

GENERAL NOTES

1. THE LOCATION OF EXISTING UTILITIES, INCLUDING UNDERGROUND UTILITIES, IS INDICATED ON THE DRAWINGS INSOFAR AS THEIR EXISTENCE AND LOCATION WERE KNOWN AT THE TIME OF PREPARATION OF THESE DRAWINGS. HOWEVER, NOTHING IN THESE CONTRACT DOCUMENTS SHALL BE CONSTRUED AS A GUARANTEE THAT SUCH UTILITIES ARE IN THE LOCATION INDICATED OR THAT THEY ACTUALLY EXIST, OR THAT OTHER UTILITIES ARE NOT WITHIN THE AREA OF OPERATION. THE CONTRACTOR SHALL LOCATE ALL UTILITIES AND DETERMINE ALL INVERTS 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 12.05.03, AND THE VIRGINIA STATE SEWAGE COLLECTION AND TREATMENT REGULATIONS WHERE LINES CROSS. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.
2. THE CONTRACTOR SHALL HAVE A VALID MISS UTILITY TICKET PRIOR TO EXCAVATION. CONTACT MISS UTILITY AT 1-800-552-7001.
3. WATERLINES SHALL BE LAID TO LINES AND GRADES SHOWN ON THE DRAWINGS TO AVOID LOCAL HIGH POINTS AND LOW POINTS EXCEPT WHERE INDICATED.
4. HORIZONTAL AND VERTICAL DATUM IS VIRGINIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 83.
5. ALL WORK SHALL BE IN ACCORDANCE WITH THESE DRAWINGS AND THE TECHNICAL SPECIFICATIONS, AN APPROVED SET OF PLANS, TECHNICAL SPECIFICATIONS, AND PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES. THE TECHNICAL SPECIFICATIONS INCLUDE THE APPLICABLE PORTIONS OF THE WESTERN VIRGINIA WATER AUTHORITY "WATER AND SEWER DESIGN & CONSTRUCTION STANDARDS".
6. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN VIRGINIA WATER AUTHORITY (AUTHORITY) 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.
7. ALL CONNECTIONS TO EXISTING WATERLINES 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 SEVENTY-TWO (72) HOURS PRIOR TO REQUIRING THE CONNECTION.
8. 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.
9. FOR PROJECTS REQUIRING TRAFFIC CONTROL IN THE CITY OF ROANOKE, NOTIFY MANAGER OF TRANSPORTATION, MARK JAMISON, AT 540-853-5471 AT LEAST TWO WEEKS IN ADVANCE OF REQUIRING TRAFFIC CONTROL. FOR A LANE CLOSURE PERMIT IN THE CITY OF ROANOKE, CONTACT THE TRAFFIC ENGINEER, GARY BOWMAN, AT 540-853-5834. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE MOST RECENT MUTCD MANUAL AND THE VDOT WORK AREA PROTECTION MANUAL UNLESS OTHERWISE SPECIFIED BY THE CITY.
10. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN(S) TO THE CITY OF ROANOKE PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S ENGINEERING COORDINATOR, CHUCK CLARK, AT 540-537-3243 AT LEAST THREE (3) DAYS PRIOR TO CONSTRUCTION.
12. A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST ONE (1) DAY PRIOR TO ANY CONSTRUCTION.
13. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT.
14. SITE IS LOCATED IN A RESIDENTIAL AREA AND EXISTING RESIDENCES ARE LOCATED IMMEDIATELY ADJACENT TO SITE. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO MINIMIZE DISTURBANCES TO ADJACENT PROPERTIES, INCLUDING PREVENTION OF DUST/DEBRIS INTRUSION ONTO PROPERTIES.
15. CONTRACTOR SHALL PROTECT EXISTING TREES FROM DAMAGE, UNLESS OTHERWISE ALLOWED BY OWNER IN WRITING. NO TREES SHALL BE REMOVED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER.
16. CONTRACTOR SHALL PROVIDE THE AUTHORITY WITH A PLAN TO MAINTAIN WATER SERVICE TO ALL CUSTOMERS WITH MINIMUM DISRUPTION PRIOR TO START OF CONSTRUCTION. NOTIFICATION TO AFFECTED CUSTOMERS SHALL BE COORDINATED WITH AUTHORITY AND GIVEN 24 HOURS PRIOR TO DISRUPTION WHEN POSSIBLE.
17. THE "OWNER" IS THE WESTERN VIRGINIA WATER AUTHORITY (AUTHORITY). THE TERMS "OWNER" AND "AUTHORITY" ARE USED INTERCHANGEABLY IN THESE CONTRACT DOCUMENTS.
18. THE USE OF TEMPORARY ABOVE GROUND LINES WILL BE ALLOWED TO FACILITATE INSTALLATION OF THE NEW LINES. THESE LINES SHALL BE PROTECTED DURING USE AND REMOVED WHEN NO LONGER NEEDED. COST OF ANY TEMPORARY LINES SHALL BE INCLUDED IN THE UNIT COST OF THE WATERLINE.
19. LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND FIELD ADJUSTMENTS TO PROPOSED WATERLINE SHALL BE MADE TO MAINTAIN PROPER CLEARANCES AND PROTECT OTHER UTILITIES. FIELD CHANGES SHALL BE APPROVED BY THE AUTHORITY'S ENGINEERING DIVISION PRIOR TO SUCH CONSTRUCTION. ALL WORK SHALL BE MAINTAINED WITHIN EXISTING STREET RIGHT OF WAY.
20. CONTRACTOR SHALL OBTAIN REQUIRED PERMITS FROM CITY OF ROANOKE AND DEPARTMENT OF CONSERVATION AND RECREATION.
21. PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH ROANOKE CITY STANDARDS.
22. THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL MAINTAIN SAFE ACCESSIBILITY TO FIRE HYDRANTS AT ALL TIMES.
23. 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.
24. 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.
25. 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.
26. THE CONTRACTOR SHALL SUPPLY THE AUTHORITY WITH CORRECT AS-BUILT PLANS BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.
27. WORK IN THE RIGHT-OF-WAY IS TO BE PERFORMED PER THE CITY OF ROANOKE RIGHT-OF-WAY EXCAVATION AND RESTORATION STANDARDS.
27. CONSTRUCTION CREWS MUST ALLOW FOR SWM TO SERVICE TRASH, RECYCLING, BULK, AND BRUSH ON MONDAYS.

WATER METER INSTALLATION:

1. WATER SERVICE CONNECTIONS SHALL INCLUDE CONNECTION TO NEW WATER LINE, SERVICE LINE, AND NEW METER BOX ASSEMBLY. CONTRACTOR SHALL INSTALL NEW WATER SERVICES INCLUDING THE METER SETTER AND BOX. THE AUTHORITY WILL INSTALL ALL NEW WATER METERS AND REMOVE ALL EXISTING WATER METERS. CONTRACTOR SHALL MAKE CONNECTION TO EXISTING SERVICE LINE ON CUSTOMER SIDE OF METER AFTER NEW WATER SYSTEM, INCLUDING SERVICE LINE, HAS BEEN TESTED, DISINFECTED, AND APPROVED FOR SERVICE. CONTRACTOR SHALL THEN DEMOLISH THE EXISTING WATER METER SETTER AND BOX. THE WORK ALSO INCLUDES ASSOCIATED BACKFILL AND RESTORATION.
2. CONTRACTOR SHALL COORDINATE EXISTING METER REMOVAL AND NEW METER INSTALLATION DIRECTLY WITH THE AUTHORITY. CONTRACTOR SHALL PROVIDE AT LEAST THREE (3) BUSINESS DAYS ADVANCE NOTICE TO THE AUTHORITY PRIOR TO NEEDING METER INSTALLATIONS. CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITY TO PROVIDE A SERIES OF AT LEAST TEN (10) SERVICES THAT ARE READY TO RECEIVE NEW METERS BEFORE CONTACTING THE AUTHORITY FOR METER REPLACEMENT.

SEWER LATERAL LOCATION:

CONTRACTOR SHALL COORDINATE WITH WESTERN VIRGINIA WATER AUTHORITY FOR MARKING OF ALL SEWER LATERALS PRIOR TO CONSTRUCTION.

EROSION & SEDIMENT CONTROL NARRATIVE
HARRISON AREA PHASE 3 WATERLINE REPLACEMENT
CITY OF ROANOKE, VIRGINIA

A. PROJECT DESCRIPTION

This project consists of installation of approximately 4,970 L.F. of 8" waterline, 8,750 L.F. of 6" waterline, 210 L.F. of 2" waterline and appurtenances, to replace aging watermain in the Harrison Area. The disturbed area is approximately 4,730 square feet.

B. EXISTING SITE CONDITIONS

The site is located in the Harrison Area of City of Roanoke in the Right of Way. The disturbed area is in grassy areas within the right-of-way.

C. ADJACENT PROPERTY

The project area is in the Right of Way and the adjacent properties are residential homes along the Right of Way.

D. PLANNED EARTHWORK ACTIVITIES / OFF-SITE AREAS

The project will include approximately 14050 L.F. of 3 foot wide trench to lay the pipe. It is not anticipated that any off-site areas will be affected.

E. SOILS

According to the SCS soils information from the NRCS Web Soil Survey the soils are Chiswell-Litz-Urban land complex, 2 to 15 percent slopes and Chiswell-Litz-Urban land complex, 15 to 35 percent slopes. See Appendix A for the Soil Resource Report.

F. CRITICAL AREAS

Critical areas include storm drain inlets, culverts and areas downhill from the disturbed area.

The proposed erosion and sediment control measures are intended to minimize any potential problems and promote stabilization.

G. EROSION AND SEDIMENT CONTROL MEASURES

All structural and vegetative erosion and sediment control practices will be constructed and maintained in accordance with the minimum standards and specifications of the "Virginia Erosion and Sediment Control Handbook" (VESCH), latest edition.

MINIMUM STANDARDS: All applicable Minimum Standards must be addressed.

Specifically:

1. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site.
1. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant (undisturbed) for longer than thirty (30) days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
2. Perimeter dikes and ditches, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land disturbing activity and shall be made functional before land disturbance takes place.
3. Stabilization measures shall be applied to earthen structures such as dams, ditches, and diversions immediately after installation.
4. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by (vehicular) tracking onto the paved surface. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual subdivision lots as well as to larger land disturbing activities.
5. All temporary erosion and sediment control measures shall be removed within thirty (30) days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program administrator. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

H. STRUCTURAL PRACTICES

1. Silt Fence - Std. & Spec. 3.05

Disturbed areas shall be lined with silt fence as shown on the plans to detain sediment and decrease storm water runoff velocity.

2. STORM DRAIN INLET PROTECTION - STD. & SPEC. 3.07

Storm drain inlet protection shall be placed at existing and proposed grate inlets to prevent sediment from entering the storm piping.

3. MS-16: UTILITY INSTALLATION

No more than 500 linear feet of utility trench may be opened at one time. Excavated material shall be placed on the uphill side of trenches. Effluent from dewatering operations shall be filtered or passed through approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property. Backfill material shall be properly compacted to minimize erosion and promote stabilization.

I. VEGETATIVE PRACTICES

GENERAL: A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized by pavement. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform and mature enough to survive and will inhibit erosion. New vegetation shall be maintained at a minimum of one full year after planting. New seeding shall be supplied with adequate moisture, especially late in the season, and in abnormally hot or dry weather. Stabilization practices shall be accomplished in accordance with the appropriate VESCH Standard and Specification and the Erosion and Sediment Control Plan.

Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may not be at final grade but will remain dormant (undisturbed) for longer than 30 days. Permanent seeding shall be used on all areas that are not at final grade and that will be left dormant for a period of more than 1-year.

1. TEMPORARY SEEDING - std & Spec 3.31

Temporary seeding shall be applied over cleared areas that will not be brought to final grade within 30 days. Temporary seeding mixes shall be as described on the detail sheets of the Erosion and Sediment Control Plan (See Sheet T-3).

2. PERMANENT SEEDING - STD. & SPEC 3.32

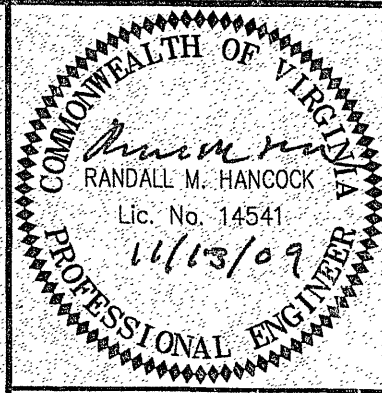
Permanent seeding is proposed over all cleared areas. Permanent seeding mixes shall be as described on the Erosion and Sediment Control Plan or as shown on the detail drawings (See Sheet T-3).

J. STORMWATER CONSIDERATIONS

Since there are no proposed changes to the existing land use, there should be no changes in drainage patterns or volumes.

GENERAL LEGEND

EXISTING	LEGEND	PROPOSED
	CONTOURS	FG 1000 TO TC 1528.3
	GROUND ELEVATION	1528.3
	TREE LINE	N/A
	STREAM	N/A
	LIMITS OF CLEARING	
	DECIDUOUS TREE	N/A
	CONIFEROUS TREE	N/A
	SHRUB	N/A
	FENCE	
	PROPERTY LINE/ROW	
	IRON ROD FOUND	
	IRON ROD SET	
	MONUMENT FOUND	
	MONUMENT SET	
	EASEMENT	
	100 YEAR FLOOD ZONE	N/A
	LIMITS OF CONSTRUCTION	
	BENCHMARK	
	BUILDING	
	HEAVY DUTY PAVEMENT	
	STANDARD DUTY PAVEMENT	
	CONCRETE	
	DEMOLITION	
	DEMOLITION KEY	
	SIGN	
	BOLLARD	
	BOREHOLE	
	METAL POST	
	WOOD POST	
	TEST PIT	
	STORM SEWER	
	STORM CLEANOUT	
	STORM MANHOLE	
	STORM DRAINAGE INLET	
	STORM STRUCTURE KEY	
	SANITARY SEWER	
	FORCE MAIN	
	SANITARY CLEANOUT	
	SANITARY MANHOLE	
	SANITARY STRUCTURE KEY	
	UNDERGROUND ELECTRIC	
	OVERHEAD POWER	
	LIGHT POLE	
	ELECTRIC POLE	
	ELECTRIC MANHOLE	
	WATER	
	WATER VALVE	
	POST INDICATOR VALVE	
	AIR RELEASE VALVE	
	GATE VALVE	
	BUTTERFLY VALVE	
	B.F. VALVE w/OPERATOR	
	SIAMESE CONNECTION	
	FIRE HYDRANT	
	HOSE BIB	
	WATER METER	
	WATER MANHOLE	
	WELL	
	GENERIC COMMUNICATION	
	UNDERGROUND COMMUNICATION	
	OVERHEAD COMMUNICATIONS	
	FIBER OPTICS	
	FIBER OPTICS MANHOLE	
	FIBER OPTICS PEDESTAL	
	CABLE TV	
	CABLE TV MANHOLE	
	CABLE TV PEDESTAL	
	TELEPHONE LINE	
	OVERHEAD TELEPHONE	
	UNDERGROUND TELEPHONE	
	TELEPHONE BOX	
	TELEPHONE MANHOLE	
	TELEPHONE PEDESTAL	
	TELEPHONE POLE	
	GAS LINE	
	GAS DRIP	
	GAS METER	
	GAS MANHOLE	
	GAS VALVE	



Draper Aden Associates

Engineering • Surveying • Environmental Services

Richmond, VA

Charlottesville, VA

Hampton Roads, VA

GENERAL NOTES
HARRISON AREA PHASE 3 WATERLINE
REPLACEMENTS
CITY OF ROANOKE, VIRGINIA

REVISIONS

△ OCTOBER 15, 2009

△ OCTOBER 28, 2009
PER WVA AND CITY OF
ROANOKE COMMENTS

△ NOVEMBER 12, 2009
PER WVA COMMENTS

APPROVED

DEC 14 2009

DESIGNED BY:

RMH

DRAWN BY:

SAK

CHECKED BY:

TOM

SCALE:

NOT TO SCALE

DATE:

SEPTEMBER 30, 2009

PROJECT NUMBER:

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T-2