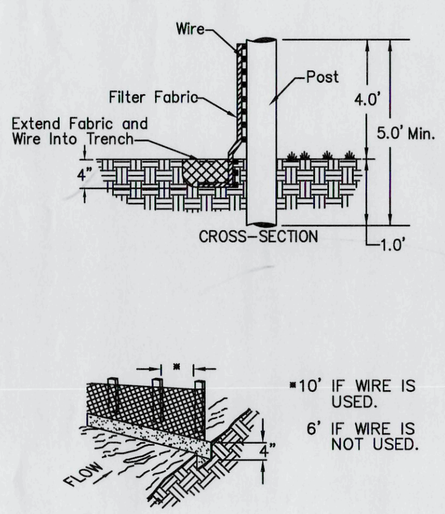
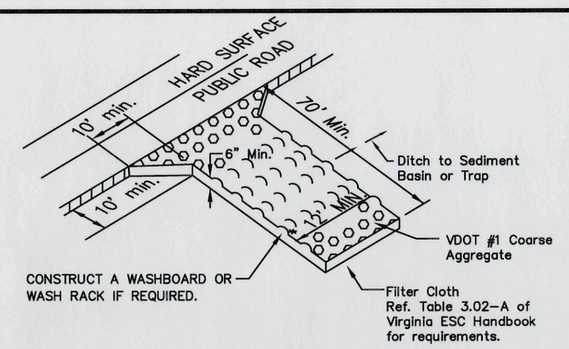
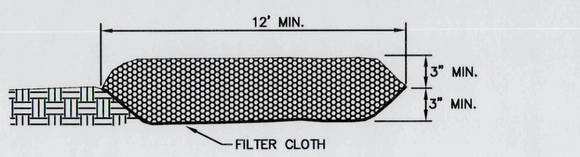
NO.	TITLE	KEY	SYMBOL	NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF		3.20	ROCK CHECK DAMS	CD	
3.02	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	CE		3.21	LEVEL SPREADER	LS	
3.03	CONSTRUCTION ROAD STABILIZATION	CRS		3.22	VEGETATIVE STREAMBANK STABILIZATION	VSS	
3.04	STRAW BALE BARRIER	STB		3.23	STRUCTURAL STREAMBANK STABILIZATION	SSS	
3.05	SILT FENCE	SF		3.24	TEMPORARY VEHICULAR STREAM CROSSING	VSC	
3.06	BRUSH BARRIER	BB		3.25	UTILITY STREAM CROSSING	USC	
3.07	STORM DRAIN INLET PROTECTION	IP		3.26	DEWATERING STRUCTURE	DS	
3.08	CULVERT INLET PROTECTION	CIP		3.27	TURBIDITY CURTAIN	TC	
3.09	TEMPORARY DIVERSION DIKE	DD		3.28	SUBSURFACE DRAIN	SD	
3.10	TEMPORARY FILL DIVERSION	FD		3.29	SURFACE ROUGHENING	SR	
3.11	TEMPORARY RIGHT-OF-WAY DIVERSION	RWD		3.30	TOPSOILING	TO	
3.12	DIVERSION	DV		3.31	TEMPORARY SEEDING	TS	
3.13	TEMPORARY SEDIMENT TRAP	ST		3.32	PERMANENT SEEDING	PS	
3.14	TEMPORARY SEDIMENT BASIN	SB		3.33	SODDING	SO	
3.15	TEMPORARY SLOPE DRAIN	TSD		3.34	BERMUDA GRASS AND ZOYSIAURASS ESTABLISHMENT	BG/ZE	OR
3.16	PAVED FLUME	PF		3.35	MULCHING	MU	
3.17	STORMWATER CONVEYANCE CHANNEL	SCC		3.36	SOIL STABILIZATION BLANKETS AND MATTING	B/M	TREAT. 1 TREAT. 2
3.18	OUTLET PROTECTION	OP		3.37	TREES, SHRUBS, VINES AND GROUND COVERS	VEG	
3.19	RIPRAP	RR		3.38	TREE PRESERVATION AND PROTECTION	TP	
				3.39	DUST CONTROL	DC	



SF CONSTRUCTION OF A SILT FENCE

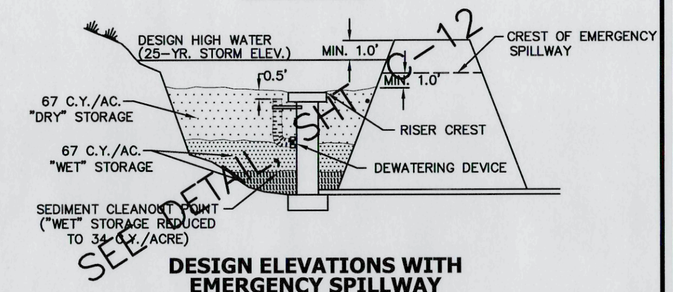


* MUST EXTEND FULL WIDTH OF INGRESS & EGRESS OPERATION.

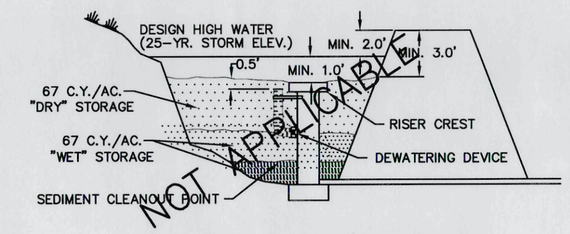


CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

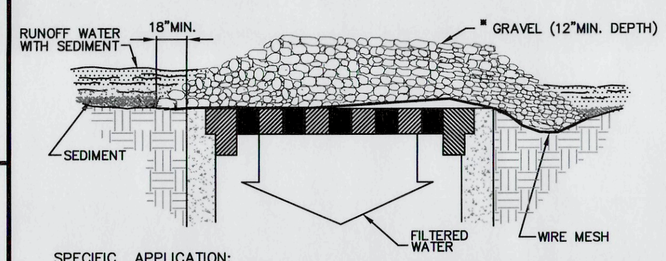
SEDIMENT BASIN SCHEMATIC ELEVATIONS



DESIGN ELEVATIONS WITH EMERGENCY SPILLWAY



DESIGN ELEVATIONS WITHOUT EMERGENCY SPILLWAY (RISER PASSES 25-YR. EVENT)



SPECIFIC APPLICATION:
This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures and unprotected areas.

* Gravel shall be VDOT #3, #357 or #5 coarse aggregate.

IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

DEFINITION – THE ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS BY SEEDING WITH APPROPRIATE RAPIDLY GROWING ANNUAL PLANTS.

LIMING REQUIREMENTS FOR TEMPORARY SITES

pH TEST	RECOMMENDED APPLICATION OF AGRICULTURAL LIMESTONE
BELOW 4.2	3 TONS PER ACRE
4.2 TO 5.2	2 TONS PER ACRE
5.2 TO 6	1 TON PER ACRE

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIAL
" QUICK REFERENCE FOR ALL REGIONS"

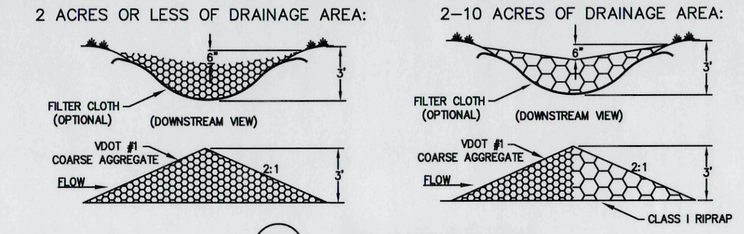
PLANTING DATES	SPECIES	RATE (LBS/ACRE)
SEPT. 1 – FEB. 15	50/50 MIX OF ANNUAL RYEGRASS & WINTER RYE	50 – 100
FEB. 16 – APR. 30	ANNUAL RYEGRASS	60 – 100
MAY 1 – AUG. 31	GERMAN MILLET	50

TS TEMPORARY SEEDING

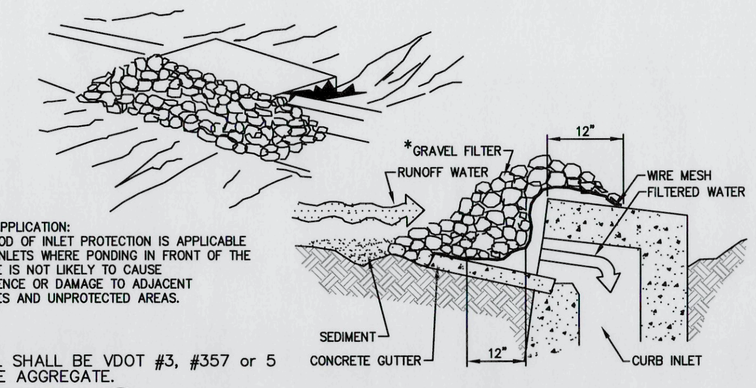
TEMPORARY SEDIMENT TRAP DATA

STRUCTURE	DRAINAGE AREA (ACRES)	STORAGE (C.Y.) REQ'D	STORAGE (C.Y.) DESIGN	WEIR LENGTH (FT.)	WEIR HEIGHT (FT.)	BERM HEIGHT (FT.)	BOTTOM TRAP WIDTH (FT.)	BOTTOM TRAP LENGTH (FT.)	BOTTOM TRAP DEPTH (FT.)
ST									

NOT APPLICABLE



CD ROCK CHECK DAM



SPECIFIC APPLICATION:
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 or 5 COURSE AGGREGATE.

IP GRAVEL CURB INLET SEDIMENT FILTER

EROSION & SEDIMENT CONTROL COST ESTIMATE
MOUNTAIN VIEW

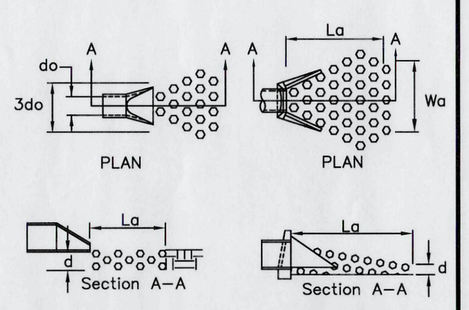
ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
SAF	LF	..	$ 4.00	$ ..
CE	EA	1	$ 1500.00	$ 1,500.00
CRS	LF	800	$ 4.00	$ 3,200.00
SF	LF	1,080	$ 3.00	$ 3,240.00
IP	EA	15	$ 100.00	$ 1,500.00
CIP–PUMP AROUND	EA	..	$ 1,500.00	$ ..
DD	LF	680	$ 3.00	$ 2,040.00
DV	LF	820	$ 5.00	$ 4,100.00
RWD	LF	120	$ 3.00	$ 360.00
USC	LF	..	$ 20.00	$ ..
ST	EA	..	$ 2,500.00	$ ..
SB	EA	1	$10,000.00	$ 10,000.00
TSD	LF	..	$ 10.00	$ ..
RR	CY	3	$ 100.00	$ 300.00
CD	EA	..	$ 50.00	$ ..
TO – STOCKPILING	LS	1	$ 500.00	$ 500.00
TS	AC	7.4	$ 800.00	$ 5,920.00
PS	AC	7.4	$ 1,200.00	$ 8,880.00
MU	AC	7.4	$ 500.00	$ 3,700.00
B/M	SY	2,033	$ 1.50	$ 3,050.00
DC	LS	1	$ 500.00	$ 500.00
SUB–TOTAL				$ 48,790.00
10% CONTINGENCY				$ 4,879.00
TOTAL PROJECT COST				$ 53,669.00

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE COUNTY.
7. THE LOCATION OF ALL OFF-SITE FILL OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT. AN EROSION CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.

TOTAL DISTURBED AREA = 6.4 AC. = 278,000 SQ. FT.



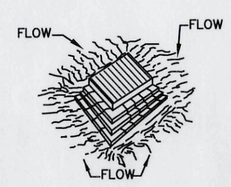
PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

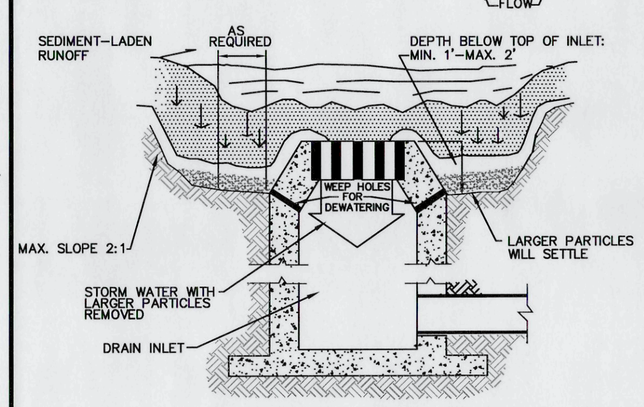
PIPE OUTLET TO WELL-DRAINED CHANNEL

NOTES:
1. APRON LINING MAY BE RIP-RAP, GROUTED RIP-RAP, OR CONCRETE.
2. La IS THE LENGTH OF THE RIP-RAP APRON AS CALCULATED USING PLATES 1.36d AND 1.36e.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6".

OP OUTLET PROTECTION

SPECIFIC APPLICATION:
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPABILITY AND EASE OF MAINTENANCE ARE DESIRABLE.





IP EXCAVATED DROP INLET SEDIMENT TRAP

TYPE A

15 OCTOBER TO 1 FEBRUARY
K-31 FESCUE @ 5 LB / 1000 SF
BORZY WINTER RYE @ 1/2 LB / 1000 SF

1 FEBRUARY TO 1 JUNE
K-31 FESCUE @ 5 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF

1 JUNE TO 1 SEPTEMBER
K-31 FESCUE @ 5 LB / 1000 SF
GERMAN MILLET @ 1/2 LB / 1000 SF

1 SEPTEMBER TO 15 OCTOBER
K-31 FESCUE @ 5 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF

TYPE B (SLOPES 3:1 OR STEEPER)

15 MARCH TO 1 MAY
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF

15 AUGUST TO 1 OCTOBER
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF

LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF

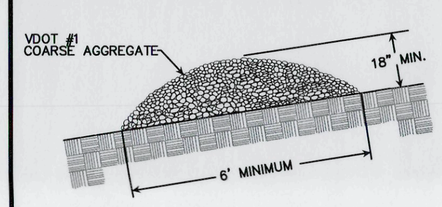
MULCH: IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING: INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

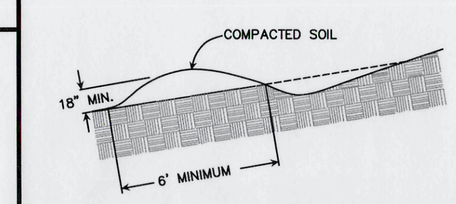
SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

SHT.

PS PERMANENT SEEDING MIXTURE

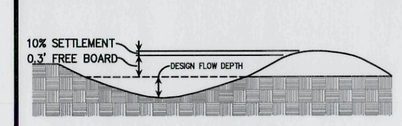


TYPICAL GRAVEL STRUCTURE

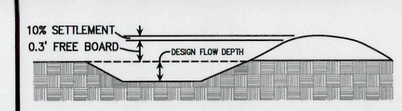


TYPICAL EARTHEN STRUCTURE

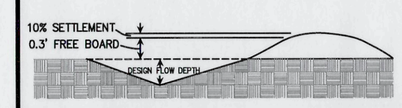
RWD TEMPORARY RIGHT-OF-WAY DIVERSIONS



TYPICAL PARABOLIC DIVERSION

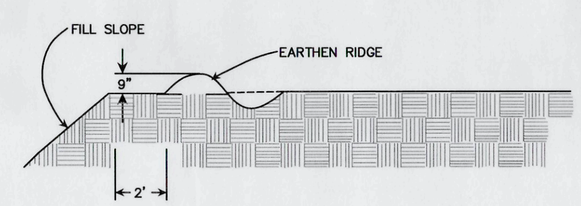


TYPICAL TRAPEZOIDAL DIVERSION

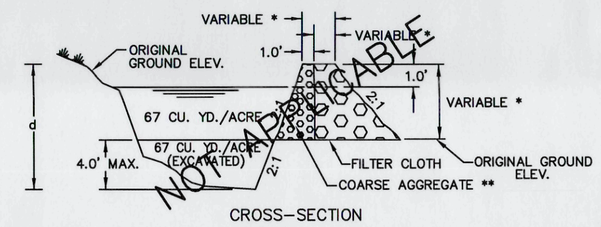


TYPICAL VEE-SHAPED DIVERSION

DV DIVERSIONS



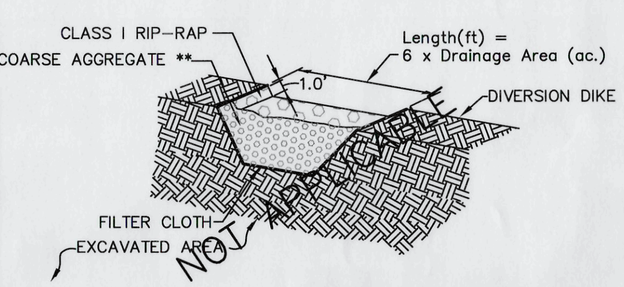
FD TEMPORARY FILL DIVERSION



CROSS-SECTION

* SEE PLATE 3.13-1 (VESCH)

** COARSE AGGREGATE SHALL BE VDOT #3, #357 OF #5



NOTE;
FOR AREAS LESS THAN 3.0 ACRES FOR AREAS LARGER THAN 3.0 ACRES A SEDIMENT BASIN IS REQUIRED. SEE DETAIL THIS SHEET.

APPROVED

NOT APPLICABLE

ST SEDIMENT TRAP

COMMONWEALTH OF VIRGINIA
CHRISTOPHER P. BURNS
Lic. No.047338
7/24/14
PROFESSIONAL ENGINEER

BALZER AND ASSOCIATES INC.
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Suite 200
Glen Allen, Virginia 23059
Phone: 804/553-0132
FAX: 804/553-0133

448 Peppers Ferry Road, NW
Christiansburg, Virginia 24073
Phone: 540/381-4290
FAX: 540/381-4291

1557 Commerce Road
Suite 201
Verona, Virginia 24482
Phone: 540/248-3220
FAX: 540/248-3221

MOUNTAIN VIEW SUBDIVISION

ESC DETAILS

ROANOKE COUNTY, VIRGINIA

DRAWN BY: JVJ
DESIGNED BY: JVJ
CHECKED BY: SMH
DATE: 05/09/2006
REVISIONS:
10/09/06 - PER 1ST REVIEW COMMENTS
01/19/07 - PER 2ND REVIEW COMMENTS
12/23/08 - CHANGES
01/23/2014

SCALE:

SHEET NO.
C-11

JOB NO.
R0600065.00