

PROJECT MANAGER Dana Paulay, PE (540) 387-5476
SURVEYED BY Blco Associates-----
DESIGN SUPERVISED BY Derek Overstreet, PE (804) 419-8924
DESIGNED BY STV Incorporated (520) 633-2220

WATER NOTES:

- ALL WATER FACILITIES SHALL BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY OR VDOT DESIGN AND CONSTRUCTION STANDARDS.
- DUCTILE IRON PIPE IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS SHALL BE REQUIRED FOR ALL PIPE WITH A WORKING PRESSURE EQUAL TO OR GREATER THAN 100 P.S.I.
- WATER LINES SHALL NOT BE PLACED WITHIN 20 HORIZONTAL FEET OF EXISTING OR PROPOSED SANITARY DRAIN FIELDS AND/OR SEPTIC TANKS.
- 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 SPECIFICATIONS AND DETAILS.
- WHEN LOCATED IN A VDOT RIGHT-OF-WAY, VALVE BOXES SHALL BE BURIED 2' BELOW GRADE WHEN IN THE SHOULDER AND FLUSH WITH PAVEMENT, IF LOCATED IN THE PAVEMENT, WATER MAINS SHALL BE CONSTRUCTED IN THE LOCATIONS SHOWN ON THE PLANS.
- ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES. WATER LINES SHALL BE LAID DEEPER WHERE SHOWN ON THE PROFILES, OR WHERE NECESSARY TO ACCOMMODATE THE BURY DEPTH OF VALVES AND VALVE VAULTS.
- ALL DISTRIBUTION LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY STANDARDS.
- COMBINATION AIR RELEASE VALVES SHOWN ON PLANS SHALL BE FIELD LOCATED AT HIGH POINT IN THE WATER MAIN.
- 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.
- THE CONTRACTOR SHALL CONTINUOUSLY KEEP UP TO DATE WITH PROPERTY RESTORATION, SEEDING AND COMPACTION TESTING.
- ALL EXISTING UTILITIES MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH THE STATE WATER WORKS REGULATIONS WHERE LINES CROSS.
- ALL TRENCHES IN EXISTING OR FUTURE VDOT RIGHT-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.
- ALL WATER PIPE SHALL BE MATERIAL AS SPECIFIED IN THE VVWA SPECIFICATIONS.
- 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 SIX (6) INCHES 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.
- 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. ALL WET AND DRY TAPS MADE TO THE EXISTING SYSTEM SHALL BE MADE BY THE WESTERN VIRGINIA WATER AUTHORITY.
- THE CONTRACTOR SHALL PROVIDE A TESTING AGENCY TO INSPECT BACKFILL MATERIAL AND PROVIDE COMPACTION TESTS AS REQUIRED BY THE VDOT LANE USE PERMIT.
- OPEN-CUTS SHALL BE USED TO CONSTRUCT WATER MAINS ACROSS EXISTING VDOT ROADS UNLESS OTHERWISE NOTED ON THE PLANS. ALL OPEN-CUTS SHALL BE PATCHED AS PER VVWA DETAIL G-12 AND THE AREA SHALL BE MILLED AND OVERLAYED WITH A SURFACE MIX TO BLEND THE NEW AND EXISTING ASPHALT.
- LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.
- WATER MAIN SHALL BE MINIMUM CLASS 350 DUCTILE IRON IN ACCORDANCE TO AWWA C151.
- DUCTILE IRON PIPE IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS SHALL BE REQUIRED FOR ALL PIPE WITH A WORKING PRESSURE EQUAL TO OR GREATER THAN 100 P.S.I.

GENERAL NOTES:

- ALL CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN VIRGINIA WATER AUTHORITY (AUTHORITY) AVAILABLE AT WWW.WESTERNVAWATER.ORG. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER STANDARDS (E.G. VDOT, DEQ, DCR, VDH, ETC.) WHERE APPLICABLE.
- 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 WATER LINE, 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 LINES SERVICES DIVISION AT 540-853-2792 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO REQUIRING THE CONNECTION.
- PRIOR TO CONSTRUCTION IN THE RIGHT OF WAY, ALL APPLICABLE PERMIT(S) FROM THE GOVERNING JURISDICTION AND/OR AGENCY MUST BE OBTAINED BY THE CONTRACTOR AND A COPY KEPT ON THE PROJECT SITE.
- 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.
- THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH THE LAND DISTURBING PERMIT REQUIRED BY VDOT FOR ALL WORK WITHIN THE VDOT RIGHT OF WAY.
- TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE MOST RECENT MUTCD MANUAL AND THE VIRGINIA WORK AREA PROTECTION MANUAL. ALL PAVEMENT REPAIRS SHALL BE IN ACCORDANCE WITH THE GOVERNING JURISDICTION'S STANDARDS (VDOT) OR OTHER AGENCY STANDARDS WHERE APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S ENGINEERING COORDINATOR, AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST SEVEN DAYS PRIOR TO ANY CONSTRUCTION.
- THE CONTRACTOR SHALL HAVE A VALID MISS UTILITY TICKET PRIOR TO EXCAVATION. CONTRACTOR TO CONTACT MISS UTILITY AT 1-800-552-7001 PRIOR TO BEGINNING EXCAVATION A MINIMUM OF TWO (2) BUSINESS DAYS.
- ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE SHOWN IN EXACT LOCATION. CONTRACTOR SHALL LOCATE ALL UTILITIES AND DETERMINE ALL INVERTS PRIOR TO CONSTRUCTION TO ALLOW FOR ADJUSTMENTS DUE TO THE CONFLICTS WITH OTHER UTILITIES. THE CONTRACTOR SHALL COMPLY WITH THE VIRGINIA STATE WATER WORKS REGULATIONS AND THE VIRGINIA STATE SEWAGE COLLECTION AND TREATMENT REGULATIONS WHERE LINES CROSS.
- AN APPROVED SET OF PLANS AND PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT.
- 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 DCR (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.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING ALL 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.
- THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL MAINTAIN SAFE ACCESSIBILITY TO FIRE HYDRANTS AT ALL TIMES. DRIVEWAYS TO REMAIN ACCESSIBLE. CONTRACTOR TO COORDINATE DRIVEWAY WORK WITH EACH INDIVIDUAL PROPERTY OWNER IN ADVANCE OF TAKING THE DRIVEWAY OFF LINE.
- REMOVAL AND DISPOSAL OF EXISTING STRUCTURES SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS EXCEPT THE WORD ENGINEER SHALL BE CHANGED TO OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER PAVING. MANHOLES SHALL BE INSTALLED TO GRADE AND FLUSH WITH THE FINAL PAVEMENT. THE LONGITUDINAL AND CROSS SLOPE OF THE MANHOLE MUST MATCH THE ROADWAY.

- UNREPAIRED ROADWAYS OPENED TO TRAFFIC SHALL HAVE AT A MINIMUM, COMPACTED AGGREGATE MATERIAL VDOT 21A OR 21B FLUSH WITH 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.
- 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.
- THE CONTRACTOR SHALL PROVIDE THE AUTHORITY WITH THE CORRECT AS-BUILT PLANS BEFORE SUBSTANTIAL COMPLETION IS GRANTED.
- EXISTING IMPROVEMENTS THAT ARE REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION, AT THE EXPENSE OF THE CONTRACTOR.
- 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.
- 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.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING SURROUNDING STRUCTURES. CONTRACTOR SHALL PROVIDE SHORING, OR OTHER MEANS NECESSARY TO PROTECT ADJACENT BUILDINGS AND PROPERTY.
- ALL EXISTING ROADSIDE DITCHES IMPACTED BY THE PROPOSED CONSTRUCTION SHALL BE FINE GRADED TO DRAIN AND PERMANENTLY SEEDED AS SOON AS WORK IS COMPLETED.
- ANY REQUIRED PAVEMENT DISTURBANCE MUST MEET OR EXCEED THE EXISTING PAVEMENT SECTION OR FOLLOW THE VDOT LUP-OCPR SPECIFICATIONS FOR PAVEMENT REPLACEMENT. ALL PAVEMENT MUST BE REPAIRED WITHIN 48 HOURS TO AVOID IMPACTING THE SAFETY OF THE TRAVELING PUBLIC.
- BACKFILL MATERIAL AND COMPACTION WITHIN VDOT RIGHT-OF-WAYS MUST MEET OR EXCEED ALL REQUIREMENTS FOUND IN THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

ADJACENT UTILITIES NOTES:

- ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE IN THE EXACT LOCATION SHOWN. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS WHERE LINES CROSS.
- 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.
- CONTRACTOR SHALL EXERCISE CARE IN DETERMINING THE LOCATION OF ANY UNDERGROUND UTILITIES TO AVOID DAMAGING OR DISRUPTING UTILITY SERVICE. IF THE CONTRACTOR INADVERTENTLY DAMAGES ANY UTILITY LINE OR CABLE, HE SHALL BE RESPONSIBLE FOR IMMEDIATELY CONTACTING THE AFFECTED UTILITY COMPANY FOR REPAIRS, OR HAVE DAMAGES REPAIRED AT HIS EXPENSE.
- FOR UTILITIES THAT CANNOT BE DISTURBED OR TEMPORARILY REMOVED, CONSTRUCTION SHALL BE ACHIEVED BY TUNNELING, BORE AND JACKING, OR COMBINATIONS OF BOTH.
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY AFFECTED UTILITY COMPANY FOR COORDINATION OF RELOCATIONS OR TEMPORARY SHORING OF UTILITIES.
- THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON AVAILABLE INFORMATION. UTILITIES MAY EXIST WITHIN THE CONSTRUCTION AREA OF THE PLANS THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES BEFORE COMMENSING WORK AND FOR ANY DAMAGES WHICH OCCURS BY HIS FAILURES 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. CALL MISS UTILITIES AT 1-800-552-7001 (TOLL FREE) 48 HOURS BEFORE DIGGING.
- DURING CONSTRUCTION, CONTRACTOR SHALL LIMITS 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.
- ALL WATER FIXTURES (METERS, VALVES, ETC) INSTALLED BETWEEN EDGE OF PAVEMENT AND DITCH LINES SHALL BE INSTALLED TWO INCHES BELOW EXISTING GRADE. FIXTURES INSTALLED BEYOND DITCHES SHALL BE INSTALLED TO MINIMIZE DISRUPTION DURING MAINTENANCE OF ROADWAY.
- ALL SERVICE LATERALS SHALL BE DIRECTIONAL BORED UNDER EXISTING VDOT ROADWAYS, UNLESS OTHERWISE NOTED.
- SOILS FOR THE SITE ARE UNCLASSIFIED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE GEOTECHNICAL ENGINEER TO CLASSIFY SOILS, IF NEEDED.
- ALL DRIVEWAYS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION.

MATERIAL STAGING NOTES:

CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING A SUITABLE STAGING AREA FOR THE PROJECT. CONTRACTOR TO PROVIDE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN TO THE VDOT SITE LOCATED. STAGING AREA SHALL BE COORDINATED AND APPROVED BY THE VDOT BEFORE THE PRE CONSTRUCTION MEETING.

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	634	0634-009-101, C-501, RW-201	8(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

ENT UTILITIES NOTES:

UTILITIES MAY NOT BE SHOWN OR MAY NOT BE IN LOCATION SHOWN. THE CONTRACTOR SHALL COMPLY WITH R WORKS REGULATIONS WHERE LINES CROSS.

SHALL CONSTRUCT CROSSING SUCH THAT EXISTING MAIN FUNCTIONAL.CARE SHALL BE TAKEN TO PREVENT TO EXISTING UTILITIES OR UNDERMINING OF SUPPORTING RUCTURES.

SHALL EXERCISE CARE IN DETERMINING THE LOCATION OF ROUND UTILITIES TO AVOID DAMAGING OR DISRUPTING UTILITY THE CONTRACTOR INADVERTENTLY DAMAGES ANY UTILITY LINE E SHALL BE RESPONSIBLE FOR IMMEDIATELY CONTACTING ED UTILITY COMPANY FOR REPAIRS,OR HAVE DAMAGES REPAIRED ENSE.

S THAT CANNOT BE DISTURBED OR TEMPORARILY REMOVED, N SHALL BE ACHIEVED BY TUNNELING, BORE AND JACKING, IONS OF BOTH.

IS RESPONSIBLE FOR CONTACTING ANY AFFECTED UTILITY R COORDINATION OF RELOCATIONS OR TEMPORARY SHORING .

G UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON INFORMATION.UTILITIES MAY EXIST WITHING THE CONSTRUCTION E PLANS THAT ARE NOT SHOWN.THE CONTRACTOR SHALL IBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH IITIES BEFORE COMMENSING WORK AND FOR DAMAGES S BY HIS FAILURES TO LOCATE SUCH UTILITIES.IF DURING N OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER HER THAN THOSE SHOWN ON THESE PLANS,HE SHALL NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER ROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE. UTILITIES AT 1-800-552-7001(TOLL FREE) 48 HOURS BEFORE

RAL CONSTRUCTION NOTES:

FRUCTION, CONTRACTOR SHALL LIMITS DISRUPTION TO ACCESS DRIVEWAYS.COORDINATE CONSTRUCTION WHAT MAY AFFECT DRIVEWAYS WITH THE PROPERTY PROVIDE OWNER WITH ACCESS BY END OF WORK DAY AS POSSIBLE,DURING ALL TIMES OF CONSTRUCTION.

IXTURES (METERS,VALVES,ETC) INSTALLED BETWEEN VEMENT AND DITCH LINES SHALL BE INSTALLED TWO V EXISTING GRADE. FIXTURES INSTALLED BEYOND LL BE INSTALLED TO MINIMIZE DISRUPTION DURING OF ROADWAY.

LATERALS SHALL BE DIRECTIONAL BORED UNDER T ROADWAYS,UNLESS OTHERWISE NOTED.

HE SITE ARE UNCLASSIFIED, IT SHALL BE THE S RESPONSIBILITY TO HIRE GEOTECHNICAL ENGINEER SOILS, IF NEEDED.

S SHALL BE RESTORED TO EQUAL OR BETTER CONDITION.

IAL STAGING NOTES:

ILL BE RESPONSIBLE FOR DETERMINING A SUITABLE FOR THE PROJECT.CONTRACTOR TO PROVIDE AN OSION AND SEDIMENT CONTROL PLAN TO THE VDOT . STAGING AREA SHALL BE COORDINATED AND THE VDOT BEFORE THE PRE CONSTRUCTION MEETING.

	PROJECT 0634-009-101	SHEET NO. 8(1)
--	-------------------------	-------------------