

THE FOLLOWING ARE REPRESENTATIVE DETAILS FOR THE STATE MINIMUM STANDARDS AND SPECIFICATIONS RELATIVE TO THE PROPOSED PROJECT. THE GENERAL CONTRACTOR SHALL RELY ON THE COMPLETE STANDARD AS INDICATED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK FOR PROPER INSTALLATION, CONSTRUCTION AND MAINTENANCE OF THE INDIVIDUAL ITEMS REQUIRED BY THESE PLANS OR AS MAY BE REQUIRED BY THE LOCAL GOVERNING AUTHORITY.

TS TEMPORARY SEEDING

DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING MEASURES AS SHOWN HEREON, AND AS FURTHER DETAILED AS "STANDARD AND SPECIFICATION 3.31 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION. IN ADDITION TO AREAS OF GENERAL GRADING THAT WILL NOT BE FINE-GRADED FOR GREATER THAN 30 DAYS, THE FOLLOWING SPECIFIC E&S MEASURES SHALL BE STABILIZED WITH TEMPORARY SEEDING IMMEDIATELY UPON COMPLETION OF CONSTRUCTION OF THE TEMPORARY MEASURE:

- SOIL STOCKPILES
- DIKES, DAMS, AND SIDES OF SEDIMENT BASINS
- TEMPORARY ROADWAY EMBANKMENTS

PRIOR TO SEEDING, INSTALL NECESSARY EROSION CONTROL PRACTICES SUCH AS DIKES, WATERWAYS, AND BASINS. PROVIDE PLANTS AS SPECIFIED HEREIN, OR ENGINEER-APPROVED EQUAL.

SEEDBED PREPARATION: LIME SHALL BE APPLIED IF DISTURBED AREAS WILL REMAIN DORMANT BETWEEN 30 DAYS AND 120 DAYS. IF REQUIRED, LIME SHALL BE APPLIED AS SHOWN, BASED ON SOIL ACIDITY.

pH	APPLICATION OF AGRICULTURAL LIMESTONE
BELOW 4.2	3 TONS PER ACRE
4.2 TO 5.2	2 TONS PER ACRE
5.2 TO 6.0	1 TON PER ACRE
ABOVE 6.0	LIME NOT REQUIRED

FERTILIZER SHALL BE APPLIED AS 600 LBS/ACRE OF 10-20-10 OR EQUIVALENT NUTRIENTS. LIME (AS APPLICABLE) AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF SOIL, IF POSSIBLE.

SURFACE ROUGHENING SHALL BE REQUIRED WHERE AREAS TO BE SEEDS HAVE BEEN COMPACTED, CRUSTED, OR HARDENED BY CONSTRUCTION TRAFFIC. AS REQUIRED, SEEDBEDS SHALL BE ROUGHENED IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.29 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. (TRACKING WITH BULLDOZER CLEATS SHALL BE USED IN SANDY SOILS)

SEEDING: SEED SHALL BE EVENLY APPLIED WITH THE SAME MEANS SPECIFIED HEREIN FOR PERMANENT SEEDING. SMALL GRAINS SHALL BE PLANTED NO MORE THAN ONE INCH DEEP. GRASSES AND LEGUMES SHALL BE PLANTED WITH NO LESS THAN 1/4" OF SOIL COVER.

MULCHING: SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO STANDARD AND SPECIFICATION 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, EXCEPT THAT FIBER MULCH MAY NOT BE USED. STRAW MULCH SHALL BE USED DURING THESE PERIODS.

TEMPORARY SEEDINGS MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY NOT REQUIRE MULCH.

RE-SEEDING: AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION SHALL BE RE-SEEDS AS SOON AS SUCH AREAS ARE IDENTIFIED.

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS BY RANGE OF PLANTING DATES:

09/01 TO 02/15	ANNUAL RYEGRASS @ 50 LB / ACRE
02/16 TO 04/30	ANNUAL RYEGRASS @ 100 LB / ACRE
05/01 TO 08/31	GERMAN MILLET @ 50 LB / ACRE

PS PERMANENT SEEDING

DISTURBED AREAS SHALL BE PERMANENTLY SEEDS WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE, OR ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN ONE YEAR.

TYPE A

03/15 TO 05/15 OR 08/16 TO 10/31:
ANNUAL RYEGRASS @ 20 LB / ACRE
RED TOP @ 2 LB / ACRE
TALL FESCUE @ 150 LB / ACRE

05/16 TO 08/15:
FOXTAIL MILLET @ 20 LB / ACRE
RED TOP @ 20 LB / ACRE
TALL FESCUE @ 150 LB / ACRE

11/01 TO 02/28:
WINTER RYE @ 20 LB / ACRE
RED TOP @ 20 LB / ACRE
TALL FESCUE @ 150 LB / ACRE

LIME: 140 LB / ACRE PULVERIZED AGRICULTURAL LIMESTONE

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

MULCH: SHALL BE USED OVER ALL SEEDS AREAS AND SHALL BE APPLIED IN STRICT ACCORDANCE WITH STANDARD AND SPECIFICATION 3.35 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 CITY ENGINEER.

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

TO TOPSOILING

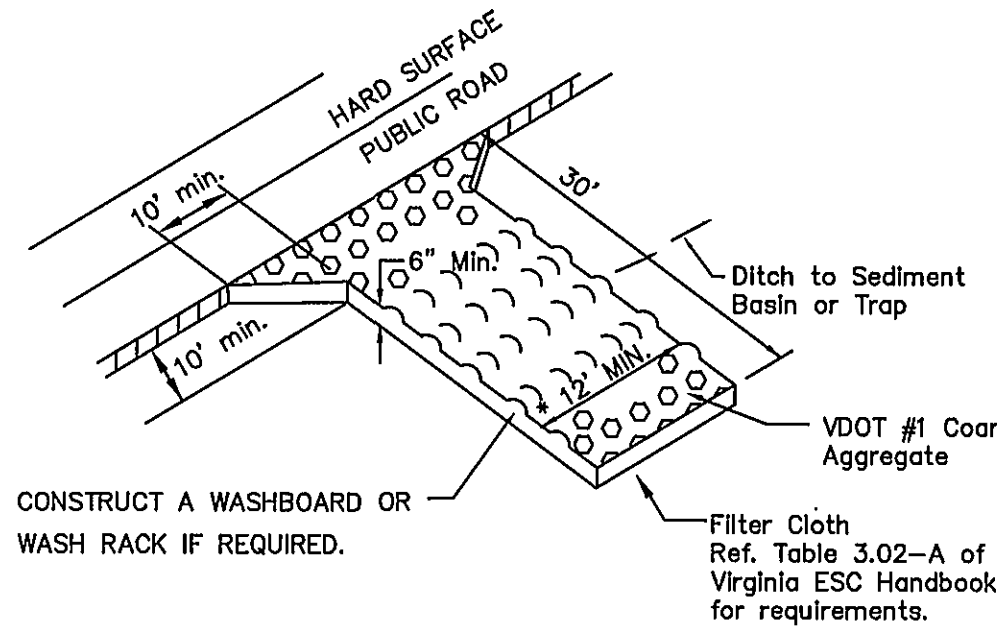
NO APPLICABLE DETAILS APPLY. REFER TO SPECIFICATION 3.30 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION FOR SPECIFIC REQUIREMENTS.

MU MULCHING

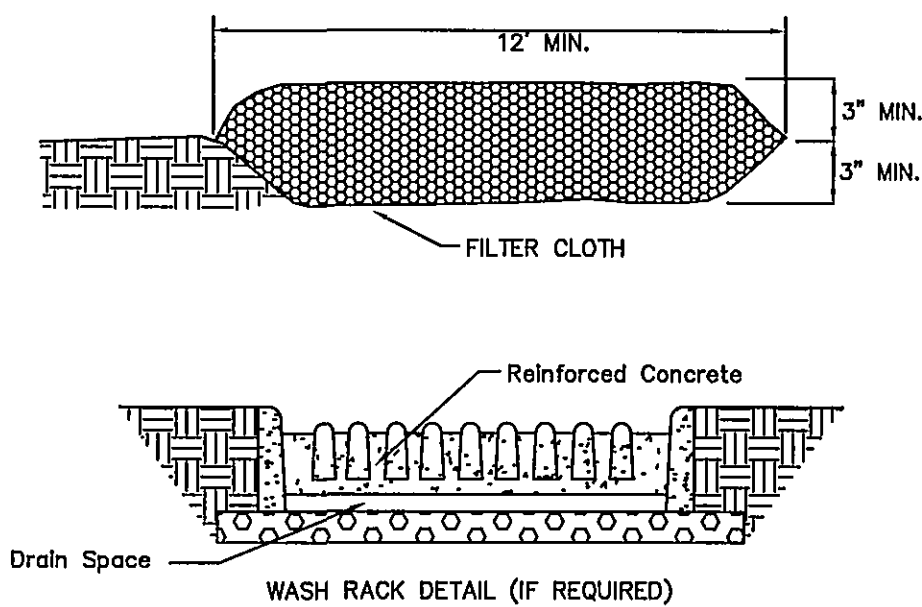
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DC DUST CONTROL

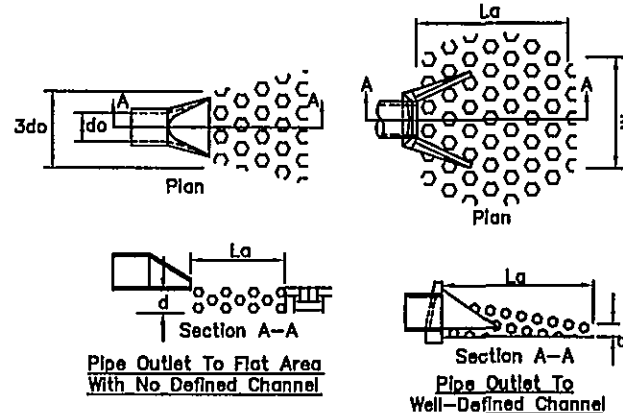
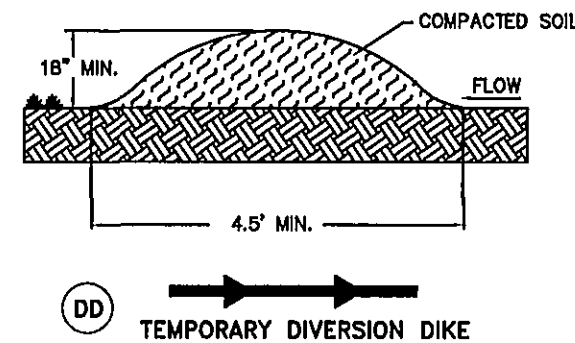
NO APPLICABLE DETAILS APPLY. REFER TO SPECIFICATION 3.39 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION FOR SPECIFIC REQUIREMENTS.



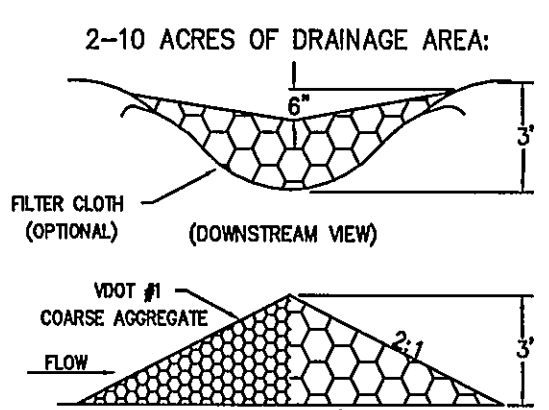
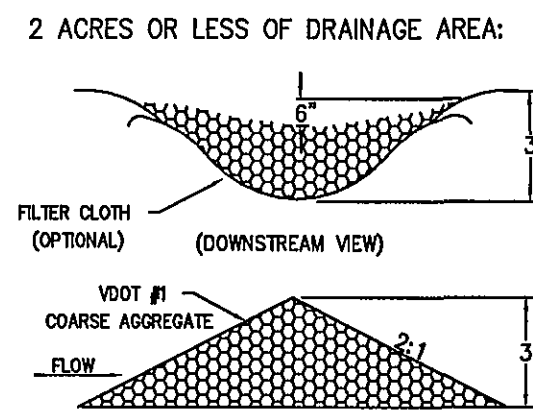
* MUST EXTEND FULL WIDTH OF INGRESS & EGRESS OPERATION.



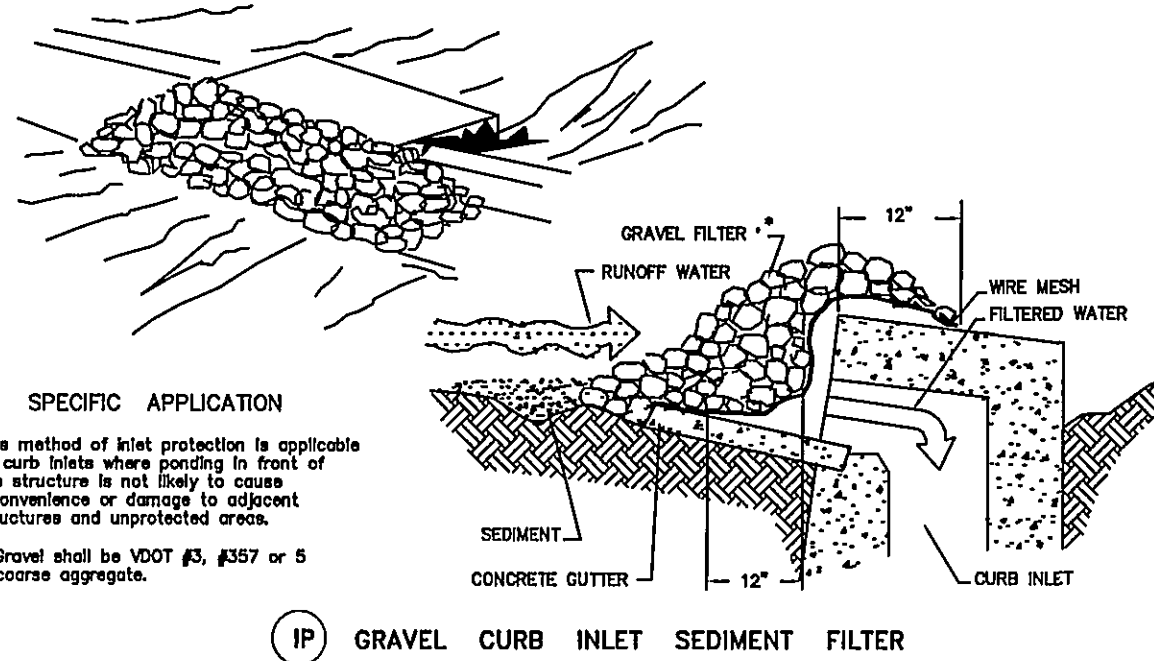
CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



NOTES
1. Apron lining may be rip-rap, grouted rip-rap, or concrete.
2. Lo is the length of the rip-rap apron as calculated using plates 1.38d and 1.39e.
3. d = 1.5 times the maximum stone diameter, but not less than 6".

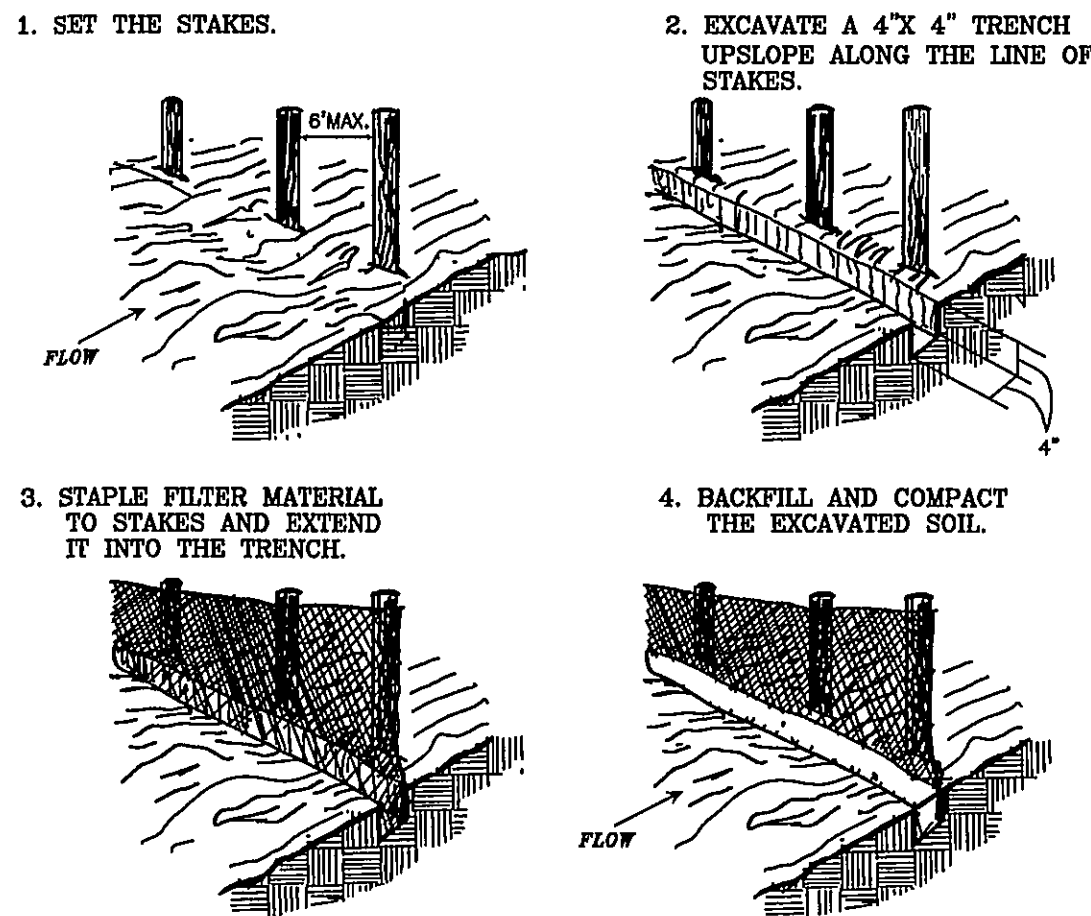


CD ROCK CHECK DAM



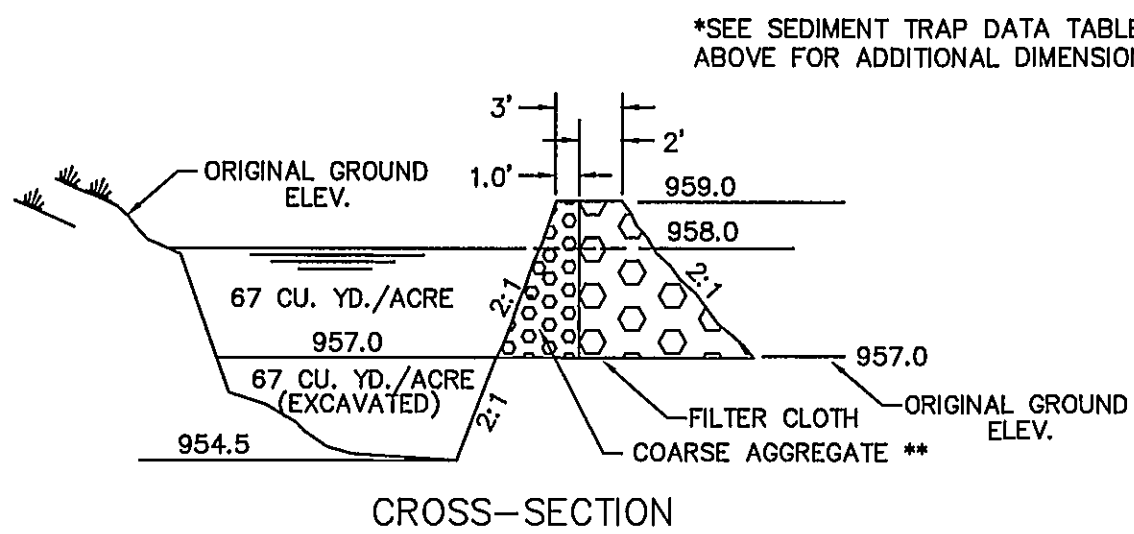
IP GRAVEL CURB INLET SEDIMENT FILTER

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)



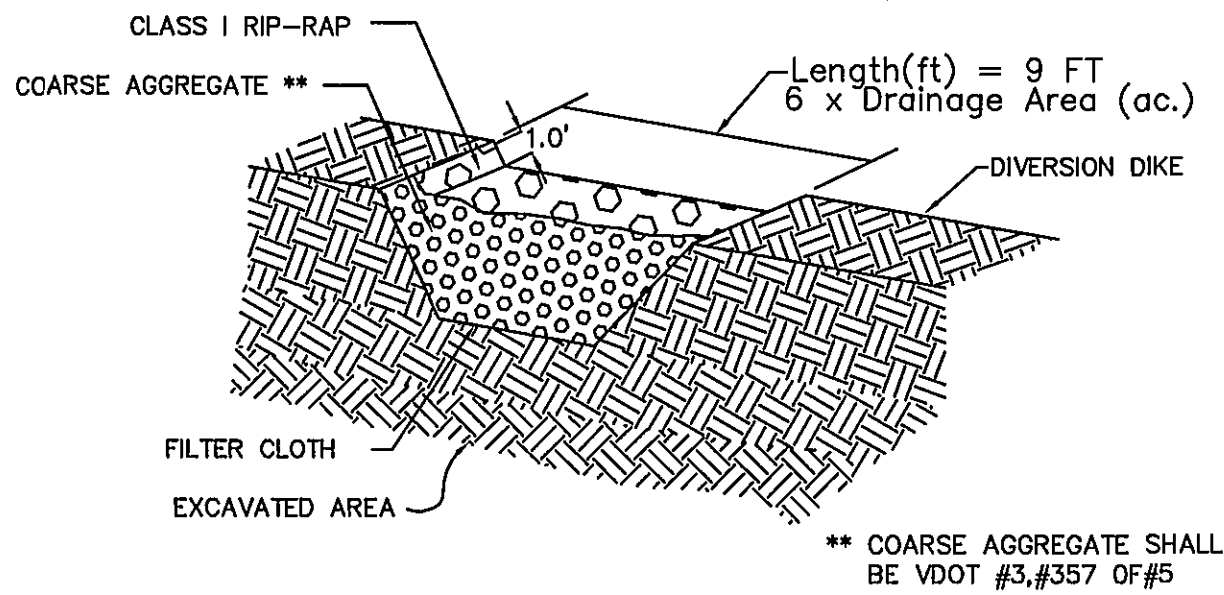
TEMPORARY SEDIMENT TRAP DATA

STRUCTURE	DRAINAGE AREA (ACRES)	STORAGE (C.Y.)		WEIR LENGTH (FT.)	WEIR HEIGHT (FT.)	BERM HEIGHT (FT.)
		REQ'D	DESIGN			
1	1.5	201	231	9	1	2



* SEE PLATE 3.13-1

*SEE SEDIMENT TRAP DATA TABLE ABOVE FOR ADDITIONAL DIMENSIONS.



ST SEDIMENT TRAP

NOTES
For areas less than 3.0 acres. For areas larger than 3.0 acres, A SEDIMENT BASIN, is required. Please see Va' ESC manual for design.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS THE PREPARATION OF PROPERTY FOR A RESIDENTIAL SUBDIVISION. THE PROPOSED PROJECT WILL COMPRISE OF REGRADING APPROXIMATELY 2.6 ACRES OF PASTURE/WOODS MIX. THE SITE IS LOCATED BETWEEN KING STREET AND BELLE AVENUE IN THE CITY OF ROANOKE, VIRGINIA. THE PROPERTY IS CURRENTLY OWNED BY THE DEVELOPER, AFFORDABLE HOME IMPROVEMENTS, INC.

EXISTING SITE CONDITIONS: THE SITE IS CURRENTLY AN UNDEVELOPED TRACT OF LAND THAT IS CURRENTLY COVERED WITH A MIX OF PASTURE/WOODS. THERE IS A CREEK THAT RUNS ALONG KING STREET AT THE BACK OF THE PROPERTY.

ADJACENT PROPERTY: THE LIMITS OF CONSTRUCTION ARE BOUNDED ON THE WEST BY KING STREET AND ON THE SOUTH AND WEST BY BELLE AVENUE. THE LIMITS OF CONSTRUCTION ARE BOUNDED ON THE NORTH BY SMALL RESIDENTIAL PARCELS.

OFF-SITE AREAS: ANY NECESSARY FILL MATERIAL WILL COME FROM MOUNTAIN BROOK ESTATES SUBDIVISION, WHICH IS LOCATED ACROSS BELLE AVENUE FROM THE SITE AND IS CURRENTLY UNDER CONSTRUCTION.

SOILS: A SUBSURFACE INVESTIGATION HAS NOT BEEN PROVIDED. SOIL INFORMATION IS AVAILABLE ON THE RESIDUAL SOILS THAT IS SUGGESTED IN THE "SOIL SURVEY OF ROANOKE COUNTY AND THE CITIES OF ROANOKE AND SALEM, VIRGINIA" AS PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE. THIS SURVEY IDENTIFIES THE ORIGINAL SOIL MATERIAL AS A GROSECLOSE-LITZ COMPLEX SOIL. GROSECLOSE SOIL HAS THE FOLLOWING CHARACTERISTICS: 1) WELL DRAINED 2) 0"-9" OF TOPSOIL 3) +/- 9" OF A SILT LOAM SUBBASE 4) SLOW PERMEABILITY 5) RAPID SURFACE RUN-OFF AND 6) HIGH EROSION POTENTIAL. LITZ SOIL HAS THE FOLLOWING CHARACTERISTICS: 1) WELL DRAINED 2) 0"-5" OF TOPSOIL 3) +/- 11" OF A SILT LOAM SUBBASE 4) MODERATE PERMEABILITY 5) RAPID SURFACE RUN-OFF AND 6) HIGH EROSION POTENTIAL.

CRITICAL EROSION AREAS: CRITICAL AREAS ARE NOT ANTICIPATED FOR THIS PROJECT.

PROTECTION OF THE WATERCOURSE: THE LIVE WATERCOURSE IS TO REMAIN PROTECTED FROM SEDIMENT AT ALL TIMES DURING CONSTRUCTION. SILT FENCE SHALL BE INSTALLED AS A FIRST STEP IN CONSTRUCTION. SEDIMENT TRAPS AND DIVERSIONS SHALL BE INSTALLED AS THE NEXT STEP PRIOR TO ANY GRADING OPERATIONS.

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" (VESH). THE MINIMUM STANDARDS OF THE VESH SHALL BE ADHERED TO UNLESS OTHERWISE DIRECTED BY THE LOCAL PROGRAM ADMINISTRATOR.

STRUCTURAL — CONSTRUCTION ENTRANCE—STD. 3.02....A STONE PAD, LOCATED AT THE INTERSECTION OF MILLWHEEL DRIVE AND MILLWOOD DRIVE(IF PAVED) OR AT OTHER POINTS OF VEHICULAR INGRESS AND EGRESS TO THE CONSTRUCTION SITE, TO REDUCE THE SOIL TRANSPORTED ONTO PUBLIC ROADS AND OTHER PAVED AREAS.

SILT FENCE—STD. 3.05....A TEMPORARY BARRIER CONSTRUCTED ALONG THE PERIMETER OF THE DISTURBED AREA AS REQUIRED TO INTERCEPT AND DETAIN SEDIMENT.

INLET PROTECTION—STD. 3.07....INSTALLATION OF A SEDIMENT TRAPPING MEASURES AROUND DROP INLETS OR CURB INLET STRUCTURES PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.

DIVERSION DIKE—STD. 3.09....A RIDGE OF COMPACTED SOIL CONSTRUCTED AT THE TOP OR BASE OF A SLOPING DISTURBED AREA WHICH DIVERTS OFF-SITE RUNOFF AWAY FROM UNPROTECTED SLOPES AND TO A STABILIZED OUTLET OR TO DIVERT SEDIMENT LADEN RUNOFF TO SEDIMENT TRAPPING STRUCTURE.

SEDIMENT TRAP—STD. 3.13....A TEMPORARY PONDING AREA FORMED BY CONSTRUCTING AN EARTHEN EMBANKMENT WITH A STONE OUTLET TO DETAIN SEDIMENT-LADEN RUNOFF FROM SMALL DISTURBED AREAS LONG ENOUGH TO ALLOW MOST OF THE SEDIMENT TO SETTLE OUT.

OUTLET PROTECTION—STD. 3.18....STRUCTURALLY LINED APRONS OR OTHER ACCEPTABLE ENERGY DISSIPATING DEVICES PLACED AT THE OUTLETS OF PIPES OR PAVED CHANNEL SECTIONS TO PREVENT SCOUR AT STORMWATER OUTLETS.

CHECK DAMS—STD. 3.20....SMALL TEMPORARY STONE DAMS CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH TO REDUCE THE VELOCITY OF CONCENTRATED STORMWATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH.

VEGETATIVE — TOPSOILING—STD. 3.30....METHODS OF PRESERVING AND USING THE SURFACE LAYER OF UNDISTURBED SOIL, OFTEN ENRICHED IN ORGANIC MATTER, IN ORDER TO OBTAIN A MORE DESIRABLE PLANTING AND GROWTH MEDIUM.

TEMPORARY SEEDING—STD. 3.31....ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR PERIODS OF 30 DAYS TO 1-YEAR BY SEEDING WITH AN APPROPRIATE RAPIDLY GROWING SEED MIXTURE.

PERMANENT SEEDING—STD. 3.32....ESTABLISHMENT OF A VEGETATIVE COVER BY PLANTING SEED ON ALL FINAL GRADED AREAS THAT WILL NOT RECEIVE AN IMPERVIOUS COVER OR RECEIVE TOPSOIL MATERIAL TO PROVIDE A STABILIZED SITE AFTER THE PROJECT IS COMPLETE.

MULCHING—3.35....MULCH SHALL BE APPLIED TO ALL TEMPORARY AND PERMANENT SEEDING OPERATIONS TO PROMOTE THE GROWTH OF VEGETATION AND TO PROTECT THE SOIL SURFACE FROM RAINDROP IMPACTS.

SOIL STABILIZATION BLANKETS & MATTING—3.36....UPON COMPLETION OF GRADING OPERATIONS FOR THE AREA ALONG THE CUL-DE-SAC EMBANKMENT, A DEGRADABLE BLANKET SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER TO PROMOTE STABILIZATION DUE TO SEEDING OPERATIONS.

MANAGEMENT STRATEGIES: A) CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

B) SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.

C) THE LOCAL PROGRAM ADMINISTRATOR RESERVES THE RIGHT TO ADD TO, DELETE OR OTHERWISE CHANGE THE EROSION CONTROL MEASURES AS DEEMED NECESSARY DUE TO ACTUAL FIELD CONDITIONS BY WRITTEN NOTIFICATION TO THE CONTRACTOR.

D) ALL FILL AND CUT SLOPES SHALL BE SEEDS WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE./ E) ONLY AFTER INSPECTION AND APPROVAL FROM THE LOCAL PROGRAM ADMINISTRATOR MAY ITEMS BE REMOVED FOLLOWING THE STABILIZATION OF THE CONTRIBUTING AREAS.

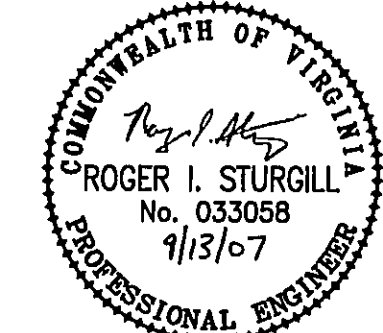
INSPECTIONS: THE GENERAL CONTRACTOR SHALL INSPECT DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED. INSPECTIONS SHALL BE MADE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND THE AREA OF CONSTRUCTION VEHICLE ACCESS AT LEAST EVERY FOURTEEN (14) CALENDAR DAYS, AND WITHIN 48 HOURS OF THE END OF A STORM EVENT PRODUCING 1/2" OR GREATER OF PRECIPITATION. WHERE AREAS HAVE BEEN FINALLY OR TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (SITE IS COVERED WITH SNOW, ICE, OR FROZEN GROUND EXISTS) SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

A) INSPECT DISTURBED AREAS AND AREAS OF MATERIALS STORAGE THAT ARE EXPOSED TO PRECIPITATION FOR EVIDENCE OF, OR THE POTENTIAL FOR SEDIMENT ENTERING THE STORM DRAIN SYSTEM. INSPECT E&S CONTROLS IN ACCORDANCE WITH REQUIREMENTS STATED HEREIN, AND INSPECT POINTS OF STORM DRAIN DISCHARGE FOR EXCESSIVE SEDIMENTATION. CORRECT SITE CONTROLS AS REQUIRED TO REDUCE SEDIMENTATION OF STORM DRAINS, CULVERTS, AND RECEIVING CHANNELS.

B) IF CONTROLS OR SEDIMENT PREVENTION AREAS ARE FOUND TO BE IN NEED OF REPAIR OR MODIFICATION, THE GENERAL CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES AS REQUIRED. ANY ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES SHALL BE RECORDED AS FIELD REVISIONS TO THESE PLANS. IN THE EVENT THAT ADDITIONAL CONTROLS ARE FOUND TO BE REQUIRED, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE CONTROLS BEFORE THE NEXT ANTICIPATED STORM EVENT. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICAL, THEY SHALL BE IMPLEMENTED AS SOON AS PRACTICAL.

C) A REPORT SUMMARIZING THE SCOPE OF INSPECTIONS, NAME OF INSPECTOR, INSPECTOR'S QUALIFICATIONS, DATES OF INSPECTIONS, MAJOR OBSERVATIONS PERTAINING TO THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS, AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS A PART OF THESE PLANS. MAJOR OBSERVATIONS OF THESE REPORTS SHALL INCLUDE: THE LOCATIONS OF EXCESSIVE SEDIMENTATION FROM THE SITE; LOCATIONS OF CONTROLS IN NEED OF REPAIR; LOCATIONS OF FAILED OR INADEQUATE CONTROLS; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

STORMWATER MANAGEMENT: DUE TO THE FACT THAT A LARGE PORTION OF THIS SITE IS LOCATED IN THE FLOODPLAIN, IT IS NOT IDEAL TO BUILD A PERMANENT STORMWATER MANAGEMENT FACILITY. THEREFORE, EACH INDIVIDUAL LOT WILL BE REQUIRED TO PROVIDE AN INFILTRATION PIT (SIZING BASED ON THE AREA BASED ON THE SIZE OF THE HOUSE ON THAT LOT) FOR STORMWATER MANAGEMENT PURPOSES.



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BELLEVIEW CREEK
SUBDIVISION
ESC DETAILS
ROANOKE CITY, VIRGINIA

DRAWN BY: CPB

DESIGNED BY: CPB

CHECKED BY: JVJ

DATE: 04/03/2007

REVISIONS:

05/04/2007
06/26/2007
08/02/2007
09/13/2007

SCALE: N/A

SHEET NO.

C-5
JOB NO.
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