

1. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLANS AND AS NEEEDED TO PREVENT EROSION AND SEDIMENTATION IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) 1992 EDITION.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
3. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES UNTIL PERMANENT STABILIZATION IS ACHIEVED.
4. ROADSIDE DITCH STABILIZATION SHALL BE PROVIDED AS NECESSARY TO PROVIDE PERMANENT GRASS ESTABLISHMENT.
5. 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. IN ADDITION, THE JOB SUPERINTENDENT SHALL KEEP RECORDS OF ALL INSPECTIONS OF, AND MAINTENANCE MEASURES TO, EROSION CONTROL ITEMS. THESE RECORDS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
6. CONTRACTOR SHALL INSTALL ADEQUATE EROSION CONTROL MEASURES DURING CONSTRUCTION TO PREVENT SILT-LADEN RUNOFF FROM LEAVING THE SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES. ALL STREETS SHALL BE KEPT FREE FROM SILT, SEDIMENT, AND DEBRIS DURING CONSTRUCTION.
7. VESCH STD. & SPEC. 3.05 SILT FENCE. SILT FENCE SHALL BE USED ALONG THE RIGHT-OF-WAY OR EASEMENT WHERE WATER MAIN AND/OR SEWER FORCEMAIN INSTALLATION OCCURS IN THE SHOULDER OF THE ROAD. SILT FENCE SHALL ALSO BE USED AS NEEEDED IN THE DITCH LINE WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN ONE ACRE.
8. VESCH STD. & SPEC. 3.08 CULVERT INLET PROTECTION. CULVERT INLET PROTECTION SHALL BE USED ON EXIST. DRIVEWAY AND ROADWAY CULVERTS TO PREVENT SEDIMENT FROM ENTERING CULVERTS AND FILLING CULVERTS OR BEING TRANSPORTED TO DOWNSTREAM AND OFF SITE AREAS.
9. VESCH STD. & SPEC. 3.30 TOPSOILING. TOPSOILING SHALL BE USED TO PROVIDE A SUITABLE GROWTH MEDIUM FOR FINAL SITE STABILIZATION WITH VEGETATION. CONTRACTOR SHALL STRIP THE EXIST. TOPSOIL AND STOCKPILE IT IN AN APPROVED MANNER FOR PLACEMENT OF FINAL RESTORATION, OR MAY ELECT TO TOPSOIL FROM ELSEWHERE.
10. VESCH STD. & SPEC. 3.32 PERMANENT SEEDING. PERMANENT SEEDING SHALL BE USED ON GRASSSED SHOULDERS AND DITCH LINES TO PROVIDE PERMANENT STABILIZATION FOLLOWING INSTALLATION OF THE UTILITIES AND SITE GRADING. PERMANENT STABILIZATION SHALL BE APPLIED TO DENUDDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
11. VESCH. STD. & SPEC. 3.35 MULCHING. MULCHING SHALL BE USED ON DISTURBED AREAS TO BE SEEDDED FOLLOWING UTILITY AND GRADING WORK IN ORDER TO PREVENT IMPACT EROSION FROM RAINFALL.
12. NO MORE THAN 200 LINEAR FEET OF UTILITY TRENCH MAY BE OPEN AT ONE TIME FOR EACH CREW.
13. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF UTILITY TRENCH.
14. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTIES.
15. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS.
16. MAINTENANCE: PERMANENT SEEDING WHICH DOES NOT RESULT IN GOOD STANDS OF GRASS MUST BE RESEEDDED. AREAS IN WHICH EROSION OCCURS MUST BE REGRADED AND RESEEDDED AS QUICKLY AS POSSIBLE. ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED (IF NECESSARY) AFTER EACH RAINFALL.

THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL EROSION CONTROL MEASURES ON SITE. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED DAILY AND AFTER EACH RUN-OFF PRODUCING RAINFALL. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:

1. SILT FENCE, AFTER EVERY STORM EVENT TO ENSURE EFFECTIVE OPERATION AND REMOVE SEDIMENT WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
2. PROVIDE PERIODIC TOP DRESSING OF CONSTRUCTION ENTRANCES WITH ADDITIONAL STONE AND REPAIR OR CLEAN OUT ANY OF THE STRUCTURES USED TO TRAP SEDIMENT.
3. CHECK GRAVEL INLET PROTECTION FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, REMOVE AND CLEAN, OR REPLACE.
4. CHECK THE SEEDED AREAS TO ENSURE THAT A STAND OF GRASS IS MAINTAINED. FERTILIZE AND RESEED AS NEEDED.

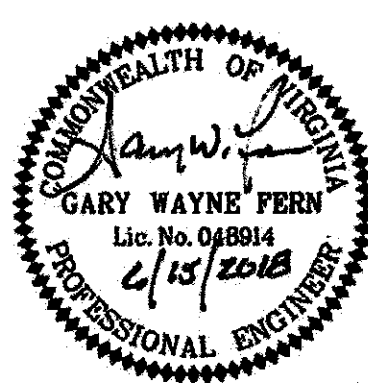
1. THE CONTRACTOR SHALL INSTALL THE PERIMETER EROSION AND SEDIMENT CONTROL MEASURES INCLUDING SILT FENCE AND CULVERT INLET PROTECTION BEFORE ANY LAND DISTURBANCE TAKES PLACE.
2. THE WESTERN VIRGINIA WATER AUTHORITY SHALL INSPECT THE WATERLINE AND SEWER LINE WORK AND HAVE JURISDICTION OVER THE EROSION AND SEDIMENT CONTROL AND STORMWATER ASSOCIATED WITH UNDER THE WESTERN VIRGINIA WATER AUTHORITY DEQ PROGRAM.

1. WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED ON THE AREA OR HAVE DIED, THESE AREAS MUST BE RESEEDING IMMEDIATELY TO PREVENT EROSION DAMAGE. HOWEVER, IT IS EXTREMELY IMPORTANT TO DETERMINE FOR WHAT REASON GERMINATION DID NOT TAKE PLACE AND MAKE ANY CORRECTIVE ACTION NECESSARY PRIOR TO RESEEDING THE AREA.
2. ALL MULCHES AND SOIL COVERINGS SHOULD BE INSPECTED PERIODICALLY (PARTICULARLY AFTER RAINSTORMS) TO CHECK FOR EROSION. WHERE EROSION IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED. NETS AND MATS SHOULD BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE-INSTALL NETTING OR MATTING AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. INSPECTIONS SHOULD TAKE PLACE UP UNTIL GRASSES ARE FIRMLY ESTABLISHED. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE; REPAIR AS NEEDED.
3. ALL SOIL STABILIZATION BLANKETS AND MATTING SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION, PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOP OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL WHICH TIME THEY BECOME PERMANENTLY STABILIZED; AT THAT TIME AN ANNUAL INSPECTION SHOULD BE ADEQUATE.

- 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.
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.
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.
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.
5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DRAINAGE DITCHES IMMEDIATELY AFTER INSTALLATION.
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 THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
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.
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.
9. EXCESSIVE WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
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.
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 RECEIVING CHANNEL.
12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PROTECTIONS SHALL BE TAKEN TO MINIMIZE EROSION. TEMPORARY 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.
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.
14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
15. THE AREA AROUND A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
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. 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 OF SITE PROPERTY.
 - d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 - e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
 - f. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.
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 BY TRIPPING AND TRANSPORTED TO SEDIMENT CONTROL DISPOSAL AREA. STREET FLOWING 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.
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 VESCP 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.
19. PROPERTIES ADJACENT TO WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND EROSION 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 STANDARDS AND CRITERIA LISTED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, CHAPTER 8 PAGES 20-24.

(CE)	STD. & SPEC. 3.02 CONSTRUCTION ENTRANCE
(CRS)	STD. & SPEC. 3.03 CONSTRUCTION ROAD STABILIZATION
(SF) — SF —	STD. & SPEC. 3.05 SILT FENCE
(CIF)	STD. & SPEC. 3.08 CULVERT INLET PROTECTION
(OP)	STD. & SPEC. 3.18 OUTLET PROTECTION
(TO)	STD. & SPEC. 3.30 TOPSOILING
(TS)	STD. & SPEC. 3.31 TEMPORARY SEEDING
(PS)	STD. & SPEC. 3.32 PERMANENT SEEDING
(MU)	STD. & SPEC. 3.35 MULCHING
(B/M)	STD. & SPEC. 3.36 SOIL STABILIZATION BLANKET

1. CONTRACTOR SHALL NOT DISTURB MORE THAN ONE (1) ACRE OF LAND ON A DAILY BASIS.
2. CONTRACTOR SHALL ADEQUATELY STABILIZE THE WORK ON A DAILY BASIS.
3. CONTRACTOR SHALL PROTECT THE WORK AND DOWNSTREAM AREAS FROM EROSION AND SEDIMENTATION DAMAGE.
4. CONTRACTOR SHALL MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS.
5. CONTRACTOR SHALL MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS PRESENT ON-SITE TO PRECIPITATION AND TO STORMWATER.
6. CONTRACTOR SHALL MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES.
7. THE DISCHARGE OF WASTEWATER FROM THE WASHOUT OF CONCRETE IS PROHIBITED.
8. THE DISCHARGE OF WASTEWATER FROM THE WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS IS PROHIBITED.
9. THE DISCHARGE OF FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE IS PROHIBITED.



WESTERN VIRGINIA WATER AUTHORITY
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DES: KN	SCALE: N/A
DRAWN: JES	HORIZ: N/A
CHECK: GWF	VERT: N/A
DATE: 06/15/18	

SUMMIT VIEW BUSINESS PARK UTILITY IMPROVEMENTS
PHASE 2

**EROSION & SEDIMENT CONTROL
& STORMWATER NOTES**

DRAWING

C1.02

SHEET

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