KEY	NAME	SYMBOL	VESCH No.
(B/M)	Soil Stabilization Blankets and Matting		3.36
(CE)	Temporary Gravel Construction Entrance		3.02
CIP	Culvert Inlet Protection		3.08
(CRS)	Construction Road Stabilization		3.03
(DD)	Temporary Diversion Dike		3.09
(ES-1)	Silt Fence Break		
(IP)	Storm Drain Inlet Protection		3.07
MU	Mulching		3.35
OP	Outlet Protection		3.18
PS	Permanent Seeding		3.32
SAF	Construction Safety Fencing	<u> </u>	3.01
SF	Silt Fence	— X — X	3.05
SR	Surface Roughening		3.29
ST	Temporary Sediment Trap		3.13
TP	Tree Preservation and Protection		3.38
(TS)	Temporary Seeding &S Plan is schematic. E&S measures are represente		3.31

GENERAL EROSION AND SEDIMENT CONTROL NOTES

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, latest edition and Virginia Regulations 4VAC50-30, Erosion and Sediment Control Regulations.

approximate their actual size. Refer to the details, other drawing notes, and the VESCH for complete information.

ES-2: 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: All erosion and sediment control measures are to be placed prior to or as the first step in clearing.

ES-4: A copy of the approved erosion and sediment control plan shall be maintained on the site at all times. ES-5: Prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the

owner for review and approval by the plan approving authority. 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

EROSION CONTROL LEGEND AND GENERAL NOTES
Refer to and comply with the Standards and Specifications of the Virginia Erosion & Sediment Control Handbook, latest edition. This information is based on and modeled after it and is provided as a quick reference.

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Erosion and sediment control must be consistent with the following criteria, techniques and methods, as required in the Virginia Administrative Code, 4VAC50-30-40.

"Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade has been reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than thirty days. Permanent stabilization shall be applied to areas that are to be left

dormant for more than one year. "During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well

as borrow areas and soil intentionally transported from the project site. "A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit

"Sediment basins and traps, perimeter dikes, 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 upslope land disturbance takes place.

"Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation. "Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap

a. "The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.

b. "Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a twenty-five year storm of 24-hour duration. Runoff coefficiencies used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.

"Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

"Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

"Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.). "All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

"Before newly constructed stormwater conveyance channels are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel. "When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

"When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary stream crossing constructed of nonerodible material shall be provided. "All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.

"The bed and banks of any watercourse shall be stabilized immediately after work in the watercourse is completed. "Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

a. "No more than 500 linear feet of trench may be opened at one time. b. "Excavated material shall be placed on the uphill side of trenches. c. "Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and

discharged in a manner that does not adversely affect flowing streams or off-site property. d. "Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.

"Restabilization shall be accomplished in accordance with these regulations. "Applicable safety regulations shall be complied with.

7. "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 paved or 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 development lots as well as to larger land-disturbing activities. 8. "All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the

temporary measures are no longer needed, unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion

"Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the standards and criteria" ... given in detail in the Virginia Erosion & Sediment Control Handbook, latest edition.

EROSION & SEDIMENT CONTROL MINIMUM STANDARDS Refer to and comply with the Standards and Specifications of the Virginia Erosion & Sediment Control Handbook, latest edition. This information is based on and modeled after it and is provided as a quick reference. DESIGN WWW.ACSDESIGNILC.COM = ENGINEERING = SURVEYING = LANDSCAPE ARCHITECTURE = CONSTRUCTION MANAGEMENT

EROSION & SEDIMENT CONTROL NARRATIVE

The project is adjacent to U.S. Route 220 between the towns of Boones Mill and Rocky Mount in Franklin County, Virginia. The purpose of this project is to construct a short-run gravity sewer line into a raw sewage pumping station, which will send raw sewage through a 3-inch sanitary sewer force main to another gravity sewer line, which will convey the raw sewage to a new wastewater treatment plant. The new treatment plant will include a laboratory building. The treated effluent from the treatment plant will surface discharge into an upstream tributary of the Blackwater River. This entire system is being created to provide sewage treatment and disposal for planned commercial and residential projects being developed by Wirtz Services, LLC.

EXISTING SITE CONDITIONS

The project corridor is a 20-foot-wide easement across undeveloped and commercial properties and along roadways. The existing conditions include a mix of grassy, paved and wooded areas.

Areas adjacent to the project corridor include undeveloped and commercial properties and roadways. The terrain adjacent to the project corridor is a mix of grassy, paved and wooded areas. It is mostly adjacent to a highway and surrounded by existing mixed use commercial development.

No off-site areas will be disturbed as part of this project except for access and staging.

See the Soils Man on this sheet for additional information

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Unit	Soil Name	Slope	Erodibility	Permeability	Depth	Texture
7C	Clifford	8-15%	Kf=0.28	Moderate	>7 ft	Fine Sandy Loar
7D	Clifford	15-25%	Kf=0.28	Moderate	>7 ft	Fine Sandy Loan
8E	Clifford-Hickoryknob	25-45%	Kf=0.28	Moderate	>7 ft	complex

CRITICAL AREAS

Some portions of the work will traverse steep slopes for short distances.

EROSION AND SEDIMENT CONTROL MEASURES . Temporary Construction Entrance (Section 3.02) One temporary construction entrance will be installed. The entrance shall be

composed of graded 3-inch stone to a minimum depth of 6 inches. The entrance shall also run for a minimum distance of not less than 70 feet back from the existing edge of pavement.

Silt Fence (Section 3.05) Temporary silt fence shall be installed along the peripheries of the areas disturbed for the pump station and the wastewater treatment plant.

Culvert Inlet Protection (Section 3.08) In order to prevent sediment-laden runoff from clogging the culvert during

construction, culvert inlet protection shall be used on the proposed culvert until upland areas are stabilized. 4. Diversion (Section 3.12) A diversion dike will be installed at the pump station site as indicated on the site plan. After every

rainfall producing runoff, the dike shall be inspected and repaired as needed. Riprap (Section 3.19) A permanent, erosion-resistant ground cover of large, loose, angular stone with filter fabric or granular underlining shall be placed to protect the slope and channel at the end of the diversion dike.

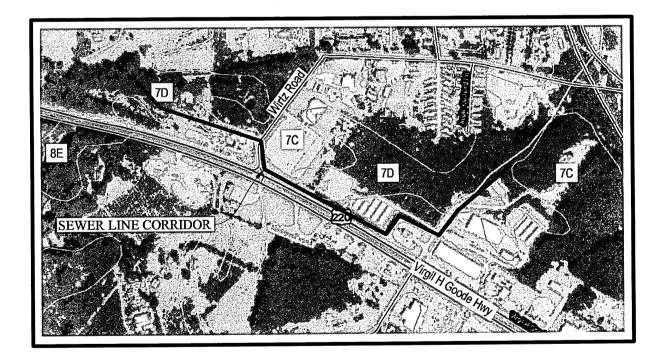
Surface Roughening (Section 3.29) Surface roughening will be employed on all 2:1 slopes or slopes exceeding 2:1. Permanent Seeding (Section 3.32) All areas disturbed by construction shall be stabilized with permanent seeding immediately

following finish grading. Erosion control blankets will be installed over fill slopes which have been brought to final grade and have been seeded to protect the slopes from rill and gully erosion and to allow seed to germinate properly. Mulch (straw or fiber) will be used on relatively flat areas. In all seeding operations, seed, fertilizer and lime will be applied prior to mulching. Mulching (Section 3.35) Mulch shall be used over all seeded areas and shall be applied in accordance with Standard and

Specification 3.35 of the Virginia Erosion and Sediment Control Handbook, latest edition.

PERMANENT STABILIZATION Permanent stabilization will be accomplished by establishment of turf.

Calculations are provided in the "Design Notes" document.



SOILS MAP EXCERPTED FROM NRCS WEB SITE SOIL SURVEY

NOTE: EROSION AND SEDIMENT CONTROL MEASURES ARE SHOWN ON PLAN & PROFILE SHEETS C3.1 THRU C3.5.

ENGINEERING - SURVEYING LANDSCAPE ARCHITECTURE **CONSTRUCTION MANAGEMENT**

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EROSION CONTROL NOTES AND DETAILS