



**TECTON
PRODUCTS, LLC
MANUFACTURING
FACILITY**

ROANOKE COUNTY, VIRGINIA

REV	DATE	DESCRIPTION	APP

COMM NO: 50298
ISSUE DATE: OCTOBER 28, 2005
DESIGNED BY: TJG DRAWN BY: TJG
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CIVIL

DETAILS

WWW.IDP.BKVPQ

C502

NOTES:

- BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
- WHEN INSTALLING NON-METALLIC PIPE, NON-DETECTABLE WARNING TAPE SHALL BE BURIED AT A MINIMUM 6" BELOW GRADE AND APPROXIMATELY 12" TO 18" ABOVE NON-METALLIC PIPE. IT SHALL BE 3 TO 5 MILS IN THICKNESS AND INSTALLED CONTINUOUS FROM VALVE BOX TO VALVE BOX OR MANHOLE TO MANHOLE.
- ALL PVC PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL WHICH SHALL BE CRUSHED STONE MEETING VDOT STANDARDS FOR GRADUATION 57 OR 68 STONE.
- IN AREAS NOT SUBJECTED TO VEHICULAR TRAFFIC, BEDDING STONE AND FILL SHALL BE PLACED IN 10" LIFTS AND SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.
- ALL SEWER LINE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.

EXISTING PAVEMENT SECTION

NOTES:

- IN ROANOKE COUNTY, THE CONTRACTOR SHALL REPLACE THE OPEN CUT WITH A MINIMUM TOP COURSE OF 2" VDOT SM-9.5A, BASE COURSE OF 3" VDOT BM-2, AND SUBBASE OF 8" VDOT 21B, OR AS REQUIRED BY VDOT. IN ROANOKE CITY, CONTRACTOR SHALL MATCH EXISTING PAVEMENT LAYERS OR AS REQUIRED BY CITY STANDARDS.
- ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE AS SPECIFIED BY VDOT OR APPLICABLE LOCALITY.
- PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM VDOT AND/OR APPLICABLE LOCALITY.
- ALL WATER LINES BENEATH PAVEMENT SHALL BE DUCTILE IRON UNLESS INSTALLED IN CASING PIPE OR BY DIRECTIONAL BORING.
- IN AREAS SUBJECT 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.
- ALL SEWER LINE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.

1. TRACER WIRES SHALL BE INSTALLED USING MANHOLES, VALVE BOXES OR VAULTS, WATER METERS AND FIRE HYDRANTS AS ACCESS POINTS.

2. TRACER WIRE SHALL BE A 12 GAUGE SOLID COPPER WIRE WITH POLYETHYLENE INSULATION OF 30 MIL THICKNESS.

3. SPLICES SHALL BE MADE USING A 3M DIRECT BURY SPLICE KIT (DBY) OR EQUIVALENT.

4. THE CONTINUOUS TRACER WIRE SHALL COVER A MAXIMUM LENGTH OF 500'.

5. ASBUILTS SHALL SHOW TRACER WIRE(S) LOCATION AND ACCESS POINT(S).

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 8" FROM THE PIPE. NON-METALLIC SPACERS MAY BE USED TO MAINTAIN A SET DISTANCE FROM THE UTILITY.

7. WHERE LINES ARE GREATER THAN SIX(6) FEET IN DEPTH, WIRE SHALL BE BROUGHT TO THE SURFACE EVERY ONE HUNDRED (100) FEET AND PLACED IN A WATER METER BOX OR APPROVED JUNCTION BOX.

8. THE TRACER WIRE SHALL BE TESTED BY THE AUTHORITY AS PART OF THE PROJECT'S FINAL ACCEPTANCE.

PLAN AND ELEVATION PLUGS

NOTES:

- FOR VERT. BEND DOWN IN EXCESS OF 11 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
- FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
- GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
- ALL THRUST BLOCK & SUPPORT CONC. SHALL BE 3000 PSI READY MIX CONC.
- THRUST BLOCKS WITH 12" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4" OF COVER.

PRESSURE = 200 psi
BEARING = 2000 psi
FACTOR OF SAFETY = 1.5

PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE	PLUG
4"	8"	12"	8"	8"	6"	6"
6"	12"	18"	12"	12"	10"	10"
8"	18"	24"	18"	18"	14"	14"
10"	24"	36"	24"	24"	18"	18"
12"	30"	48"	30"	30"	22"	22"
16"	42"	60"	42"	42"	30"	30"
24"	60"	90"	60"	60"	42"	42"
30"	72"	108"	72"	72"	54"	54"

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE

07/01/04

BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS

G-01

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE

07/01/04

BEDDING AND BACKFILL UNDER PAVEMENT

G-02

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE

07/01/04

TRACER WIRE FOR NON-METALLIC PRESSURE PIPE

G-05

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE

07/01/04

THRUST BLOCK CONSTRUCTION

W-19

NOTES:

- MAIN BODY OF HYDRANT MUST BE PAINTED SILVER WITH RED REFLECTIVE CAPS AND BONNET.
- FIRE HYDRANT SHALL BE INSTALLED 2" MIN. AND 4" MAX. FROM BACK OF CURB OR 6" MIN. AND 12" MAX. WHEN CURB IS NOT PRESENT. FIRE HYDRANT TO BE INSTALLED WITHIN RIGHT-OF-WAY OR EASEMENT LINE.
- AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE LEVEL AND UNOBSTRUCTED.
- WATERPROOF BAGS SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
- HIGH PRESSURE (OVER 120 PSI) REQUIRES THE USE ALL 3 RESTRAINTS.

CORPORATION STOP TO BE INSTALLED WITH TAPPING SADDLE. SEE W-11 NOTE 92 FOR SERVICE SADDLE DETAILS.

HATCH SHALL BE BILCO MODEL J-3AL (3'0"x2'6") OR APPROVED EQUAL W/ERT

METER BOX DIA.

METER	BOX DIA.
5/8"	18"
3/4"	24"
1 1/2"	30"
2"	36"

TYPE 'K' COPPER SERVICE 1" MIN. OR SIZED TO MATCH METER

1-1/2" BYPASS LINE W/ LOCKABLE VALVE

COMPACTED GRAVEL

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE

07/01/04

FIRE HYDRANT ASSEMBLY

W-18

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REVISION DATE

07/01/04

COMMERICAL WATER SERVICE

W-05

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BLOW-OFF ASSEMBLY FOR MAIN LINE TEMPORARY TERMINATION

W-10

WESTERN VIRGINIA WATER AUTHORITY - CONSTRUCTION STANDARDS

REVISION DATE

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AUTOMATIC AIR RELEASE ASSEMBLY

W-12