

Erosion & Sediment Control Technical Bulletin No. 4
Nutrient Management for Development Sites

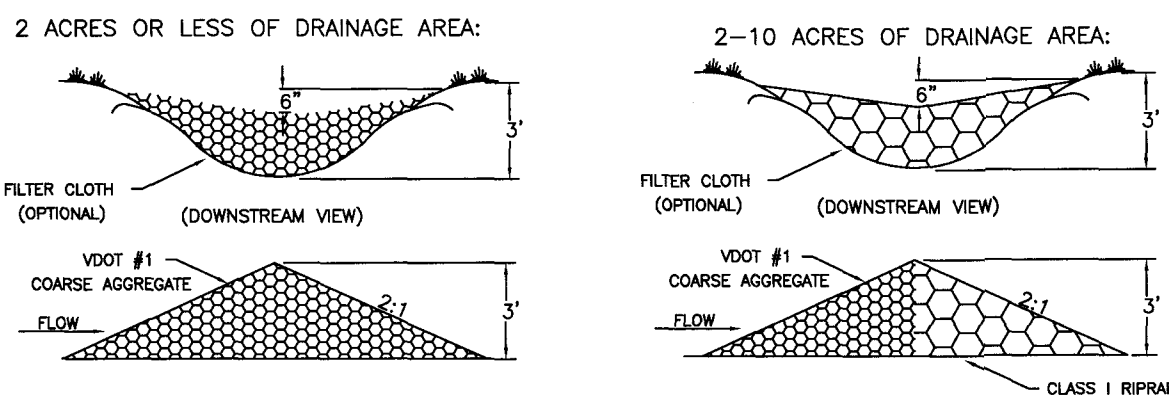
C. When applying maintenance fertilizer on established sod,

Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is less than 50 percent WIN				
Month	Type of Grass			
	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
September	1	1	0	0
October	1	1	0	0
Early November	0	0	0	0
April	0	0	0	0
May	0-0.5	0-0.05	1	1
June	0	0	1	0
July/August	0	0	0	1
Yearly Lbs. N/1000 sf	2.5	2.5	2	2
Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is more than 50 percent WIN				
Month	Type of Grass			
	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
August 15	1.5	1.5	0	0
October 1	1.5	1.5	0	0
April	0	0	1.5	1.5
May 15	0	0	0	0
June	0	0	1.5	1.5
Yearly Lbs. N/1000 sf	3	3	3	3

FERTILIZER SPECIFICATIONS AND
RATES FOR MANAGEMENT

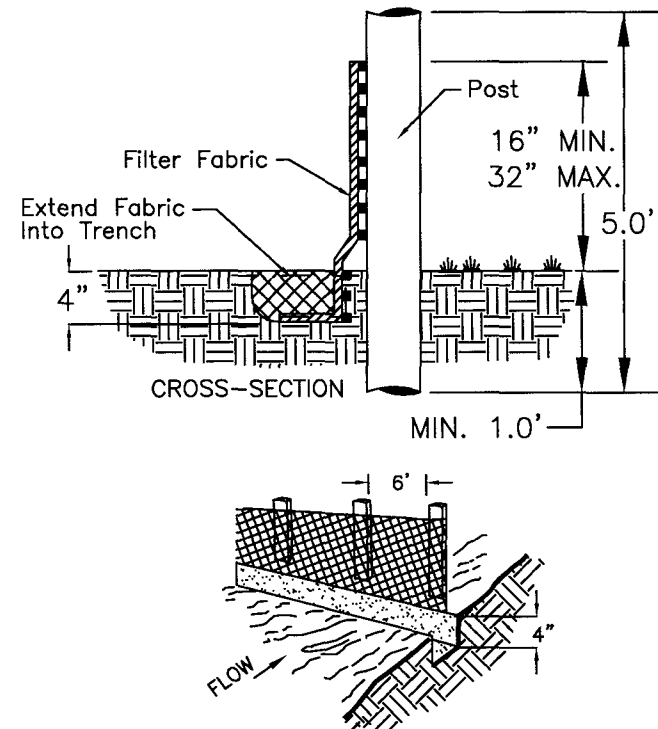
TABLE 3.32-C (Revised June 2003) PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN/MOUNTAIN AREA		
LAND USE	SEED ¹ SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹ Perennial Ryegrass ² Kentucky Bluegrass ³	50-100lb 0-10% 0-10% TOTAL: 200-250 lbs
High-Maintenance Lawn	Minimum of three (3) up to five (5) varieties of Kentucky Bluegrass from approved list for use in Virginia ⁴	TOTAL: 125 lbs
General Slope (3:1 or less)	Tall Fescue ¹ Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ³	125 lbs 2 lbs 20 lbs TOTAL: 150 lbs
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ¹ Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ³ Crownvetch ⁴	125 lbs 2 lbs 20 lbs 20 lbs TOTAL: 160 lbs
1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (Vicia) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by Vicia. A current turfgrass variety list is available at the local County Extension office or through Vicia at 804-746-4894 or at http://sudan.ces.vt.edu/html/turf/turfpublications/publications2.htm		
2 - Perennial Ryegrass will germinate faster and at lower soil temperatures than Tall Fescues, thereby providing lower and erosion resistance for seedbed.		
3 - Use seasonal nurse crop in accordance with seeding dates as stated below: March, April - May 15 th Annual Rye May 16 th - August 15 th Foxtail Millet August 16 th - September, October Annual Rye November - February Winter Rye		
4 - All legume seed must be properly inoculated. If Paspalea is used, increase to 30 lbs/acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40 lbs/acre.		
FERTILIZER & LIME		
● Apply 10-20-10 fertilizer at a rate of 500 lbs./acre (or 12 lbs./1,000 sq. ft.) ● Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)		
NOTE: 1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site. 2 - Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disk or by other means. 3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dor.state.va.us/sw/eds.htm#trubs		

PS PERMANENT SEEDING
SPECIFICATIONS



CD ROCK CHECK DAM

TS TEMPORARY SEEDING
SPECIFICATIONS



SF CONSTRUCTION OF A SILT FENCE
EROSION AND SEDIMENT CONTROL STANDARD - 3.05

UTILITY NOTES

- SUPPLY AND INSTALL ALL MATERIALS AND METHODS FOR WATERLINES, SANITARY SEWERS AND STORM DRAINAGE IN ACCORDANCE WITH THE SPECIFICATIONS AND REQUIREMENTS OF WWA AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION "ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS", LATEST EDITION.
- OBTAIN ALL REQUIRED PERMITS AND NOTIFY APPROPRIATE OFFICIALS 48 HOURS PRIOR TO COMMENCEMENT OF WORK. OBTAIN INFORMATION FROM WWA CONCERNING PERMITS AND CONNECTIONS TO EXISTING LINES.
- ALL WORK SHALL BE SUBJECT TO INSPECTION BY ROANOKE COUNTY. NOTIFY APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF WORK.
- SITE SHALL BE TO SUB GRADE PRIOR TO INSTALLATION OF UTILITIES. ALL UTILITIES SHALL BE IN PLACE PRIOR TO PLACEMENT OF PAVEMENT BASE MATERIAL.
- USE SELECT MATERIAL FREE FROM FROST, LARGE CLOUDS, STONES, AND DEBRIS FOR BACK FILL FROM THE BOTTOM OF THE TRENCH TO TWELVE (12) INCHES ABOVE THE PIPE.
- MINIMIZE ANY DISTURBANCE TO EXISTING WATER SERVICE, SEWER LINES OR ANY OTHER UTILITY DURING CONSTRUCTION AND PROVIDE QUALITY WORKMANSHIP.
- MAKE ALL PIPE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE COUNTY'S SPECIFICATIONS. MAKE JOINTS BETWEEN DIFFERENT PIPE MATERIALS WITH STANDARD FITTINGS MANUFACTURED FOR THE PURPOSE.
- MAINTAIN ALL WATER LINES AT TEN (10) FEET HORIZONTAL SEPARATION FROM SEWER LINES AND MANHOLES; MEASURE THE DISTANCE EDGE-TO-EDGE. WHEN LOCAL CONDITIONS PREVENT THE DESIRED HORIZONTAL SEPARATION, THE WATERLINE MAY BE LAID CLOSER TO THE SEWER OR MANHOLE PROVIDED THAT THE BOTTOM OF THE WATERLINE SHALL BE AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER. WHERE THIS VERTICAL SEPARATION CANNOT BE OBTAINED, CONSTRUCT THE SEWER OF ANWA APPROVED WATER PIPE AND PRESSURE TREAT IN PLACE PRIOR TO BACKFILLING. THE SEWER MANHOLE SHALL BE OF WATERTIGHT CONSTRUCTION TESTED IN PLACE.
- SEWER AND WATER TAPS SHALL BE LOCATED BY THE CONTRACTOR AND MADE BY THE WESTERN VIRGINIA WATER AUTHORITY.
- LOCATE AND UNCOVER VALVE VAULTS AND MANHOLES AFTER PAVING AND ADJUST TO FINAL GRADE, IF NECESSARY.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS WHERE UTILITIES ENTER THE BUILDING.
- VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF:
 - ANY LOCATION OR ELEVATION IS DIFFERENT FORM THAT SHOWN ON THE PLANS.
 - IF THERE APPEARS TO BE ANY CONFLICT.
 - UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS.
- REPAIR ALL DAMAGE CAUSED TO ANY UTILITY, PUBLIC OR PRIVATE, AS A RESULT OF THIS WORK AT NO ADDITIONAL COST TO OWNER.
- PROVIDE A CONTINUOUS AND UNIFORM BEDDING IN THE TRENCH FOR ALL PIPE. REMOVE STONES AND ROCKS FOUND IN THE TRENCH FOR A DEPTH OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE AND TAMP SELECT FILL BEDDING PROVIDED. AFTER THE PIPE HAS BEEN PLACED IN THE TRENCH, BACK FILL THE TRENCH WITH SELECT MATERIAL, THOROUGHLY COMPACT TO 90% (95% UNDER PAVEMENT OR CONCRETE SLAB) OF THE STANDARD PROCTOR (ASTM D-698) USING CARE NOT TO DAMAGE THE PIPE. USE VDOT STANDARD PB-1 TRENCH FOR STORM SEWER AND UB-1 FOR SANITARY SEWER AND WATER.
- PLACE BACK FILL FOR ALL UTILITIES IN ACCORDANCE WITH THE COUNTY'S SPECIFICATIONS, AND THE FOLLOWING CRITERIA:
 - BACK FILL NO TRENCH UNTIL AUTHORIZED BY THE COUNTY/WWA. MATERIALS USED FOR BACK FILL FROM THE BOTTOM OF THE TRENCH TO TOP OF THE PIPE SHALL BE CRUSHER RUN, OR APPROVED EQUAL MATERIAL. THOROUGHLY AND CAREFULLY COMPACT THE BACK FILL MATERIAL.
 - COMPACT BACK FILL BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO INSURE A SUITABLE SUBBASE ACCEPTABLE TO THE ROAD ENGINEER. IF THE MATERIAL TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACK FILLING THE TRENCH.
- IN AREAS OF WATER LINE CONSTRUCTION, GRADES SHALL BE WITHIN SIX (6) INCHES OF FINISHED SUB GRADE PRIOR TO THE COMMENCEMENT OF THIS WORK.
- MINIMUM COVER OVER WATER AND SANITARY SEWER LINES SHALL BE THREE (3) FEET.
- THE WESTERN VIRGINIA WATER AUTHORITY COUNTY SHALL MAKE ALL CONNECTIONS TO EXISTING WATER MAINS.
- THE CONTRACTOR SHALL INSTALL ALL WATER SERVICE CONNECTIONS AND METER BOXES.
- PIPES AND FITTINGS SHALL BE POLYVINYL.
- CONNECT PIPE TO MANHOLES THROUGH PRE CAST OPENINGS AND JOIN WITH EITHER A FLEXIBLE BOOT ADAPTER OR A PIPE SEAL GASKET.

CONSTRUCTION SITE PLAN GENERAL NOTES
CONSTRUCTION METHODS

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, AND LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS, WHERE APPLICABLE.
 - THE LOCATION OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION WORK AND NOTIFY ENGINEER IMMEDIATELY IF LOCATIONS DIFFER FROM PLANS.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-552-7001 OR 811 PRIOR TO ANY CONSTRUCTION WORK IN THIS AREA.
- UNDERGROUND UTILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LINE AND GRADE FOR ALL DRY UTILITIES PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING DRY UTILITY LINES AND GRADES AGAINST ALL PROPOSED UTILITIES SHOWN ON THE PLANS. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER AS SOON AS POSSIBLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING TELEPHONE, CABLE, FIBER OPTIC, AND ELECTRICAL SERVICES TO THE PROJECT. CONTACT UTILITY PROVIDERS AS SOON AS POSSIBLE TO BEGIN COORDINATION.
 - THE CONTRACTOR SHALL REVIEW SITE AND BUILDING DRAWINGS TO VERIFY COORDINATION OF UTILITY INVERTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.

GRADING NOTES

G.C. SHALL REVIEW THE "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION CAVERN MARKET," F&R PROJECT NO. 62U0342, DATED NOVEMBER 2016. IF ANY DISCREPANCIES ARE FOUND BETWEEN THE REPORT AND THE NOTES ON THESE PLANS, THE REPORT SHALL GOVERN.

REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.

REMOVE TREES, SHRUBS, GRASS, AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.

BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.

EXCAVATION FOR STRUCTURES:

- CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1'.
- PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM AND LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
- REMOVE ALL LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
- FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET.
- IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM EXCAVATION WITH CONTROLLED FILL.

CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.

EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING.

PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. CONVEY WATER WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35°F (1°C).

PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35°F (1°C).

BACKFILLING:

- COMPACT THE BACKFILL AROUND THE OUTSIDE OF EACH BUILDING TO A MINIMUM OF 85% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 STANDARD PROCTOR. DO NOT ALLOW HEAVY COMPACTION EQUIPMENT SUCH AS ROLLERS, ETC., CLOSER TO ANY FOOTING THAN THE HORIZONTAL DISTANCE SUBTENDED BY A 45° ANGLE WITH THE TOP EDGE OF THE FOOTINGS AND THE SURFACE OF THE GROUND.
- BACKFILL BEHIND WALLS AFTER PERMANENT CONSTRUCTION WHICH BRACES THE WALL IS IN PLACE OR TEMPORARY BRACING OF THE WALL IS PROPERLY INSTALLED, AND AFTER ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE INCLUDING DAMP-PROOFING, REMOVAL OF CONCRETE FORMWORK, AND REMOVAL OF TRASH AND DEBRIS.

FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.

GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10' STRAIGHT EDGE.

PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.

PLACE ALL FILL AND BACKFILL AS CONTROLLED FILL ACCORDING TO THE GEOTECH REPORT AND THE FOLLOWING NOTES:

- ESTABLISH SUITABLE SUBGRADE CONDITIONS PRIOR TO PLACING FILL BY PROOFROLLING, UNDERCUTTING, AND COMPACTING AS NECESSARY.
- PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" FOR HAND TAMPERS.
- PRIOR TO COMPACTION, PROVIDE MOISTURE CONTENT TO WITHIN 3% OF OPTIMUM BY MOISTENING OR AERATING EACH LAYER. DO NOT PLACE FILL MATERIAL ON SURFACES WHICH ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE.
- COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR):
 - 95% UNDER PAVEMENT, GRAVEL, AND BUILDING
 - 85% UNDER LAWN OR UNPAVED AREAS

SPREAD TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES. IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL, DISK THE ENTIRE TOPSOILED AREA AND RAKE FREE OF STONES AND DEBRIS OVER 1/2" IN ANY DIMENSION. PROVIDE A FINISHED SURFACE FREE OF DEPRESSIONS OR HIGH SPOTS. SEED IMMEDIATELY.

OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

GENERAL NOTES

PROVIDE NEW MATERIALS AND WORKMANSHIP IN CONFORMANCE WITH ALL APPLICABLE CODES, STATE AND FEDERAL LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND OTHER CRITERIA WHICH WOULD NORMALLY APPLY TO WORK OF THIS NATURE. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A CONFLICT IN CODES, ORDINANCES, STANDARDS, OR OTHER CRITERIA. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:

- BOCA - BASIC CODES
- ROANOKE COUNTY
- VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS
- VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK
- OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
- WWA - WESTERN VIRGINIA WATER AUTHORITY

MAINTAIN A SET OF APPROVED PLANS ON SITE AT ALL TIMES DURING CONSTRUCTION.

OBTAIN EACH REQUIRED PERMIT PRIOR TO COMMENCING THAT PART OF THE WORK. PAY REQUIRED FEES.

NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF CONDITIONS WHICH DIFFER FROM THOSE SHOWN ON THE PLANS.

COMPLY WITH LOCAL ORDINANCES FOR BURNING OF WASTE. TRANSPORT WASTE MATERIALS AND UNSUITABLE MATERIALS FROM OWNER'S PROPERTY.

COORDINATE BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.

A PRECONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO COMMENCING WORK. AS A MINIMUM, THE CONTRACTOR, OWNER'S AGENT AND COUNTY'S AGENT MUST ATTEND.

VERIFY THE LOCATION AND ELEVATION OF EACH EXISTING UNDERGROUND UTILITY IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK. CONTACT ENGINEER IMMEDIATELY IF THERE APPEARS TO BE A CONFLICT, UPON DISCOVERY OF A UTILITY WHICH IS NOT SHOWN, AND UPON DISCOVERY OF A LOCATION OR ELEVATION WHICH DIFFERS FROM THAT SHOWN. TO LOCATE UTILITIES, CALL "MISS UTILITY", 1-800-552-7001. UTILITY LOCATIONS SHOWN ARE THE RESULT OF A COMBINATION OF FIELD LOCATION AND EXISTING INFORMATION. LOCATIONS ARE APPROXIMATE.

REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES, AT NO ADDITIONAL COST TO OWNER.

NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION.

SIGNAGE SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE COUNTY OF ROANOKE ZONING ORDINANCE, SECTION 30-93. A SEPARATE PERMIT IS REQUIRED.

ANY SITE DEVELOPMENT OUTSIDE OF THE SCOPE OF THIS PLAN WILL REQUIRE SITE PLAN REVIEW.

ADDITIONAL DRAINAGE STRUCTURES AND EASEMENTS MAY BE REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION DUE TO AND DEVIATION BETWEEN THE APPROVED PROPOSED CONTOURS AND THE AS-BUILT CONDITIONS OR ANY OTHER TOPOGRAPHIC CHANGES.



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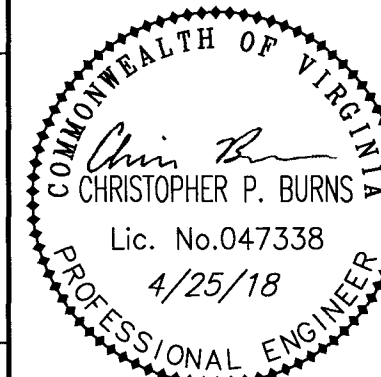
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EXPLORE PARK
GRAVITY S.S. EXTENSION
NOTES AND ESC DETAILS
VINTON DISTRICT
ROANOKE COUNTY, VIRGINIA

DRAWN BY CPB

DESIGNED BY CPB

CHECKED BY SMH

DATE 11/9/2017

SCALE AS SHOWN

REVISIONS:
12/18/2017
1/24/2018
4/25/2018

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C5

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