

18171comp1-06-e02.dwg

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION
THE PROJECT AREA IS LOCATED BETWEEN CLEARVIEW DRIVE AND HOLLOWDALE DRIVE IN ROANOKE COUNTY AND CONSISTS OF A RESIDENTIAL DEVELOPMENT. ADDITIONAL IMPROVEMENTS INCLUDE SANITARY SEWER AND WATER LINE EXTENSIONS TO SERVE THIS DEVELOPMENT. THE TOTAL DISTURBED AREA IS APPROXIMATELY 0.55 ACRES.

EXISTING SITE CONDITIONS
THE SITE IS CURRENTLY A VACANT, LIGHTLY PLANTED, GRASSY TRACT. THIS SITE DOES INCLUDE A PORTION OF AN EXISTING RETAINING WALL.

ADJACENT AREAS
THE PROJECT AREA IS BORDERED BY EXISTING RESIDENTIAL LOTS TO THE EAST AND WEST, CLEARVIEW DRIVE TO THE NORTH, AND HOLLOWDALE DRIVE TO THE SOUTH.

OFFSITE AREAS
NO OFFSITE AREAS ARE CURRENTLY ASSOCIATED WITH THIS PLAN. ALL MATERIAL THAT IS REMOVED FROM OR DELIVERED TO THIS SITE IN ASSOCIATION WITH THIS PROJECT SHALL BE FROM A PERMITTED CUT OR FILL SITE. 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.

SOILS
SOILS INFORMATION IS BASED ON AN INSPECTION OF THE USDA WEB SOIL SURVEY AND HAS NOT BEEN FIELD VERIFIED. THE ONSITE SOILS ARE INDICATED TO BE AS FOLLOWS:

CHESWELL-LUTZ COMPLEX, 15 TO 25% SLOPES (MAP UNIT S0)

EDGEMONT SOIL
HYDROLOGIC SOIL GROUP: D
DEPTH OF RESTRICTIVE FEATURE: 10 TO 20 INCHES TO PARALITHIC BEDROCK
DEPTH TO WATER TABLE: MORE THAN 80 INCHES
DRAINAGE CLASS: WELL DRAINED
AVAILABLE WATER CAPACITY: MODERATELY LOW TO MODERATELY HIGH
SOIL PROFILE: 0 TO 2 INCHES: CHANNERY SANDY LOAM, 2 TO 12 INCHES: VERY CHANNERY SILT LOAM, 12 TO 22 INCHES: BEDROCK.

CRITICAL AREAS
THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MINIMIZE THE POTENTIAL FOR ANY SEDIMENT LEAVING THE SITE ONTO ADJACENT PROPERTY.

MINIMUM STANDARDS
REFER TO DC0 MINIMUM STANDARDS.
EROSION AND SEDIMENT CONTROL MEASURES

CONSTRUCTION ENTRANCE (C.102) - A STONE CONSTRUCTION ENTRANCE WILL BE INSTALLED TO MINIMIZE THE AMOUNT OF MUD TRANSPORTED INTO EXISTING ROADS.

SILT FENCE (C.105) - SILT FENCE WILL BE INSTALLED AT THE LOWER ENDS OF THE PROJECT SITE TO INTERCEPT SEDIMENT LADEN RUN-OFF PRIOR TO EXITING THE SITE.

TEMPORARY DIVERSION DIKE (C.108) - A TEMPORARY RIDGE OF COMPACTED SOIL WILL BE CONSTRUCTED TO DIVERT UPSLOPE RUNOFF AWAY FROM A DISTURBED AREA, AND/OR TO DIVERT SEDIMENT LADEN RUNOFF FROM A DISTURBED AREA TO A SEDIMENT TRAPPING MEASURE.

TEMPORARY SEEDING (C.3.1) - TEMPORARY SEEDING SHALL BE APPLIED TO TEMPORARY DIVERSION DIKES, TOPSOIL STOCKPILES, AND ALL AREAS TO BE ROUGH GRADED, BUT NOT FINISHED GRADED DURING THE INITIAL PHASE OF CONSTRUCTION. TEMPORARY SEEDING SHALL BE FAST GERMINATING, TEMPORARY VEGETATION AND INSTALLED IMMEDIATELY FOLLOWING GRADING, OR INSTALLATION IF A TEMPORARY MEASURE. SEE ALSO MINIMUM STANDARDS.

PERMANENT SEEDING (C.3.2) - PERMANENT SEEDING SHALL BE INSTALLED ON ALL DISTURBED AREAS OF THE SITE NOT OTHERWISE STABILIZED.

MULCHING (C.3.3) - ALL DISTURBED AREAS SHALL BE MULCHED AFTER SEEDING. STRAW MULCH SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE AND ANCHORED WITH 750 LBS PER ACRE OF FIBER MULCH OVER THE SEEDED AREA.

PERMANENT STABILIZATION
AREAS NOT COVERED BY LANDSCAPING OR OTHER PERMANENT HARD SURFACE SHALL BE STABILIZED WITH PERMANENT SEEDING. THE CONTRACTOR SHALL ENSURE THAT A STRONG STAND OF GRASS IS ESTABLISHED BEFORE THE REMOVAL OF EROSION CONTROL MEASURES.

MAINTENANCE
ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BI-WEEKLY AND AFTER EVERY RUNOFF PRODUCING RAINFALL. A LOG OF DATES AND INSPECTIONS SHALL BE KEPT. ANY DEFICIENCIES THAT ARE FOUND SHALL BE CORRECTED IMMEDIATELY. ACCUMULATED SEDIMENT AT TRAPPING MEASURES SHALL BE ROUTINELY REMOVED. THE CONTRACTOR AND RLD SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING:

ALL DITCHES, SWALES, AND NATURAL WATERCOURSES DOWNSTREAM OF THIS PROJECT SHALL BE FIELD INSPECTED DURING AND AFTER CONSTRUCTION BY THE RLD TO ENSURE COMPLIANCE WITH DEQ'S MS-19. IF EROSION OR SCOUR IS OCCURRING THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL CORRECTIVE MEASURES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED, AND THEN TEMPORARY MEASURES PROPERLY REMOVED.

ALL SEEDING AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEED AS REQUIRED TO ACHIEVE A GOOD STAND OF GRASS.

THE CONSTRUCTION ENTRANCE SHALL BE CHECKED REGULARLY TO ENSURE THAT MUD IS NOT TRANSPORTED ONTO THE ADJACENT ROADS. THE STONE SHALL BE REMOVED, CLEANED, OR REPLACED AS REQUIRED FOR THE CONSTRUCTION ENTRANCE TO FUNCTION PROPERLY.

STORMWATER MANAGEMENT COMPLIANCE
NO STORMWATER MANAGEMENT COMPLIANCE IS REQUIRED SINCE THE TOTAL PROJECT DISTURBANCE IS LESS THAN 1 ACRE.

CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING MINIMUM STANDARDS.

1. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of a site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year. **APPLY SEEDING MIXTURES IN ACCORDANCE WITH SPECIFICATIONS 8.19 AND 8.20 OF THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (VSECH) TO ALL AREAS THAT DO NOT HAVE A NON-ERODIBLE SURFACE AS SHOWN ON THIS PLAN.**

2. During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site. **NO ONSITE STOCKPILES ARE CURRENTLY PLANNED FOR THIS PROJECT.**

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 is uniform, mature enough to survive and will inhibit erosion. **SEE MINIMUM STANDARD 1.**

4. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed on a first site in any land-disturbing activity and shall be made functional before upslope land disturbance takes place. **INSTALL EROSION CONTROL MEASURES AS OUTLINED IN THE CONSTRUCTION SEQUENCE.**

5. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation. **INSTALL EARTHEN STRUCTURES AS SHOWN ON THIS PLAN.**

6. Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.
b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outlet system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or three conditions expected to exist while the sediment basin is utilized.
NO SEDIMENT TRAP IS NEEDED FOR THIS PLAN.

7. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected. **RESERVE ANY AREAS THAT DO NOT HAVE AN ESTABLISHMENT OF A GOOD STAND OF GRASS AFTER INITIAL APPLICATION OF PERMANENT SEEDING. ADDITIONAL SLOPE STABILIZATION MEASURES ARE TO BE CONSIDERED AS CONDITIONS DICTATE.**

8. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent flume or pipe and fill slopes unless contained within an adequate temporary or permanent flume or pipe. **CONCENTRATED RUNOFF BENEFIT SHALL BE REDUCED IF POSSIBLE TO AVOID FLOW DOWN CUT OR FILL SLOPES. INSTALL DIVERSIONS AS SHOWN ON THIS PLAN.**

9. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided. **THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY UPON THE DISCOVERY OF ANY WATER SEEPS.**

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. **INLET PROTECTION WILL NOT BE REQUIRED AS NO STORM SEWER INLETS EXIST WITHIN AND AROUND THIS SITE.**

11. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and needed channel. **OUTLET PROTECTION WILL NOT BE REQUIRED AS NO STORMWATER SYSTEM OUTLETS EXIST WITHIN AND AROUND THIS SITE.**

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 construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**

13. When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**

14. All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**

15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed. **NO WORK WITHIN LIVE WATERCOURSES ARE PROPOSED FOR THIS PROJECT.**

16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
a. No more than 500 linear feet of trench may be opened at one time.
b. Excavated material shall be placed on the uphill side of trenches.
c. Efficient 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.
d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
e. Restoration shall be accomplished in accordance with these regulations.
f. Applicable safety regulations shall be complied with.
INSTALL UNDERGROUND UTILITY LINES PER THE ABOVE REQUIREMENTS.

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. This provision shall apply to individual development lots as well as to larger land-disturbing activities. **ADDITIONAL MEASURES SHALL BE PROVIDED FOR THE CLEANING OF MUD AND SEDIMENT FROM CONSTRUCTION VEHICLES PRIOR TO ENTERING PUBLIC STREETS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MUD AND SEDIMENT TRANSPORTED FROM THIS SITE ONTO THE PUBLIC STREETS. CONSTRUCTION ENTRANCE SHALL BE INSTALLED FOR THIS PROJECT.**

18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation. **EROSION & SEDIMENT CONTROL MEASURES SHALL NOT BE REMOVED WITHOUT ROANOKE COUNTY PERMISSION AND SHALL BE IN ACCORDANCE WITH ABOVE REQUIREMENTS.**

MINIMUM STANDARDS CONTINUED:

19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increased velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels.

a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outlet of the pipe or pipe system shall be performed.

b. Adequacy of all channels and pipes shall be verified in the following manner:

(1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or

(2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overlap channel banks nor cause erosion of channel bed or banks;
(b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overlap its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

(c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

(1) Improve the channels to a condition where a ten-year storm will not overlap the banks and a two-year storm will not cause erosion to channel bed or banks; or

(2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;

(3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff enters a natural channel or pipe, or cause the pre-development peak runoff rate from a ten-year storm to increase when runoff enters into a man-made channel; or

(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.

d. The applicant shall provide evidence of permission to make the improvements.

e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development of the subject project.

f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipater shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

h. All on-site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

j. In applying these stormwater runoff criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.

l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural and man-made channels if the practices are designed to:

(i) detain the water quality volumes and release it over 48 hours;

(ii) detain and release over 24-hour period the expected rainfall resulting from the one year, 24-hour storm and;

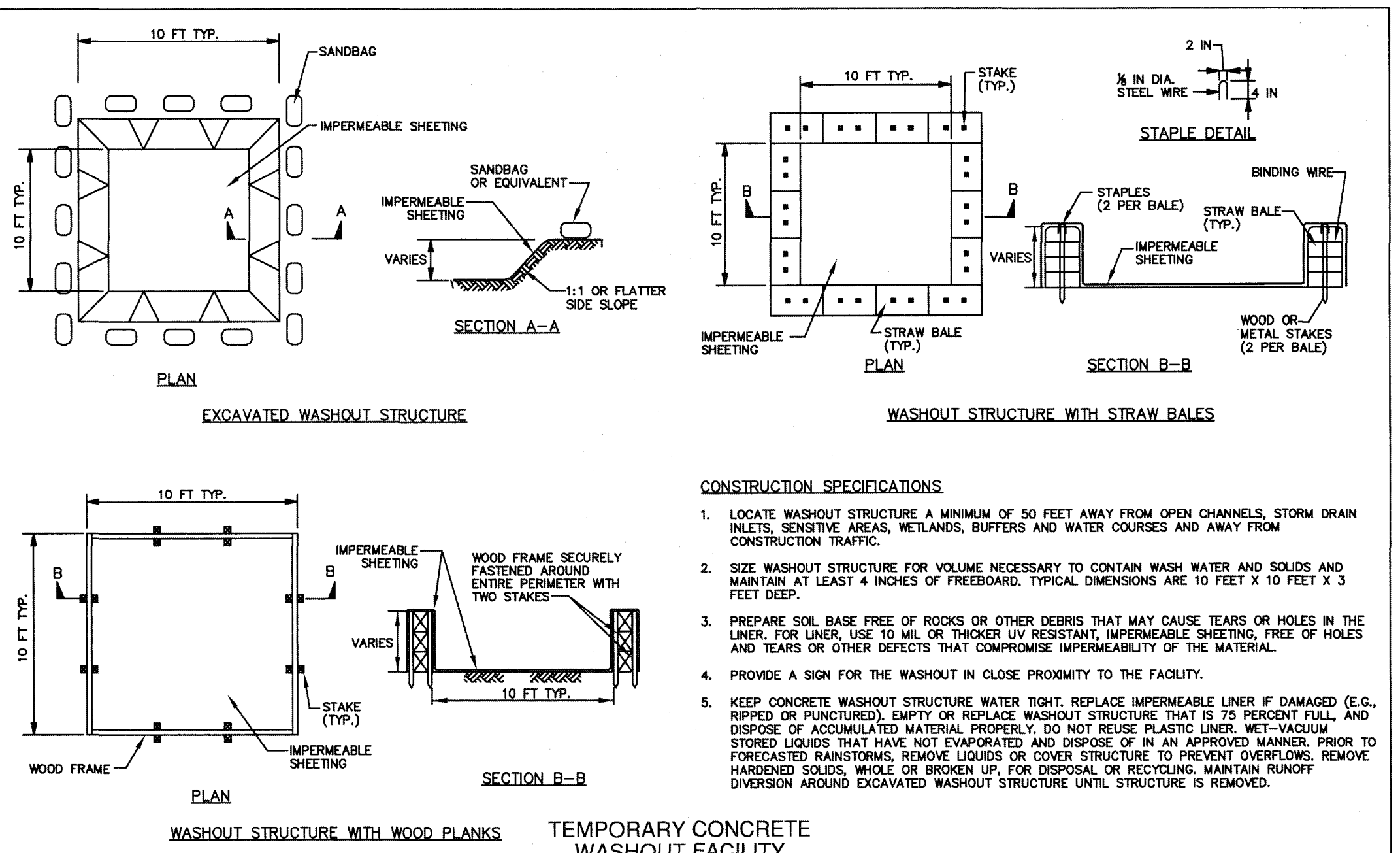
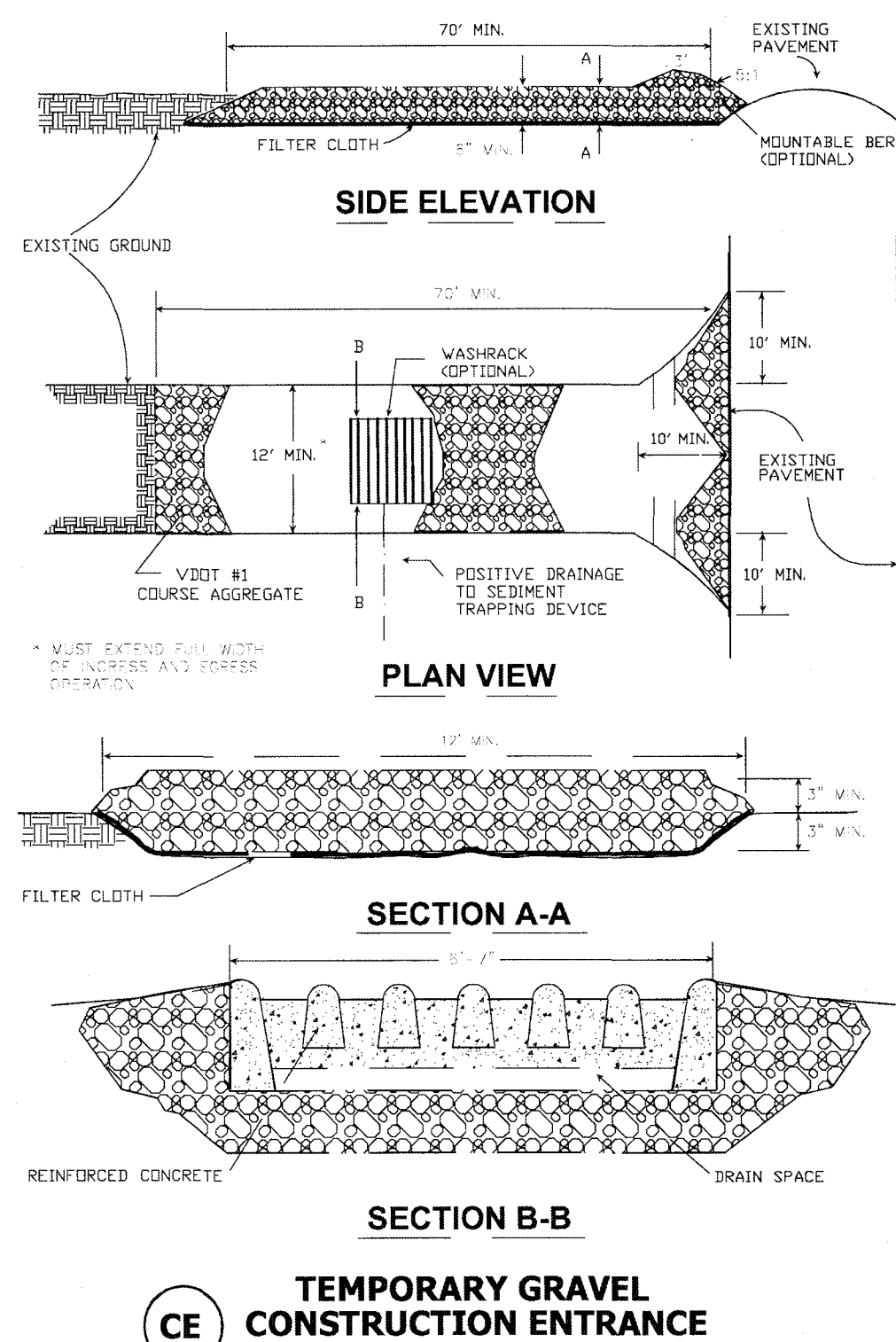
(iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to 62.1-44.15:54 or 62.1-44.15:65 of the Act.

For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of 62.1-44.15:52 of the Act and this subsection shall be satisfied by compliance with water quality requirements in the Stormwater Management Act (62.1-44.15:24 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 9VAC25-870-48 of the Virginia Stormwater Management Program (VSM) Permit Regulations.

n. Compliance with the water quality minimum standards set out in 9VAC25-870-48 of the Virginia Stormwater Management Program (VSM) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 18.

THE DRAINAGE IMPROVEMENTS SHOWN WITH THESE PLANS ARE DESIGNED TO RETURN THE PROPERTY TO ITS ORIGINAL HYDROLOGIC STATE. THEREFORE, THE PROPOSED IMPROVEMENTS OF THIS SITE DO NOT ALTER EXISTING DRAINAGE PATTERNS AND DOES NOT INCREASE THE RUNOFF VOLUME, VELOCITY, OR PEAK FLOW RATES.

COMPLIANCE WITH MS-19 IS BY SUBSECTION 4(3) OF THE ABOVE REQUIREMENTS. THE DRAINAGE IMPROVEMENTS PROPOSED WITH THIS PROJECT DO NOT PRODUCE ANY INCREASE IN PEAK RUNOFF RATE OR INCREASE IN DRAINAGE FOR DOWNSTREAM NATURAL WATERCOURSES WILL NOT SEE AN INCREASE IN POST-DEVELOPMENT FLOW FOR THE 2-YEAR STORM EVENT.



CONSTRUCTION SPECIFICATIONS

- LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
- SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
- PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
- PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
- KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WHEN DISPOSED, STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSED IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

EROSION & SEDIMENT CONTROL COST ESTIMATE				
ALL COSTS GIVEN ARE COMPLETE IN PLACE				
DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EACH	1	\$1,200.00	\$1,200.00
SILT FENCE	L.F.	320	\$4.00	\$1,280.00
DIVERSION DIKE OR FILL DIVERSION	L.F.	180	\$5.00	\$900.00
TEMPORARY SEEDING	S.F.	24,000	\$0.04	\$960.00
PERMANENT SEEDING AND MULCHING	S.F.	24,000	\$0.05	\$1,200.00
SUB-TOTAL				\$5,540.00
10% CONTINGENCY				\$554.00
TOTAL PROJECT COST				\$6,094.00

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-82-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE ONSITE PRECONSTRUCTION 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 AND NARRATIVE, AS WELL AS A COPY OF THE LAND DISTURBING PERMIT, SHALL BE MAINTAINED ON THE SITE AT ALL TIMES. THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR WILL DELIVER THESE MATERIALS AT THE PRECONSTRUCTION CONFERENCE.

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 AND SEDIMENT 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 THE LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8. DURING DRAINAGE OPERATION, 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. AN INSPECTION REPORT MUST BE COMPLETED ONCE EVERY FIVE WORKING DAYS BEGINNING WITH COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, WITHIN 48 HOURS OF ANY RUNOFF-PRODUCING RAINFALL EVENT. REPORTS MUST BE FILED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), WHICH MUST BE KEPT ONSITE. FAILURE TO COMPLETE A REPORT WILL BE GROUNDS FOR IMMEDIATE REVOCATION OF THE LAND DISTURBING PERMIT. A STANDARD INSPECTION REPORT FORM WILL BE SUPPLIED. THIS PROVISION IN NO WAY WAIVES THE RIGHT OF ROANOKE COUNTY PERSONNEL TO CONDUCT SITE INSPECTIONS, NOR DOES IT DENY THE RIGHT OF THE PERMITTEE (S) TO ACCOMPANY THE INSPECTOR (S).

TEMPORARY STABILIZATION

TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

TEMPORARY SEEDING MIXTURE

PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPT. 1 - FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50 - 100
FEB. 16 - APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60 - 100
MAY. 1 - AUG. 31	GERMAN MILLET (SETARIA ITALICA)	50
LIME	90 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE	
FERTILIZER	10-10-10 @ 10 LB / 1000 SF	

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH PERMANENT SEEDING WITHIN 7 DAYS OF IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING WILL BE DONE ACCORDING TO STANDARD AND SPECIFICATION 3.32 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. PERMANENTLY SEEDING AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH STRAW MULCH.

PERMANENT SEEDING MIXTURE

SEEDING AREA:	SEEDING RATE:
GENERAL TURF	K-31 FESCUE 200 lbs/ac (Optional) PERENNIAL RYEGRASS 20 lbs/ac
GENERAL SLOPE (3:1 or less)	K-31 FESCUE 128 lbs/ac RED TOP GRASS 2 lbs/ac SEASONAL NURSE CROP 20 lbs/ac
STEEP SLOPE (Greater than 3:1)	K-31 FESCUE 108 lbs/ac RED TOP GRASS 2 lbs/ac SEASONAL NURSE CROP 20 lbs/ac CROWNVEICH 20 lbs/ac
SEASONAL NURSE CROP SCHEDULE:	ANNUAL RYE March, April - May 15th May 16th - August 15th August 16th - September, October November - February
LIME	90 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE
FERTILIZER	10-20-10 @ 12 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 CONDITIONS: 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.

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

Lumsden Associates, P.C.
ENGINEERS | SURVEYORS | PLANNERS



COMMONWEALTH OF VIRGINIA
ANDREW P. LUMSDEN
Lic. No. 052216
PROFESSIONAL ENGINEER

EROSION & SEDIMENT CONTROL PLAN
NOTES & DETAILS

DEVELOPMENT PLAN FOR
CLEARVIEW HEIGHTS DEVELOPMENT
PREPARED FOR
MAVEAN, LLC
WINDSOR HILLS MAGISTERIAL DISTRICT
ROANOKE COUNTY, VIRGINIA

REVISIONS	DESCRIPTION	DATE	NO.
1			
2			
3			
4			
5			

DATE: December 5, 2018
SCALE: NONE
COMMISSION NO: 18-171
SHEET 6 OF 8

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