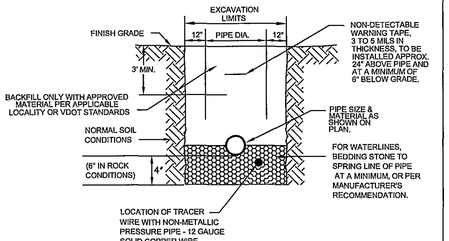
NOTES:

1. BEDDING, HAUNCHING AND INITIAL BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
2. ALL PVC PIPE SHALL BE BEDDED IN COMPACTED VDOT #57 OR #68 STONE.
3. IN AREAS NOT 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 SHALL 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."




| WESTERN VIRGINIA WATER AUTHORITY – CONSTRUCTION STANDARDS | | | |
|---|---|---|---|
| REVISION DATE | | | |
| 07/01/04 | | | |
| 03/01/06 | | | |
| | BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS | W-24 | |

EXISTING PAVEMENT SECTION
LIMITS OF OPEN CUT
SM-9.5A SURFACE
BM-2 BASE
21B SUBBASE
SEE NOTE 5 FOR MIN. WIDTH
PIPE DIA. + 12" EACH SIDE
SEE NOTE 5 FOR MIN. WIDTH
DEPTH VARIES
BACKFILL ONLY WITH APPROVED MATERIAL PER APPLICABLE LOCALITY OR VDOT STANDARDS
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.
PIPE SIZE & MATERIAL AS SHOWN ON PLAN
(6" IN ROCK CONDITIONS) 4"
FOR WATER LINES, BEDDING STONE SHALL BE TO SPRING LINE OF PIPE AT A MINIMUM, OR PER MANUFACTURER'S RECOMMENDATION.
WIDTH OF TRENCH EXCAVATION
LOCATION OF TRACER WIRE WITH NON-METALLIC PRESSURE PIPE - 12 GAUGE SOLID COPPER WIRE

NOTES:

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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. BEDDING REQUIREMENTS FOR DUCTILE WATER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
8. BENCHCUT ON EACH SIDE OF PAVEMENT: CITY OF ROANOKE EQUALS 12"; VDOT RIGHT-OF-WAY EQUALS 6".
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| WESTERN VIRGINIA WATER AUTHORITY – CONSTRUCTION STANDARDS | | | |
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| REVISION DATE | | | |
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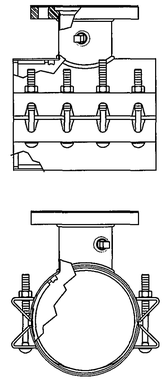
| | BEDDING AND BACKFILL UNDER PAVEMENT AND RIGHT-OF-WAY | W-25 | |



1. TAPPING SLEEVE SHALL BE POWERSEAL MODEL 3490 TYPE 304 STAINLESS STEEL WITH CARBON STEEL FLANGE, ROMAC'S MODEL SST III OR APPROVED EQUIVALENT. SLEEVE SHALL BE RATED AT 250 PSI AND MUST HAVE A TEST PLUG.
2. TAPPING VALVE SHALL BE AVK RESILIENT SEATED GATE VALVE SERIES 25 MJFL OR MUELLER *T-2360 RESILIENT WEDGE TAPPING VALVE WITH MJFL*. VALVE SHALL BE RATED AT 250 PSI.
3. TAPPING SLEEVE AND VALVE SHALL BE FULL PORT TO ACCEPT FULL SIZE SHELL CUTTER.

| WESTERN VIRGINIA WATER AUTHORITY – CONSTRUCTION STANDARDS | | | |
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| REVISION DATE | | | |
| 07/01/04 | | | |
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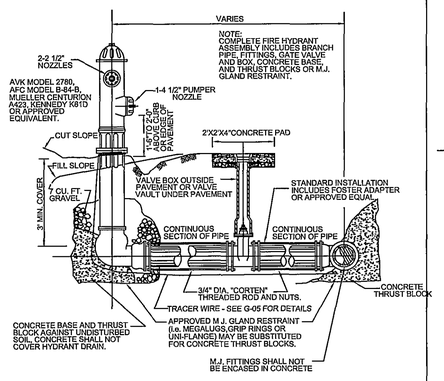
| | TAPPING SLEEVE AND VALVE | W-23 | |

NOTES:

1. PUBLIC HYDRANTS SHALL BE PAINTED SILVER WITH AN OIL-BASED PAINT AND PRIVATE HYDRANTS SHALL BE PAINTED WHITE WITH AN OIL-BASED PAINT.
2. 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.
3. AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE LEVEL AND UNOBSTRUCTED.
4. WATERPROOF BAGS SHALL BE PLACED OVER ALL NEWLY INSTALLED FIRE HYDRANTS.
5. HIGH PRESSURE (OVER 120 PSI) REQUIRES THE USE ALL 3 RESTRAINTS.

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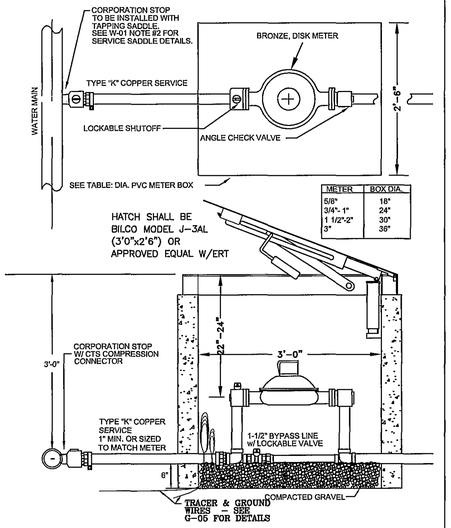
| REVISION DATE | | | |
| 07/01/04 | | | |
| 03/01/06 | | | |
| | FIRE HYDRANT ASSEMBLY | W-18 | |

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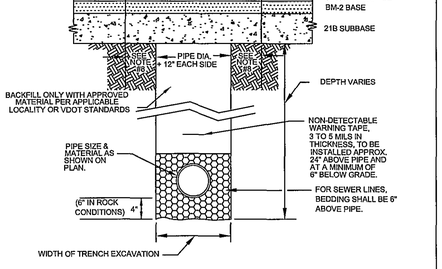
| REVISION DATE | | | |
| 07/01/04 | | | |
| 03/01/06 | | | |
| | COMMERICAL WATER SERVICE | W-05 | |




NOTES:

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7. ALL SEWER LINE PIPE SHALL BE BEDDED IN COMPACTED GRANULAR MATERIAL. BEDDING REQUIREMENTS FOR DUCTILE SEWER LINE ARE DEPENDENT ON MANUFACTURER'S BEDDING CRITERIA.
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| WESTERN VIRGINIA WATER AUTHORITY – CONSTRUCTION STANDARDS | | | |
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| REVISION DATE | | | |
| 07/01/04 | | | |
| 03/01/06 | | | |
| | BEDDING AND BACKFILL UNDER PAVEMENT AND RIGHT-OF-WAY | S-31 | |

NOTES:

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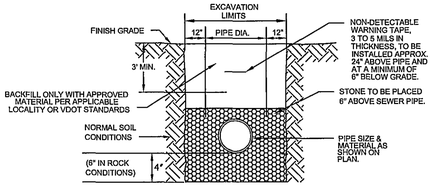


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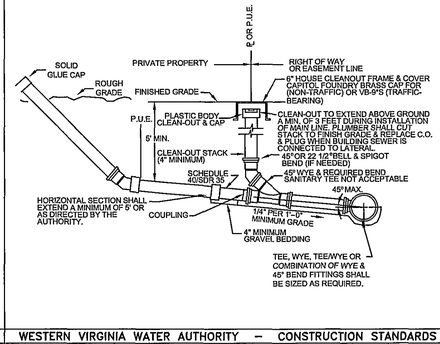
| REVISION DATE | | | |
| 07/01/04 | | | |
| 03/01/06 | | | |
| | BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS | S-30 | |

GENERAL NOTES:

1. TRAFFIC BEARING BOX REQUIRED IN TRAFFIC AREAS.
2. ALL PIPE AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
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 AS NOTED)
5. ALL MAIN LINE TAPS ON ACTIVE MAINS WILL BE PERFORMED BY WESTERN VIRGINIA WATER AUTHORITY.
6. PIPING BEHIND CLEANOUT TO BE INSTALLED PER BOCA CODE.
7. MINIMUM LATERAL SIZE:
   4" FOR RESIDENTIAL SERVICE
   6" FOR NON-RESIDENTIAL SERVICE
8. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE(3') FEET.
9. PROPERTY OWNER RESPONSIBLE FOR INSTALLING CLEANOUT ON PROPERTY LINE WHEN MAINTENANCE OCCURS, IN ACCORDANCE WITH THIS STANDARD.
10. FLOWLINE AT CLEANOUT WYE SHALL BE A MINIMUM OF THREE FEET (3') BELOW LOWEST SERVED FINISHED FLOOR




| WESTERN VIRGINIA WATER AUTHORITY – CONSTRUCTION STANDARDS | | | |
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| REVISION DATE | | | |
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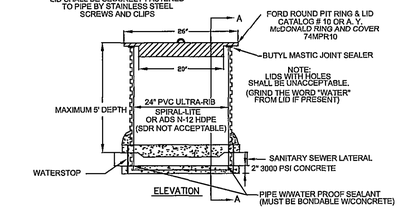
| | SANITARY SEWER LATERAL | S-08 | |

NOTE:
LID SHALL BE SECURELY FASTENED TO PIPE BY STAINLESS STEEL SCREWS AND CLIPS




NOTES:

1. NOT ACCEPTABLE FOR USE IN TRAFFIC AREAS OR AREAS SUBJECT TO FLOODING.
2. VACUUM OR EXFILTRATION TESTING SHALL BE USED. VACUUM TESTING SHALL MEET THE SAME STANDARD FOR CONCRETE MANHOLES. EXFILTRATION TESTING SHALL HAVE NO LEAKAGE WITHIN 1 HOUR.
3. "AquaBlok" WASTEWATER ACCESS CHAMBERS MAY BE SUBSTITUTED. TRAFFIC BEARING BOXES WILL BE REQUIRED IF INSTALLED IN TRAFFIC AREAS. TESTING OF "AquaBlok" SHALL BE BY APPLICABLE PLUMBING CODE FOR SEWER LATERALS.
4. 2' DIA. CONCRETE WELL CASING 3000 PSI MAY BE SUBSTITUTED FOR ULTRA-RIB PIPE. ANY VERT. JOINTS IN THE CASING PIPE MUST BE BY BELL & SPIGOT CONNECTION WITH MASTIC.
5. INVERT SHAPING/CHANNEL SHALL BY 180 DEGREES THROUGH SAMPLE MANHOLE. NO ANGLES, RADIUS, ETC ARE ALLOWED IN SAMPLE MANHOLES.

| WESTERN VIRGINIA WATER AUTHORITY – CONSTRUCTION STANDARDS | | | |
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| REVISION DATE | | | |
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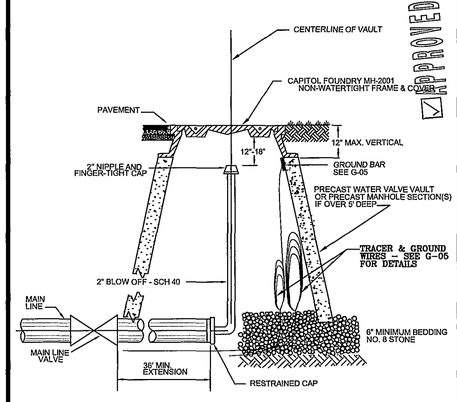
| | SAMPLING STRUCTURE DETAIL | S-07 | |

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| REVISION DATE | | | |
| 07/01/04 | | | |
| 03/01/06 | | | |
| | BLOW-OFF ASSEMBLY FOR MAIN LINE TEMPORARY TERMINATION | W-10 | |


COMMONWEALTH OF VIRGINIA
ROGER I. STURGILL
No. 033058
PROFESSIONAL ENGINEER

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BOJANGLES RESTAURANT
WWWA DETAILS
HOLLINS
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY: BTC
DESIGNED BY: BTC
CHECKED BY: RIS
DATE: 2-15-07
REVISIONS:
4-18-07
6-5-07
6-29-07

SCALE: AS SHOWN

SHEET NO.
C-16

JOB NO.
R0600307.00