

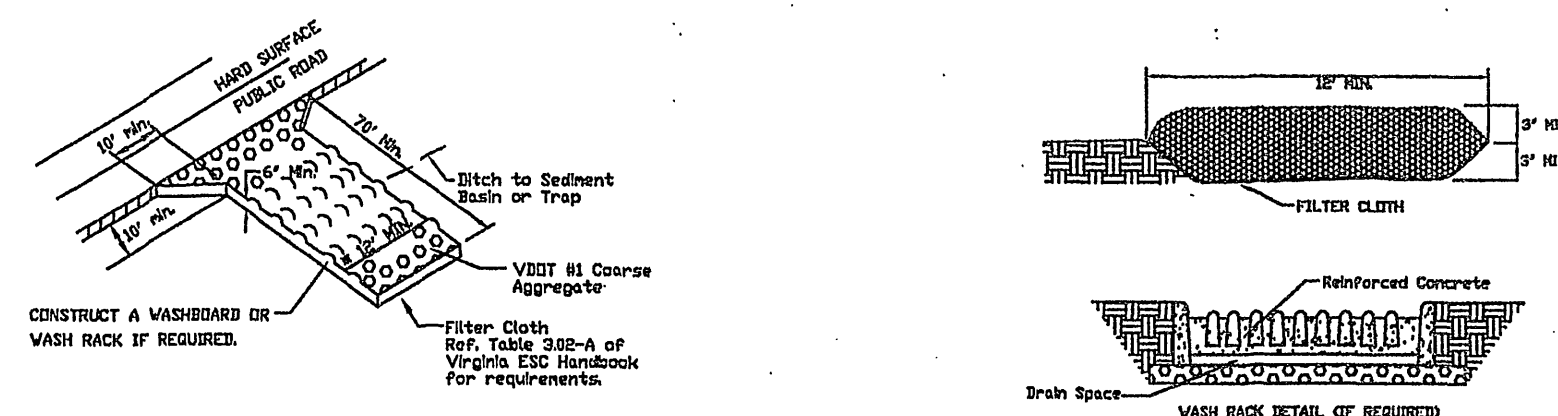
## MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 5000 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.	(PS) 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.	(SF) (PS) (ST) IF STOCKPILE APPLICABLE
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 LOCAL PROGRAM ADMINISTRATOR OR DESIGNATED AGENT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	(PS) 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.	(SF)
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NA
6	SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NA
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.	(PS) 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.	NA
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NA
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.	NA
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.	(RR) WITH FILTER CLOTH
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 PROTECTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.	(CIP) INSTALLED DOWNSTREAM OF DISTURBED AREA AT CULVERT
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.	CONTRACTOR'S WORK SHALL BE IN ACCORDANCE
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.	WWHA HAS APPLIED FOR NATIONWIDE PERMIT. CHANNEL WILL BE STABILIZED ONCE WORK IS COMPLETED.
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	(RR)
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) RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS. 6) APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.	CONTRACTOR'S WORK SHALL BE IN ACCORDANCE
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.	(CE)
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.	(PS) SELF-EXPLANATORY
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 DURATION OF 24-HOUR DURATION IN ACCORDANCE WITH THE APPLICABLE CRITERIA.	NA

### GENERAL EROSION AND SEDIMENT CONTROL NOTES:

- ES-1: Unless otherwise indicated, all vegetative and structural control practices will be constructed and maintained according to the minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and Virginia Regulations 4VAC50-30 Erosion and Sediment Control Regulations.
- ES-2: The plan approving authority must be notified one week prior to the 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 shall be maintained on the site at all times.
- 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 during 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.



CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

## EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS TO INSTALL APPROXIMATELY THREE-THOUSAND FOUR-HUNDRED AND TWENTY (3,420) FEET OF 12" DIP WATERLINE TO CONNECT TWO EXISTING WATERLINES IN ORDER TO PROVIDE AN OPTIONAL WATER SOURCE TO THE BONSACK AREA. THE PROPOSED WATERLINE WILL RUN THROUGH ROANOKE CITY AND ROANOKE COUNTY. THERE IS AN EXISTING 12" WATERLINE ON BERKLEY ROAD BETWEEN VINYARD PARK, THE NEW LINE WILL CONNECT THERE AND RUN THRU TAX PARCELS 061.05-02-01-00-0000, 7030102 AND 050.03-01-08-00-0000 TO AN EXISTING 16" WATERLINE. THE CONSTRUCTION WILL DISTURB A TYPICAL 15' WIDE STRIP FOR A DISTANCE OF 3,420'. THE AREA OF LAND DISTURBANCE IS ESTIMATED AS FOLLOWS: 0.29 AC IN ROANOKE CITY AND APPROXIMATELY 0.99 AC IN ROANOKE COUNTY. TOTAL LAND DISTURBANCE WILL BE 1.28 AC.

EXISTING SITE CONDITIONS: THE PROPERTY DRAINS NORTHWARD TO GLADE CREEK. THE WOODED AREA IS ROUGHLY 30% SLOPE AND THE GRASSY AREA NEAR THE CREEK HAS A 0-15% SLOPE TO THE CREEK.

ADJACENT PROPERTY: THE PROJECT IS SURROUNDED BY RESIDENTIAL PROPERTIES, GLADE CREEK AND ROANOKE COUNTY VINYARD PARK.

OFF-SITE AREAS: THE DEVELOPMENT WILL BE A "BALANCED" SITE AND NO EXCESS MATERIAL WILL BE EXPORTED NOR WILL ANY MATERIAL BE IMPORTED FROM OTHER PROPERTIES.

SOILS: THE FOLLOWING DATA WAS DETERMINED USING INFORMATION FROM US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE THRU THEIR WEBSITE WEB SOIL SURVEY. THE AREA OF CONSTRUCTION IN THE VINYARD PARK AREA IS COMPOSED OF THE FOLLOWING:

6A - COMBES LOAM 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED  
COMBES - 75% OF MAP UNIT; 45.3% SAND; 43.2% SILT; 11.5% CLAY; HYDROLOGIC GROUP B\*, Kf OF .32 MODERATE ERODIBILITY  
CLUBCAF - 5% OF MAP UNIT; 13.9% SAND; 70.1% SILT; 16.0% CLAY, HYDROLOGIC GROUP D, Kf .28 MODERATE ERODIBILITY; WELL DRAINED  
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT); MODERATELY HIGH TO HIGH (0.57 TO 1.98 IN/HR); TYPICAL PROFILE: 0 TO 18 INCHES - LOAM; 18 TO 72 INCHES - LOAM; LANDFORM: FLOOD PLAINS; PARENT MATERIAL: ALLUVIUM  
12E - EVARD FINE SANDY LOAM, 25 TO 55 PERCENT SLOPES  
EVARD - 75% OF MAP UNIT; 70.9% SAND; 16.6% SILT; 12.5% CLAY; HYDROLOGIC GROUP B\*, Kf OF .24 MODERATE ERODIBILITY; WELL DRAINED  
CAPACITY TO THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT); MODERATELY HIGH TO HIGH (0.57 TO 1.98 IN/HR); TYPICAL PROFILE: 0 TO 3 INCHES - FINE SANDY LOAM; 3 TO 31 INCHES - SANDY CLAY LOAM; 31 TO 44 INCHES - SANDY CLAY LOAM; 44 TO 68 INCHES SANDY LOAM; LANDFORM: MOUNTAINS; PARENT MATERIAL: RESIDUUM WEATHERED FROM GRANITE AND GNEISS AND SCHIST  
52 - UDORTH - URBAN LAND COMPLEX  
UDORTHS - 60% OF MAP UNIT; NO OTHER DATA WAS PROVIDED; URBAN LAND - 25% OF MAP UNIT; NO OTHER DATA WAS PROVIDED; PARENT MATERIAL: FILL

THE AREA OF CONSTRUCTION AT 181 BERKLEY IS COMPOSED OF THE FOLLOWING:  
52 - UDORTHS - URBAN LAND COMPLEX  
UDORTHS - 60% OF MAP UNIT; NO OTHER DATA WAS PROVIDED; URBAN LAND - 25% OF MAP UNIT; NO OTHER DATA WAS PROVIDED; PARENT MATERIAL: FILL

THERE IS VERY LIMITED INFORMATION VALUABLE FOR UDORTHS - URBAN LAND COMPLEX  
\*GROUP HYDROLOGIC B - SOILS HAVE A MODERATE RATE WHEN THOROUGHLY WET. THESE CONSIST CHIEFLY OF MODERATELY DEEP OR DEEP, MODERATELY WELL DRAINED OR WELL DRAINED SOILS THAT HAVE MODERATELY FINE TEXTURE TO MODERATELY COARSE TEXTURE. THESE SOILS HAVE A MODERATE RATE OF WATER TRANSMISSION.

CRITICAL EROSION AREAS: DRAINAGE AREA TO GLADE CREEK.

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 HANDBOOK. THE MINIMUM STANDARDS OF THE VESCOR SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

STRUCTURAL PRACTICES:  
SILT FENCE - 3.05  
SILT FENCE WILL BE INSTALLED DOWNSLOPE OF TRENCH TO PREVENT SOIL ERODING INTO GLADE CREEK.  
CULVERT INLET PROTECTION - 3.08  
CULVERT INLET PROTECTION WILL BE PLACED PRIOR TO CONSTRUCTION TO KEEP SEDIMENT OUT OF EXISTING CULVERT LOCATED NEAR STATION 344+00.  
CONSTRUCTION ENTRANCE - 3.02  
A CONSTRUCTION ENTRANCE WILL BE PLACED PRIOR TO CONSTRUCTION TO KEEP THE EQUIPMENT FROM TRACKING DIRT ONTO THE ROADWAY.  
RIPRAP WITH FILTER CLOTH - 3.19  
RIPRAP AND FILTER CLOTH WILL BE INSTALLED IN DRAINAGE DITCH IMMEDIATELY AFTER WATERLINE INSTALLED.  
ROCK CHECK DAMS - 3.20  
ROCK CHECK DAM WILL BE INSTALLED IN DRAINAGE DITCH BEFORE INSTALLATION OF WATERLINE THRU DITCH  
TREE PROTECTION - 3.38  
WILL BE USED TO PROTECT SOME OF THE LARGER TREES

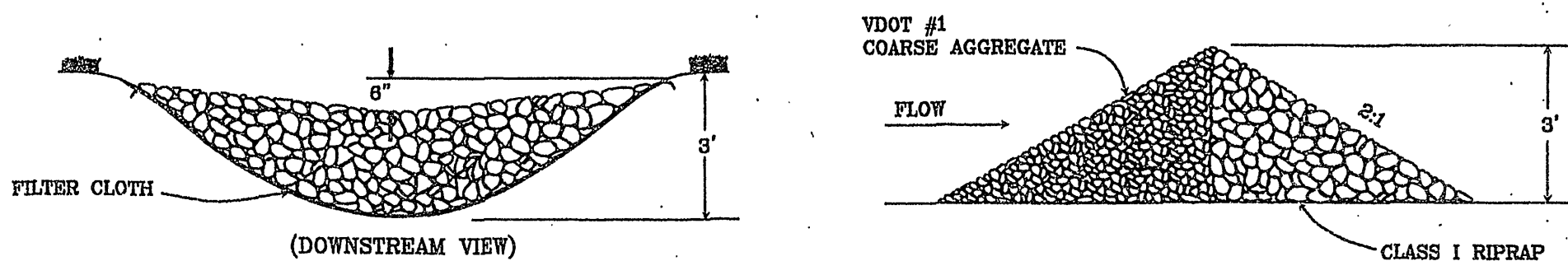
VEGETATIVE PRACTICES:  
PERMANENT SEEDING - 3.32  
ALL DISTURBED AREAS WILL RECEIVE PERMANENT SEEDING.

MANAGEMENT STRATEGIES:  
1. THE CONSTRUCTION ENTRANCE AND SILT FENCE SHALL BE INSTALLED PRIOR TO BEGINNING CONSTRUCTION.  
2. AREA WILL RECEIVE PERMANENT SEEDING IMMEDIATELY AFTER WATERLINE IS INSTALLED.  
3. ALL E&S MEASURES SHALL BE INSPECTED DAILY AND AFTER A SIGNIFICANT STORM. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.  
4. AFTER GRASS IS ESTABLISHED AND APPROVED BY THE APPROPRIATE GOVERNING BODY (ROANOKE CITY, ROANOKE COUNTY) THE SILT FENCE WILL BE REMOVED.

CALCULATIONS:  
1. NO GRADING AND NOT INCREASE IN IMPERVIOUS AREA, THEREFORE, NO INCREASE IN PEAK RUNOFF RATES.  
2. NO STORMWATER MANAGEMENT (QUALITY AND QUANTITY) IS REQUIRED.

## ROCK CHECK DAM (CD)

2-10 ACRES OF DRAINAGE AREA:



## (PS) PERMANENT SEEDING MIXTURE

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

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 RYE @ 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  
30-0-0 @ 7 LB / 1000 SF

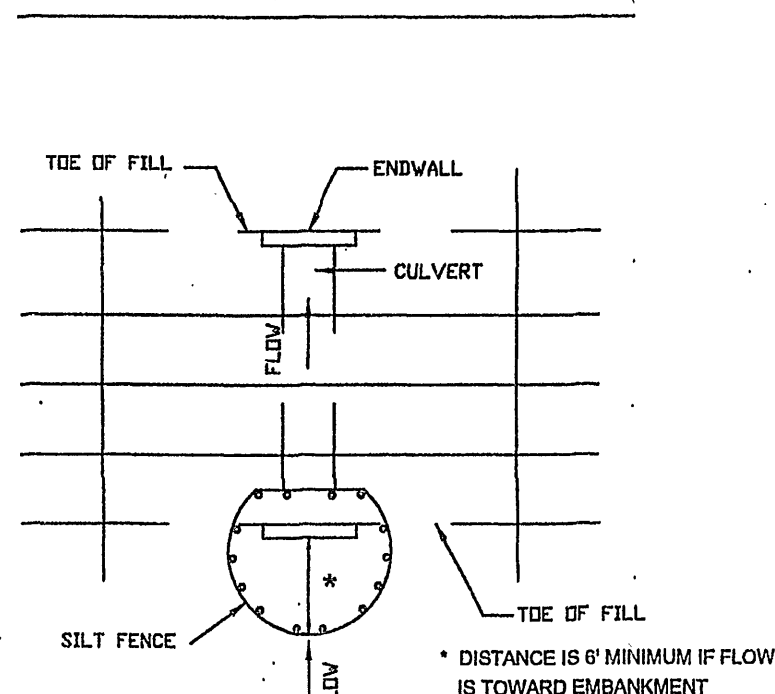
MULCH:  
IF REQUIRED, SHALL BE USED OVER ALL SEEDING AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

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.

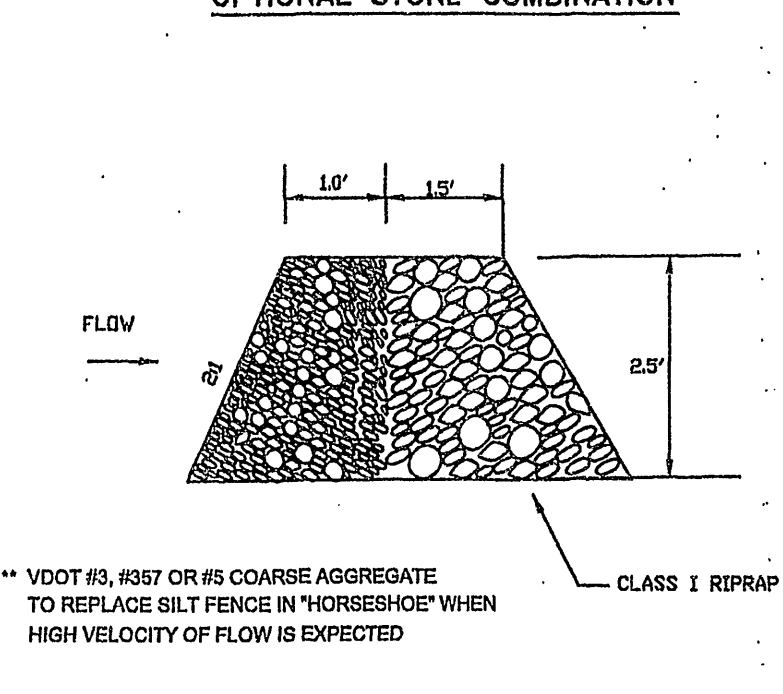
SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER IN A FIRM, FRABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 1.28 AC. = 55,721 SQ. FT.

## (CIP) SILT FENCE CULVERT INLET PROTECTION



## OPTIONAL STONE COMBINATION\*\*



## EROSION & SEDIMENT CONTROL COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EA	1	\$ 1,500.00	\$ 1,500.00
SILT FENCE	LF	3,610	\$ 3.00	\$ 10,830.00
INLET PROTECTION	EA	1	\$ 1,500.00	\$ 1,500.00
TEMPORARY DIVERSION DIKE	LF			
TEMPORARY FILL DIVERSION	LF			
SEDIMENT TRAP	EA			
CHECK DAM	EA	1	\$ 50.00	\$ 50.00
PERMANENT SEEDING	1000 SF	55.7	\$ 55.00	\$ 3,063.50
OUTLET PROTECTION	EA			
SEDIMENT BASIN	EA			
TEMP. SEEDING	1000 SF			
ROW DIVERSION	LF			
SUBTOTAL COST				16,943.50
10% CONTINGENCY				1,694.35
TOTAL PROJECT COST				\$ 18,637.85

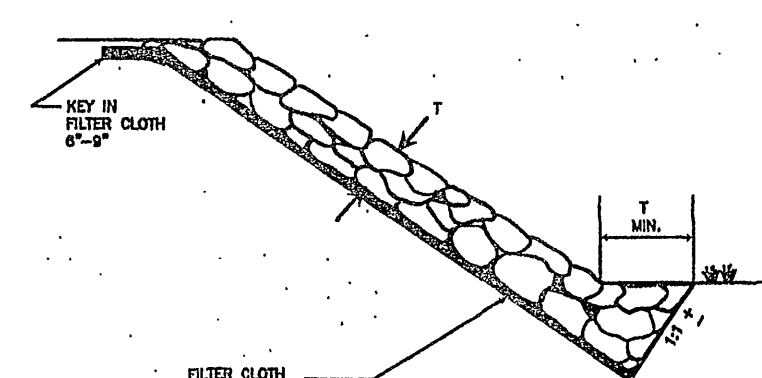
## GENERAL EROSION AND SEDIMENT CONTROL NOTES

- 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.
- 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.
- 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.
- IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
- 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.
- 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.
- 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 OR ROANOKE CITY PLANNING, BUILDING AND DEVELOPMENT. AN EROSION CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.
- THIS SHEET MAY NOT BE MODIFIED EXCEPT FOR TABLES

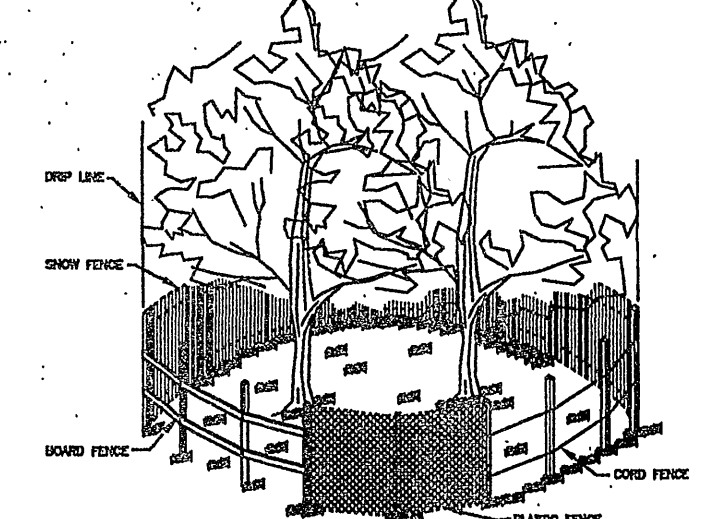
Roan City 0.29 12,632  
Roan County 0.99 43,046  
TOTAL DISTURBED AREA = 1.28 AC. = 55,721 SQ. FT.

## TOE REQUIREMENTS FOR BANK STABILIZATION

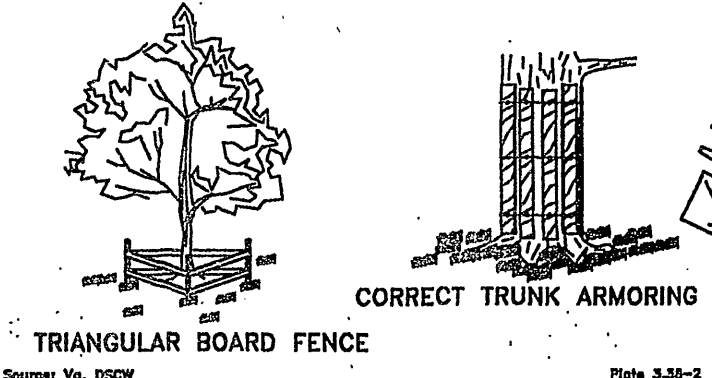
FILTER CLOTH UNDERLINER (PREFERRED)



## FENCING AND ARMORING



CORRECT METHODS OF TREE FENCING



TRIANGULAR BOARD FENCE

CORRECT TRUNK ARMORING

SOURCE: Adapted from VDOT Drainage Manual

PLATE 3.10-1

Department of  
Community Development

COUNTY OF ROANOKE  
AND CITY OF ROANOKE, VA.

Erosion & Sediment Control Details



SHEET  
7 (ES1)  
OF  
9

10-27-93	01-22-98	02-18-03	05-16-03	DATE
1	2	3	4	NO.
Engr. & Insp.	Engr. & Insp.	Community Development	Community Development	REVISIONS
SCALE	NO SCALE	DRAWING BY: SAU/MTB	DESIGNED BY: TIGIS/Special Projects/RCGIS, 2008_0018.SP	APPROVED BY: GWS/III