

EROSION AND SEDIMENT CONTROL NARRATIVE

Project Description:

The proposed project consists of installing approximately 3,569 L.F. of 12" DI water line along the east shoulder and west side of Lee Highway with one road crossing, connections to existing 12" waterlines on both ends, located in Cloverdale. The project will be done in Botetourt County. The proposed project is a linear project and will disturb about 0.82 Acres of land.

Existing Site Conditions:

The proposed project will be constructed from the existing 12" waterline along the east shoulder of Lee Highway continuing north, with the exception where the waterline crosses to the west side of Lee Highway following 10 feet parallel to existing R/W within 25' permanent waterline easement approximately 1,600 feet north before continuing east to the west side c.p. of Lee Highway continuing north to connection with existing 12" waterline at intersection of Lee Highway and Service Road.

Adjacent/Off-site Areas:

Most of the project will be constructed either in the VDOT right-of-way, or on farmland. In neighborhood areas, care will need to be taken to ensure that the erosion control measures prevent sediment laden runoff from entering private property or clogging storm drains or ditches. There are no anticipated off-site areas for staging or disposal of material on the project.

Soils:

The majority of the soils throughout this project are clays or silts. The project area is composed of the following soil types as taken from the NRCS soil survey for Botetourt County version 9, dated August 19, 2010. The clay soils that will be encountered are: Chilhowie silty clay loam, Flatwoods silt loam,Lindside silt loam, Sequoia silt loam and Udorthents-Urban land complex. The K-factors for these soils range from 0.28 to 0.37, which represents soils with low to moderate potential for erosion.

Erosion and Sediment Control Measures:

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook, Third Edition.

Structural Measures:

- 1.) Silt Fence - Silt fence will be installed (where shown on drawings) downslope of disturbed areas with minimal grades to filter sediment-laden runoff from sheet flow. See Section 3.05 of the Virginia Erosion and Sediment Control Handbook, latest edition for the standards and specifications of silt fence.
- 2.) Culvert Inlet Protection - Culvert inlet protection will be installed at the upstream side of drainage pipes along the areas where the sewer line will be in unpaved areas. See Section 3.08 of the Virginia Erosion and Sediment Control Handbook, latest edition for the standards and specifications of culvert inlet protection.
- 3.) Trench Dewatering - 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.) Construction entrance - A construction entrance shall be installed as shown on the erosion and sediment control plan and in conformance with Std. and Spec. 3.02. A construction entrance allows mud and debris to be removed from the construction equipment prior to exiting the site.

Vegetative Measures:

- 1.) Permanent Seeding - Any areas disturbed during the course of the project shall be reseeded upon completion of the project. See project specifications for the permanent seeding schedule and seeding mixtures to be used.
- 2.) Temporary Seeding - Shall only be used on areas that have yet to be restored to finish grade and will not be brought to final grade for longer than 30 days.

Management Strategies:

- 1.) No more than 500 linear feet of 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 the Virginia Erosion and Sediment Control Regulations.
- 6.) Roadside Drainage ditches shall be maintained in such a way as to allow the conveyance of storm water runoff with minimal erosion.
- 7.) Applicable safety regulations shall be complied with.
- 8.) Silt fence shall be installed on steep slopes perpendicular to the direction of slope as shown on the plans in order to prevent erosion and allow time for the slope to stabilize after construction is complete.
- 8.) The banks and stream bed of all watercourses shall be stabilized immediately after work in the watercourse is complete.

Permanent Stabilization:

All areas disturbed by construction shall be stabilized with permanent seeding following backfilling of the utility trench. Seeding shall be done in accordance with the Permanent Seeding schedule in the project specifications. Roadside ditches shall be stabilized with silt fence or straw bails placed in the ditch until a good stand of grass has developed in order to reduce erosion during storm events. In all seeding operations, seed, fertilizer and lime will be applied prior to mulching.

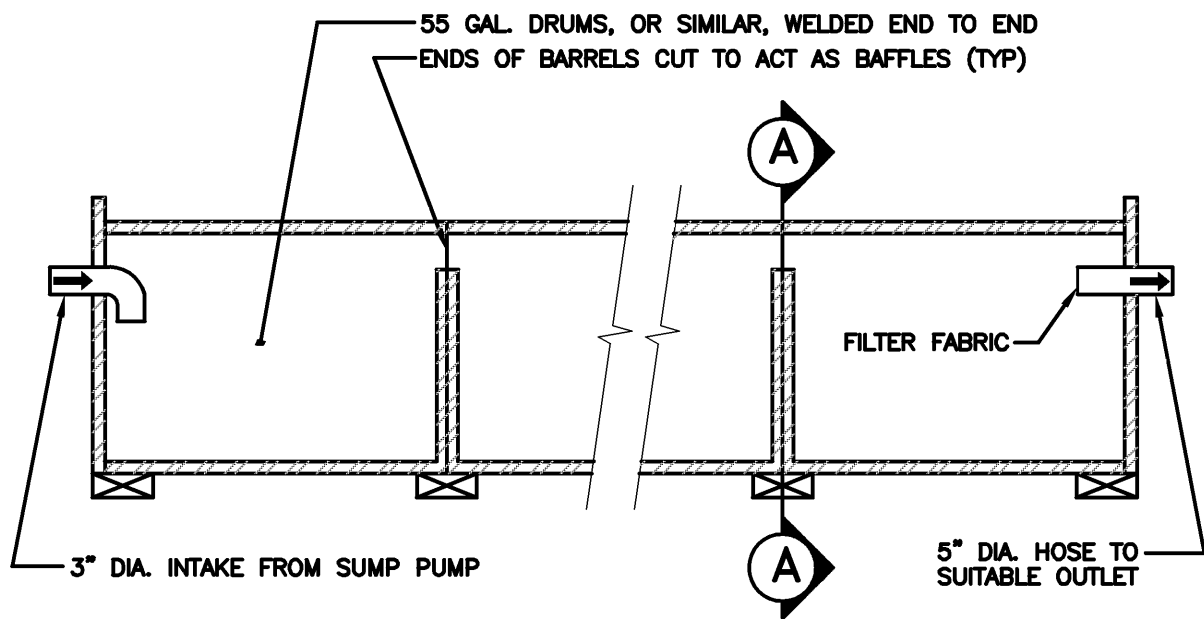
Maintenance:

In general, all erosion and sediment control measures will be checked daily and after each significant rainfall. The following items will be checked in particular:

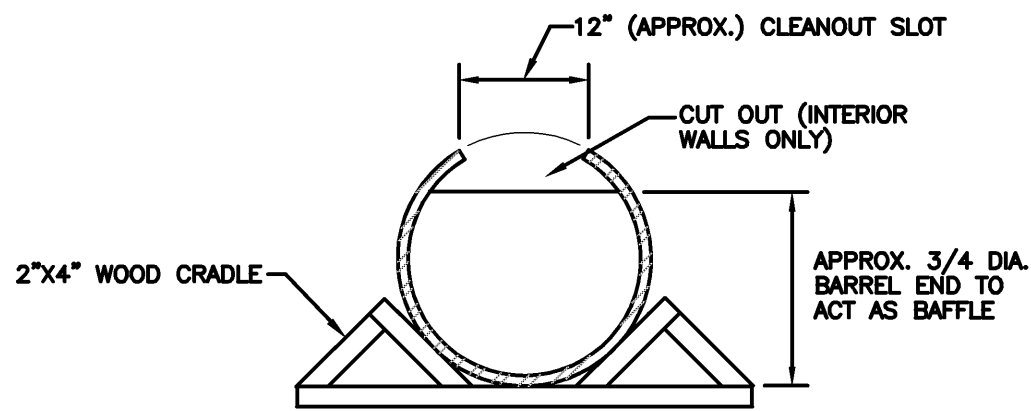
- 1.) All seeded areas will be checked regularly to ensure that a good stand is maintained. Areas should be fertilized and reseeded as needed to produce a good stand of grass.
- 2.) Any silt fence installed on the project will be checked regularly and after every rainfall event for undermining or deterioration of the fabric. Sediment shall be removed when the level of sediment deposition reaches half way to the top of the barrier.

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 and Virginia Regulations VR 625-02-00 Erosion and Sediment Control Regulations.
- ES-2: The plan approving authority must be notified one week prior to the onsite pre-construction 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 & narrative, as well as a copy of the Land Disturbing Permit, shall be maintained on the site at all times. The Erosion and Sediment Control Administrator will deliver these materials at the onsite pre-construction conference.
- 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 aduring 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 immediately. An inspection report must be filed with the Botetourt County Erosion & Sediment Control Administrator once every two weeks, beginning with commencement of the land disturbing activity, and within 48 hours of any runoff-producing rainfall event. Failure to submit a report will be grounds for immediate revocation of the Land Disturbing Permit. Reports must be postmarked within 24 hours of the deadline. A standard inspection report will be supplied, which should be copied as necessary. This provision in no way waives the right of Botetourt County personnel to conduct site inspections, nor does it deny the right of the permittee(s) to accompany the inspector(s).



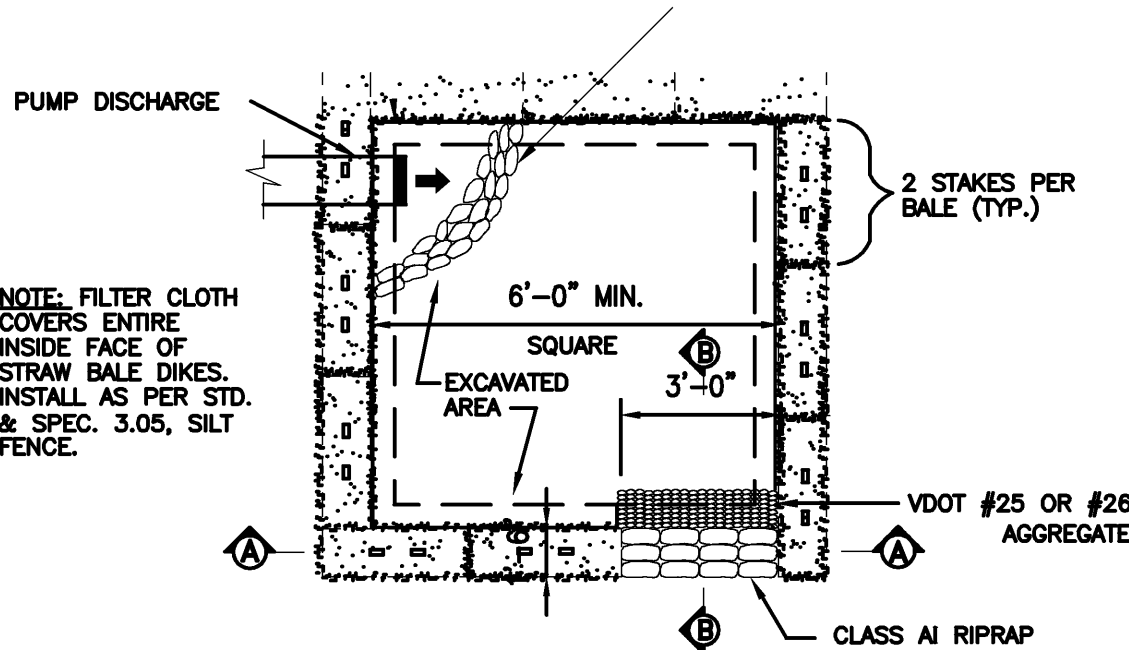
ELEVATION



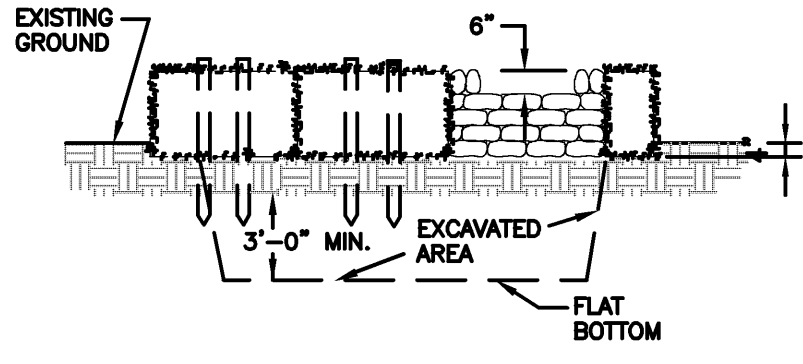
CROSS-SECTION A-A

SOURCE: USDA -- SCS

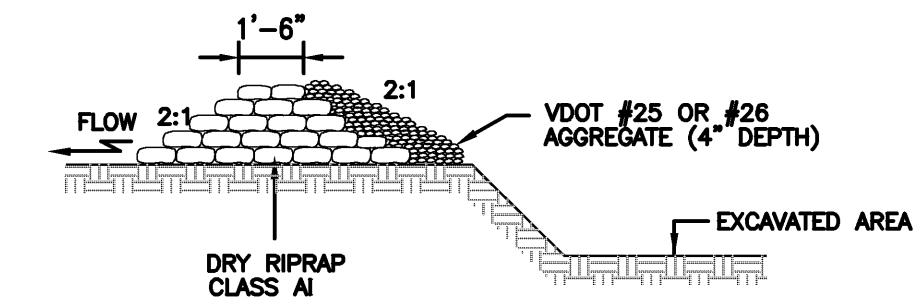
PLATE: 3.26-1



PLAN VIEW



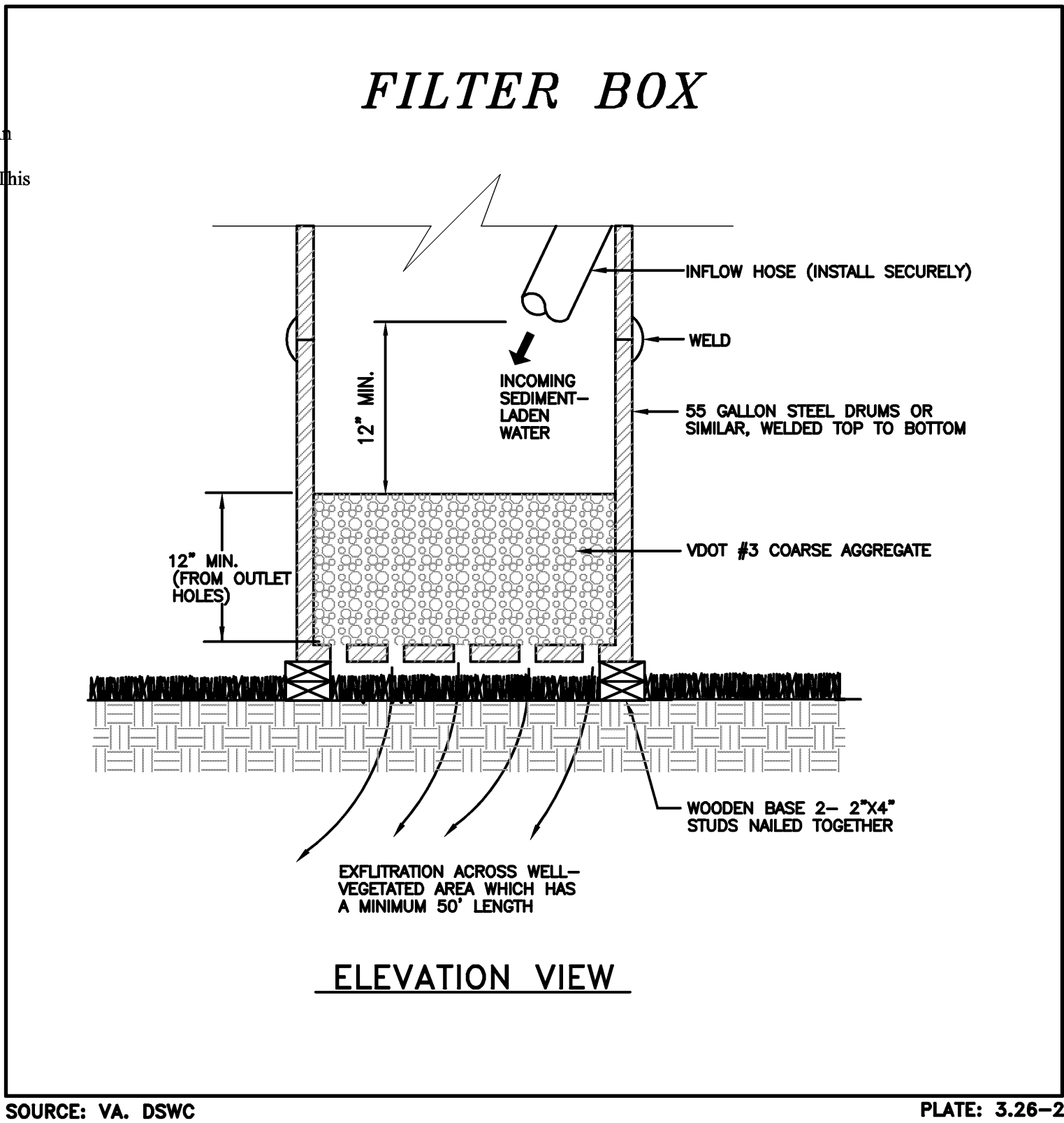
CROSS-SECTION A-A



CROSS-SECTION B-B

SOURCE: Va. DSWC

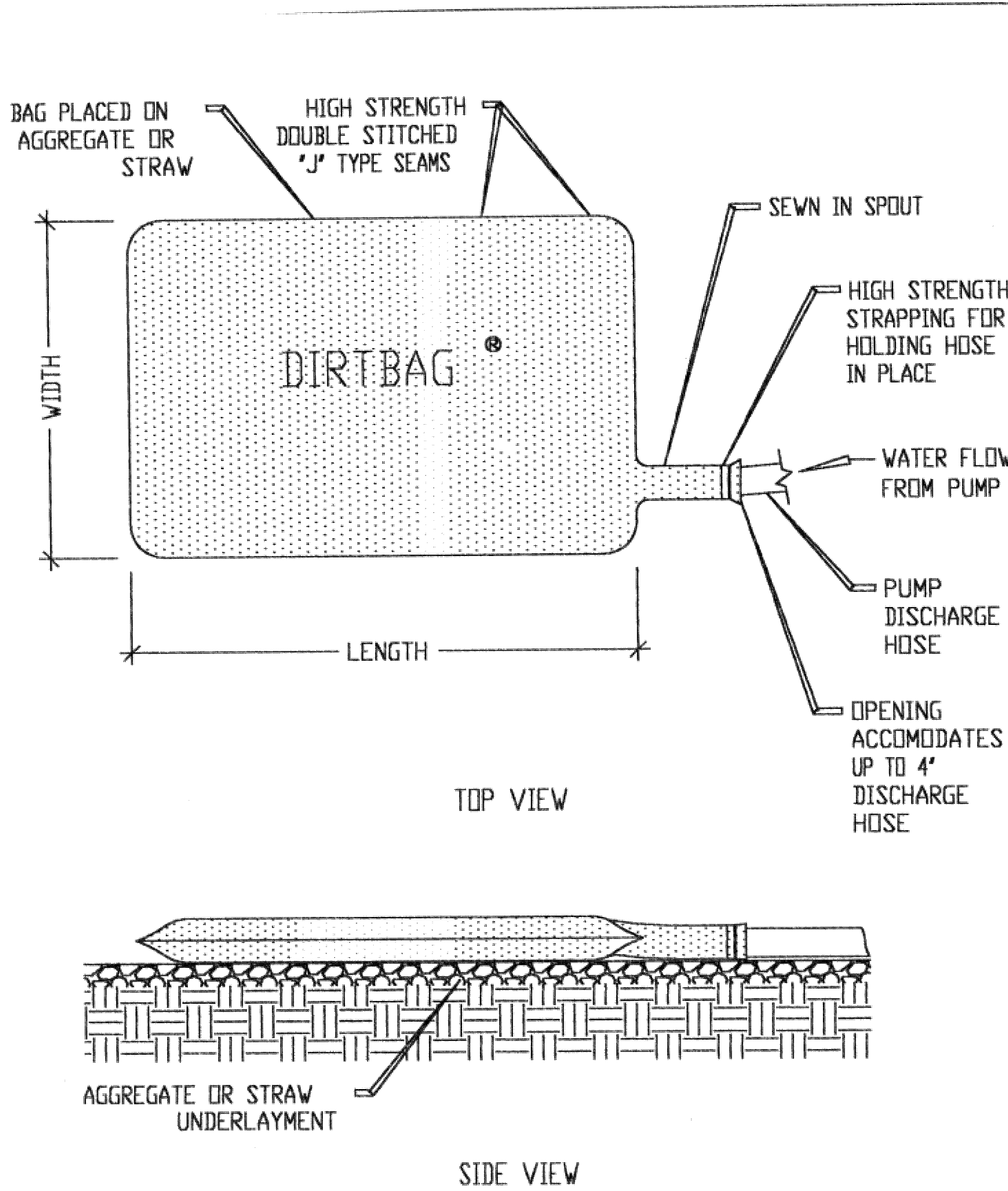
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ELEVATION VIEW

SOURCE: VA. DSWC

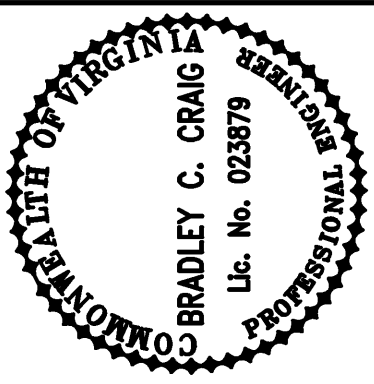
PLATE: 3.26-2



DETAIL OF DIRTBAG PUMPED SILT CONTROL SYSTEM

PROJECT:	
CITY:	DR. BY:
STATE:	DATE:
DR. NO:	

RECORD DRAWING



Revisions	Date
1 VDOT COMMENTS	12/13/11
2 RECORD DRAWINGS	9/28/12

Issue Date:	December 4, 2011
Drawn By:	ARB
Designed By:	ARB
Checked By:	BCC
Date:	12/11/11

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CLOVERDALE WATERLINE EXTENSION  
EROSION AND SEDIMENT  
CONTROL NARRATIVE AND DETAILS  
BOTETOURT COUNTY, VIRGINIA

Vertical Scale:  
N/A

Horizontal Scale:  
N/A

Commission Number:  
3178

Sheet No.:

C-10