

APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

<ul style="list-style-type: none"> <li>Apply 10-10-10 fertilizer at a rate of 450 lbs./acre (or 10 lbs./1,000 sq. ft.)</li> <li>Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)</li> </ul>
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**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 disking 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/esa.htm#pubs>

TS TEMPORARY SEEDING SPECIFICATIONS

LAND USE	SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue <sup>1</sup> Perennial Ryegrass <sup>2</sup> Kentucky Bluegrass <sup>3</sup>	50-100% 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 <sup>1</sup>	TOTAL: 125 lbs.
General Slope (3:1 or less)	Tall Fescue <sup>1</sup> Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop <sup>3</sup>	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue <sup>1</sup> Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop <sup>3</sup> Crownvetch <sup>4</sup>	108 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4894 or at <http://sudan.ces.vt.edu/html/Turf/turfpublications/publications2.html>

2 - Perennial Ryegrass will germinate faster and at lower soil temperatures than Tall Fescues, thereby providing cover and erosion resistance for seedbed.

3 - Use seasonal nurse crop in accordance with seeding dates as stated below:

March, April - May 15 <sup>th</sup>	Annual Rye
May 16 <sup>th</sup> - August 15 <sup>th</sup>	Foxtail Millet
August 16 <sup>th</sup> - September, October	Annual Rye
November - February	Winter Rye

4 - All legume seed must be properly inoculated. If Flatpea 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.

<ul style="list-style-type: none"> <li>Apply 10-20-10 fertilizer at a rate of 600 lbs./acre (or 12 lbs./1,000 sq. ft.)</li> <li>Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)</li> </ul>
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**NOTE:**

- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
- 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/esa.htm#pubs>

PS PERMANENT SEEDING SPECIFICATIONS

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

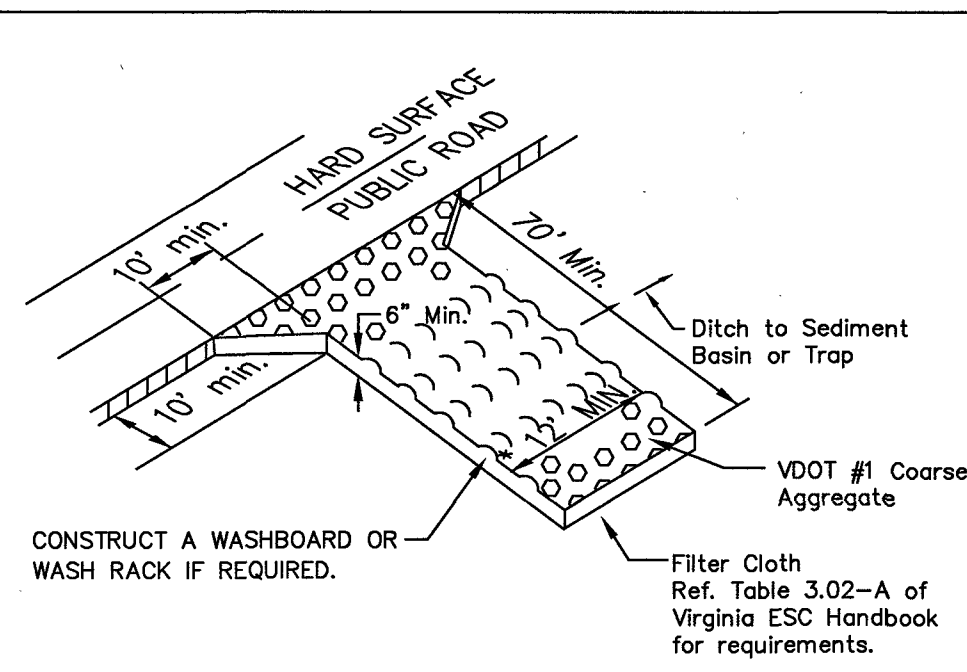
C. When applying maintenance fertilizer on established sod,

Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is less than 50 percent WIN				
Month	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 sq ft	2.5	2.5	2	2

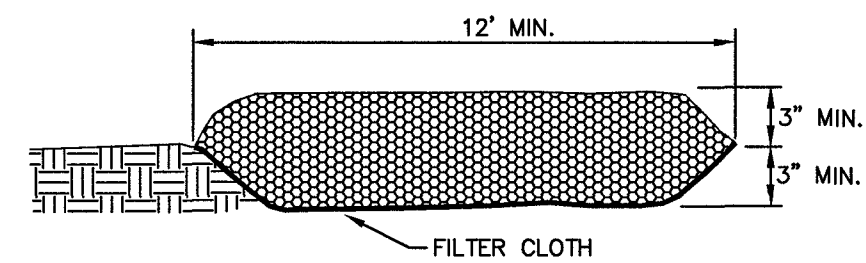
  

Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is more than 50 percent WIN				
Month	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
August 15	1.5	1.5	0	0
October 1	1.5	1.5	0	0
April	0	0	1.5	1.5
May 15	0	0	0	0
June	0	0	1.5	1.5
Yearly Lbs. N/1000 sq ft	3	3	3	3

FERTILIZER SPECIFICATIONS AND  
RATES FOR MANAGEMENT

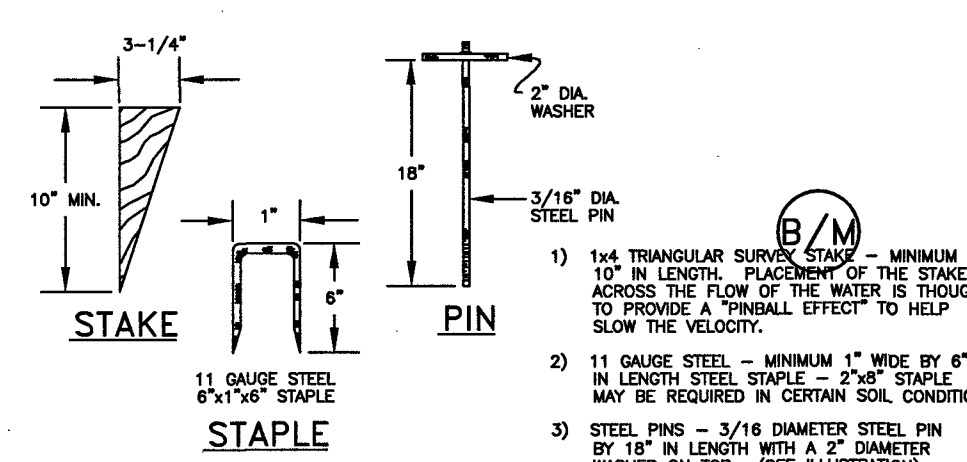


\* MUST EXTEND FULL WIDTH OF INGRESS & EGRESS OPERATION.



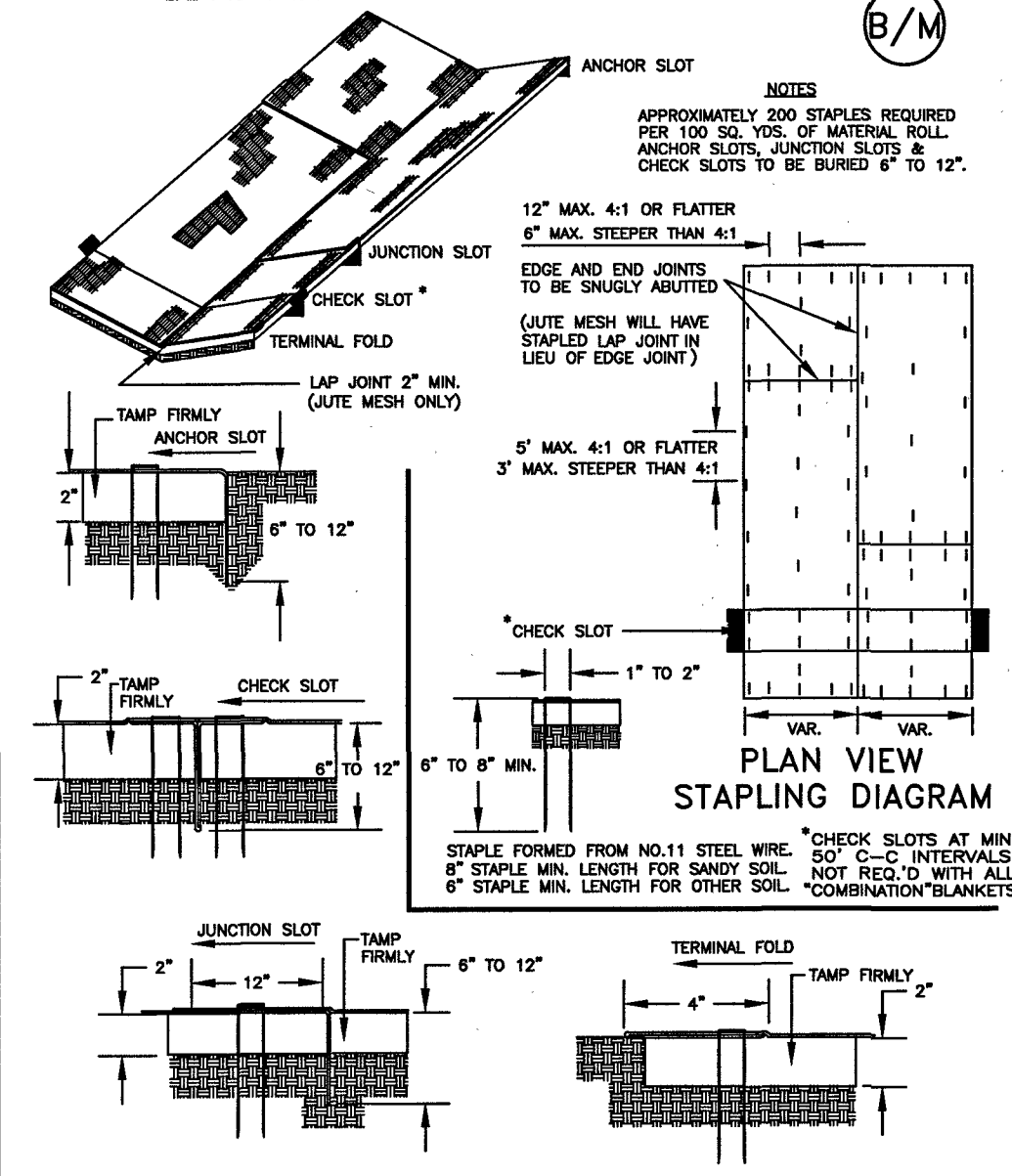
CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

STAKES, STAPLES, & PINS  
FOR  
INSTALLATION OF  
TREATMENT - 2  
SOIL STABILIZATION MATTING



SOURCE: PRODUCT LITERATURE FROM GREENSTREAK, INC. PLATE: 3.36-3

TYPICAL TREATMENT - 1  
(SOIL STABILIZATION BLANKET)  
INSTALLATION CRITERIA



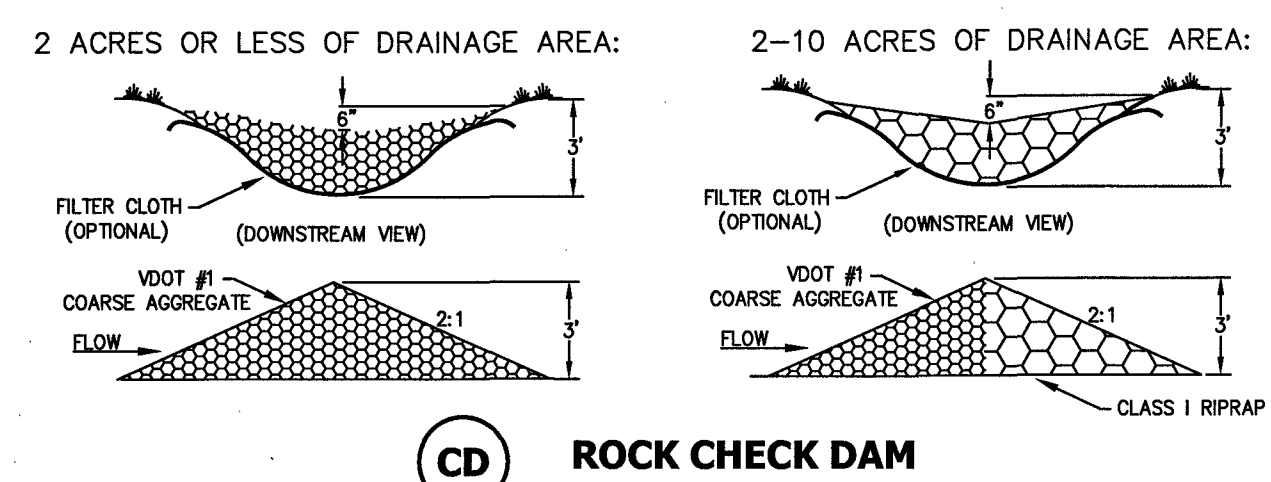
SOURCE: VDOT ROAD AND BRIDGE STANDARDS PLATE: 3.36-2

MULCHES:	RATES:		NOTES:
	Per Acre	Per 1000 sq. ft.	
Straw or Hay	1 1/2 - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

\* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1000 sq. ft.

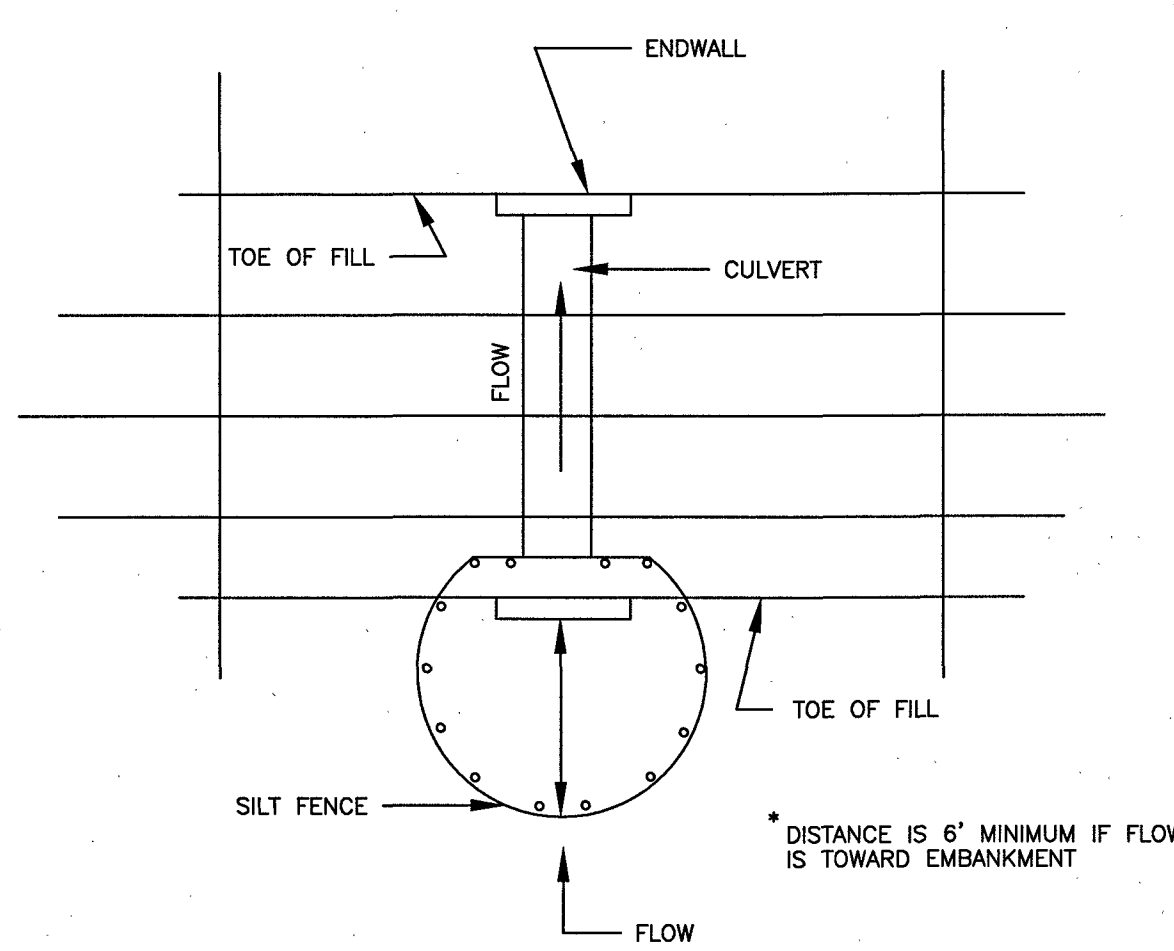
Source: Va. DSWC

MULCHING SPECIFICATIONS

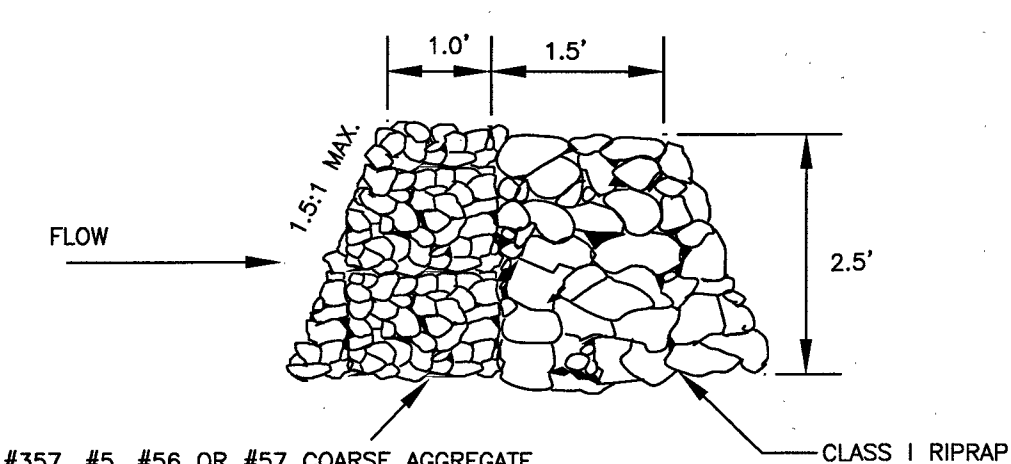


CD ROCK CHECK DAM

SILT FENCE CULVERT INLET  
PROTECTION



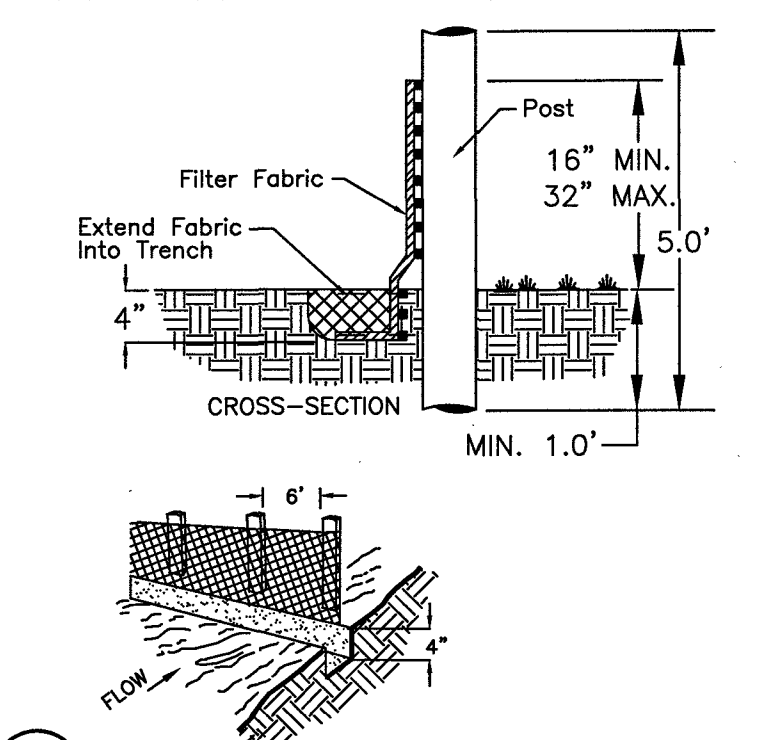
\* OPTIONAL STONE COMBINATION



SOURCE: ADAPTED FROM VDOT Standard Sheets and Va. DSWC PLATE: 3.08-1

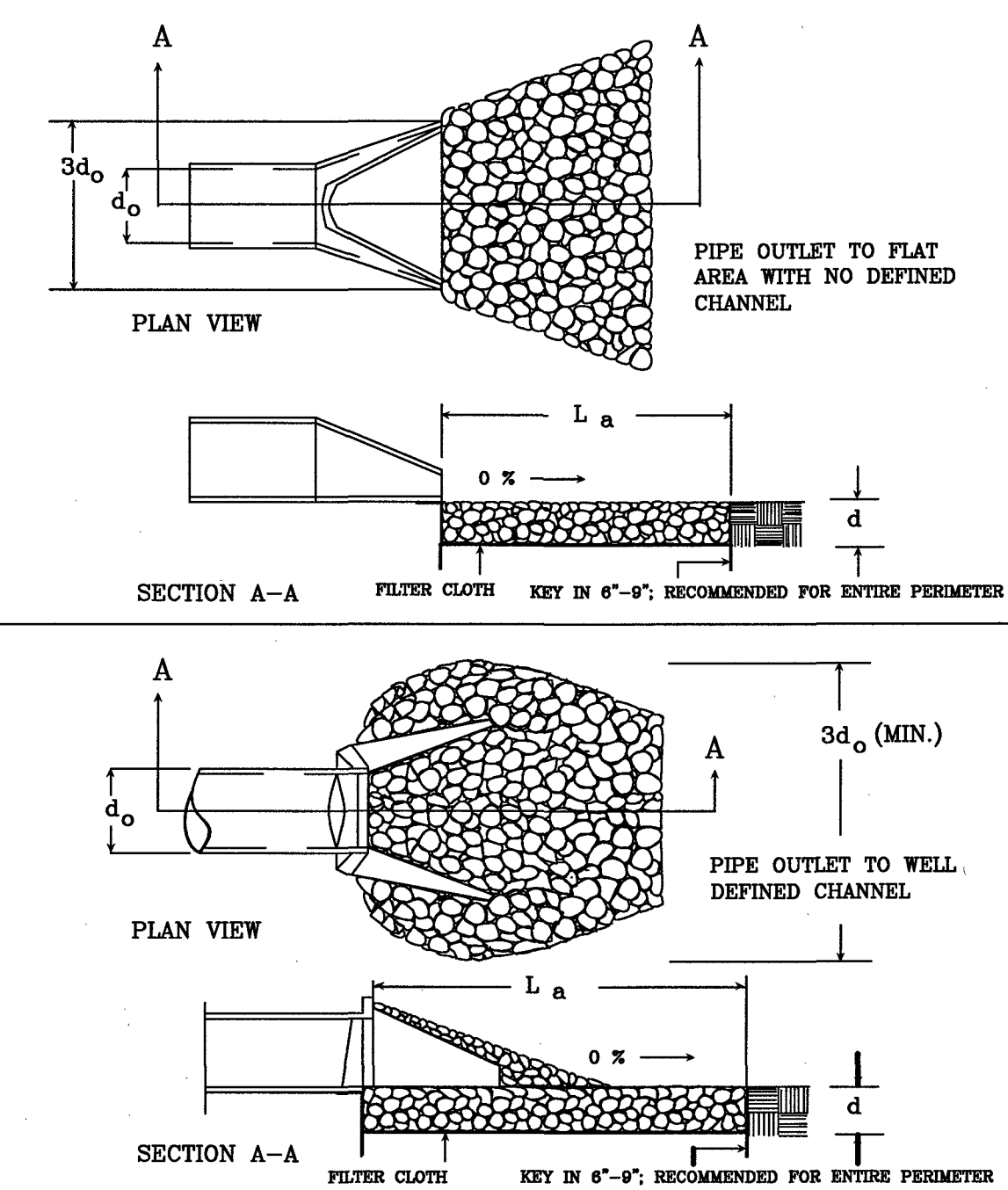
ALL COSTS GIVEN ARE COMPLETE IN PLACE				
DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EA	1	\$ 1,200.00	\$ 1,200.00
SILT FENCE	LF	650	4.00	2,600.00
CHECK DAMS	EA	6	100.00	600.00
CULVERT INLET PROT.	EA	3	400.00	1,200.00
OUTLET PROTECTION	EA	2	250.00	500.00
TEMP SEEDING	SF	45,000	0.04	1,800.00
PERM SEEDING	SF	45,000	0.05	2,250.00
BLANKET MATTING	SF	35,000	0.25	8,750.00
SUB-TOTAL				\$ 18,900.00
10% CONTINGENCY				\$ 1,890.00
TOTAL PROJECT COST				\$ 20,790.00

\*NOTE: THIS COST ESTIMATE TABLE IS PROVIDED FOR BIDDING PURPOSES ONLY. VERIFICATION OF ALL QUANTITIES AND PRICES FOR BIDDING PURPOSES SHALL BE THE RESPONSIBILITY OF THE BIDDER.\*



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

PIPE OUTLET CONDITIONS



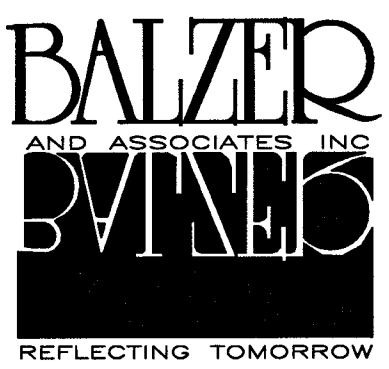
Source: Va. DSWC

Plate 3.18-1

OUTLET PROTECTION STR. #1  
EC-1 CLASS II RIP RAP  
LENGTH OF APRON=6' (L<sub>a</sub>)  
WIDTH OF APRON=6' (W<sub>a</sub>)  
MIN. D50 STONE SIZE=6"

OUTLET PROTECTION STR. #2  
EC-1 CLASS II RIP RAP  
LENGTH OF APRON=14' (L<sub>a</sub>)  
WIDTH OF APRON=6' (W<sub>a</sub>)  
MIN. D50 STONE SIZE=6"

APPROVED



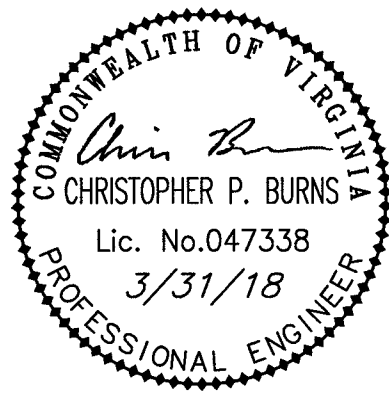
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WETLAND DELINEATIONS & STREAM EVALUATIONS

Balzer and Associates, Inc.

1208 Corporate Circle  
Roanoke, VA 24018  
540-772-9580  
FAX 540-772-8050



HELLKAMP RESIDENCE  
5300 PERRINE CREST CR  
ESC DETAILS  
CAVE SPRING  
ROANOKE COUNTY, VIRGINIA

DRAWN BY EJP  
DESIGNED BY CPB  
CHECKED BY CPB  
DATE 3/2/2018  
SCALE N/A

REVISIONS:  
3/20/2018  
3/31/2018

SHEET NO.  
ESC-5  
JOB NO. 04180007.00