THE PAVEMENT DESIGNS SHOWN ARE BASED ON A SUBGRADE CBR VALUE OF 10 OR GREATER. THE SUBGRADE SOIL IS TO BE TESTED BY AN INDEPENDENT LABORATORY AND THE RESULTS SUBMITTED TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO BASE CONSTRUCTION. SHOULD THE SUBGRADE CBR VALUES BE LESS THAN 10, THEN ADDITIONAL BASE MATERIAL WILL BE REQUIRED IN ACCORDANCE WITH

THE SUBGRADE MUST BE APPROVED BY VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO PLACEMENT OF THE BASE. BASE MUST BE APPROVED BY VIRGINIA DEPARTMENT OF TRANSPORTATION FOR DEPTH, TEMPLATE AND COMPACTION BEFORE SURFACE IS APPLIED.

ALL NECESSARY UTILITY LATERALS ALONG WITH PROVISIONS FOR CONDUITS (I.E. WATER, SENER, STORM, GAS AND TELEPHONE) WILL BE CONSTRUCTED PRIOR TO PLACEMENT OF BASE MATERIAL.

GAS OR PETROLEUM TRANSMISSION LINES WILL NOT BE PERMITTED WITHIN THE PAVEMENT OR SHOULDER ELEMENT (BACK OF CURB TO BACK OF CURB) OF THIS DEVELOPMENT. SERVICE LATERALS CROSSING AND PIPE LINES LOCATED OUTSIDE THE PAVEMENT BUT INSIDE THE RIGHT OF WAY WILL BE CONSTRUCTED IN CONFORMITY WITH ASA B 31.8 SPECIFICATIONS AND SAFETY REGULATIONS. DISTRIBUTION LINES WITH PRESSURES LESS THAN 120 LBS. ARE UNAFFECTED BY THE ABOVE.

PERMITS WILL BE REQUIRED FOR ALL UTILITIES WITHIN STREET RIGHT OF WAY PRIOR TO ACCEPTANCE INTO THE SECONDARY HIGHWAY SYSTEM. ANY EASEMENTS GRANTED TO A UTILITY COMPANY FOR PLACEMENT OF POWER, TELEPHONE, ETC. MUST BE RELEASED PRIOR TO ACCEPTANCE.

MODIFIED CG-9D GUTTER WILL BE PROVIDED AT ALL ENTRANCES TO PRIVATE LOTS WHERE STANDARD CG-6 CURB AND GUTTER IS APPROVED FOR

DRIVEWAYS CONNECTING TO ROADS WITHOUT CURB & GUTTER SHALL CONFORM TO THE PAVEMENT, SHOULDER & SLOPE.

PERMITS WILL BE REQUIRED FOR ALL PRIVATE ENTRANCES CONSTRUCTED ON STREET RIGHTS OF WAY AFTER ACCEPTANCE INTO THE SECONDARY

ALL PRIVATE ENTRANCES WITHIN THE RIGHT-OF-WAY AREA SHOULD NOT EXCEED EIGHT PERCENT (8%) MAXIMUM GRADE.

CARE MUST BE TAKEN DURING CONSTRUCTION TO PREVENT EROSION, DUST AND MUD FROM DAMAGING ADJACENT PROPERTY, CLOGGING DITCHES, TRACKING PUBLIC STREETS AND OTHERWISE CREATING A PUBLIC OR PRIVATE NUISANCE TO SURROUNDING AREAS.

THE ENTIRE CONSTRUCTION AREA INCLUDING DITCHES, CHANNELS, BACK OF CURBS AND OR PAVEMENT ARE TO BE BACKFILLED AND SEEDED AT THE EARLIEST POSSIBLE TIME AFTER FINAL GRADING.

DRAINAGE EASEMENTS MUST BE DEFINED BY EXCAVATED DITCHES OR CHANNELS FOR THEIR FULL LENGTH TO WELL DEFINED EXISTING NATURAL

THE ROAD WILL BE REVIEWED DURING CONSTRUCTION FOR THE NEED OF PAVED DITCHES. IF EROSION IS ENCOUNTERED IN ANY DRAINAGE EASEMENT, IT WILL BE THE RESPONSIBILITY OF THE DEVELOPER TO SOD, RIP RAP, GROUT, PAVE OR TO DO WHATEVER IS NECESSARY TO

ALL VEGETATION AND OVERBURDEN TO BE REMOVED FROM SHOULDER TO SHOULDER PRIOR TO THE CONDITIONING (CUTTING AND/OR PREPARATION) OF THE SUBGRADE.

INTERSECTION PAVEMENT RADIUS MINIMUM PAVEMENT RADIUS OF 25 FEET IS REQUIRED AT ALL STREET INTERSECTION.

CONNECTIONS TO STATE-MAINTAINED ROADS

WHILE THESE PLANS HAVE BEEN APPROVED, SUCH APPROVAL DOES NOT EXEMPT CONNECTIONS WITH EXISTING STATE-MAINTAINED ROADS FROM CRITICAL REVIEW AT THE TIME PERMIT APPLICATIONS ARE MADE. THIS IS NECESSARY IN ORDER THAT THE PREVAILING CONDITIONS BE TAKEN INTO CONSIDERATION REGARDING SAFETY ACCOMPANIMENTS SUCH AS TURNING LANES.

STANDARD GUARDRAIL WITH SAFETY END SECTIONS MAY BE REQUIRED ON FILLS AS DEEMED NECESSARY BY THE RESIDENT ENGINEER. AFTER COMPLETION OF ROUGH GRADING OPERATIONS, THE OFFICE OF THE RESIDENT ENGINEER, SHALL BE NOTIFIED SO THAT A FIELD REVIEW MAY BE MADE OF THE PROPOSED LOCATIONS.

WHERE GUARDRAILS ARE TO BE INSTALLED THE SHOULDER WIDTH SHALL BE INCREASED IN ACCORDANCE WITH VOOT ROAD AND BRIDGE STANDARDS.

STORM DRAINAGE

FIELD REVIEW WILL BE MADE DURING CONSTRUCTION TO DETERMINE THE NEED AND LIMITS OF PAVED DITCHES AND/OR DITCH STABILIZATION TREATMENTS, AND TO DETERMINE THE NEED AND LIMITS OF ADDITIONAL DRAINAGE EASEMENTS. ALL DRAINAGE EASEMENTS MUST BE CUT AND MADE TO FUNCTION TO A NATURAL WATERCOURSE. ANY EROSION PROBLEMS ENCOUNTERED IN AN EASEMENT MUST BE CORRECTED BY WHATEVER MEANS NECESSARY PRIOR TO SUBDIVISION ACCEPTANCE.

DITCH SLOPES ARE TO BE FOUR TO ONE (4:1) FOR SHOULDER WIDTHS OF SIX FEET (6') OR GREATER AND THREE TO ONE (3:1) FOR SHOULDER WIDTHS OF FOUR FEET (4') OR FIVE FEET (5'), UNLESS OTHERWISE SPECIFIED IN THE PLANS.

CONTRACTOR SHALL OBTAIN ENTRANCE PERMIT TO THE EXISTING VIRGINIA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY FROM RESIDENT

ENGINEER PRIOR TO ROAD CONSTRUCTION.

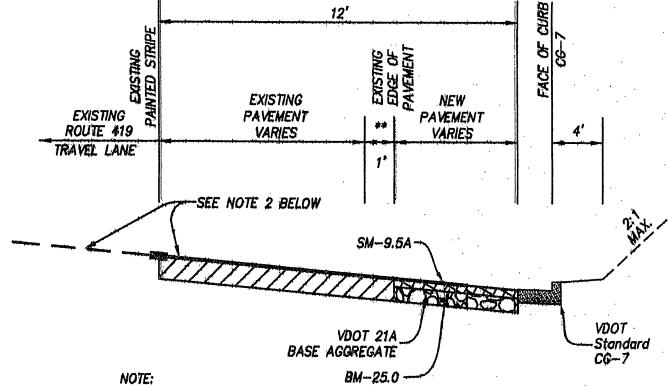
AN INSPECTOR WILL NOT BE FURNISHED EXCEPT FOR PERIODIC PROGRESS INSPECTION, THE ABOVE MENTIONED FIELD REVIEWS AND CHECKING FOR REQUIRED STONE DEPTHS. THE DEVELOPER WILL BE REQUIRED TO POST A SURETY TO GUARANTEE THE ROAD FREE OF DEFECTS FOR ONE YEAR AFTER ACCEPTANCE BY THE DEPARTMENT OF TRANSPORTATION.

THE STREETS MUST BE PROPERLY MAINTAINED UNTIL ACCEPTANCE. AT SUCH TIME AS ALL REQUIREMENTS HAVE BEEN MET FOR ACCEPTANCE. ANOTHER INSPECTION WILL BE MADE TO DETERMINE THAT THE STREET HAS BEEN PROPERLY MAINTAINED.

CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK BY CONTACTING MISS UTILITY. CONTACT SITE ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS. IF THERE APPEARS TO BE A CONFLICT, AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THIS PLAN, CALL "MISS UTILITY" OF CENTRAL VIRGINIA AT 1-800-552-7001.

REVISIONS OF SPECIFICATIONS AND STANDARDS APPROVAL OF THESE PLANS WILL BE BASED ON SPECIFICATIONS AND STANDARDS IN EFFECT AT THE TIME OF APPROVAL AND WILL BE SUBJECT, UNTIL COMPLETION OF THE ROADWAY AND ACCEPTANCE BY THE DEPARTMENT, TO FUTURE REVISIONS OF THE SPECIFICATIONS AND STANDARDS.

** CONTRACTOR TO BEGIN NEW CONSTRUCTION ONE (1) FOOT BACK FROM EXISTING EDGE OF PAVEMENT OR MORE AS REQUIRED TO MAINTAIN THE EXISTING, FULL DEPTH, PAVEMENT SECTION OF ROUTE 419 THROUGHOUT THE ENTIRE TURN LANE AND TAPER. CONTRACTOR IS RESPONSIBLE FOR STRIPING AS REQUIRED PER VDOT STANDARDS AND SPECIFICATIONS.



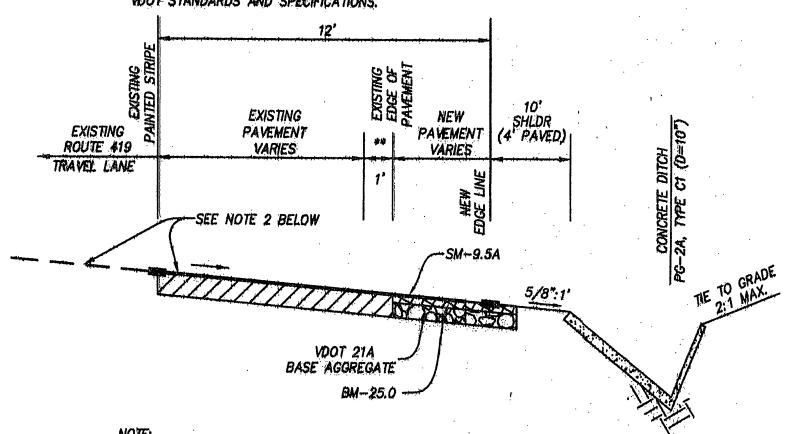
1.) STANDARD GUARDRAIL WITH SAFETY END SECTIONS MAY BE REQUIRED ON FILLS AS DEEMED NECESSARY BY THE VDOT RESIDENT ENGINEER. AFTER COMPLETION OF ROUGH GRADING OPERATIONS, THE OFFICE OF THE VOOT RESIDENT ENGINEER, SHALL BE NOTIFIED SO A VOOT FIELD REVIEW MAY BE MADE OF THE PROJECT.

2.) CROSS SLOPE ACROSS TURN LANE PAVEMENT TO MATCH EXISTING PAVEMENT CROSS CROSS SLOPE; 1/4":1" MINIMUM.

TURN LANE DETAIL

NO SCALE

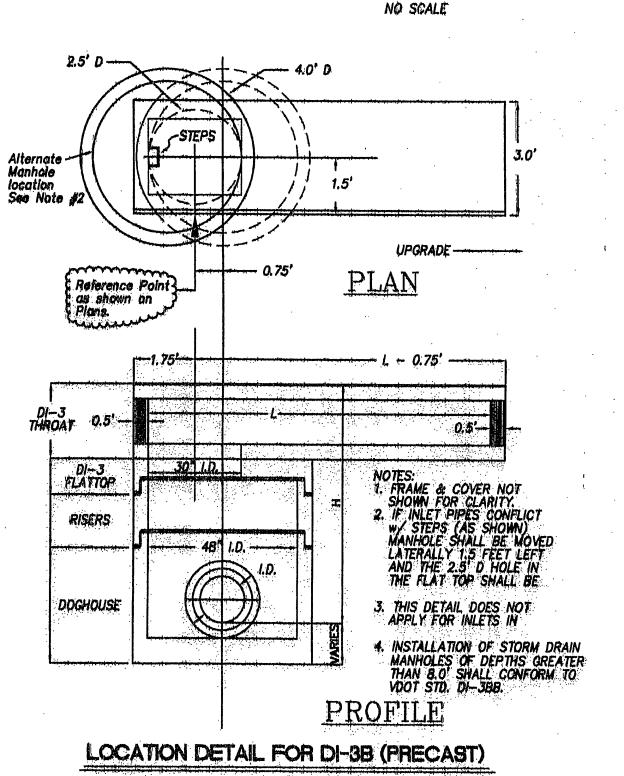
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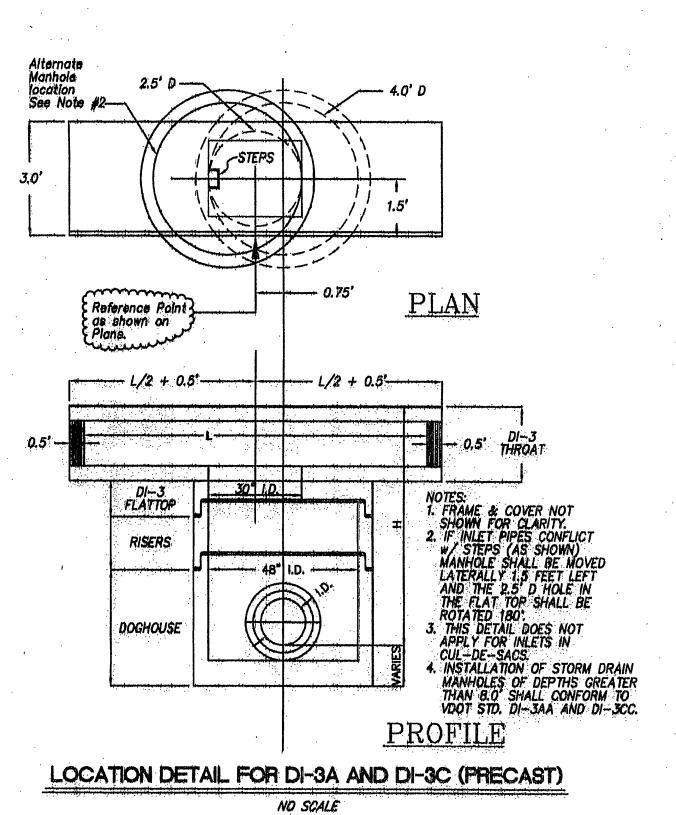
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2.) CROSS SLOPE ACROSS TAPER PAVEMENT TO MATCH EXISTING PAVEMENT CROSS CROSS SLOPE; 1/4": 1' MINIMUM.

TAPER DETAIL



NO SCALE



2" ASPHALT CONCRETE; TYPE SM-9.5A 6" ASPHALT CONCRETE; TYPE BM-25.0 8" AGGREGATE BASE, VDOT #21A STONE

----- COMPACTED EARTH

PAVEMENT DETAIL

NO SCALE

PAVEMENT NOTES:

- 1. THE SIZE 21B AGGREGATE SHALL BE PRIMED WITH APPROXIMATELY 0.35 GAL/SY OF RC-250 ASPHALT AND COVERED WITH 16 TO 18 LBS/SY OF SIZE 8-P AGGREGATE BEFORE PLACING 5M-9.5A
- FOR STANDARD PAVEMENT ONLY. 2. EXISTING PAVEMENT IS TO BE SAW CUT WHERE NEW PAVEMENT IS TO MATCH. SAW CUT IS TO BE MADE WITH A MECHANICAL SAW AND SIDES TO BE TACKED WITH BITUMINOUS MATERIAL, TYPE RC-250, OR EQUAL.
- 3. PAVENENT DETAIL SHALL BE USED FOR THE TURN LANE, TAPER, AND FOR THE NEW ENTRANCE PAVEMENT.

SITE AND ZONING TABULATIONS

PROPOSED USE: ENTRANCE FOR FUTURE RETAIL/OFFICE

ROANOKE, VA 24018

GENERAL NOTES

- 1. THE PROPERTY SHOWN ON THESE PLANS IS LOCATED AT ROANOKE COUNTY TAX ASSESSMENT MAP # 77.18-05-02.0 2. OWNER/DEVELOPER;
 - WEST VILLAGE, LLC. PO BOX 721
- 3. THIS PROPERTY IS NOT LOCATED WITH THE LIMITS OF A 100 YEAR FLOOD BOUNDARY AS DESIGNATED BY FEMA. THIS OPINION IS BASED ON AN INSPECTION OF THE FLOOD INSURANCE rate map, #51161c0062 d, dated october 15, 1983, and has not been verified by actual FIELD ELEVATIONS.
- H. BOUNDARY SURVEY PERFORMED BY LUMSDEN ASSOCIATES, DATED 2003.
- SOURCE OF TOPOGRAPHY IS AERIAL MAPPING DATED AUGUST 9,2004. 5. NO TITLE REPORT WAS FURNISHED FOR THIS PROPERTY.
- . THE DEVELOPMENT SHOWN ON THESE PLANS SHALL BE ACCESSED BY PUBLIC ROADS. 8. THE DEVELOPMENT SHOWN ON THESE PLANS SHALL BE SERVED BY PUBLIC WATER AND
- . ALL EXTERIOR LIGHTING FIXTURES SHALL BE LOCATED AND ARRANGED SO AS NOT TO DIRECT GLARE ON ADJOINING STREETS OR RESIDENTIAL PROPERTIES. THE INTENSITY AT ADJOINING STREETS OR RESIDENTIAL PROPERTIES SHALL NOT EXCEED 0.5 FOOT
- 10. ANY EXTERIOR SIGN WILL REQUIRE A SEPARATE SIGN PERMIT.

CONSTRUCTION NOTES

- i. All construction shall conform to the current county of roanoke STANDARDS AND SPECIFICATIONS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED
- FROM ANY AUTHORITY ISSUING PERMITS. 3. NO SUBSOIL INVESTIGATIONS HAVE BEEN FURNISHED TO THE DESIGNING ENGINEER. 4. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS
- PRIOR TO STARTING CONSTRUCTION, 5. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES
- PRIOR TO STARTING CONSTRUCTION.
- 6. SEE 2001 VOOT ROAD AND BRIDGE STANDARDS FOR CONCRETE CURB AND STORM DRAINAGE DETAILS.
- 7. THE CONTRACTOR AND OR OWNER SHALL PROVIDE A STORAGE CONTAINER FOR TEMPORARY STORAGE AND DISPOSAL OF LAND CLEARANCE DEBRIS AND
- BUILDING MATERIALS. ON-SITE BURIAL OF MATERIAL SHALL NOT BE PERMITTED. 8. NO DEVIATION TO THE DEVELOPMENT PLANS SHALL BE MADE WITHOUT THE APPROVAL OF THE DEVELOPMENT PLANS SHALL BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
- 9. ANY ALTERATIONS TO THE UTILITY INFRASTRUCTURE, GRADE CHANGES, OR ANY ALIGNMENT Changes shall require a new set of plans sealed by the consulting engineer, and SHALL REQUIRE APPROVAL BY ROANOKE COUNTY AND THE WESTERN VIRGINIA WATER AUTHORITY.
- 10. ALL NECESSARY UTILITY LATERALS ALONG WITH PROVISIONS FOR CONDUITS (LE. WATER, SEWER, STORM, GAS AND TELEPHONE) WILL BE CONSTRUCTED PRIOR TO THE PLACEMENT OF BASE
- 11. THE ENTIRE CONSTRUCTION AREA INCLUDING DITCHES AND/OR PAVEMENT IS TO BE
- BACKFILLED AND SEEDED AT THE EARLIEST POSSIBLE TIME AFTER FINAL GRADING 12. THE EXISTING GUARDRAIL REMOVED MUST BE RETURNED TO VDOT, CONTACT THE RESIDENCY AT (540) 387-5488 TO DETERMIN A SUITABLE COLLECTION TIME. THE EXISTING END TREATMENT
- MUST BE EVALUATED BY VOOT TO DETERMINE IF IT MEETS CURRENT REQUIREMENTS. 13. The contractor shall be responsible for repair or replacement of structures within THE VDOT RIGHT-OF-WAY WHICH ARE DAMAGED DURING CONSTRUCTION OF THIS PROJECT.

GRADING NOTES

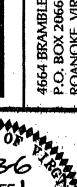
- 1. AREAS TO BE GRADED SHALL BE CLEARED OF ALL VEGETATION, STRUCTURES, AND OTHER PHYSICAL FEATURES IN PREPARATION OF GRADING. TOPSOIL SHALL BE REMOVED FROM THE CLEARED AREA AND STOCKPILED FOR FUTURE
- 3. FILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER AND ROCKS LARGER THAN 6
- INCHES IN DIAMETER. 4. FILL MATERIAL SHALL BE PLACED AND COMPACTED IN EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698, STANDARD PROCTOR, MAINTAIN MOISTURE CONTENT OF FILL MATERIAL WITHIN THREE (3) PERCENT OF OPTIMUM TO ATTAIN REQUIRED COMPACTION DENSITY.
- 5. NO SUBSURFACE SOILS INFORMATION HAS BEEN FURNISHED TO THE DESIGNING ENGINEER (LUMSDEN ASSOCIATES, P.C.). A QUALIFIED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF VIRGINIA. SHOULD BE CONSULTED CONCERNING SOIL STABILITY, SLOPE STABILIZATION, SOIL COMPACTION, TESTING, AND OTHER SOIL CHARACTERISTICS. LUMSDEN ASSOCIATES ASSUMES NO RESPONSIBILITY OR LIABILITY RELATING TO FAILURES RESULTING FROM SAME.

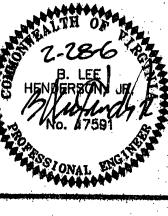
WESTERN VIRGINIA WATER AUTHORITY GENERAL NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN WROINIA NATER AUTHORITY, ROANOKE COUNTY AND/OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
- A PRE-CONSTRUCTION CONFERENCE SHOULD BE SCHEDULED WITH ROANOKE COUNTY ENGINEERING DIVISION, AND THE WESTERN VIRGINIA WATER AUTHORITY, TO BE HELD AT LEAST ONE (1) DAY PRIOR TO ANY CONSTRUCTION, ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE WESTERN VIRIGINIA
- WATER AUTHORITY, ROANCKE COUNTY AND/OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION INSPECTORS. THE DEVELOPER OR CONTRACTOR SHALL SUPPLY THE COUNTY, AND THE VESTERN VIRGINIA WATER AUTHORITY WITH CORRECT AS-BUILT PLANS BEFORE
- TENTATIVE ACCEPTANCE. FIELD CORRECTIONS SHALL BE APPROVED BY THE ROANOKE COUNTY ENGINEERING DIVISION AND THE WESTERN VIRGINIA WATER AUTHORITY PRIOR to such construction.

LUMSDEN ASSOCIATES, P.C. ENGINEERS-SURVEYORS-PLANNERS ROANOKE, VIRGINIA







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NO SCALE 2004-230

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