

WATER NOTES:

1. WATER LINES SHALL NOT BE PLACED WITHIN 10 HORIZONTAL FEET OF EXISTING OR PROPOSED SANITARY DRAIN FIELDS AND/OR SEPTIC TANKS.
2. ALL VALVES, BENDS, TEES, PLUGS, & CAPS SHALL BE RESTRAINED WITH MECHANICAL RESTRAINING DEVICES IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS. CONCRETE ANCHORS IN LIEU OF MECHANICAL RESTRAINTS, IF APPROVED BY OWNER, SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND DETAILS.
3. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36". WATER LINES SHALL BE LAID DEEPER WHERE SHOWN ON THE PROFILES, OR WHERE NECESSARY TO ACCOMMODATE THE BURY DEPTH OF VALVES ,VALVE VAULTS, AND FIRE HYDRANTS.
4. ALL WATER LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY STANDARDS.
5. COMBINATION AIR RELEASE VALVES SHOWN ON PLANS SHALL BE FIELD LOCATED AT THE HIGH POINT IN THE WATER MAIN.
6. NO BLOW OFF VALVE, AIR RELEASE VALVE, VACUUM BREAKER, OR OTHER FLUSHING DEVICE SHALL BE DIRECTLY CONNECTED TO ANY SANITARY SEWER OR STORM DRAIN SEWER.
7. THE CONTRACTOR SHALL CONTINUOUSLY KEEP UP TO DATE WITH PROPERTY RESTORATION, SEEDING, AND COMPACTION TESTING.
8. ALL PROPOSED WATER SERVICE LINES SHALL BE 1" UNLESS OTHERWISE NOTED.
9. ALL EXISTING UTILITIES MAY NOT BE SHOW IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH THE VDH WATERWORKS REGULATIONS WHERE LINES CROSS SANITARY SEWERS.
10. ALL TRENCHES IN EXISTING OR FUTURE VDOT RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.
11. A CONTINUOUS UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL PIPE. STONES AND ROCKS FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 6" BELOW THE BOTTOM OF THE PIPE AND TAMPED SELECTED FILL BEDDING PROVIDED. AFTER THE PIPE HAS BEEN PLACED IN THE TRENCH, THE TRENCH SHALL BE BACKFILLED WITH SELECTED MATERIAL, THOROUGHLY COMPACTED TO 95% UNDER PAVEMENT, OF THE STANDARD PROCTOR (ASTM D 698) USING CARE NOT TO DAMAGE THE PIPE.
12. ALL EXISTING WATER SERVICES SHALL BE REPLACED WITH NEW SERVICES. ALL WATER SERVICES SHALL BE BORED UNLESS OTHERWISE NOTED. ALL WATER METERS SHALL BE INSTALLED BY THE WESTERN VIRGINIA WATER AUTHORITY.
13. THE CONTRACTOR SHALL PROVIDE A LICENSED GEOTECHNICAL ENGINEER TO INSPECT BACKFILL MATERIAL AND PROVIDE COMPACTIONS TESTS AS REQUIRED BY THE VDOT LAND USE PERMIT, IF APPLICABLE.
14. OPEN-CUTS SHALL BE USED TO CONSTRUCT WATER LINES ACROSS EXISTING ROADS UNLESS OTHERWISE NOTED ON THE PLANS. ALL OPEN-CUTS SHALL BE PATCHED AS PER UTR-1 ON SHEET 15 AND THE AREAS NOTED ON THE PLANS SHALL BE MILLED AND OVERLAYED WITH A SURFACE MIX TO BLEND THE NEW AND EXISTING ASPHALT. SEE WORK IN CITY RIGHT-OF-WAY NOTES, THIS SHEET.
15. EXISTING WATER SERVICE CROSSINGS MAY NOT BE SHOWN IN PROFILE FOR CLARITY. CONTRACTOR SHALL INSTALL WATERLINE TO AVOID EXISTING WATER SERVICES.

GENERAL NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS AVAILABLE AT WWW.WESTERNVAVATER.ORG OR BY CONTACTING THE AUTHORITY AT 540-853-5700. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER AGENCY STANDARDS (E.G., VDOT, DEQ, DCR, VDH, ETC.) WHERE APPLICABLE.
2. THE AUTHORITY WILL INSTALL ALL NEW WATER METERS AND REMOVE ALL EXISTING WATER METERS. THE CONTRACTOR SHALL INSTALL COMPLETE NEW WATER SERVICES INCLUDING THE METER SETTER AND BOX. FOLLOWING METER REPLACEMENTS BY THE AUTHORITY, THE CONTRACTOR SHALL DEMOLISH THE EXISTING WATER METER SETTER AND BOX. THE CONTRACTOR SHALL COORDINATE EXISTING METER REMOVAL AND NEW METER INSTALLATION DIRECTLY WITH THE AUTHORITY. THE CONTRACTOR SHALL PROVIDE AT LEAST 3 BUSINESS DAYS ADVANCE NOTICE TO THE AUTHORITY PRIOR TO NEEDING METER INSTALLATIONS. THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITY TO PROVIDE A SERIES OF AT LEAST 10 SERVICES THAT ARE READY TO RECEIVE NEW METERS BEFORE CONTACTING THE AUTHORITY FOR WATER METER REPLACEMENT.
3. ALL CONNECTIONS TO EXISTING WATERLINES (USING WET TAPS) SHALL BE PERFORMED BY THE AUTHORITY. THE CONTRACTOR SHALL PROVIDE FULL STAINLESS STEEL TAPPING SLEEVE(S) AND VALVE(S). THE CONTRACTOR SHALL EXCAVATE TO THE EXISTING WATERLINE, SHORE THE TRENCH PER OSHA REQUIREMENTS, CLEAN THE EXISTING WATERLINE, AND INSTALL THE TAPPING SLEEVE AND VALVE PRIOR TO THE AUTHORITY PERFORMING THE TAP. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S UTILITY LINE SERVICES DIVISION AT 540-853-2792 AT LEAST 72 HOURS PRIOR TO REQUIREING THE CONNECTION. CONNECTION TO EXISTING WATERLINES PERFORMED BY CUT-INS SHALL BE PERFORMED BY THE CONTRACTOR AFTER CAREFUL COORDINATION WITH WVWA. WVWA SHALL OPERATE ALL VALVES ASSOCIATED WITH THE SHUTDOWN.
4. PRIOR TO CONSTRUCTION IN THE RIGHT-OF-WAY, ALL APPLICABLE PERMIT(S) FROM THE GOVERNING JURISDICTION AND/OR AGENCY MUST BE OBTAINED AND A COPY KEPT ON THE PROJECT SITE.
5. FOR PROJECTS REQUIRING TRAFFIC CONTROL IN THE CITY OF ROANOKE, NOTIFY MANAGER OF TRANSPORTATION, DWAYNE D'ARDENNE, AT 540-853-2676 AT LEAST 2 WEEKS IN ADVANCE OF REQUIRING TRAFFIC CONTROL. FOR A LANE CLOSURE PERMIT IN THE CITY OF ROANOKE, CONTACT THE TRAFFIC ENGINEER, HONG LIU, AT 540-853-2686. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE MOST RECENT MUTCD MANUAL AND THE VDOT WORK AREA PROTECTION MANUAL UNLESS OTHERWISE SPECIFIED.
6. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S ENGINEERING COORDINATOR, BRIAN WHITENACK, AT 540-400-4079 AT LEAST 3 DAYS PRIOR TO CONSTRUCTION.
7. A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST 1 DAY PRIOR TO ANY CONSTRUCTION.
8. THE CONTRACTOR SHALL HAVE A VALID VA811 UTILITY TICKET PRIOR TO EXCAVATION. CONTACT VA811.COM.
9. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE SHOWN IN THEIR EXACT LOCATION. CONTRACTOR SHALL LOCATE ALL UTILITIES AND DETERMINE ALL INVERT ELEVATIONS PRIOR TO CONSTRUCTION TO ALLOW FOR ADJUSTMENTS DUE TO CONFLICTS WITH OTHER UTILITIES. THE CONTRACTOR SHALL COMPLY WITH THE VIRGINIA STATE WATER WORKS REGULATIONS, SECTION 12VAC5-590-1150, AND THE VIRGINIA STATE SEWAGE COLLECTION AND TREATMENT REGULATIONS WHERE LINES CROSS.
10. AN APPROVED SET OF PLANS AND PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
11. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT.
12. PRIOR TO COMMENCING WORK, THE CONTRACTOR'S CERTIFIED RESPONSIBLE LAND DISTURBER SHALL OBTAIN AN EROSION AND SEDIMENT CONTROL PERMIT FOR THE PROJECT FROM THE LOCAL GOVERNING JURISDICTION AND DEQ (IF REQUIRED). ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
13. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING AL VEHICLES AND EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE STREETS ARE KEPT IN A CLEAN, MUD- AND DUST-FREE CONDITION AT ALL TIMES.
14. FIELD CHANGES SHALL BE APPROVED BY THE AUTHORITY'S ENGINEERING DIVISION PRIOR TO COMMENCEMENT OF CHANGES.
15. THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL MAINTAIN SAFE ACCESSIBILITY TO FIRE HYDRANTS AT ALL TIMES.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER PAVING. MANHOLE RIMS SHALL BE INSTALLED TO GRADE AND FLUSH WITH THE FINAL PAVEMENT.

17. UNREPAIRED ROADWAYS OPENED TO TRAFFIC SHALL HAVE, AT A MINIMUM, COMPACTED AGGREGATE MATERIAL VDOT 21A OR 21B FLUSH WITH THE ADJACENT ROADWAY SURFACE AND SHALL BE INSPECTED AND REPAIRED ON A DAILY BASIS. SOME AREAS WILL REQUIRE A TEMPORARY PATCH UNTIL FINAL PAVING CAN BE COMPLETED.
18. THE CONTRACTOR SHALL NOT EXCAVATE MORE TRENCH LENGTH THAN CAN BE RESTORED WITHIN THE SAME WORK DAY. ALL TRENCHES SHALL BE BACKFILLED OR PLATED AT THE END OF EACH WORK DAY OR WHEN THE CONTRACTOR IS NOT ON SITE.
19. THE CONTRACTOR SHALL SUPPLY THE AUTHORITY WITH CORRECT AS-BUILT PLANS (IN THE FORM OF NEAT, RED-LINE MARKUPS) BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.
20. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICE TO ALL EXISTING CUSTOMERS THROUGHOUT CONSTRUCTION. THIS MAY REQUIRE TEMPORARY CONNECTIONS AND/OR RELOCATION OF EXISTING SERVICE LINES AND METERS.
21. EXISTING IMPROVEMENTS THAT ARE REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION, AT THE EXPENSE OF THE CONTRACTOR.
22. IN AREAS WHERE IT IS NECESSARY TO BENCH SLOPES TO INSTALL UTILITY LINES, FINAL SLOPES SHALL BE RESTORED TO THE ORIGINAL SLOPE OR TO THE SLOPE NECESSARY TO SUCCESSFULLY STABILIZE THE SLOPE.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY ON THIS SITE. CONTRACTOR SHALL INSTALL ANY BARRIERS, TEMPORARY FENCING, FLASHERS, LIGHTING, OR ANY OTHER MEANS NECESSARY TO PROTECT UNAUTHORIZED PERSONNEL FROM HAZARDOUS AREAS.
24. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING SURROUNDING STRUCTURE. CONTRACTOR SHALL PROVIDE SHORING, OR OTHER MEANS NECESSARY TO PROTECT ADJACENT BUILDINGS AND PROPERTY.
25. EXISTING MAILBOXES MAY NOT BE SHOWN ON PLANS.
26. ALL EXISTING ROADSIDE DITCHES IMPACTED BY THE PROPOSED CONSTRUCTION SHALL BE FINE GRADED TO DRAIN AND PERMANENTLY SEEDED AS SOON AS POSSIBLE.
27. ANY REQUIRED PAVEMENT DISTURBANCE MUST MEET OR EXCEED THE EXISTING PAVEMENT SECTION.
28. BACKFILL MATERIAL AND COMPACTION WITHIN VDOT RIGHTS-OF-WAY MUST MEET OR EXCEED ALL REQUIREMENTS FOUND IN THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, WHETHER INDICATED ON THE PLANS OR NOT, NECESSARY TO ACCOMPLISH THE WORK.
2. CARE SHALL BE TAKEN TO PROTECT EXISTING VEGETATION, TREES, RETAINING WALLS, AND OTHER IMPROVEMENTS NOT REQUIRED TO BE REMOVED FOR CONSTRUCTION.
3. CONSTRUCTION SHALL REPLACE AND REPAIR ALL LAWNS, TERRACES, FENCES, SIDEWALKS, CURBS, CROSS WALKS, GUTTERS, DRIVEWAYS, OR PAVEMENTS, AND REPAIR AND MAKE GOOD ALL OTHER DAMAGE THAT MAY OCCUR DURING CONSTRUCTION WORK.
4. CONTRACTOR SHALL REPLACE AND REPAIR AFFECTED CONSTRUCTION AREAS WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
5. CONTRACTOR SHALL BECOME FAMILIAR WITH PROJECT AREA TO INCLUDE REPAIR AND REPLACEMENT COSTS IN BID.

TREE PROTECTION NOTES:

1. PROVIDE TEMPORARY FENCE AROUND DRIP LINE OF INDIVIDUAL TREES OR DRIP LINE OF GROUPS OF TREES TO REMAIN.
2. DO NOT STORE CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL WITHIN DRIPLINE OF TREES TO REMAIN.
3. DO NOT PERMIT VEHICLES, EQUIPMENT, OR FOOT TRAFFIC WITHIN DRIPLINE OF TREES TO REMAIN.
4. WHERE EXCAVATION FOR NEW CONSTRUCTION IS REQUIRED WITHIN DRIPLINE OF TREES TO REMAIN, HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS OR REQUEST A FIELD REVIEW WITH THE ENGINEER FOR APPROVAL OF AN ALTERNATE ROUTE.

FIELD ADJUSTMENT NOTES:

1. PROPOSED WATERLINE AND LATERAL ALIGNMENTS ARE BASED ON AVAILABLE INFORMATION AND INDICATE THE GENERAL LOCATION AND ARRANGEMENT OF UNDERGROUND WATERLINE PIPING. INSTALL PIPING AS INDICATED, TO EXTENT PRACTICAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL LATERALS, EXITING UTILITIES, ETC.
2. EXISTING CONDITIONS MAY NECESSITATE SLIGHT ADJUSTMENTS IN THE ALIGNMENT AND GRADE. FIELD ADJUSTMENTS MAY NOT BE MADE THAT REDUCE THE CAPACITY OR SERVICEABILITY WITHOUT APPROVAL FROM ENGINEER. ALL FIELD ADJUSTMENTS SHALL BE APPROVED BY THE WESTERN VIRGINIA WATER AUTHORITY.
3. FIELD ADJUSTMENTS SHALL BE MADE WHEN A LESS DISRUPTIVE CONSTRUCTION ACTIVITY AND DISTURBANCE TO PRIVATE PROPERTY WILL NOT RESULT IN AN INCREASE IN CONTRACT PRICE OR DELAY TO THE SCHEDULE.
4. FIELD ADJUSTMENTS RESULTING IN A CHANGE IN SCHEDULE OR CONTRACT PRICE SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. NO CHANGES IN CONTRACT SCHEDULE OR PRICE WILL BE MADE FOR FIELD ADJUSTMENTS MADE WITHOUT ENGINEER'S APPROVAL.
5. NO FIELD ADJUSTMENTS SHALL BE MADE WITHOUT APPROVAL OF THE CONSULTING ENGINEER AND WESTERN VIRGINIA WATER AUTHORITY.
6. ANY NEW ALIGNMENTS, CHANGES IN GRADES, ALTERNATIVE PIPE SIZES OR MANHOLES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. AUTHORITY ENGINEERS WILL REVIEW PLANS WITHIN ONE DAY OF SUBMITTAL. PLAN SHEETS CAN BE 8.5X11 IF THE INFORMATION IS LEGIBLE.

ADJACENT UTILITIES NOTES:

1. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS WHERE LINES CROSS.
2. CONTRACTOR SHALL CONSTRUCT CROSSING SUCH THAT EXISTING UTILITIES REMAIN FUNCTIONAL. CARE SHALL BE TAKEN TO PREVENT DISRUPTIONS TO EXISTING UTILITIES OR UNDERMINING OF SUPPORTING SOILS OR STRUCTURES.
3. CONTRACTOR SHALL EXERCISE CARE IN DETERMINING THE LOCATION OF ANY UNDERGROUND UTILITY TO AVOID DAMAGING OR DISRUPTING UTILITY SERVICE. IF CONTRACTOR INADVERTENTLY DAMAGES ANY UTILITY LINE OR CABLE, HE SHALL BE RESPONSIBLE FOR IMMEDIATELY CONTACTING THE AFFECTED UTILITY COMPANY FOR REPAIR, OR HAVE REPAIRED, THE DAMAGE AT HIS EXPENSE.
4. FOR UTILITIES THAT CANNOT BE DISTURBED OR TEMPORARILY REMOVED, CONSTRUCTION SHALL BE ACHIEVED BY TUNNELING, BORE & JACKING, OR A COMBINATION OF BOTH.
5. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY AFFECTED UTILITY COMPANY FOR COORDINATION OF RELOCATIONS OR TEMPORARY SHORING OF UTILITY.
6. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. UTILITIES MAY EXIST WITHIN THE CONSTRUCTION AREA OF THESE PLANS THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES BEFORE COMMENCING WORK, AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE SUCH UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THESE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE. CONTACT VA811 48 HOURS BEFORE DIGGING.

GENERAL CONSTRUCTION NOTES:

1. DURING CONSTRUCTION, CONTRACTOR SHALL LIMIT DISRUPTION TO RESIDENTIAL ACCESS DRIVEWAYS, COORDINATE CONSTRUCTION ACTIVITIES THAT MAY AFFECT DRIVEWAYS WITH THE PROPERTY OWNER, AND PROVIDE OWNER WITH ACCESS BY END OF WORK DAY OR AS SOON AS POSSIBLE DURING ALL TIMES OF CONSTRUCTION.
2. ALL WATER FIXTURES (METERS, VALVES, ETC.) INSTALLED BETWEEN EDGE OF PAVEMENT AND DITCH LINES SHALL BE INSTALLED FLUSH WITH EXISTING GRADE. FIXTURES INSTALLED BEYOND DITCHES SHALL BE INSTALLED TO MINIMIZE DISRUPTION DURING MAINTENANCE OF ROADWAY.
3. SOILS FOR THIS SITE ARE UNCLASSIFIED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE GEOTECHNICAL ENGINEER TO CLASSIFY SOILS, IF NEEDED.

ABANDONMENT NOTES:

1. EXISTING WATERLINES SHALL BE ABANDONED IN-PLACE, INCLUDING ALL VALVES AND RELATED APPURTENANCES, IN ACCORDANCE WITH THE WVWA STANDARDS. ABANDONMENT OF WATERLINES AND/OR APPURTENANCES SHALL BE COORDINATED AND APPROVED BY THE WVWA.
2. AS PORTIONS OF THE EXISTING WATERLINE ARE ABANDONED, ASSOCIATED VALVE VAULTS ARE TO BE ABANDONED IN PLACE BY REMOVING THE FRAME & COVER AND FILLING VAULT WITH COMPACTED 21A STONE. PROJECT INSPECTOR WILL NOTIFY CONTRACTOR WHEN VAULTS CAN BE ABANDONED.
3. WVWA TO VISUALLY INSPECT EACH ABANDONED VAULT AFTER VAULT IS FILLED WITH STONE AND BEFORE BACKFILL MATERIAL IS PLACED OVER VAULT.
4. ALL EXISTING SURFACE APPURTENANCES (VALVE BOXES, MANHOLE FRAMES & COVERS, METER BOXES, FIRE HYDRANTS, ETC.) FOR ABANDONED UTILITIES SHALL BE REMOVED SO THAT NO EVIDENCE EXISTS AT THE SURFACE.

EROSION & SEDIMENT CONTROL GENERAL NOTES:

THE PURPOSE OF THIS PROJECT IS TO REPLACE EXISTING WATERLINES OWNED BY WVWA THAT ARE EITHER UNDERSIZED OR HAVE DETERIORATED DUE TO AGE. THE VAST MAJORITY OF WATERLINES WILL BE PLACED IN THE EXISTING STREETS (UNDER PAVEMENT). THERE ARE AREAS WITHIN THE PROJECT LIMITS WHERE THE NEW WATERLINE WILL BE CONSTRUCTED IN GRASS AREAS WITHIN THE EXISTING RIGHT OF WAY. DUE TO THE LINEAR NATURE OF THIS PROJECT, IT IS NOT ANTICIPATED THAT A CHANGE IN LAND USE WILL OCCUR AS A RESULT OF THIS PROJECT. THE EXISTING GROUND CONDITIONS WILL BE RESTORED TO THE EXISTING STATE FOR THE ENTIRE PROJECT LENGTH. THE TOTAL DISTURBED AREA FOR THE PROJECT IS 19,580 SF. THE AREA DISTURBED IN PAVED AREAS IS 9,385 SF, AND THE AREA DISTURBED OUTSIDE OF PAVEMENT (PERVIOUS AREAS) IS 10,195 SF.

(ADOPTED FROM TABLE 6-1 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK)

- ES-1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
- ES-2. UNLESS OTHERWISE NOTED HEREON OR STIPULATED BY THE LAND DISTURBING PERMIT, THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-3. UNLESS OTHERWISE NOTED IN THE EASC NARRATIVE, PERIMETER CONTROLS AND SEDIMENT TRAPS SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPLOPSE LAND DISTURBANCE TAKES PLACE.
- ES-4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5. IF OFF-SITE FILL OR BORROW AREAS ARE TO BE USED, THE LOCATION OF THE OFF-SITE FILL OR BORROW AREAS WILL BE PROVIDED TO THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR ALONG WITH EVIDENCE OF AN ACTIVE LAND-DISTURBANCE PERMIT FOR THE OFF-SITE FILL OR BORROW AREAS. IF THE OFF-SITE FILL OR BORROW AREAS ARE NOT CURRENTLY PERMITTED FOR LAND-DISTURBING ACTIVITIES, AN EROSION AND SEDIMENT CONTROL PLAN FOR THE FILL/BORROW SITES SHALL BE SUBMITTED AND APPROVED PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES ON SAID SITES.
- ES-6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ES-7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ES-10. THE EROSION AND SEDIMENT CONTROL (E&SC) MEASURES SHOWN ON THESE STREETS ARE TO BE CONSTRUCTED DURING THE SITE GRADING AND CONSTRUCTION. REFER TO THE SHEET 20 FOR EROSION AND SEDIMENT CONTROL NARRATIVE, SEQUENCE OF WORK, DETAILS, AND DESIGN DATA.
- ES-11. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- ES-12. DURING CONSTRUCTION OF THE PROJECT, ON-SITE SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON THE SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. REFER TO ES-5 FOR ADDITIONAL REQUIREMENTS.
- ES-13. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
- ES-14. TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION MEASURES SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- ES-15. PERMANENT SEEDING APPLIED TO ALL MECHANICALLY STABILIZED SLOPES AND SLOPES STEEPER THAN 3:1 AND SHALL MEET THE FOLLOWING SEED MIXTURE:

POUNDS PER ACRE	SEED TYPE
108	KENTUCKY 31
2	RED TOP
20	SEASONAL NURSE CROP (ANNUAL RYE, FOXTAIL MILLET, & WINTER RYE MIX)
- ES-16. ALL AREAS DISTURBED BY THE WORK OF THIS PROJECT SHALL BE STABILIZED BY EITHER THE CONSTRUCTION OF A PERMANENT SURFACE SUCH AS CURB, PAVEMENT, OR CONCRETE SIDEWALK, OR STABILIZED BY MEANS OF PERMANENT SEEDING OR ANOTHER APPROVED STABILIZATION METHOD.
- ES-17. FOLLOWING THE COMPLETION OF SITE DEVELOPMENT CONSTRUCTION/GRADING, CONFIRMED STABILIZATION OF ALL DISTURBED AREAS, CONFIRMATION THAT EROSION OR SEDIMENTATION IS NO LONGER OCCURRING ON THE PROJECT SITE OR AT ITS BOUNDARIES, CONFIRMATION THAT DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN, AND APPROVAL HAS BEEN GRANTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR, THE CONTRACTOR MAY THEN BEGIN TO REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES. THIS WORK SHALL BE DONE IN A CAREFUL, NEAT, AND ORGANIZED MANNER. IF DEWATERING IS REQUIRED, WATER SHALL BE PUMPED TO AN APPROVED FILTERING DEVICE.

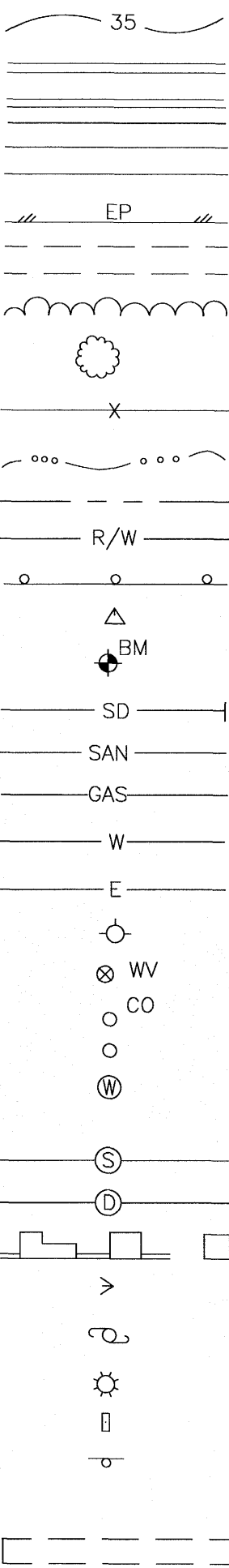
WORK IN CITY OF ROANOKE RIGHT-OF-WAY:

1. ALL WORK IN CITY ROW SHALL BE COMPLETED BY DECEMBER 31, 2021 TO ALLOW THE CITY TO BEGIN PAVING BLITZ (MILL AND OVERLAY OF ENTIRE STREET).
2. CONTRACTOR SHALL OBTAIN A CITY RIGHT-OF-WAY EXCAVATION PERMIT FROM THE CITY OF ROANOKE AND PAY ALL PERMIT FEES, POST NECESSARY BONDS, AND PROVIDE ALL WARRANTIES AS REQUIRED BY THE PERMIT. CONTRACTOR SHALL COMPLY WITH ALL PERMIT PROVISIONS.
3. SEE PAVEMENT RESTORATION DETAIL UTR-1 ON SHEET 15. GRAY SHADED AREAS ON PLAN VIEWS SHOW THE ANTICIPATED LIMITS FOR THE PAVEMENT PATCH OVER THE TRENCH. THE PAVEMENT PATCH SHALL CONSIST OF ASPHALT BASE (NO SURFACE MIX IS REQUIRED) UNLESS OTHER RESTORATION REQUIREMENTS ARE NOTED ON THE PLAN VIEWS.
4. COMPACTION TESTING SHALL BE PERFORMED BY THE CONTRACTOR (UTILIZING A CITY APPROVED AGENCY) AS REQUIRED BY THE RIGHT-OF-WAY EXCAVATION AND RESTORATION STANDARDS.
5. MAINTENANCE OF TRAFFIC (MOT) REQUIREMENTS ARE SHOWN ON SHEET 18.

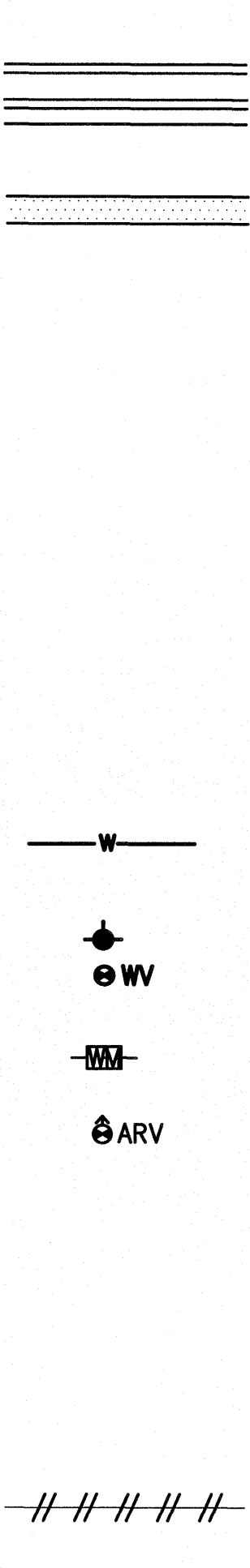
SEQUENCE OF CONSTRUCTION:

1. THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION FOR APPROVAL PRIOR TO BEGINNING WORK.
2. SUGGESTED GENERAL SEQUENCE OF CONSTRUCTION:
 - A. CONSTRUCT CONNECTION/TEMPORARY CONNECTION AT THE INTERSECTION OF TENNESSEE AVE AND PETERS CREEK RD (SHEET 4).
 - B. CONSTRUCT PROP. WATER SYSTEM ALONG TENNESSEE AVE & TYREE RD WORKING TOWARDS WESTSIDE AVE CONNECTION (SHEET 8).
 - C. CONSTRUCT PROP. WATER SYSTEM AND CONNECTIONS AT MAINE AVE (SHEETS 12 & 13)
 - D. CONSTRUCT PROP. WATER SYSTEM TOWARDS AND ALONG KENTUCKY AVE. CONSTRUCT CONNECTIONS TO EXIST. WATER SYSTEM IN KENTUCKY AVE (SHEET 10)
 - E. CONSTRUCT PROP. WATER SYSTEM TOWARDS AND ALONG WYOMING AVE.
 - F. CONSTRUCT CONNECTION TO EXIST. SYSTEM NEAR THE EXIST. WATER TANK (SHEET 11)
 - G. CONSTRUCT CONNECTION TO EXIST. SYSTEM NEAR INTERSECTION OF WYOMING AVE AND MONROE ST (SHEET 11).

EXISTING



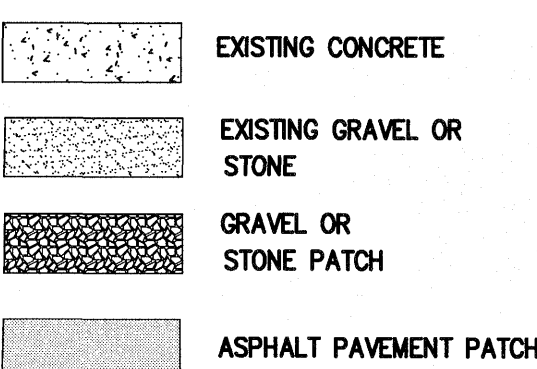
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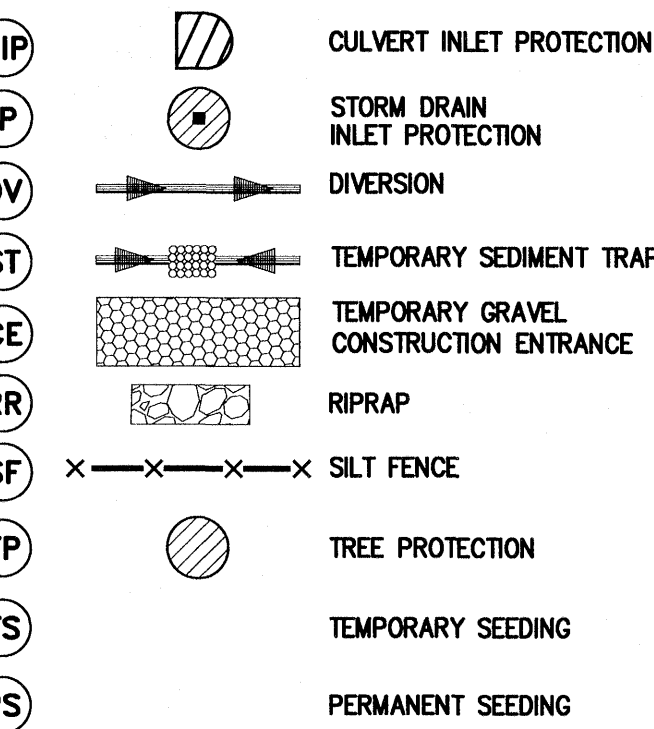
DESCRIPTION

- CONTOUR, CONTOUR WITH ELEVATION
- CONCRETE CURB
- CONCRETE CURB & GUTTER
- CONCRETE WALK OR SLAB
- EDGE OF PAVEMENT
- UNPAVED OR GRAVEL ROAD
- TREE LINE
- TREE OR SHRUB
- FENCE
- EDGE OF WATER
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- GUARD RAIL
- FIELD SURVEY TRAVERSE POINT
- BENCHMARK
- STORM DRAIN AND ENDWALL
- SANITARY SEWER
- GAS MAIN OR SERVICE LINE
- WATER MAIN OR SERVICE LINE
- ELECTRICAL LINE
- FIRE HYDRANT
- WATER VALVE
- CLEANOUT
- WATER METER
- WATER MANHOLE
- AIR RELEASE VALVE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- DROP INLET (CURB AND GRATING TYPES)
- GUY WIRE
- POWER POLE, GUY AND ANCHOR
- LIGHT POLE
- MAILBOX
- STREET SIGN
- ABANDON OR REMOVE
- DRIVEWAY CULVERT

MATERIALS SYMBOLS



EROSION AND SEDIMENT CONTROL SYMBOLS



COMMONWEALTH OF VIRGINIA

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WASHINGTON HEIGHTS WATERLINE REPLACEMENT PHASE 2

GENERAL NOTES & LEGEND

ROANOKE, VIRGINIA

Vertical Scale:

Horizontal Scale:

N/A

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