Symbol Legend Table

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 STORM DRAIN	BB		3.25	UTILITY STREAM CROSSING	USC	
3.07	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 TEMPORARY RIGHT-OF-WAY	FD		3.29	SURFACE ROUGHENING	SR	
3.11	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	SD	
3.15	TEMPORARY SLOPE DRAIN	TSD		3.34	BERMUDA GRASS AND ZOYSIAGRASS ESTABLISHMENT	BG/ZG	
3.16	PAVED FLUME STORMWATER CONVEYANCE	PF		3.35	MULCHING	MU	
3.17	CHANNEL	SCC		3.36	SOIL STABILIZATION BLANKETS AND MATTING		
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	

SEDIMENT BASIN SCHEMATIC ELEVATIONS

DESIGN ELEVATIONS WITH EMERGENCY SPILLWAY

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

TEMPORARY SEDIMENT TRAP DATA

STRUCTURE	DRAINAGE AREA (ACRES)	STORAGE REQUIRED (C.Y.)	STORAGE DESIGN (C.Y.)	WEIR LENGTH (FT.)	WEIR HEIGHT (FT.)	BERM HEIGHT (FT.)	TRAP WIDTH (FT.)	TRAP LENGTH (FT.)	TRAP DEPTH (FT.)

EROSION & SEDIMENT CONTROL COST ESTIMATE
ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EACH	2	$800.00	$1,600.00
SILT FENCE	L.F.	800	$3.00	$2,400.00
CULVERT INLET PROTECTION	EACH	1	$150.00	$150.00
TEMPORARY & PERMANENT SEEDING, MULCHING, ETC.	ACRE	0.5	$1,500.00	$750.00
SUB-TOTAL				$4,800.00
25% CONTINGENCY				$1,225.00
TOTAL PROJECT COST				$6,125.00

CD ROCK CHECK DAM

2 ACRES OR LESS OF DRAINAGE AREA
2-10 ACRES OF DRAINAGE AREA

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER (IP)

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.

GRAVEL CURB INLET SEDIMENT FILTER (IP)

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 COARSE AGGREGATE.

CIP SILT FENCE CULVERT INLET PROTECTION

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.
8. THIS SHEET MAY NOT BE MODIFIED EXCEPT FOR TABLES.

TOTAL DISTURBED AREA = 0.5 AC. = 21,200 SQ. FT.

SF CONSTRUCTION OF A SILT FENCE

Wire
Post
Filter Fabric
4.0'
5.0'
Extend Fabric and Wire Into Trench
CROSS-SECTION 1.0'

■ 10' IF WIRE IS USED.
6' IF WIRE IS NOT USED.

CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

HARD SURFACE PUBLIC ROAD
Ditch to Sediment Basin or Trap
VDOT #1 Coarse Aggregate
Filter Cloth Ref. Table 3.02-A of Virginia ESC Handbook for requirements.
CONSTRUCT A WASHBOARD OR WASH RACK IF REQUIRED.
12' MIN.
3' MIN.
FILTER CLOTH

■ MUST EXTEND FULL WIDTH OF INGRESS & EGRESS OPERATION.

TS TEMPORARY SEEDING

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

RWD TEMPORARY RIGHT-OF-WAY DIVERSIONS

TYPICAL GRAVEL STRUCTURE
TYPICAL EARTHEN STRUCTURE

DV DIVERSIONS

TYPICAL PARABOLIC DIVERSION
TYPICAL TRAPEZOIDAL DIVERSION
TYPICAL VEE-SHAPED DIVERSION

OP OUTLET PROTECTION

PLAN
PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL
PIPE OUTLET TO WELL-DRAINED CHANNEL
Section A-A

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".

IP EXCAVATED DROP INLET SEDIMENT TRAP

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.

PS PERMANENT SEEDING MIXTURE

TYPE A	TYPE B (SLOPES 3:1 OR STEEPER)
15 OCTOBER TO 1 FEBRUARY: K-31 FESCUE @ 5 LB / 1000 SF, BORZY WINTER VETCH @ 1/2 LB / 1000 SF	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
1 FEBRUARY TO 1 JUNE: K-31 FESCUE @ 5 LB / 1000 SF, ANNUAL RYE @ 1/2 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
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	

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 SEEDINGS, 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.

FD TEMPORARY FILL DIVERSION

FILL SLOPE
EARTHEN RIDGE

ST SEDIMENT TRAP

CROSS-SECTION
CLASS I RIP-RAP
COARSE AGGREGATE
DIVERSION DIKE
FILTER CLOTH
EXCAVATED AREA
Length (ft) = 6 × Drainage Area (ac.)

■ SEE PLATE 3.13-1

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

■■ COARSE AGGREGATE SHALL BE VDOT #3, #357 OR #5.

Department of Community Development
COUNTY OF ROANOKE, VA.
Erosion & Sediment Control Details