

## PROJECT DESCRIPTION

## EXISTING SITE CONDITIONS

ADJACENT PROPERTY:

OFF-SITE AREAS:

SOILS:

- 6C - CHISWELL-LITZ-URBAN LAND COMPLEX, 2-15% SLOPES
- 43A - SPEEDWELL LOAM, 0-2% SLOPES
- 44A - SPEEDWELL-URBAN LAND COMPLEX, 0-2% SLOPES

## STRUCTURAL PRACTICES

## VEGETATIVE PRACTICES

































## PERMANENT STABILIZATION

## MANAGEMENT STRATEGIES

- ## INSPECTIONS

A REPORT SUMMARIZING THE SCOPE OF INSPECTIONS, NAME OF INSPECTOR, INSPECTOR'S QUALIFICATIONS, DATES OF INSPECTIONS, MAJOR OBSERVATIONS PERTAINING TO THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS, AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS A PART OF THESE PLANS. MAJOR OBSERVATIONS OF THESE REPORTS SHALL INCLUDE: THE LOCATIONS OF EXCESSIVE SEDIMENTATION FROM THE SITE; LOCATIONS OF CONTROLS IN NEED OF REPAIR; LOCATIONS OF FAILED OR INADEQUATE CONTROL S; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

ES-9: INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. MAKE ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES IMMEDIATELY.

MINIMUM STANDARDS		
The following standards are to be provided or addressed on every development project exceeding 10,000 S.F. in area of disturbance. These standards are considered a minimum and may require additional measures as deemed necessary by the local approving authority or the consulting engineer.		
No.	CRITERIA, TECHNIQUE OR METHOD	PRACTICES PROVIDED
1	Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade has been reached on any portion of the site. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may 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 (1) year.	   FOR ALL DENUDED AREAS
2	During construction of the project, soil stockpiles shall be stabilized or protected with sediment trapping measures. The contractor is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as soil intentionally transported from the project site.	   FOR PROVIDED STOCKPILE
3	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, in the opinion of the WVWA, is uniform, mature enough to survive and will inhibit erosion.	   FOR ALL DENUDED AREAS
4	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.	 FOR ALL DRAINAGE DIVIDES
5	Stabilization methods shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.	   FOR ALL EARTHEN STRUCTURES
6	Sediment traps and basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.	SEE SUPPLEMENTAL CALCULATIONS
7	Cut and fill slopes shall be constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one (1) year of permanent stabilization shall be provided with additional slope stabilization measures until the problem is corrected.	   FOR ALL ERODING SLOPES
8	Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.	
9	Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.	<small>SHOULD SEEPS OCCUR IN ANY EXISTING OR NEW CUT OR FILL SLOPE, THE CONTRACTOR SHALL FIRST INSURE THAT THERE ARE NOT AREAS OF POOLED WATER AT THE TOPS OF THE SLOPES, AND THEN SHALL CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT GEOTECHNICAL ENGINEER FOR ON-SITE EVALUATION OF THE AREAS OF SEEPAGE.</small>
10	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.	  FOR ALL STORM WATER INTAKES
11	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.	  FOR ALL STORMWATER OUTLETS
12	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.	 FOR THE PROTECTION OF THE NATURAL WATERCOURSE
13	When a live watercourse must be crossed by construction vehicles more than twice in any six (6) month period, a temporary stream crossing constructed of nonerodible material.	PERMANENT CROSSING
14	All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met. The beds and banks of any watercourse shall be stabilized immediately after work in the watercourse is completed.	  
15	The beds and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.	  
16	Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria: 1) No more than 500 linear feet of any trench may be opened at one time. 2) Excavated material shall be placed on the uphill side of trenches. 3) 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. 4) Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization. 5) Restabilization shall be accomplished in accordance with these regulations. 6) Applicable safety regulations shall be complied with.	NOT APPLICABLE
17	Where construction vehicle access routes intersect paved or 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 surface 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.	 FOR ALL POINTS OF INGRESS/EGRESS
18	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.	  
19	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 applicable criteria.	SELF-EXPLANATORY SEE PLANS & CALC'S

**SIDE ELEVATION**

EXISTING FRAGMENT  
3" MIN.  
7'0" MIN.  
1" MIN.  
FILTER CLOTH  
12" MIN.  
VENT AT COURSE AGGREGATE  
POURTE INCREASE TO REDUCED TRIPPING DENCE  
12" MIN.  
12" MIN.  
12" MIN.

**PLAN VIEW**

12" MIN.  
7'0" MIN.  
12" MIN.  
12" MIN.

**SECTION A-A**

12" MIN.  
7'0" MIN.  
12" MIN.  
12" MIN.

**SECTION B-B**

12" MIN.  
7'0" MIN.  
12" MIN.  
12" MIN.

**CONCRETE REINFORCED**

**DOWN SPICE**

1. SET THE STAKES

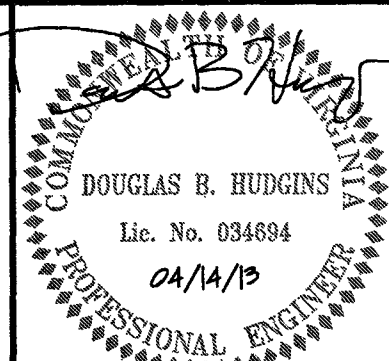
2. DISMANTLE A 2' x 2' SECTION UNLOADED ALONG THE LINE OF STAKES

3. SEWAGE FILTER MATING, TO STAKES AND EXTEND IT INTO THE TRENCH

4. SCUFFLE AND COMPACT THE EXPOSED SOIL

**SHEET FLOW INSTALLATION  
(PERSPECTIVE VIEW)**

POINTS A SHOULD BE HIGHER THAN POINT B.  
DRAINAGEWAY INSTALLATION  
(PRIORITY TREATMENT)



**Draper Aden Associates**  
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EROSION AND SEDIMENT CONTROL  
NARRATIVE AND DETAILS  
WESTERN VIRGINIA WATER AUTHORITY FY2011  
VWCWRLF COLLECTION SYSTEM PROJECTS  
LOWER MURRAY RUN SEWER REPLACEMENT  
ROANOKE, VIRGINIA

## REVISIONS

DESIGNED BY:		BSR
DRAWN BY:		BSR
CHECKED BY:		DBH
SCALE:		AS NOTED
DATE:		04/14/13
PROJECT NUMBER: 24495.1003 (CHA) B11132B-04X (DAA)		

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