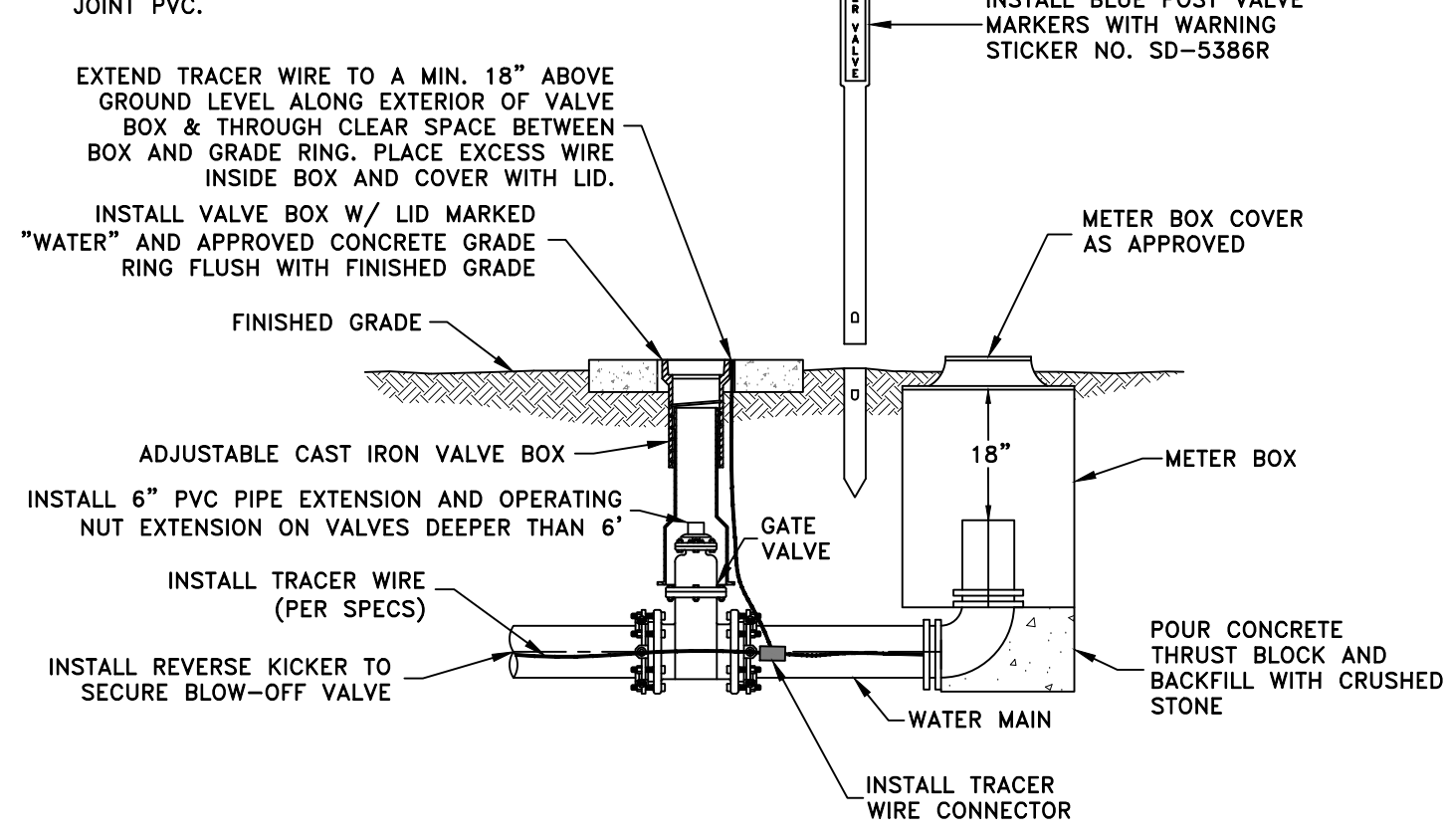
TYPICAL IN-LINE VALVE INSTALLATION

NOTES:
1.) VALVE INSTALLATIONS SHALL BE BEDDED AND BACKFILLED WITH CRUSHED STONE.
2.) TAPPING SLEEVE AND VALVE ASSEMBLY SHALL BE WRAPPED IN PLASTIC PROTECTIVE COATING.



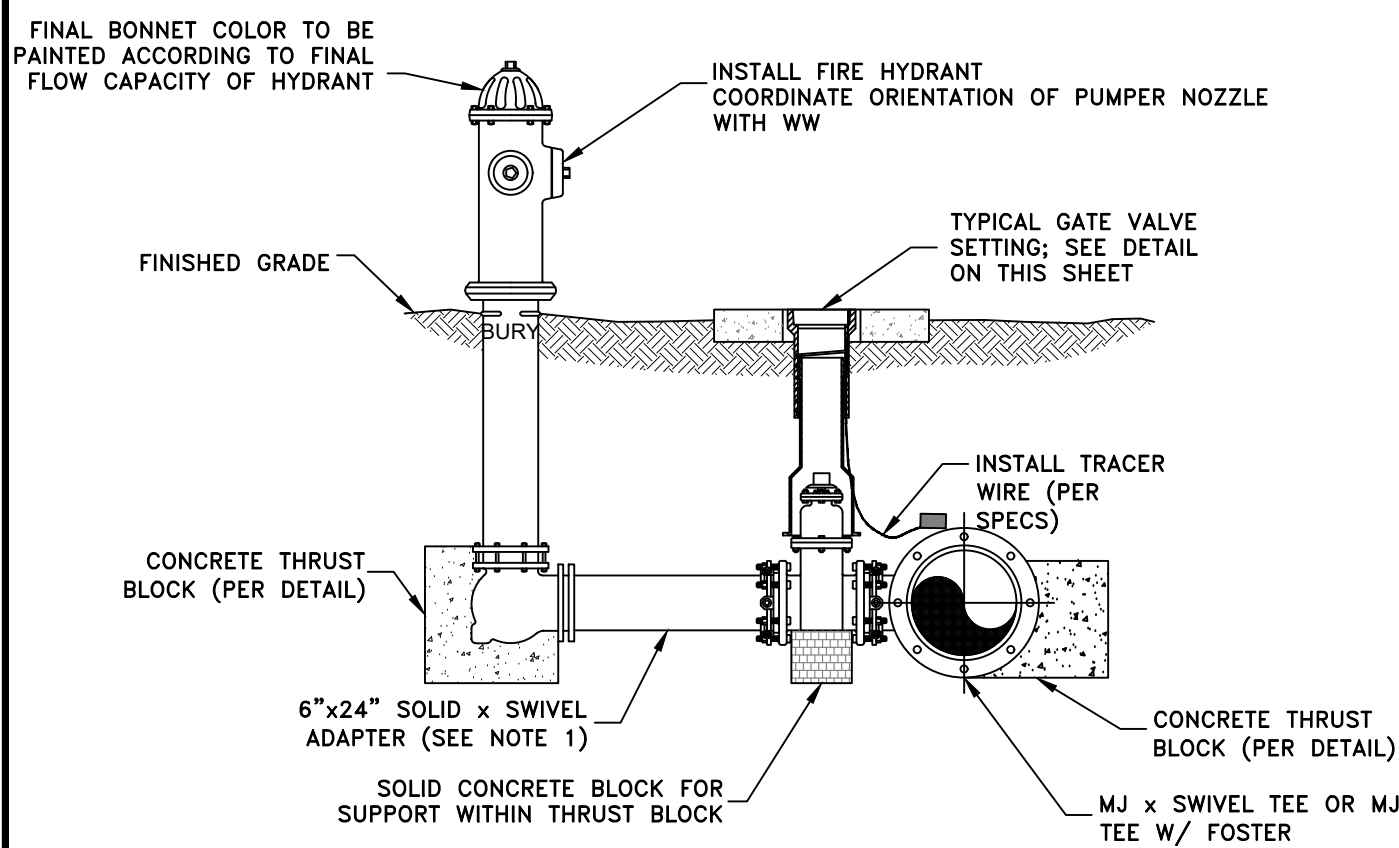
TAPPING SLEEVE AND VALVE INSTALLATION

NOTES:
1.) BLOW-OFF ASSEMBLY SHALL BE BEDDED AND BACKFILLED WITH CRUSHED STONE.
2.) BLOW-OFF ASSEMBLY ELBOW SHALL BE WRAPPED IN PLASTIC PROTECTIVE COATING UNLESS ELBOW IS SLIP-ON JOINT PVC.

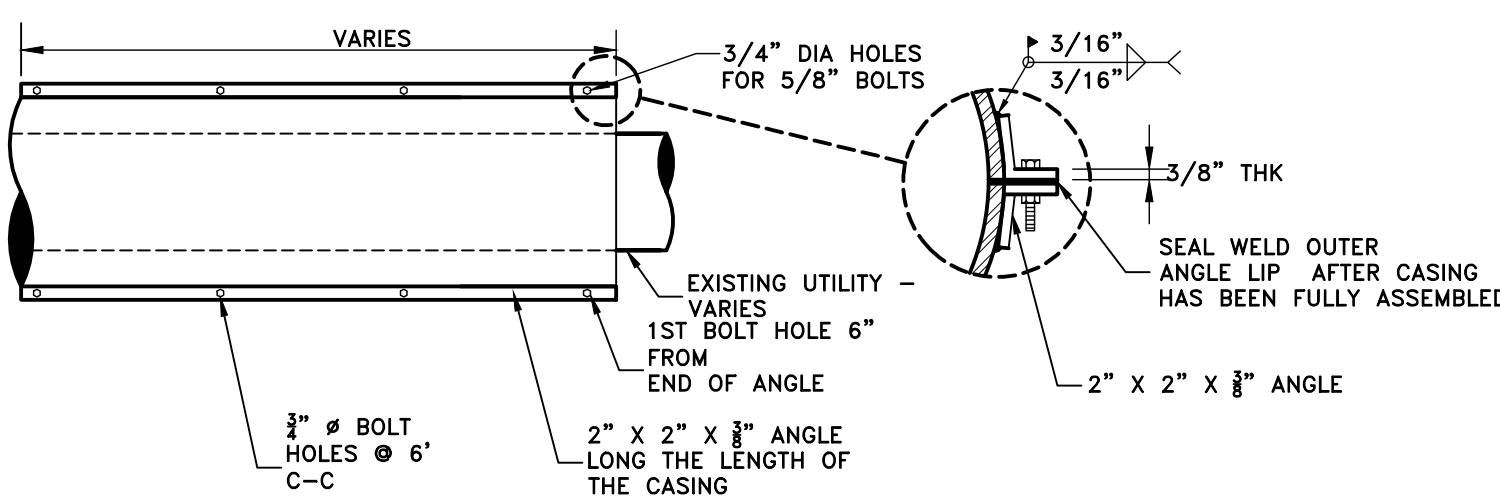


BLOW-OFF ASSEMBLY INSTALLATION

NOTES:
1.) HYDRANT ASSEMBLY SHALL BE BEDDED AND BACKFILLED WITH CRUSHED STONE.
2.) TEE OR TAPPING SLEEVE AND VALVE ASSEMBLY SHALL BE WRAPPED IN PLASTIC PROTECTIVE COATING.
3.) FOR INSTALLATIONS REQUIRING A LONGER HYDRANT LEAD, SOLID x SWIVEL ADAPTER WILL BE REPLACED WITH DIP (LENGTH AS REQUIRED) AND RESTRAINED WITH MEGALUG OR ROMAC GRIP RING.
4.) IF MULTIPLE JOINTS OF PIPE ARE PROPOSED BETWEEN THE VALVE AND HYDRANT ASSEMBLY, RESTRAINED FIELD LOCK GASKET SHALL BE UTILIZED AT EACH BELL TO RESTRAIN THE PIPE.



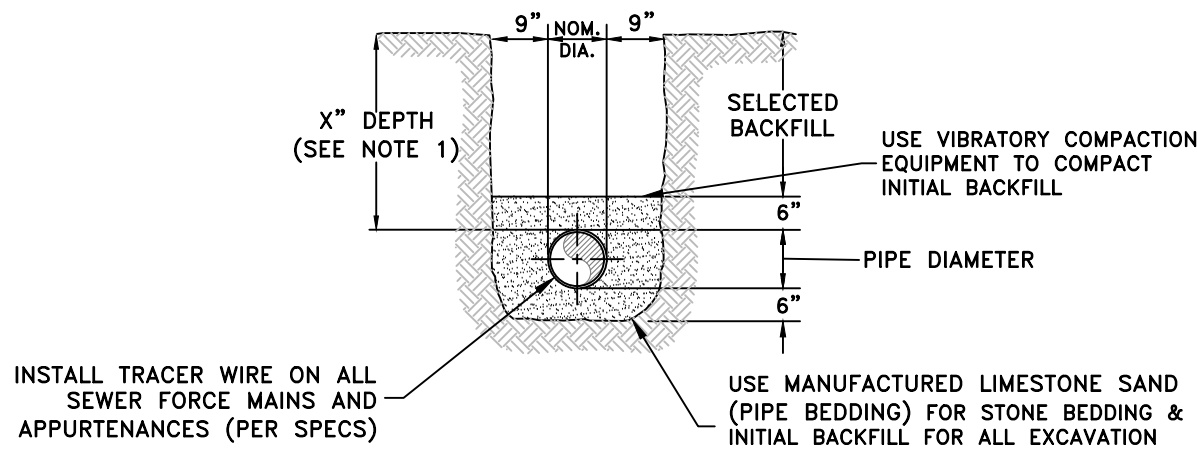
FIRE HYDRANT ASSEMBLY



NOTES:
1. SPLIT CASINGS ARE INTENDED FOR OPEN CUT INSTALLATIONS ONLY AND PRIMARILY FOR PROTECTING EXISTING UTILITIES.
2. SPLIT CASING WILL NOT BE ACCEPTABLE FOR BORE AND JACK INSTALLATIONS.
3. CASING SPACERS SHALL BE PROVIDED AS SPECIFIED FOR TYPICAL CASING INSTALLATIONS.
4. SIZING AND SPACER CONFIGURATION PER TYPICAL CASING DETAIL.

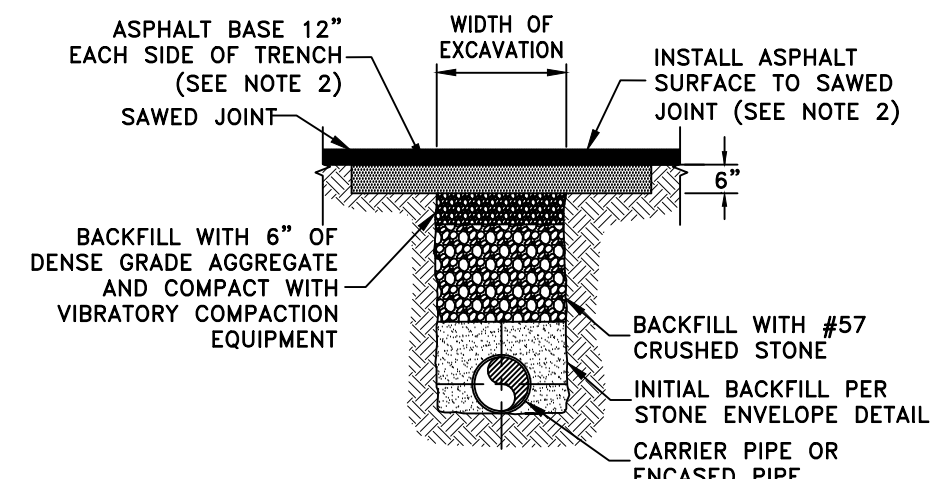
TYPICAL SPLIT CASING DETAIL

NOTES:
1.) FOR PIPE DIAMETERS LESS THAN OR EQUAL TO 10", 30" OF COVER IS REQUIRED. FOR PIPE DIAMETERS GREATER THAN OR EQUAL TO 12", 48" OF COVER IS REQUIRED. NO PIPE SHALL HAVE MORE THAN 48" OF COVER AT FINISHED GRADE UNLESS APPROVED BY WSB.
2.) WHEN INSTALLING WATER MAIN UNDER A ROADWAY, PIPE SHOULD BE BEDDED AND BACKFILLED WITH 100% #9M OR #57 STONE TO SUBGRADE.



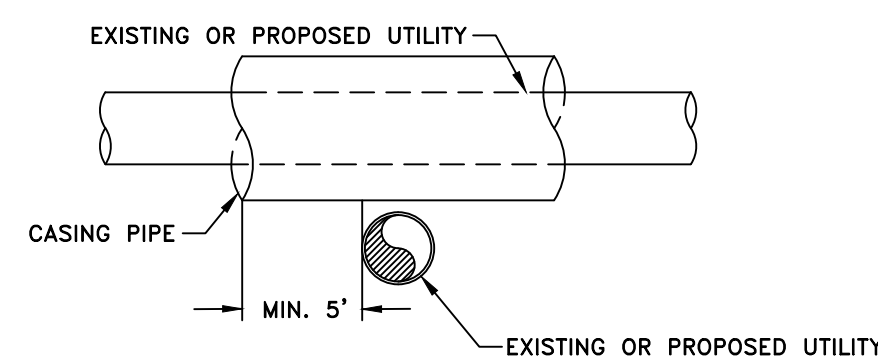
TYPICAL STONE ENVELOPE - WATER

NOTES:
1.) FOR BOTH CONCRETE AND ASPHALT PAVEMENT REPAIR, REFERENCE BOWLING GREEN PUBLIC WORKS STREET REPAIR METHOD DETAIL OR COORDINATE WITH GOVERNING ROAD AGENCY.
2.) FOR CONCRETE PAVEMENT, REPLACE WITH A CONTINUOUS SLAB FROM SUB-BASE TO SURFACE.



SURFACE RESTORATION (FOR CROSSING OF ALL STREETS & HIGHWAYS)

NOTES:
1.) IF A VERTICAL SEPARATION OF 18" CANNOT BE ACHIEVED BETWEEN ANY TWO UTILITY CROSSINGS DUE TO SITE CONSTRAINTS, STEEL OR PVC CASING SHALL BE UTILIZED DOWN TO A MINIMUM SEPARATION OF 6". THE LENGTH OF CASING SHALL BE ADEQUATE TO SPAN THE TRENCH OF THE UTILITY BEING CROSSED. SPACERS AND END CAPS ARE NOT NECESSARY, BUT THE ENDS OF THE CASING SHOULD BE SEALED WITH SPRAY FOAM.



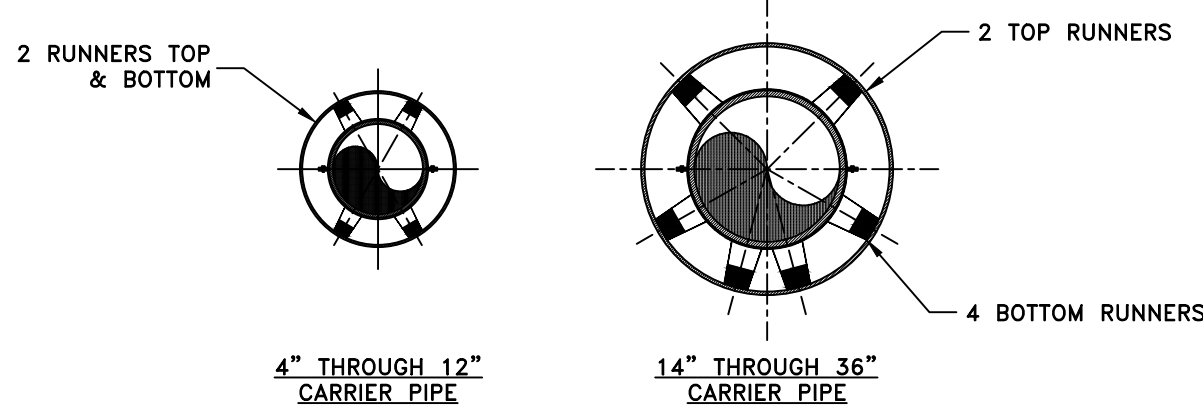
TYPICAL UTILITY CROSSING

NOTES:
1. CASING SIZES ARE BASED ON A TYPICAL TYTON JOINT WITH RESTRAINED JOINT GASKETS. IF A TRADITIONAL RESTRAINED JOINT SIMILAR TO TR FLEX OR EQUIVALENT IS UTILIZED, COORDINATE WITH WSB TO ENSURE SUFFICIENT CASING SIZE IS PROVIDED.
2. MINIMUM COVER AT LOWEST POINT IN RIGHT OF WAY SHOULD BE 4' TO TOP OF CASING FOR KYTC AND COUNTY ROADWAYS AND 5.5' TO BASE OF RAIL ON RAILROADS.
3. ALL CASINGS SHALL EXTEND THROUGH RIGHT OF WAY.
4. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING.
5. FOR CASINGS 50 FEET IN LENGTH OR LONGER, ALL CARRIER PIPE SHALL BE DUCTILE IRON PIPE AND HAVE MECHANICAL RESTRAINED JOINTS.
6. STAINLESS STEEL SPACERS SHALL BE USED FOR ALL DUCTILE IRON PIPE OR ANY PIPE 12" IN DIAMETER AND LARGER.
7. PIPE TO BE USED AS A CASING SHALL CONFORM TO ASTM A252 STANDARD SPECIFICATION FOR WELDED & SEAMLESS STEEL PIPE PILES WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI

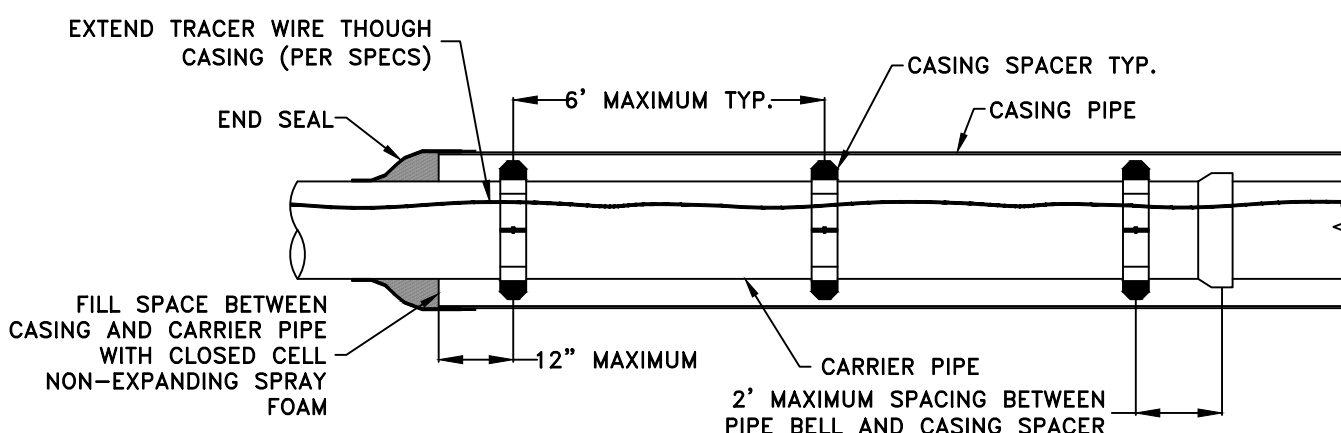
TYPICAL CASING DETAIL - WATER

CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES										
CARRIER PIPE NOM. DIA. (D1)	4	6	8	10	12	16	20	24	30	
CASING PIPE NOM. DIA. (D2)	12	12	16	20	20	24	30	36	42	
WALL THICKNESS	0.375	0.375	0.375	0.375	0.375	0.500	0.500	0.500	0.625	

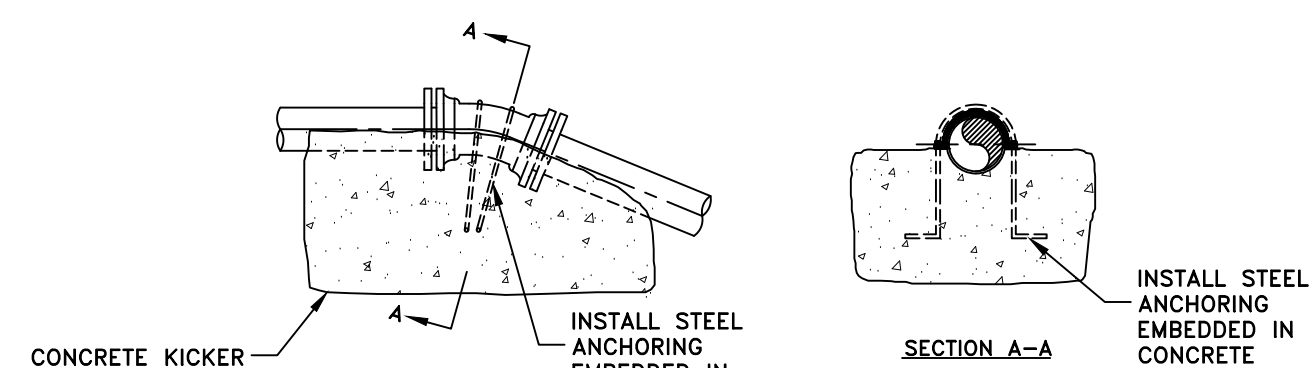
CASING SCHEDULE



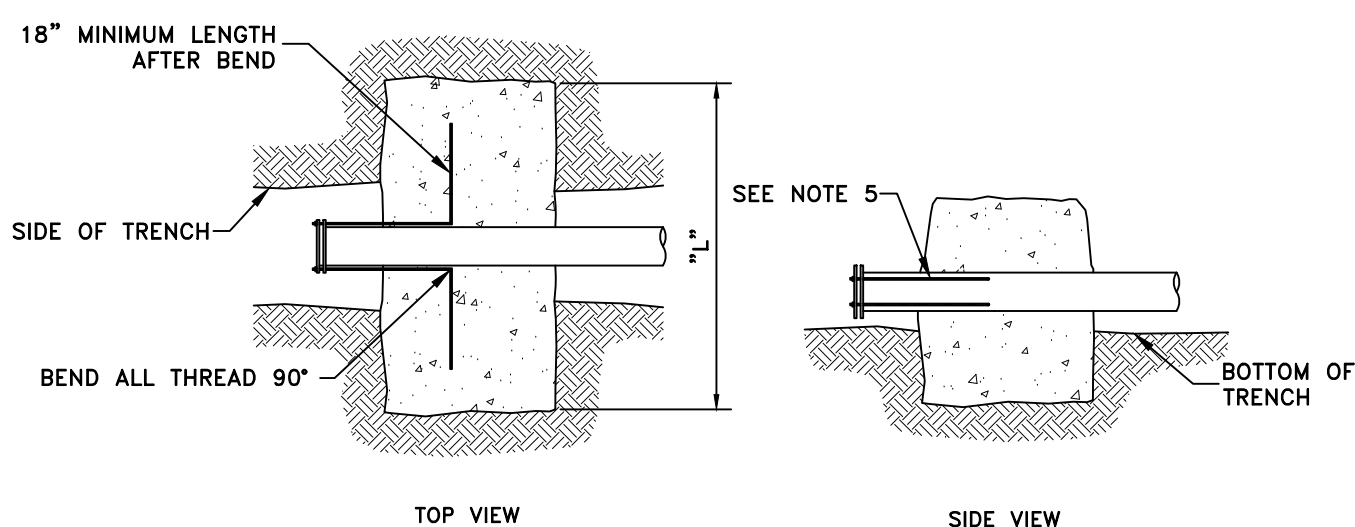
CASING END VIEW DETAIL



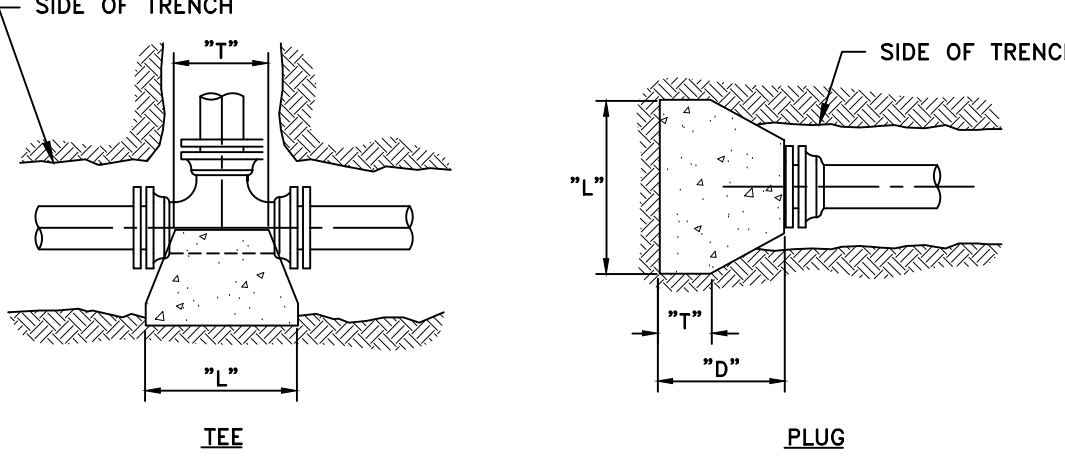
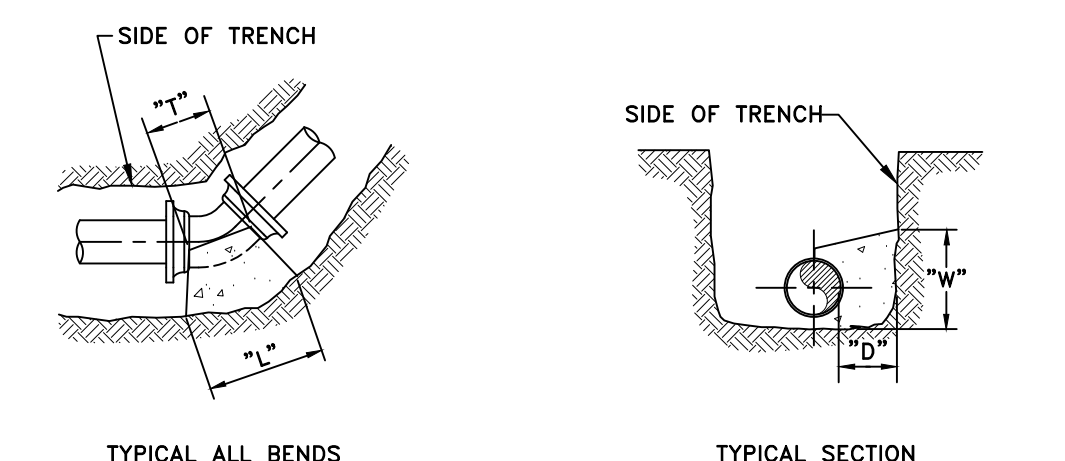
CASING SIDE VIEW DETAIL



VERTICAL BEND PIPE ANCHOR DETAIL



CONCRETE REVERSE KICKER (DEADMAN) DETAIL



VALVES AT END OF LINE

NOTES:
1.) ALL FITTINGS SHALL INCLUDE RESTRAINT GLANDS: USE ROMAC RESTRAINT FOR PVC. USE ROMAC OR MEGALUG RESTRAINT FOR DIP.
2.) CONCRETE THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED EARTH.
3.) PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL CONCRETE AND PIPE AND/OR FITTINGS.
4.) ANCHOR BAR SHALL BE 5/8" MINIMUM DIAMETER.
5.) RODDING FOR A CONCRETE REVERSE KICKER SHALL BE AS FOLLOWS: ≤4" USE 2 RODS, 6"-10" USE 4 RODS & ≥12" PER ENGINEER.
6.) FITTINGS SHALL BE INSTALLED AS REQUIRED PER WSB INSPECTOR.

90° BENDS															
SIZE	2	4	6	8	10	12	14	16	18	20	24	30			
"D"	6	8	8	10	12	14	22	22	24	24	30	30			
"L"	16	20	24	30	32	34	68	68	80	80	96	120			
"W"	8	10	12	18	22	24	34	34	40	40	48	60			
"T"	10	12	16	20	22	22	38	38	40	40	44	52			

45° BENDS															
SIZE	2	4	6	8	10	12	14	16	18	20	24	30			
"D"	6	6	8	10	12	12	22	22	24	24	30	30			
"L"	14	18	18	22	24	24	51	51	60	60	72	90			
"W"	8	10	12	16	18	18	25	25	29	29	36	44			
"T"	10	12	16	18	18	18	38	38	40	40	44	52			

22 1/2" & 11 1/4" BENDS															
SIZE	2	4	6	8	10	12	14	16	18	20	24	30			
"D"	6	10	14	18	20	20	22	22	24	24	30	30			
"L"	20	24	28	28	28	28	36	36	42	42	54	66			
"W"	18	20	22	24	24	24	18	18	21	21	24	31			
"T"	12	14	16	18	18	18	38	38	40	40	44	52			

TEES, PLUGS & BLOWOFFS															
SIZE	2	4	6	8	10	12	14	16	18	20	24	30			
"D"	12	16	18	24	28	30	30	30	30	30	30	36			
"L"	12	16	18	24	28	30	60	60	72	72	84	102			
"W"	14	16	18	18	22	24	28	28	32	32	40	51			
"T"	10	10	12	12	12	12	38	38	40	40	44	52			

MINIMUM CONCRETE BLOCKING FOR PIPE & FITTINGS

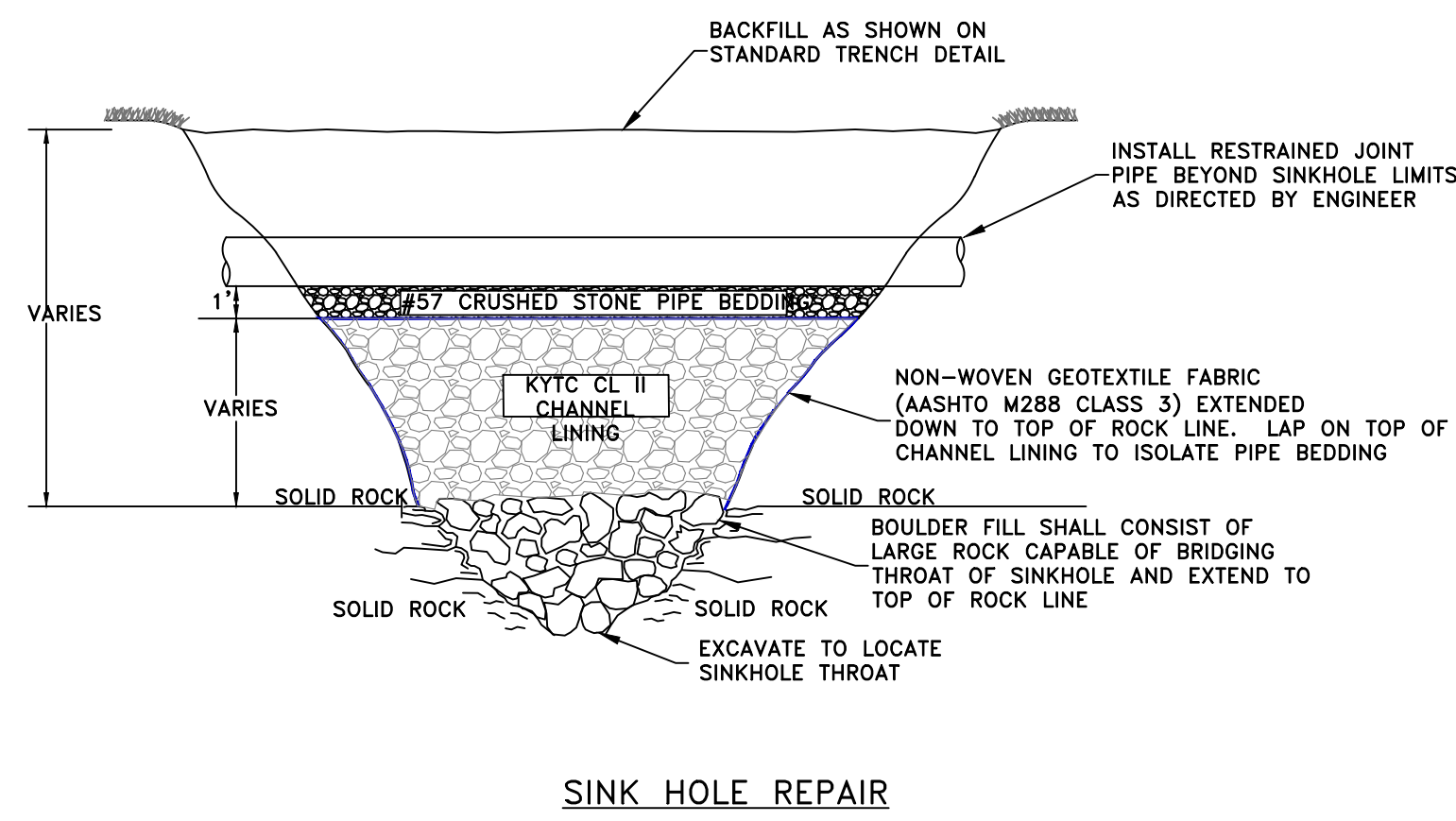
SCALE: NOT TO SCALE
DATE: 04-22-2026
DWG NO.: WD1
DESIGNED: WCWD
DRAWN: BCP
CHECKED: CRH

REVISIONS:

NO.: DATE:

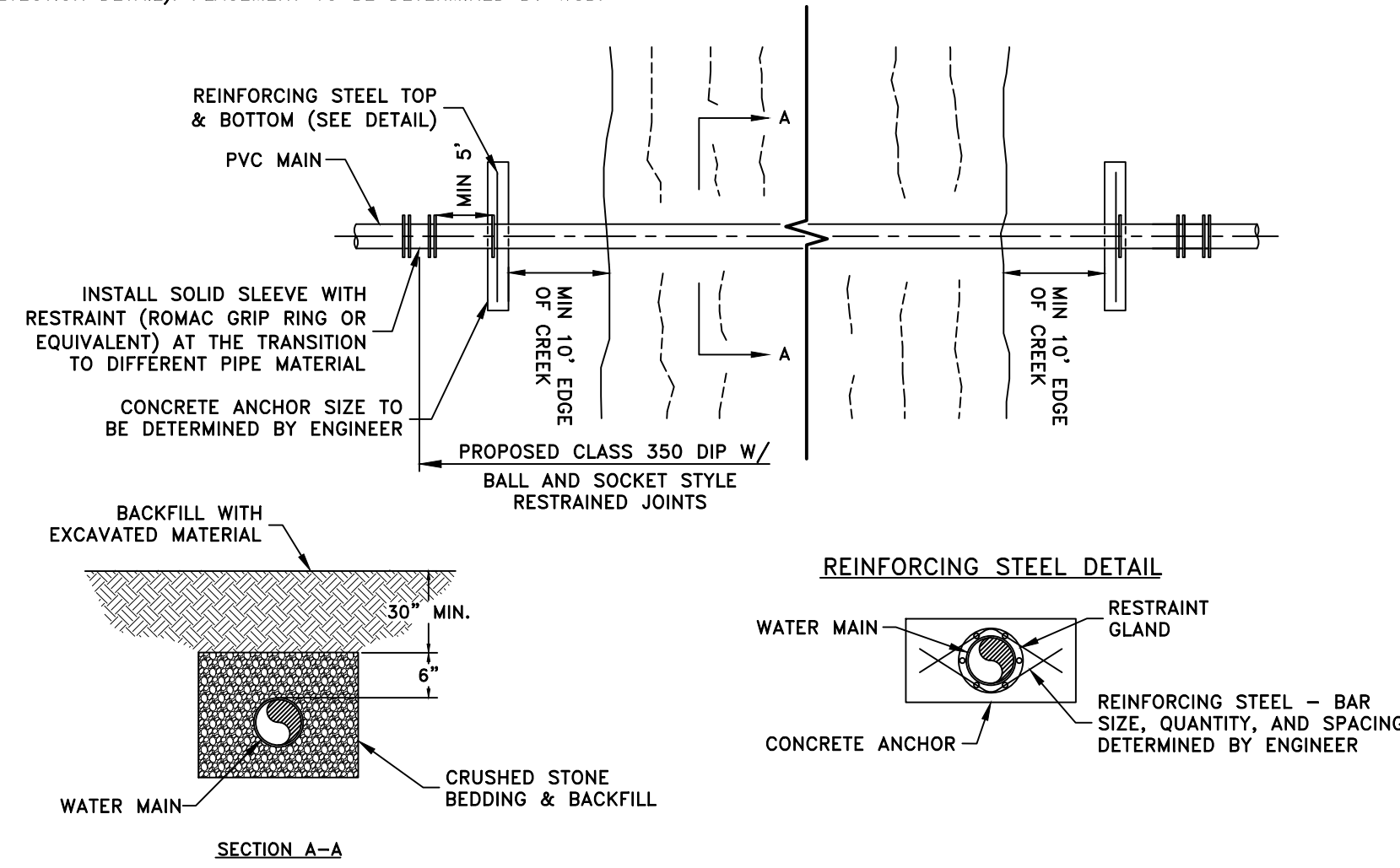
DRAWING:

WD1

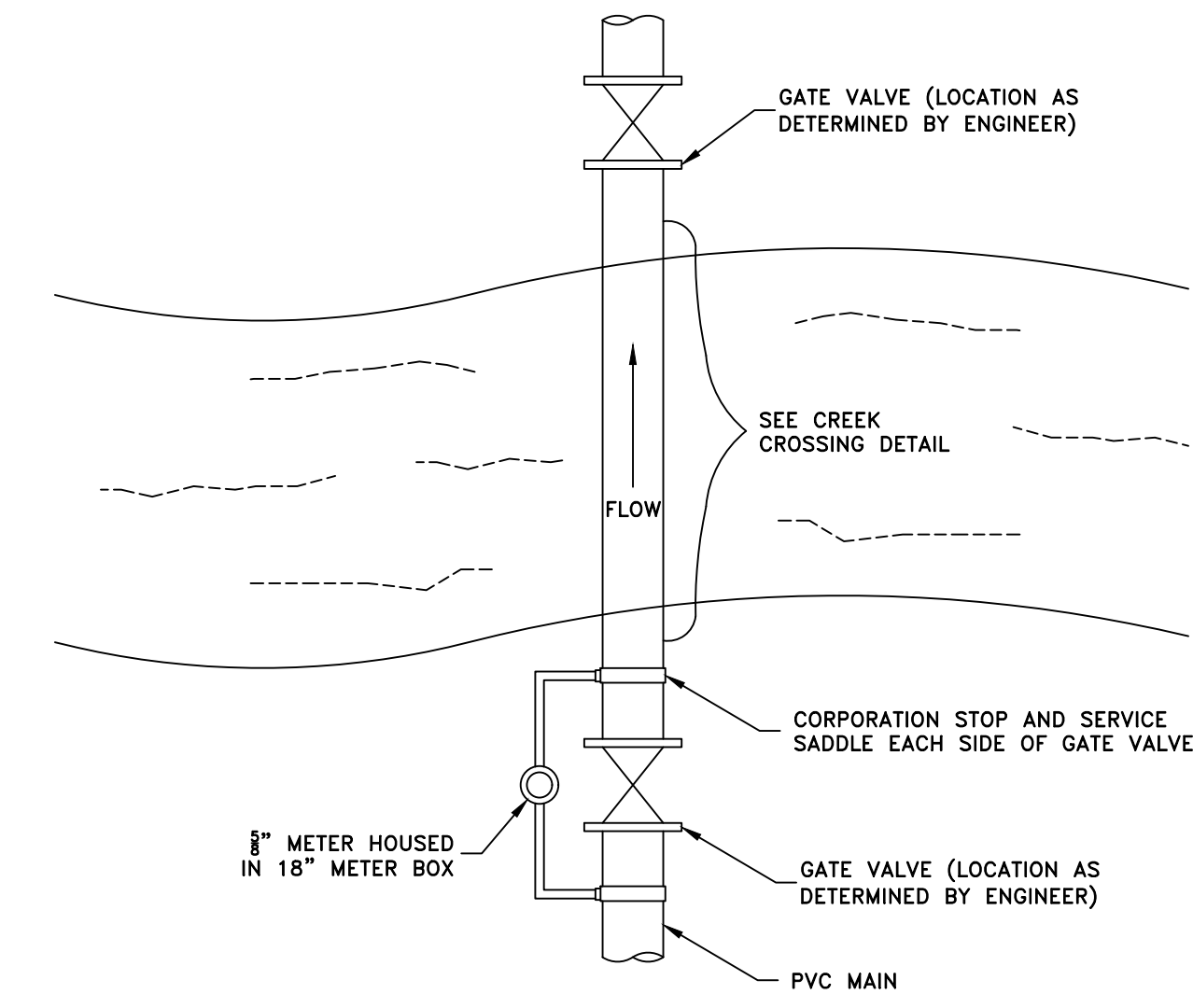


SINK HOLE REPAIR

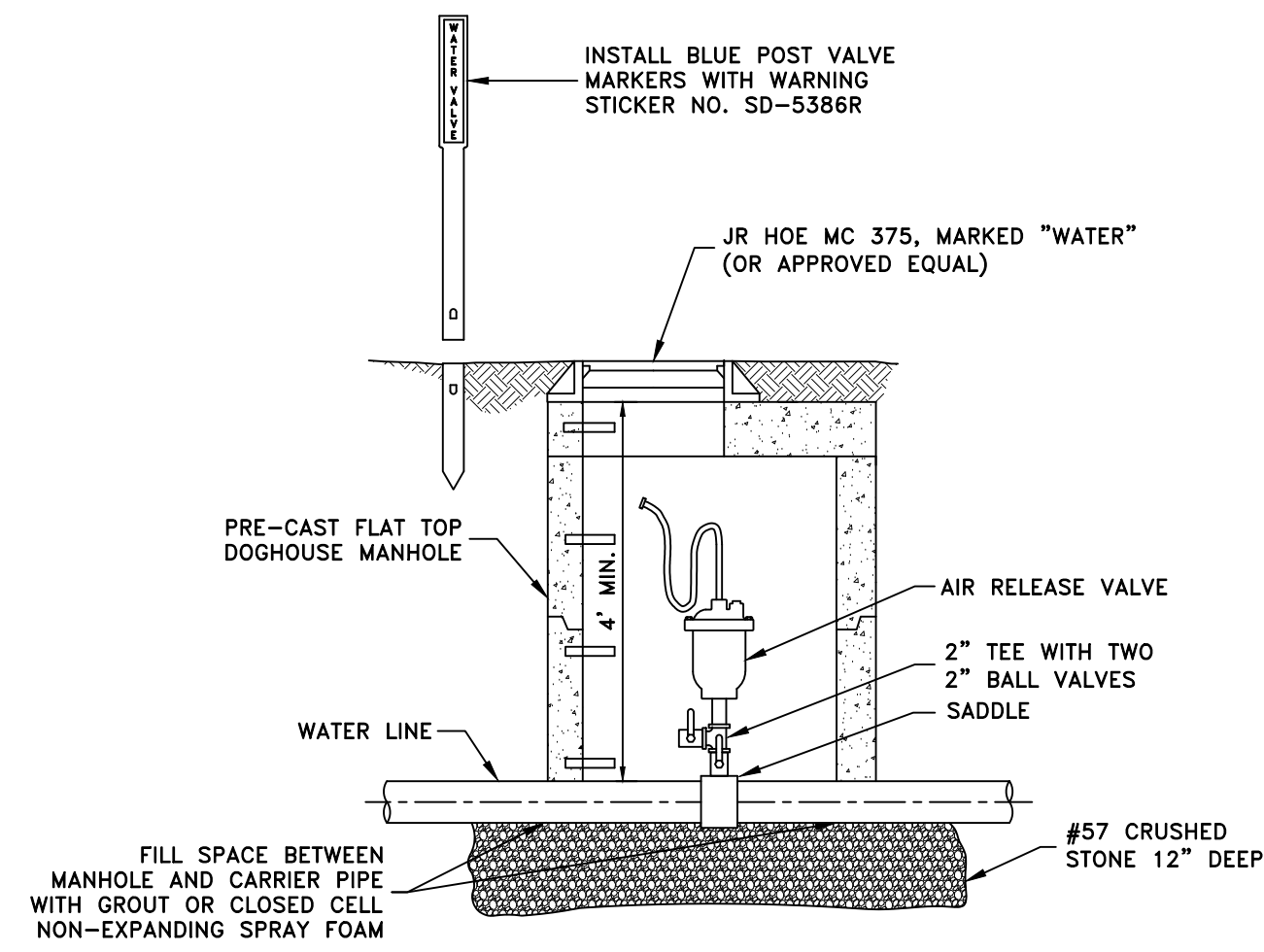
- NOTES:
- 1.) CREEK CROSSING AS SHOWN SHALL BE CONSTRUCTED ACROSS ALL MAJOR STREAMS AS INSTRUCTED BY ENGINEER.
 - 2.) CONSTRUCTION OF FITTINGS AND ANCHORS SHALL BE SYMMETRICAL ON EACH SIDE.
 - 3.) GATE VALVES ARE REQUIRED ON EACH SIDE OF THE CREEK CROSSING.
 - 4.) FOR CHANNELS GREATER THAN 15' IN WIDTH, A LEAK DETECTION STATION SHALL BE INSTALLED ON ONE SIDE OF THE STREAM (PER WSB LEAK DETECTION DETAIL). PLACEMENT TO BE DETERMINED BY WSB.



TYPICAL CREEK CROSSING

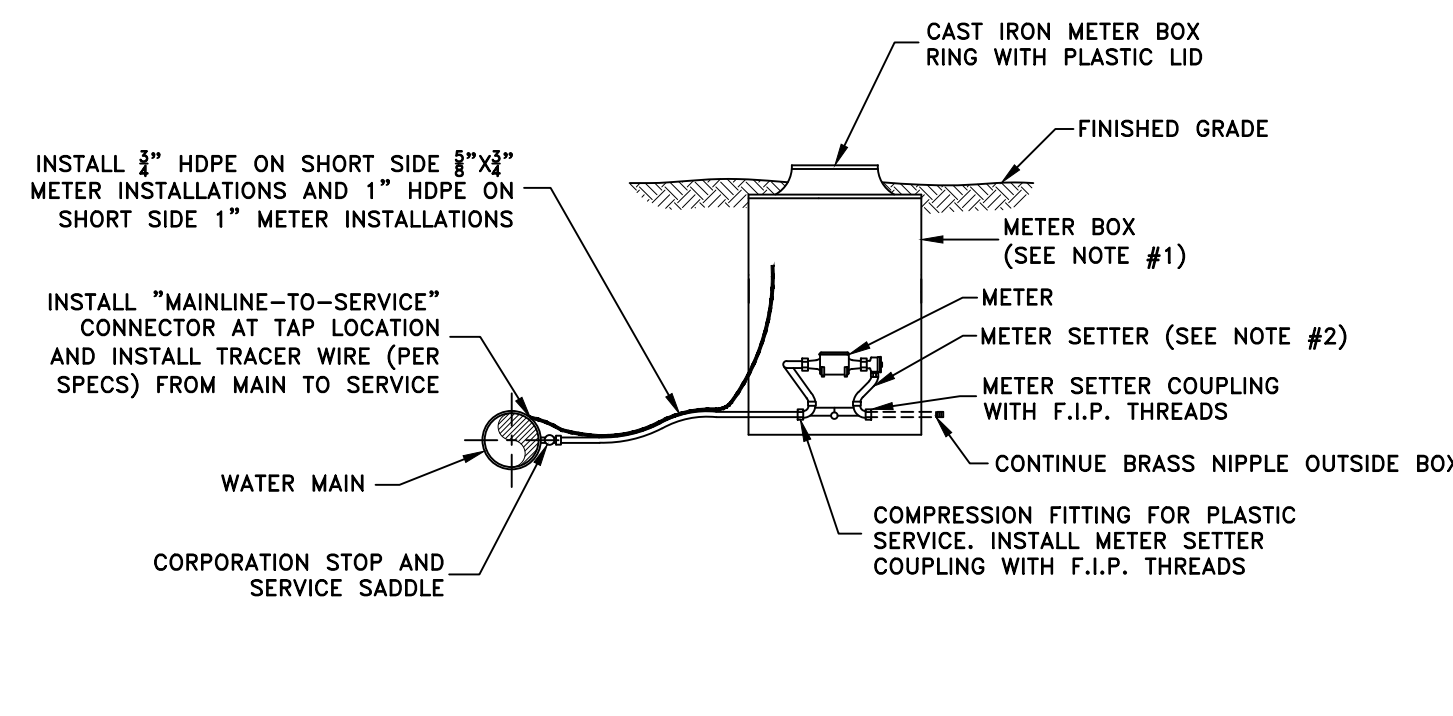


CREEK CROSSING LEAK DETECTION



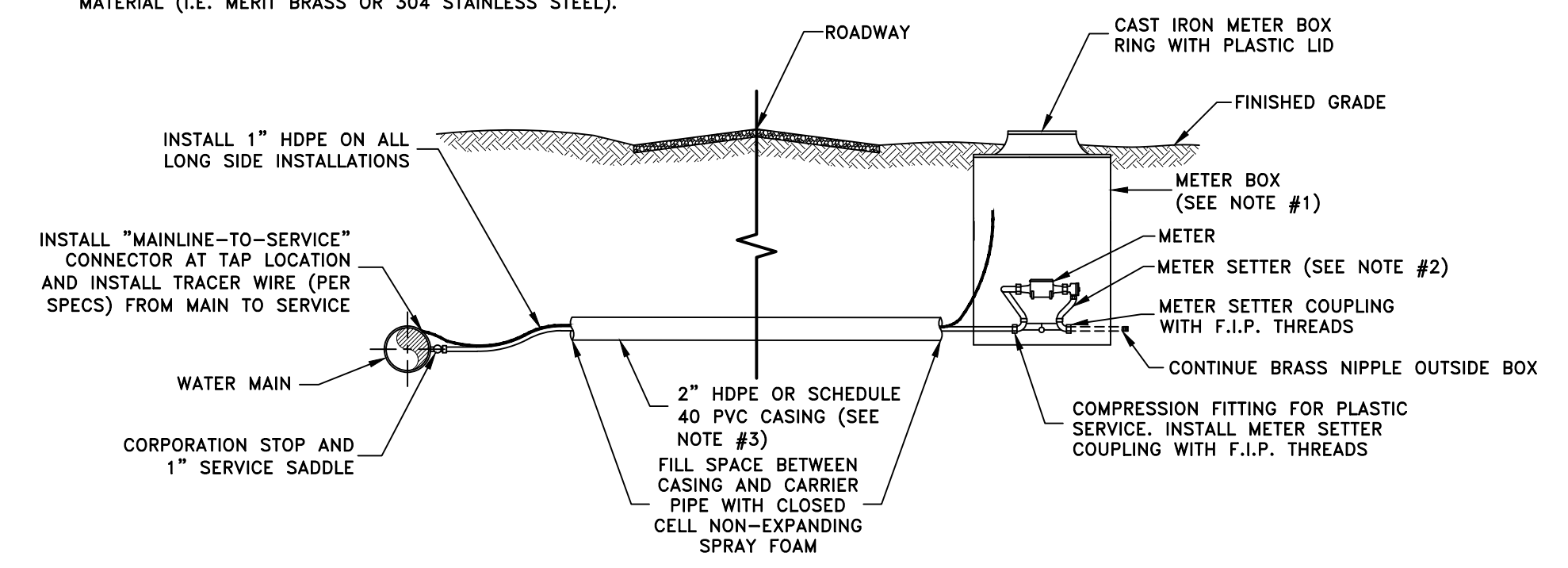
STANDARD AIR RELEASE STATION - WATER

- NOTES:
- 1.) ALL 3/4\"/>



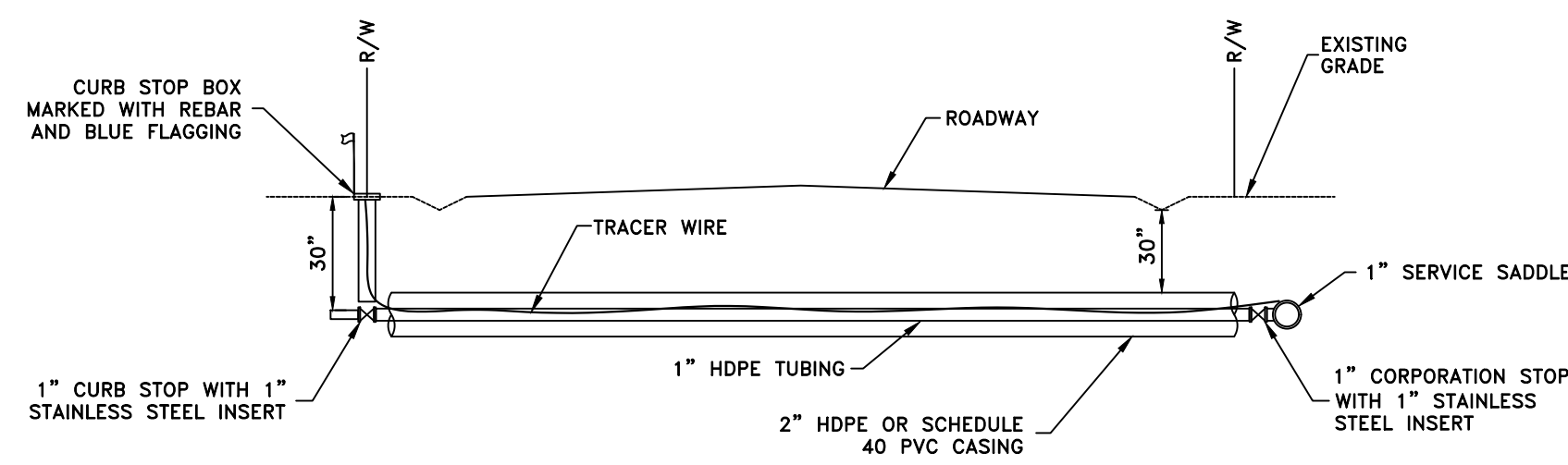
TYPICAL METER SETTING FOR
"SHORT SIDE"
3/4" & 1" SERVICES

- NOTES:
- 1.) ALL 1\"/>



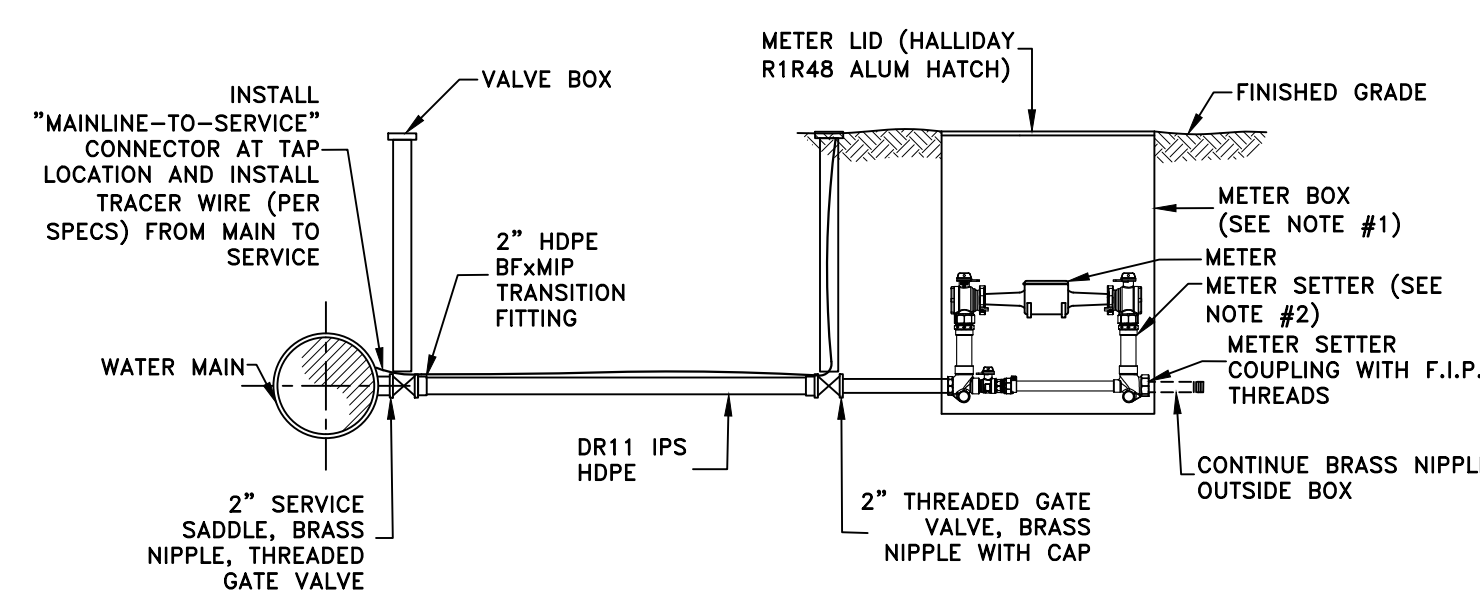
TYPICAL METER SETTING FOR
"LONG SIDE"
3/4" & 1" SERVICES

- NOTES:
- 1.) NO TAPS SHALL BE MADE ON PRESSURIZED MAINS.
 - 2.) CURB STOPS SHALL BE INSTALLED ON PROPERTY CORNERS AS DIRECTED BY WSB.
 - 3.) CASING SHALL EXTEND THE ENTIRE RIGHT OF WAY, SHORTENED AS NEEDED FOR CURB STOP.
 - 4.) ALL CROSSINGS SHALL BE BACKFILLED WITH CRUSHED STONE.
 - 5.) IF MULTIPLE SERVICE CONNECTIONS ARE NEEDED, LARGER CASING MAY BE REQUIRED.
 - 6.) ALL FITTINGS SHALL BE INSTALLED WITH TEFLON TAPE OR JOINT COMPOUND.
 - 7.) ALL SHOWN MATERIAL SHALL BE SUPPLIED BY THE DEVELOPER.



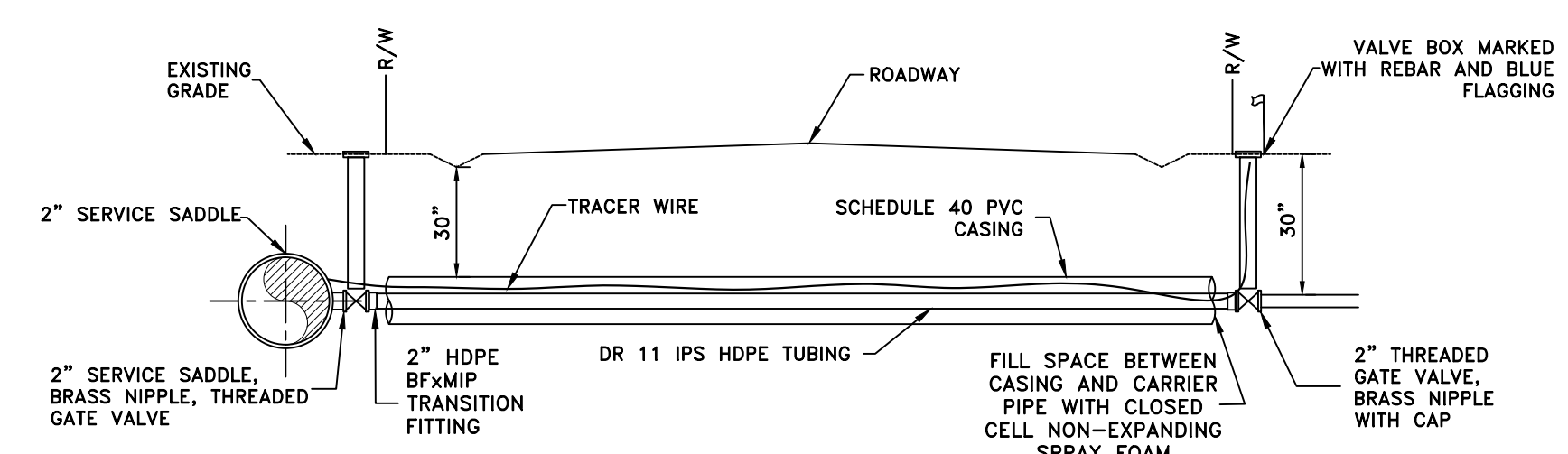
SERVICE LINE CROSSING
DETAIL FOR SUBDIVISION

- NOTES:
- 1.) ALL 2\"/>



TYPICAL METER SETTING FOR
2" SERVICE LINE

- NOTES:
- 1.) GATE VALVES ARE TO BE INSTALLED ON PROPERTY CORNERS AS DIRECTED BY WSB.
 - 2.) CASING SHALL EXTEND THE ENTIRE RIGHT OF WAY, SHORTENED AS NEEDED FOR GATE VALVE.
 - 3.) ALL CROSSINGS SHALL BE BACKFILLED WITH CRUSHED STONE.
 - 4.) ALL FITTINGS SHALL BE INSTALLED WITH TEFLON TAPE OR JOINT COMPOUND.
 - 5.) ALL SHOWN MATERIAL SHALL BE SUPPLIED BY THE DEVELOPER.
 - 6.) IF THE SERVICE LINE IS LONGER THAN 10 FEET AND TO BE WITHIN A 200' RADIUS OF AN UNDERGROUND FUEL STORAGE TANK, USE NON-PERMEABLE MATERIAL (I.E. TAPPING SLEEVE/TEE AND VALVE WITH 4" DUCTILE IRON PIPE AND NITRILE GASKETS).



TYPICAL 2" LONG SIDE
SERVICE LINE

SCALE: NOT TO SCALE

DATE: 04-22-2026

DWG NO.: WD2

DESIGNED: WCD

DRAWN: BCP

CHECKED: CRH

REVISIONS:

NO. DATE:

DRAWING:

WD2