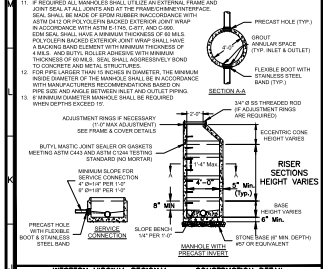
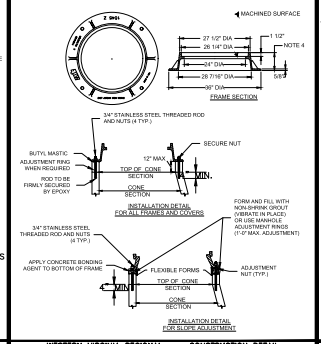
1. MATERIALS AND FABRICATION IN ACCORDANCE WITH ASTM C478-09.
2. WHEN USED AS SAMPLING MANHOLE FLOW SHALL PASS STRAIGHT THROUGH, i.e., 180°.
3. STEPS SHALL BE VERTICALLY ALIGNED. FIRST STEP SHALL BE WITHIN 12" OF COVER; BOTTOM STEP SHALL BE WITHIN 24" OF BOTTOM OF MANHOLE.
4. FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2 FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.
5. FLAT TOP MANHOLES MAY ONLY BE SUBSTITUTED WITH THE PERMISSION OF THE PARTICIPATING UTILITY.
6. FLEXIBLE JOINT MANHOLE CONNECTION SHALL BE AS MANUFACTURED BY PRES-SEAL GASKET CORPORATION OR EQUAL.
7. GROUT ANNULAR SPACE BETWEEN PIPE AND PRECAST MANHOLE ON INSIDE OF MANHOLE.
8. 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.
9. 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 IMPERVIOUS TO WATER PRESSURE OF 10 PSI OR GREATER.
10. IF REQUIRED EXTERIOR VERTICAL WALL SURFACES SHALL BE FACTORY COATED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. COATING SHALL BE HIGH BUILD COAL TAR EPOXY MEETING ASTM D1027. COATING SHALL BE APPLIED IN TWO COATS TO A MINIMUM TOTAL THICKNESS OF 16 MILS.
11. IF REQUIRED ALL MANHOLES SHALL UTILIZE AN EXTERNAL FRAME AND JOINT SEAL AT ALL JOINTS AND AT THE FRAME/CHIMNEY/INTERFACE. SEAL SHALL BE MADE OF EPDM RUBBER (NACCORDANCE WITH ASTM D412 OR POLYOLEFIN BACKED EXTERIOR JOINT WRAP IN ACCORDANCE WITH ASTM E-1745, C-877, AND C-990. EDM SEAL SHALL HAVE A MINIMUM THICKNESS OF 60 MILS. POLYOLEFIN BACKED EXTERIOR JOINT WRAP SHALL HAVE A MINIMUM THICKNESS OF 30 MILS AND A TOTAL THICKNESS OF 4 MILS. AND BUTYL ROLLER ADHESIVE WITH MINIMUM THICKNESS OF 60 MILS. SEAL SHALL AGGRESSIVELY BOND TO CONCRETE AND METAL STRUCTURES.
12. 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.
13. IF MINIMUM DIAMETER MANHOLE SHALL BE REQUIRED WHEN DEPTHS EXCEED 15'.



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

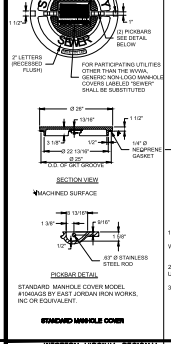
4' STANDARD MANHOLE FOR PIPE 15" OR SMALLER (FOR DEPTHS UP TO 15 FEET) — 01/01/14 — S-1

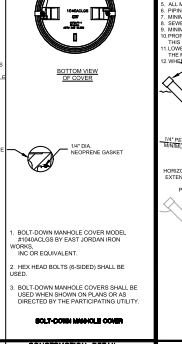
1. WATERTIGHT MANHOLE FRAME #1045Z BY EAST JORDAN IRON WORKS, INC. OR EQUIVALENT.
2. HDPE ADJUSTMENT RINGS SHALL MEET H-20 LOAD RATING, AND SHALL BE INTERLOCKING OR UTILIZE BUTYL MASTIC JOINT SEALANT BETWEEN EACH RING TO FORM A WATERTIGHT JOINT.
3. CONCRETE ADJUSTMENT RINGS SHALL MEET H-20 LOAD RATING AND UTILIZE BUTYL MASTIC JOINT SEALANT BETWEEN EACH RING AND FRAME AN COVER TO FORM A WATERTIGHT JOINT.
4. FRAME HEIGHT SHALL BE 7" FOR BURIED LOCATIONS AND 4" FOR EXPOSED LOCATIONS.



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

WATERTIGHT MANHOLE FRAME — 01/01/14 — S-4

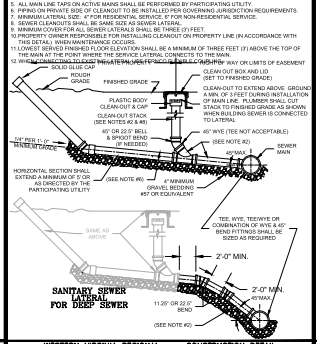




WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

WATERTIGHT MANHOLE COVER — 01/01/14 — S-5

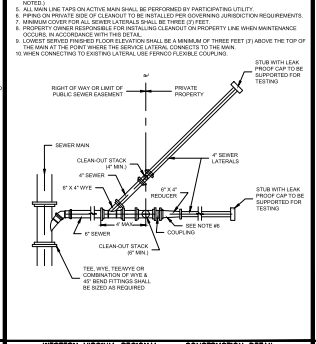
1. TRAFFIC BEARING BOX AND LID REQUIRED IN TRAFFIC AREAS (CAPITOL FOUNDRY VB-9"S).
2. SEWER LATERAL AND CLEANOUT PIPING SHALL BE ASTM D3034 SDR 26. SEWER LATERAL FITTINGS SHALL BE OF SAME SDR RATING AS THE SEWER MAIN. SCHEDULE 40 SOLVENT WELD PIPE AND FITTINGS MAY BE USED FOR THE SEWER LATERAL AND CLEANOUT ASSEMBLY WITH APPROVAL FROM THE PARTICIPATING UTILITY.
3. ALL PIPE 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 COVER FOR ALL SEWER LATERALS SHALL BE THREE (3') FEET.
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 SERVICED 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 EAST PRIVATE SIDE OF PUBLIC RIGHT-OF-WAY OR LIMITS OF EASEMENT



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

SANITARY SEWER LATERAL — 01/01/14 — S-6

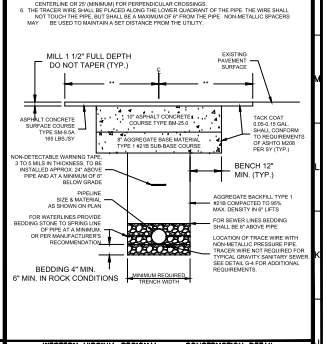
1. TRAFFIC BEARING BOX REQUIRED IN TRAFFIC AREAS.
2. SEWER LATERAL AND CLEANOUT PIPING SHALL BE ASTM D3034 SDR 26. SEWER LATERAL FITTINGS SHALL BE OF SAME SDR RATING AS THE SEWER MAIN. SCHEDULE 40 SOLVENT WELD PIPE AND FITTINGS MAY BE USED FOR THE SEWER LATERAL AND CLEANOUT ASSEMBLY WITH APPROVAL FROM THE PARTICIPATING UTILITY.
3. ALL PIPE SHALL BE OF SIZE SHOWN.
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 SHALL BE PERFORMED BY PARTICIPATING UTILITY.
6. PIPING ON PRIVATE SIDE OF CLEANOUT TO BE INSTALLED PER GOVERNING JURISDICTION REQUIREMENTS.
7. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3') FEET.
8. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS. IN ACCORDANCE WITH THIS DETAIL.
9. 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.
10. WHEN CONNECTING TO EXISTING LATERAL USE FERNCO FLEXIBLE COUPLING.



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

DOUBLE LATERAL COMBINED 6" BY TWO 4" LATERALS — 01/01/14 — S-7

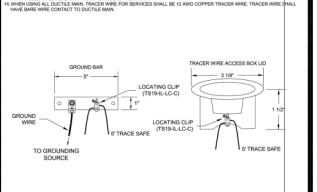
1. ALL PAVEMENT MARKINGS DAMAGED OR DESTROYED BY TRENCH EXCAVATION ACTIVITY SHALL BE REPLACED BY THE PERMITEE PER VDOT SPECIFICATIONS.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3. THIS DETAIL FOR HIGHWAYS WITH EXISTING ASPHALT CONCRETE PAVEMENT SECTIONS.
4. THE EXTENT OF PAVEMENT RESTORATION FOR ALL OTHER PAVEMENT CUTS SHALL BE DETERMINED BY THE DISTRICT ADMINISTRATOR'S DESIGNEE.
5. "*" WIDTH OF TRAVEL LANE MINIMUM FULL PAVEMENT WIDTH FOR OPEN CUT TRENCHING ALONG ROAD CENTERLINE OR 25' (MINIMUM) FOR PERPENDICULAR CROSSINGS.
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

VDOT LAND USE PERMIT OPEN CUT PAVEMENT RESTORATION — 01/01/14 — G-13

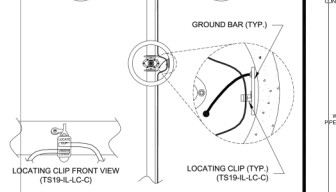
1. TRACER WIRES SHALL BE INSTALLED USING MANHOLES, TRACER WIRE ACCESS BOXES, VALVE BOXES OR VAULTS, WATER METERS OR ACCESS POINTS ALONG THE PIPE.
2. FOR WATER AND SEWER INSTALLED BY OPEN TRENCHING, HORIZONTAL DIRECTIONAL DRILLING OR PIPE BURSTING, TRACER WIRE SHALL BE NEPTCO TRACE-SAFE WATER BLOCKING TRACER WIRE OR APPROVED EQUAL.
3. SPLICES SHALL ONLY BE MADE WITH GEL FILLED CONNECTORS DESIGNED FOR WIRE WITH A WOVEN POLYESTER FIBER (ONE SUCH AS NEPTCO TRACE-SAFE WATER BLOCKING CONNECTORS OR APPROVED EQUAL. SPLICES SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING CONTINUITY AT ALL SPLICE LOCATIONS.
4. WHERE HDPE PIPE IS INSTALLED WITHOUT STEEL CASING PIPE, SUCH AS A DIRECTIONALLY DRILLED CROSSINGS, AND CONNECTED TO DUCTILE IRON PIPE ON EACH END, TRACER WIRE SHALL BE INSTALLED ALONG FULL LENGTH OF HDPE PIPE WITH AN ACCESS POINT INSTALLED AT EACH HDPE/DUCTILE IRON TRANSITION. TRACER WIRE SHALL BE CONNECTED TO THE ACCESS POINT ON DUCTILE IRON PIPE. AT THE HDPE/DUCTILE IRON TRANSITION FROM DUCTILE IRON MAIN TO NON-DUCTILE IRON MAIN SHALL HAVE AN ACCESS POINT TO BEGIN TRACER WIRE.
5. AS-BUILTS SHALL SHOW TRACER WIRE(S) LOCATION AND ACCESS POINT(S), ALONG WITH BUTT SPLICE LOCATIONS.
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.
7. WIRE SHALL BE BROUGHT TO THE SURFACE EVERY **FIVE HUNDRED (500)** FEET AND PLACED IN A WATER METER BOX OR / DRAINAGE & WATER SOLUTIONS, INC. (OR APPROVED EQUAL) ALL CAST IRON TRACER WIRE ACCESS BOX.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING THE TRACER WIRE AT THE PROJECT'S FINAL ACCEPTANCE. CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING ALL CONTINUITY OF TRACER WIRE.
9. THE GROUND WIRE SHALL BE #6 AWG COPPER WIRE AND SHALL BE OF ADEQUATE LENGTH TO EXTEND A MINIMUM OF (5) FIVE FEET BEYOND THE TOP OF THE STRUCTURE. THE END OF THE GROUND WIRED SHALL CONNECT TO THE GROUND BAR OR LID TERMINAL USING A BURNDY KWU MECHANICAL TERMINAL LUG.
10. THE GROUND BAR SHALL BE 5" LONG AND 1" WIDE. THE GROUND WIRE SURFACES AND CONNECTS TO GROUND BAR. GROUND ROD SHALL BE COPPER COATED WITH A MINIMUM DIAMETER OF 5/8" AND SHALL BE BURIED A MINIMUM OF FOUR (4) FEET INTO THE GROUND.
11. THE GROUND BAR SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED USING SS 2" X 1/2" SS HEX TAPCON. THE FOLLOWING SHALL BE INSTALLED IN (4) FOUR CENTER HOLES: 10-32SS NUTS, #10 SS WASHERS AND 10-32 X 3/8 PHILLIPS. THE FOURTH HOLE SHALL BE ELIGIBLE FOR A NO MECHANICAL TERMINAL LUG FOR THE #6 AWG GROUND WIRE. THE ASSEMBLY CAN BE ACQUIRED AT DRAINAGE & WATER SOLUTIONS, INC. 040-353-0850 - CLAMP NFC-11. THE ENDS OF THE TRACER WIRES SHALL BE PLACED IN THE GROUND BAR AS SHOWN.
12. IF USING TRACER WIRE ACCESS BOX AS ACCESS POINT GROUND BAR WILL NOT BE REQUIRED. WIRES SHALL BE CONNECTED AS SHOWN BELOW. TRACER WIRE SHALL BE OF ADEQUATE LENGTH TO EXTEND FIVE (5) FEET ABOVE THE TOP OF ACCESS BOX.
13. TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.
14. WHEN USING ALL DUCTILE MAIN, TRACER WIRE FOR SERVICES SHALL BE 12 AWG COPPER TRACER WIRE. TRACER WIRE SHALL HAVE BARE WIRE CONTACT TO DUCTILE MAIN.



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TRACER WIRE FOR NON-METALLIC PRESSURE PIPE — 06/06/16 — G-4

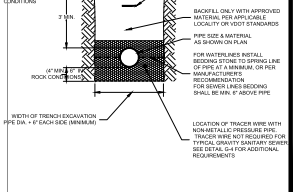
BLUE = TRACE SAFE TRACER WIRE
BLACK = GROUND WIRE & GROUND BAR
TS19-IL-LC-C = TRACE SAFE LOCATING CLIP AT GROUND BAR
TS19-C = SERVICE LATERAL TRACE SAFE CONNECTOR
GROUND WIRE = #6 AWG COPPER WIRE
NOTE: LEAVE FIVE FEET (5') OF EXCESS TRACER WIRE COILED UP IN VAULT



WESTERN VIRGINIA REGIONAL - CONSTRUCTION DETAIL

TRACER WIRE SAMPLE TEE/CROSS INTERSECTION — 06/06/16 — G-4A

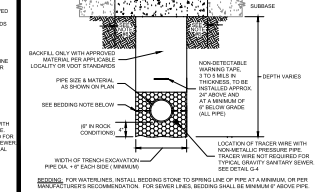
1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE, OR CRUSHER RUN.
3. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS FROM BOTTOM OF TRENCH TO 1' ABOVE THE PIPE AND THE REMAINING SHALL BE PLACED IN 10" LIFTS AND BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
4. BEDDING REQUIREMENTS FOR DUCTILE IRON WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
5. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
6. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS — 01/01/14 — G-11

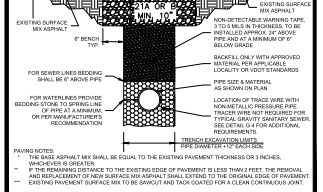
1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3. IN VDOT ROW, THE CONTRACTOR SHALL REPLACE THE PAVEMENT AS REQUIRED AND SPECIFIED BY VDOT. THE PAVEMENT SECTION SHALL CONSIST OF 3" VDOT BM-25.0, AND SUBBASE OF 10" VDOT 21B, OR AS REQUIRED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL REPLACE PAVEMENT AS REQUIRED BY CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS, LATEST EDITION.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
5. PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
6. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL, SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
7. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL, SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
8. PVC PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE SEWER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
9. BENCH CUT ON EACH SIDE OF PAVEMENT WILL BE IN ACCORDANCE WITH THE APPLICABLE LOCALITY'S SPECIFICATIONS.
10. ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
11. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.



WESTERN VIRGINIA REGIONAL – CONSTRUCTION DETAIL

BEDDING AND BACKFILL UNDER PAVEMENT AND IN RIGHT-OF-WAY — 01/01/14 — G-12

1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3. IN VDOT ROW, THE CONTRACTOR SHALL REPLACE THE PAVEMENT AS REQUIRED AND SPECIFIED BY VDOT. THE PAVEMENT SECTION SHALL CONSIST OF 3" VDOT BM-25.0, AND SUBBASE OF 10" VDOT 21B, OR AS REQUIRED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL REPLACE PAVEMENT AS REQUIRED BY CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS.
4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
5. PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
6. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
7. IN AREAS SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL, SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
8. PVC PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE SEWER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
9. BENCH CUT ON EACH SIDE OF PAVEMENT: CITY OF ROANOKE EQUALS 12"; VDOT RIGHT-OF-WAY EQUALS 6". ALL EXCAVATIONS SHALL COMPLY WITH OSHA TECHNICAL MANUAL, CHAPTER 2, TITLED "EXCAVATIONS: HAZARD RECOGNITION IN TRENCHING AND SHORING."
10. THE TRACER WIRE SHALL BE PLACED ALONG THE LOWER QUADRANT OF THE PIPE. THE WIRE SHALL NOT TOUCH THE PIPE, BUT SHALL BE A MAXIMUM OF 6" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.


ROADWAY
6" MIN.
MIN. 1" ASPHALT CONCRETE SURFACE COURSE TYPE (SM)
6" MIN.
EDGE OF PAVEMENT
EXISTING SURFACE MIX ASPHALT
ROADWAY
EXISTING SURFACE MIX ASPHALT
6" BENCH TYP.
NON-DETECTABLE WARNING TAPE, 3 TO 5 MILS IN THICKNESS, TO BE INSTALLED APPROX. 24" ABOVE PIPE AND AT A MINIMUM OF 6" BELOW GRADE
BACKFILL ONLY WITH APPROVED MATERIAL PER APPLICABLE LOCALITY OR VDOT STANDARDS
FOR SEWER LINES BEDDING SHALL BE 6" ABOVE PIPE
PIPE SIZE & MATERIAL AS SHOWN ON PLAN
FOR WATERLINES PROVIDE BEDDING STONE TO SPRING LINE OF PIPE AT A MINIMUM, OR PER MANUFACTURER'S RECOMMENDATION
LOCATION OF TRACE WIRE WITH NON-METALLIC PRESSURE PIPE. TRACER WIRE NOT REQUIRED FOR TYPICAL GRAVITY SANITARY SEWER SEE DETAIL G-4 FOR ADDITIONAL REQUIRE