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CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE FOLLOWING MINIMUM STANDARDS:

- Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the 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. **ONCE GRADING IS COMPLETED, APPLY PERMANENT SEEDING TO AREAS NOT REQUIRING STRUCTURES, PAVEMENT, HARDSCAPE OR OTHER LANDSCAPING MATERIALS.**
- 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. **ON-SITE SOIL STOCKPILES SHALL HAVE SILT FENCE ALONG THE DOWNWIND PERIMETER. A TEMPORARY SLOPE DRAIN OR SLOPE DRAIN WITH A SEDIMENT TRAP SHALL BE INSTALLED ALONG THE DOWNWIND PERIMETER IF THEY ARE TO REMAIN AS-IS FOR LONGER THAN 14 DAYS.**
- 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.**
- 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 topsoil land disturbance takes place. **VERIFY INTEGRITY OF EXISTING SEDIMENT BASINS AND TRAPS. IF NECESSARY, REPAIR OR IMPROVE THEM. INSTALL SEDIMENT TRAPS, SILT FENCE AND DIVERSION DIKES AS SHOWN ON THIS PLAN.**
- Stabilization measures shall be applied to erosion structures such as dams, dikes and diversions immediately after installation. **APPLY TEMPORARY SEEDING TO TEMPORARY DIVERSION DIKE AND ANY OTHER EARTHEN STRUCTURES IMMEDIATELY FOLLOWING CONSTRUCTION.**
- Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
  - 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.
  - 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 those conditions expected to exist while the sediment basin is utilized.**VERIFY INTEGRITY OF EXISTING SEDIMENT BASIN AND CONSTRUCT SEDIMENT TRAPS WHERE SHOWN, AND TO THE DIMENSIONS LISTED, ON THIS PLAN. VERIFY SEDIMENT TRAPS MUST BE INSTALLED TO ACCOMMODATE GRADING OPERATIONS. CONTRACTOR SHALL VERIFY THAT DESIGN VOLUMES AND ELEVATIONS ARE MAINTAINED.**
- 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. **AREAS TO RECEIVE PERMANENT SEEDING ARE TO BE INSPECTED PERIODICALLY. RESEED ANY AREAS THAT DO NOT HAVE A GOOD STAND OF GRASS AFTER INITIAL APPLICATION OF PERMANENT SEEDING. APPLY SLOPE STABILIZATION MATTING WHERE INDICATED ON PLANS. ADDITIONAL SLOPE STABILIZATION MEASURES ARE TO BE CONSIDERED AS CONDITIONS DICTATE.**
- Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure. **THE PLAN MINIMIZES THE POTENTIAL FOR CONCENTRATED RUNOFF TO FLOW DOWN CONSTRUCTED SLOPES. SLOPED CONCENTRATED FLOW CHANNELS SHALL BE REPAIRED OR IMPROVED TO IMPROVE THE GRADE TO DISBURSE FLOW ACROSS A BROAD AREA, OR PROVIDE AN APPROPRIATE TEMPORARY SLOPE DRAINAGE STRUCTURE.**
- Where water seeps from a slope face, adequate drainage or other protection shall be provided. **NOT APPLICABLE. SEWERAGE THROUGH SLOPES IS NOT ANTICIPATED TO BE ENCOUNTERED ON THIS PROJECT. SHOULD SEWERAGE OCCUR, ADEQUATE DRAINAGE SHALL BE ESTABLISHED TO CONVEY WATER TO A CONTROLLED POINT OF DISCHARGE AND TO PROTECT THE SLOPE.**
- 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. **PLACE INLET PROTECTION ON ALL NEWLY INSTALLED INLETS, AND TO EXISTING INLETS WHERE SHOWN ON PLAN.**
- 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 receiving channel. **VERIFY EXISTING OUTLET PROTECTION IS IN PLACE AND TO THE ORIGINAL DESIGN DIMENSIONS.**
- 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 cofferdams and cofferdams. Earthen fill may be used for these structures if covered by nonerodible cover materials. **NOT APPLICABLE. NO LIVE WATERCOURSE IS ADJACENT TO THIS PROJECT AND NO WORK IS ANTICIPATED IN ANY LIVE WATERCOURSE RELATED TO THIS PROJECT.**
- 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. **NOT APPLICABLE. NO LIVE WATERCOURSE IS ADJACENT TO THIS PROJECT AND NO WORK IS ANTICIPATED IN ANY LIVE WATERCOURSE RELATED TO THIS PROJECT.**
- All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall be met. **NOT APPLICABLE. NO LIVE WATERCOURSE IS ADJACENT TO THIS PROJECT AND NO WORK IS ANTICIPATED IN ANY LIVE WATERCOURSE RELATED TO THIS PROJECT.**
- The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed. **NOT APPLICABLE. NO LIVE WATERCOURSE IS ADJACENT TO THIS PROJECT AND NO WORK IS ANTICIPATED IN ANY LIVE WATERCOURSE RELATED TO THIS PROJECT.**
- Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
  - No more than 500 linear feet of trench may be opened at one time.
  - Excavated material shall be placed on the uphill side of trenches.
  - 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.
  - Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
  - Restabilization shall be accomplished in accordance with this chapter.
  - Applicable safety chapters shall be complied with.**INSTALL UNDERGROUND UTILITIES IN ACCORDANCE WITH THESE REQUIREMENTS, AS SHOWN ON THIS PLAN AND IN COORDINATION WITH THE UTILITY SERVICE PROVIDERS.**
- 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 sweeping 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. **FOLLOW ABOVE REQUIREMENTS FOR ACCESS TO THE SITE. THE CONSTRUCTION ENTRANCES SHOWN ON THIS PLAN ARE FOR INITIAL GRADING OPERATIONS AND MAY BE ADJUSTED AS CONSTRUCTION PROGRESSES. RELOCATION OF CONSTRUCTION ENTRANCES SHALL BE COORDINATED WITH THE ROANOKE COUNTY INSPECTOR.**
- 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 VESCP authority. Trapped sediment and the disturbed soil area resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation. **READY TEMPORARY MEASURES IN ACCORDANCE WITH ABOVE REQUIREMENTS, AND WITH THE PRIOR APPROVAL OF ROANOKE COUNTY.**
- 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 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.
  - 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 stabilization shall be provided at the outlet of the pipe or pipe system shall be performed.
  - Adequacy of all channels and pipes shall be verified in the following manner:
    - 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
    - (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks; and
    - (b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop 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.
  - If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:
    - Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to the channel bed or banks; or
    - Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances; or
    - Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outlets into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outlets into a man-made channel; or
    - Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.
  - The applicant shall provide evidence of permission to make the improvements.
  - All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development of the subject project.
  - 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.
  - Detention from a detention facility shall be discharged to a receiving channel, and energy dissipaters shall be placed at the outlet of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.
  - All on-site channels must be verified to be adequate.
  - 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.
  - 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.
  - 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.**THE DEVELOPMENT OF THIS SITE DOES NOT ALTER EXISTING DRAINAGE PATTERNS, AND DOES NOT INCREASE THE EXISTING IMPERVIOUS LAND COVER. PREVIOUS DEVELOPMENT ON THE SITE RESULTED IN IMPERVIOUS AREA LESS THAN THE AVERAGE LAND COVER CONDITION (10%) WITH NO WATER QUALITY TREATMENT REQUIRED, AND NO NEW TREATMENT IS REQUIRED OR PROPOSED WITH THIS PROJECT. THE CURRENT PROJECT WILL BE MANAGED FOR STORMWATER QUANTITY BY USE OF THE EXISTING DETENTION POND. REFER TO "PROJECT CALCULATIONS" WORKBOOK FOR STORMWATER MANAGEMENT DESCRIPTION AND CALCULATIONS.**

EROSION CONTROL NARRATIVE

**PROJECT DESCRIPTION**  
THE PROJECT AREA IS LOCATED ADJACENT TO THE LARGER SOUTH PEAK DEVELOPMENT AT ROUTES 220 AND 419 IN ROANOKE COUNTY AND CONSISTS OF SITE GRADING, STORM DRAIN AND RETAINING WALL CONSTRUCTION AND UTILITY RELOCATION IN ANTICIPATION OF FUTURE DEVELOPMENT. TOTAL DISTURBED AREA IS APPROXIMATELY 5.8 ACRES.

**EXISTING SITE CONDITIONS**  
THE SITE IS CURRENTLY PARTIALLY DEVELOPED PARCEL WITH A CONDOMINIUM STRUCTURE, ACCESS DRIVE AND PARKING CONSTRUCTED PREVIOUSLY. THE REMAINING PROJECT AREA IS PRIMARILY WOODED WITH GRASSED AREAS.

**ADJACENT AREAS**  
THE PROJECT AREA IS SURROUNDED BY MULTI-FAMILY RESIDENTIAL APARTMENTS AND UNDEVELOPED AREAS TO THE WEST, THE SOUTH PEAK DEVELOPMENT AREAS UNDER CONSTRUCTION TO THE NORTH AND EAST, AND THE ESTATES AT SOUTH PEAK RESIDENTIAL DEVELOPMENT UNDER CONSTRUCTION TO THE SOUTH.

**ON-SITE AREAS**  
NO OFF-SITE 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.

**SOILS**  
SOILS INFORMATION IS BASED ON AN INSPECTION OF THE USDA WEB SOIL SURVEY AND HAS NOT BEEN FIELD VERIFIED. NOTE THAT PREVIOUS CONSTRUCTION HAS ALTERED THE SOIL STRATA OVER PORTIONS OF THE SITE. THE ON-SITE SOILS ARE INDICATED TO BE CHISWELL-LITZ COMPLEX (MAP UNITS SC AND SE), 7 TO 15% AND 25 TO 50% SLOPES, AND URBAN LAND (MAP UNIT S3).

THE CHISWELL SOIL, HYDROLOGIC SOIL GROUP D, POSSESSES THE FOLLOWING CHARACTERISTICS AND PROPERTIES:  
DEPTH OF THE RESTRICTIVE FEATURE: 10 TO 20 INCHES TO BEDROCK DEPTH TO WATER TABLE: MORE THAN 80 INCHES  
DRAINAGE CLASS: WELL DRAINED AVAILABLE WATER CAPACITY: VERY LOW  
PERMEABILITY: MODERATELY LOW TO MODERATELY HIGH

TYPICAL PROFILE: 0 TO 2 INCHES - CHANNERY SILT LOAM; 2 TO 12 INCHES - VERY CHANNERY SILT LOAM; 12 TO 22 INCHES - BEDROCK

THE LITZ SOIL, HYDROLOGIC SOIL GROUP C, POSSESSES THE FOLLOWING CHARACTERISTICS AND PROPERTIES:  
DEPTH OF THE RESTRICTIVE FEATURE: 20 TO 40 INCHES TO BEDROCK DEPTH TO WATER TABLE: MORE THAN 80 INCHES  
DRAINAGE CLASS: WELL DRAINED AVAILABLE WATER CAPACITY: LOW  
PERMEABILITY: MODERATELY LOW TO MODERATELY HIGH

TYPICAL PROFILE: 0 TO 5 INCHES - CHANNERY SILT LOAM; 5 TO 24 INCHES - VERY CHANNERY SILT LOAM; 24 TO 34 INCHES - BEDROCK

**CRITICAL AREAS**  
THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MINIMIZE THE POTENTIAL FOR ANY SEDIMENT LEAVING THE SITE ONTO ADJACENT PROPERTY AND THAT THE INTEGRITY OF SEDIMENT TRAPPING MEASURES AND DIVERSIONS ARE ROUTINELY VERIFIED TO PREVENT FAILURE AND RISK TO PROPERTIES BELOW THE PROJECT. THE EXISTING SEDIMENT BASIN AND OUTFALL SHALL BE REGULARLY INSPECTED ANY DOWNSTREAM PROBLEMS RESULTING FROM THIS PROJECT SHALL BE CORRECTED IMMEDIATELY.

MINIMUM STANDARDS

REFER TO DEQ MINIMUM STANDARDS.

EROSION AND SEDIMENT CONTROL MEASURES

**CONSTRUCTION ENTRANCE (3.02)** - A STONE CONSTRUCTION ENTRANCE WILL BE INSTALLED TO MINIMIZE THE AMOUNT OF MUD TRANSPORTED INTO EXISTING ROADS.

**SILT FENCE (3.05)** - SILT FENCE WILL BE INSTALLED AT THE LOWER ENDS OF THE PROJECT SITE TO INTERCEPT SEDIMENT LADEN RUN-OFF PRIOR TO EXITING THE SITE.

**INLET PROTECTION (3.07)** - INLET PROTECTION WILL BE INSTALLED AT EACH STORM DRAIN INLET TO MINIMIZE THE AMOUNT OF SEDIMENT LADEN RUNOFF FROM ENTERING THE STORM DRAIN SYSTEM.

**TEMPORARY DIVERSION DIKE (3.09)** - 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 RIGHT-OF-WAY DIVERSION (3.11)** - A TEMPORARY RIDGE OF COMPACTED GRAVEL 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 SEDIMENT TRAP (3.13)** - TO DETAIN SEDIMENT-LADEN RUNOFF FROM DISTURBED AREAS OF LESS THAN 3 ACRES, LONG ENOUGH TO ALLOW THE MAJORITY OF THE SEDIMENT TO SETTLE OUT, TEMPORARY PONDING AREAS, OR SEDIMENT TRAPS, WILL BE CREATED BY CONSTRUCTING AN EARTHEN EMBANKMENT WITH A STONE OUTLET.

**TEMPORARY SEDIMENT BASIN (3.14)** - TO DETAIN SEDIMENT-LADEN RUNOFF FROM DISTURBED AREAS OF 3 ACRES OR MORE LONG ENOUGH TO ALLOW THE MAJORITY OF THE SEDIMENT TO SETTLE OUT, TEMPORARY PONDING AREAS WILL BE CREATED BY CONSTRUCTING AN EARTHEN EMBANKMENT WITH AN OUTLET STRUCTURE.

**TEMPORARY SLOPE DRAIN (3.15)** - TO CONVEY CONCENTRATED RUNOFF DOWN A SLOPE WITHIN A PIPE TO PREVENT EROSION OF THE SLOPE.

**OUTLET PROTECTION (3.18)** - TO PREVENT SCOUR AT STORMWATER OUTLETS, TO PROTECT THE OUTLET STRUCTURE, AND TO MINIMIZE THE POTENTIAL FOR DOWNSTREAM EROSION BY REDUCING THE VELOCITY AND ENERGY OF CONCENTRATED FLOWS.

**TEMPORARY SEEDING (3.31)** - 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 (3.32)** - PERMANENT SEEDING SHALL BE INSTALLED ON ALL DISTURBED AREAS OF THE SITE NOT OTHERWISE STABILIZED.

**MULCHING (3.33)** - 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.

**SOIL STABILIZATION & MATTING (3.36)** - SLOPES GREATER THAN 3:1 SHALL HAVE A PROTECTIVE COVERING OR MAT INSTALLED TO MINIMIZE EROSION AND AID IN ESTABLISHMENT OF PERMANENT VEGETATIVE STABILIZATION.

**PERMANENT STABILIZATION**  
AREAS NOT COVERED BY DRIVEWAYS, WALKS 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.

SEDIMENT BASIN AND TRAPS SHALL BE INSPECTED REGULARLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN DESIGN VOLUMES.

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

ALL SEEDED 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 CONSIDERATION:**  
THE EXISTING DETENTION BASIN, CONSTRUCTED WITH PREVIOUS DEVELOPMENT, WILL SERVE THIS PROJECT. REFER TO STORMWATER MANAGEMENT CALCULATIONS FOUND IN THE "PROJECT CALCULATIONS" WORKBOOK ASSOCIATED WITH THIS PROJECT.

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THE EXISTING DETENTION BASIN, CONSTRUCTED WITH PREVIOUS DEVELOPMENT, WILL SERVE THIS PROJECT. REFER TO STORMWATER MANAGEMENT CALCULATIONS FOUND IN THE "PROJECT CALCULATIONS" WORKBOOK ASSOCIATED WITH THIS PROJECT.

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.

SEDIMENT BASIN AND TRAPS SHALL BE INSPECTED REGULARLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN DESIGN VOLUMES.

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

ALL SEEDED 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.

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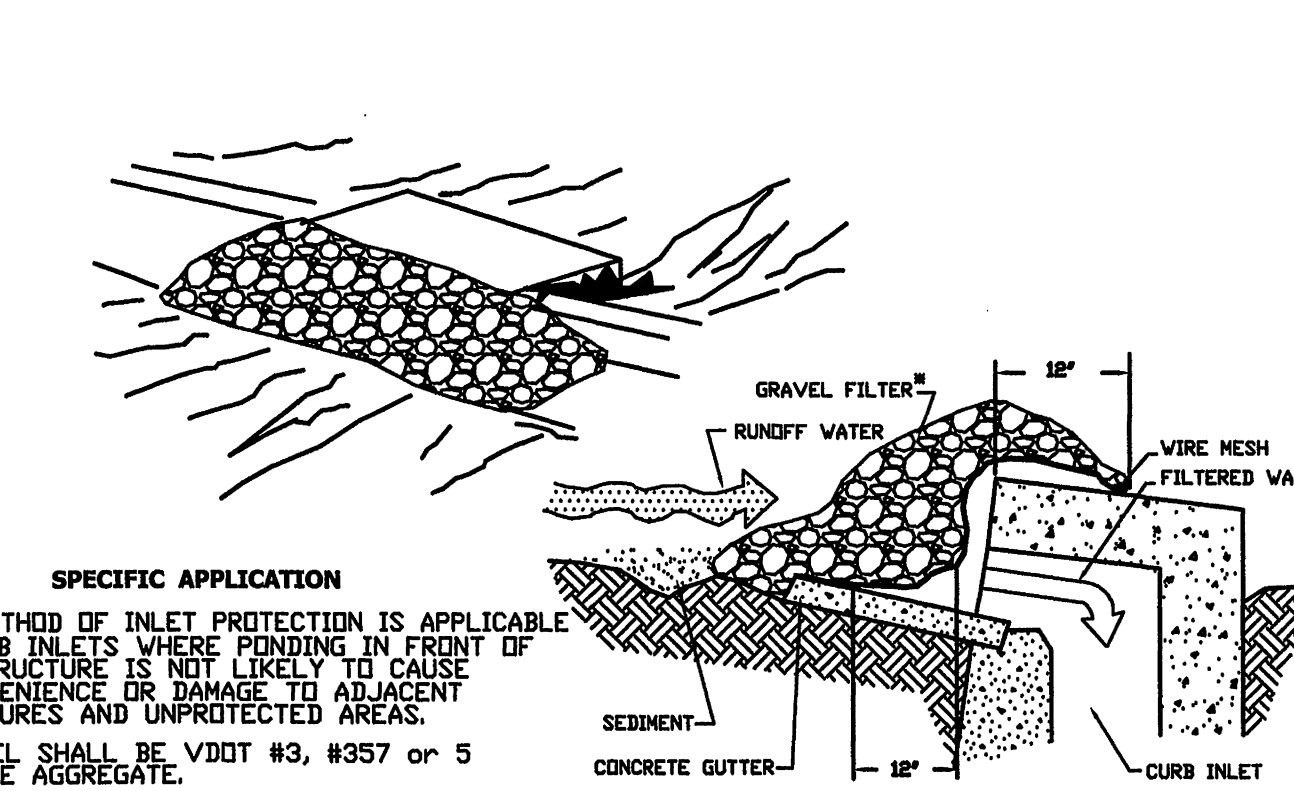
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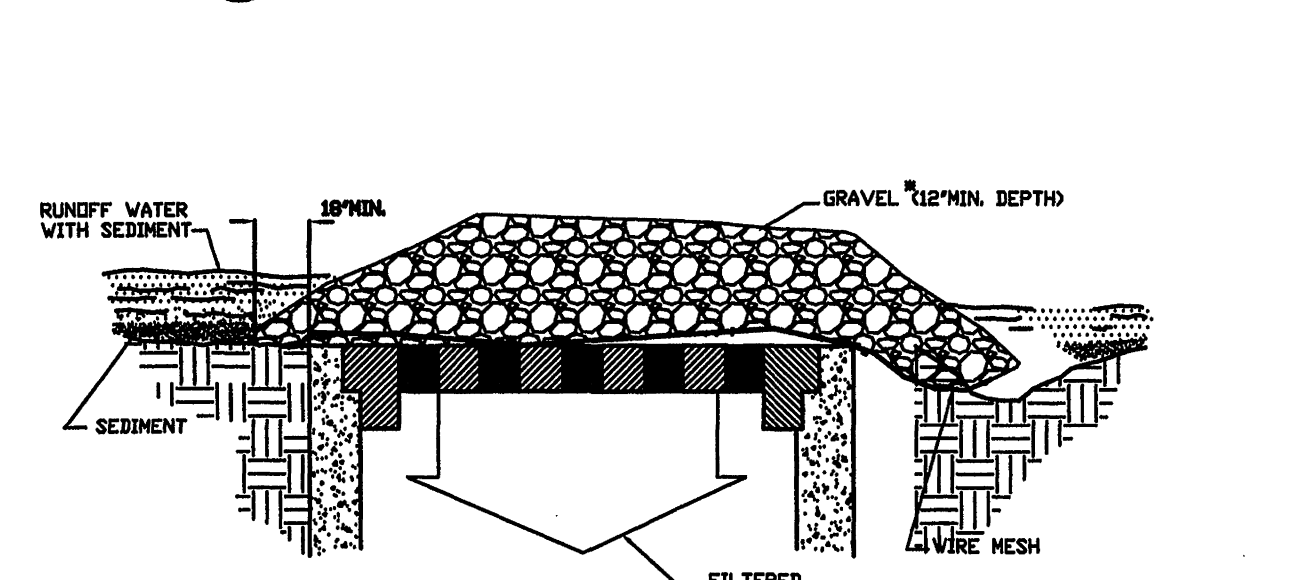
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EROSION & SEDIMENT CONTROL COST ESTIMATE				
ALL COSTS GIVEN ARE COMPLETE IN PLACE				
DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EACH	2	\$1,500.00	\$3,000.00
SILT FENCE	L.F.	1,185	\$4.00	\$4,740.00
SUPER SILT FENCE	L.F.	304	\$6.00	\$1,824.00
INLET PROTECTION	EACH	8	\$250.00	\$2,000.00
CULVERT INLET PROTECTION	EACH	0	\$300.00	\$0.00
TEMPORARY DIVERSION DIKE	L.F.	1,594	\$2.00	\$3,188.00
SEDIMENT TRAP	EACH	4	\$1,500.00	\$6,000.00
SLOPE MATTING	S.Y.	4,435	\$6.00	\$26,610.00
TEMPORARY & PERMANENT SEEDING, MULCHING, ETC.	ACRE	5.8	\$2,000.00	\$11,600.00
SEDIMENT BASIN	EACH	1	\$5,000.00	\$5,000.00
TEMPORARY SLOPE DRAIN	L.F.	185	\$10.00	\$1,850.00
ROW DIVERSION	L.F.	48	\$3.00	\$144.00
SUB-TOTAL				\$65,956.00
10% CONTINGENCY				\$6,595.60
TOTAL PROJECT COST				\$72,551.60



IP GRAVEL CURB INLET SEDIMENT FILTER



IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

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

IP GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

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