

ID - P:\2021\21442 - Orchard\Drawing Civil\Sheets\21442 - ESC Notes.dwg - Fri, 1 Apr 2022 - 14:38

EROSION AND SEDIMENT CONTROL GENERAL NOTES

ES-1) UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-840 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2) THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3) A LAND DISTURBANCE PERMIT IS REQUIRED PRIOR TO INITIATING ANY SITE WORK.

ES-4) A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5) 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-6) 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 LOCAL PLAN APPROVING AUTHORITY.

ES-7) EROSION AND SEDIMENT CONTROLS SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY. EARTHEN STRUCTURES SHALL BE SEEDED IMMEDIATELY UPON INSTALLATION.

ES-8) PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS IMMEDIATELY AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED IMMEDIATELY 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 6 MONTHS.

ES-9) ALL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES, INCLUDING SILT FENCE AROUND THE LOW SIDE OF STOCKPILE AND TEMPORARY/PERMANENT SEEDING WITH MULCHING. IF A STOCKPILE IS NOT SHOWN ON THE PLANS AND DEEMED TO BE NEEDED, CONTACT THE ENGINEER & LOCAL AUTHORITY PRIOR TO STARTING SAID STOCKPILE. A PLAN ADDENDUM MAY BE REQUIRED.

ES-10) 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.

ES-11) THE ROADWAY SHALL BE STABILIZED BY THE APPLICATION OF STONE BASE UPON REACHING FINAL GRADE. CHECK DAMS SHALL BE INSTALLED IN ALL DITCHES IMMEDIATELY UPON THE GRADING IN OF SAME.

ES-12) 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.

ES-13) CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.

ES-14) ALL STORM INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT LADEN WATER CANNOT ENTER THE STORM WATER CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

ES-15) WHEN INSTALLING UTILITY LINES, NO MORE THAN 500 FEET OF TRENCH MAY BE OPEN AT ONE TIME, AND EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

ES-16) ALL RIP-RAP SHALL BE INSTALLED OVER FILTER FABRIC.

ES-17) DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-18) 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-19) SILT FENCE, SILT TRAP AND CHECK DAMS SHALL BE CLEANED OUT WHEN SEDIMENT REACHES ONE HALF THE HEIGHT OF THE BARRIER AND WHENEVER DIRECTED BY THE COUNTY EROSION AND SEDIMENT CONTROL OFFICIAL. SEDIMENT SHALL BE IMMEDIATELY STABILIZED UP GRADIENT OF EROSION AND SEDIMENT CONTROL MEASURES.

ES-20) ALL MEASURES SHALL BE UTILIZED AND CONTINUOUSLY MAINTAINED DURING THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AND DENUDED AREAS ARE STABILIZED. NO AREA SHALL REMAIN DENUDED FOR MORE THEN THREE CALENDAR DAYS WHEN CONSTRUCTION IS NOT IN PROGRESS.

ES-21) THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES EVERY 5 BUSINESS DAYS AND 24 HOURS AND AFTER EACH MEASURABLE STORM EVENT. A MEASURABLE STORM EVENT IS 0.25" OF RAINFALL IN 24 HOURS. ALL NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

ES-22) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION, OR AFTER THE MEASURES ARE NO LONGER NEEDED.

ES-23) THE MAXIMUM SPACING BETWEEN THE CHECK DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATIONS THE TOP OF THE DOWNSTREAM DAM. REFERENCE PLATE 3.20-2.

SEEDING

SEEDS SHALL BE SCARIFIED INTO THE TOP 2" OF THE TOP SOIL, IF APPLIED BY HAND. SEEDING BY HYDRO SEEDING SHALL BE IN ACCORDANCE WITH VDOT SPECIFICATIONS. TEMPORARY SEEDING RATES AND SPECIFICATIONS SEE VESCH STD. 3.31 PERMANENT SEEDING RATES AND SPECIFICATIONS SEE VESCH STD. 3.32 FERTILIZER TYPE AND RATES SHALL BE PER SOIL TEST. MULCH SHALL BE PER VESCH STD. 3.35

EC-2 EROSION BLANKET (VESCH TREATMENT ONE) SHALL BE PER VDOT OR VESCH STD. 3.36.

EC-3 EROSION BLANKETS (VESCH TREATMENT TWO) SHALL BE PER VDOT OR VESCH STD. 3.36.

EROSION AND SEDIMENT MINIMUM STANDARDS 9VAC25-840-40.

A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

1. 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 DIVERSIONS 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 OUTFALL 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. WHENEVER 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, 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 CORRIDORWAYS. 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 BED AND BANKS OF 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 OFF-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 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.

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 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:

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 OUTFALL 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 OVERTOP 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 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.

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 OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE 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 OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS 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 CONDITION 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 DISSIPATORS 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 MANAGEMENT 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 OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO:

(I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 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 A 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 62.1-44.15:05 OF THE ACT.

M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (S 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 (VSMP) REGULATIONS, N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-68 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.

EROSION & SEDIMENT CONTROL NARRATIVE:

PROJECT DESCRIPTION:

THIS PROJECT PROPOSES THE CONSTRUCTION OF CAR WASH, VACUUM SPACES, AND PARKING IN THE ORCHARD MARKETPLACE DEVELOPMENT IN DALEVILLE, VA LOCATED OFF ROANOKE ROAD AND MARKETPLACE DRIVE. THIS SITE IS LOCATED IN A LARGER PLAN DEVELOPMENT THAT HAD STORMWATER QUANTITY DESIGNED FOR ULTIMATE BUILDOUT. APPROXIMATELY 1.35 ACRES WILL BE DISTURBED BY CONSTRUCTION ON A 1.46-ACRE PARCEL AND 0.70 ACRES OF IMPERVIOUS AREA WILL BE ADDED. PLEASE SEE PRE-DEVELOPED AND POST-DEVELOPED LAND USE MAPS IN SECTION E.1 OF THE ENGINEERING CALCULATIONS. THIS PROJECT IS ESTIMATED TO TAKE ONE-YEAR TO COMPLETE ONCE THE OWNER OR CONTRACTOR PROPOSES A START DATE FOR CONSTRUCTION.

EXISTING CONDITIONS:

THE EXISTING SITE IS A GRADED PAD THAT DRAIN TO THE SOUTH AND WEST TO AN EXISTING STORMWATER CONVEYANCE CHANNEL THAT DISCHARGES TO A REGIONAL STORMWATER FACILITY, SWM LOT 2. SLOPES VARY ON THE SITE BUT ARE GENERALLY AROUND 5%. THERE ARE 0.02 ACRES OF IMPERVIOUS, 1.33 ACRES OF MANAGED TURF, AND 0.00 ACRES OF WOODED/OPEN SPACE. PLEASE SEE PRE-DEVELOPED LAND USE MAP IN SECTION E.1 OF THE ENGINEERING CALCULATIONS.

RECEIVING WATERS:

THIS SITE DRAINS TO HUC# 30101010401 - BUFFALO CREEK - TINKER CREEK.

POTENTIAL POLLUTION SOURCES:

THERE ARE NO SIGNIFICANT POLLUTION SOURCES. STOCKPILES OF DIRT AND MATERIALS USED IN CONSTRUCTION WILL BE USED AND REMAIN COVERED WHEN NOT IN USE. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE BY SCREENING OUTFALLS AND PICKING UP DEBRIS DAILY. EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED AS REQUIRED BY THE VIRGINIA EROSION AND SEDIMENT CONTROL LAWS AND REGULATIONS UNDER THE GUIDANCE OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY.

SEQUENCE OF MAJOR SOIL DISTURBANCE ACTIVITIES:

THE CONTRACTOR SHALL PROVIDE A SEQUENCE OF MAJOR SOIL DISTURBANCE ACTIVITIES. GENERALLY, THE SEQUENCE SHOULD FOLLOW:

- INSTALLATION OF PERIMETER CONTROLS
- SITE CLEARING (AS NEEDED)
- SITE GRADING
- BUILDING CONSTRUCTION
- INSTALLATION OF UNDERGROUND UTILITIES
- PAVING AND STABILIZATION
- REMOVAL OF TEMPORARY E&S MEASURES
- CLOSE-OUT SITE

ADJACENT PROPERTY:

THIS SITE IS BORDERED ON THE NORTH BY A PARCEL OF LAND OWNED BY NEW ORCHARD MARKETPLACE LLC (PARCEL ID 101(1776)). THE EASTERN AND SOUTHEASTERN BORDERS ARE THE RIGHT-OF-WAYS FOR MARKET CENTER WAY AND MARKET COURT. THE SOUTHERN BORDERS ARE A PARCEL OF LAND OWNED BY NEW ORCHARD MARKETPLACE LLC (PARCEL ID 101(1719W2) AND THE RIGHT-OF-WAY FOR MARKETPLACE DRIVE. THE WESTERN BORDER IS THE RIGHT-OF-WAY FOR ROANOKE ROAD.

OFF-SITE AREAS:

THE ENGINEER ESTIMATES THIS SITE WILL REQUIRE APPROXIMATELY 1250 CUBIC YARDS OF IMPORT MATERIAL. THE CONTRACTOR SHALL IDENTIFY THE SOURCE AND LOCATION OF THIS MATERIAL AT THE PRECONSTRUCTION MEETING.

SOILS:

THIS ENTIRE SITE HAS BEEN PREVIOUSLY DISTURBED BY GRADING ACTIVITIES; HOWEVER, ACCORDING TO THE NCRS WEB SOIL SURVEY, THERE IS ONE SOIL ONSITE. THIS SOIL IS GROSBEOLOE SILT LOAM, ABBREVIATED 28C, WITH 7 TO 15 PERCENT SLOPES AND BELONGING TO HYDROLOGIC SOIL GROUP C.

CRITICAL EROSION AREAS:

CRITICAL EROSION AREAS ARE ALL SLOPES STEEPER THAN 3:1. SLOPES SHALL BE SURFACE ROUGHENED AND SEEDED IMMEDIATELY AFTER THE COMPLETION OF GRADING WITH SEEDING AND MULCHING AS INDICATED ON THE PLANS. FAILURE TO STABILIZE THE SITE WILL RESULT IN BLANKET WATING BEING REQUIRED FOR ALL SLOPES STEEPER THAN 3:1.

EROSION AND SEDIMENT CONTROL MEASURES:

ALL MEASURES SHALL BE INSTALLED AND MAINTAINED PER THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. THE CONTRACTOR SHALL NAME A RESPONSIBLE LAND DISTURBER (RLD), WHO WILL BE RESPONSIBLE FOR INSTALLING EROSION AND SEDIMENT CONTROLS AS THE FIRST STEP IN CONSTRUCTION, AND THEN SHALL BE RESPONSIBLE FOR ADDITIONAL CONTROL AS NEEDED AND AS SHOWN ON THE PLAN, AS WELL AS FOR MAINTENANCE OF ALL CONTROLS THROUGH CONSTRUCTION ACTIVITIES. THE RLD SHALL INSTALL ADDITIONAL CONTROLS AS DIRECTED BY THE ENGINEER AND THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, AND AS SITE CONDITIONS WARRANT.

STRUCTURAL PRACTICES:

- CONSTRUCTION ENTRANCE (VESCH# 3.02): ONE CONSTRUCTION ENTRANCE IS PROPOSED TO PREVENT SEDIMENT FROM BEING DEPOSITED ON ANY PUBLIC ROAD BY CONSTRUCTION TRAFFIC. SHOULD THE CONSTRUCTION ENTRANCE BECOME CLOGGED WITH SEDIMENT OR ARE ANY EFFECTIVELY PREVENTING SEDIMENT DEPOSITION ON THE PUBLIC STREET, IT SHALL BE CLEANED AND REMORKED OR HAVE A NEW TOP DRESSING OF STONE APPLIED.
- CONSTRUCTION ROAD STABILIZATION (VESCH# 3.03): CONSTRUCTION ROAD STABILIZATION IS PROPOSED ON ALL PARKING AND TRAVEL WAYS ON THE SITE. THE BASE STONE SHALL SERVE AS THE CONSTRUCTION ROAD STABILIZATION. ALL BASE STONE SHALL BE VDOT 21-B SHOULD CONSTRUCTION ROAD STABILIZATION BECOME CLOGGED WITH SEDIMENT, IT SHALL HAVE A NEW TOP DRESSING OF STONE APPLIED.
- SILT FENCE (VESCH# 3.05): SILT FENCE IS PROPOSED AT THE TOE OF ALL SLOPES WHERE SHEET FLOW IS EXPECTED. SEDIMENT SHALL BE CLEANED OUT WHEN IT REACHES HALFWAY UP THE FENCE. ANY BRACHES OR UNDERCUTTING SHALL BE REPAIRED IMMEDIATELY ONCE DISCOVERED. COMPROMISED OR DETERIORATED SILT FENCE SHALL BE REPLACED.
- INLET PROTECTION (VESCH# 3.07): INLET PROTECTION IS PROPOSED AT THE EXISTING CURB INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM INLET AND PIPE. SHOULD THE INLET PROTECTION STONE BECOME CLOGGED WITH SEDIMENT, IT SHALL BE REPLACED. SEDIMENT ACCUMULATIONS SHALL BE REMOVED WHEN THEY REACH ONE QUARTER OF THE HEIGHT OF THE STONE.
- TEMPORARY DIVERSION DIKE (VESCH# 3.09): TEMPORARY DIVERSION DIKES ARE PROPOSED TO ASSIST IN DIRECTING STORMWATER TO THE PROPOSED SEDIMENT TRAP. DAMAGE FROM CONSTRUCTION TRAFFIC SHALL BE REPAIRED IMMEDIATELY AND AN 18" MINIMUM DEPTH SHALL BE MAINTAINED AT ALL TIMES.
- TEMPORARY SEDIMENT TRAP (VESCH# 3.13): A SEDIMENT TRAP IS PROPOSED IN THE SOUTHWEST CORNER OF THE SITE. DIVERSION DIKES WILL DIRECT RUNOFF TO THIS TRAP BEFORE RELEASING IT TO THE EXISTING CHANNEL. SEDIMENT SHALL BE CLEANED OUT WHEN IT REACHES 1.5 FT FROM THE BOTTOM OF THE STONE WEIR. CLOGGED STONE SHALL BE REMOVED AND CLEANED OR REPLACED.
- OUTLET PROTECTION (VESCH# 3.16): OUTLET PROTECTION IS PROPOSED AT THE OUTLET OF ALL PIPES ON THE SITE TO SLOW VELOCITIES AND PREVENT SCOUR. IF STONE BECOMES CLOGGED WITH SEDIMENT, IT SHALL BE REMOVED AND REPLACED.
- SURFACE ROUGHENING (VESCH# 3.29): SURFACE ROUGHENING IS PROPOSED ON ALL CUT AND FILL SLOPES ON SITE TO ASSIST WITH SEEDING AND SLOPE STABILIZATION.

VEGETATIVE PRACTICES:

- TOPSOILING (VESCH# 3.30) PRIOR TO PERMANENT SEEDING, 4" OF TOPSOIL SHALL BE PLACED OVER ALL DISTURBED AREAS TO BE SEEDED OR LANDSCAPED. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSED BY BLOWING OR SCARIFYING TO A DEPTH OF AT LEAST 2" TO ENSURE BONDING OF THE TOPSOIL AND SUBGRADE.
- TEMPORARY SEEDING (VESCH# 3.31): TEMPORARY SEEDING IS PROPOSED TO BE IMMEDIATELY APPLIED IN AREAS THAT ARE NOT READY FOR PERMANENT STABILIZATION BUT WILL NOT BE DISTURBED FOR A PERIOD OF 14 DAYS OR LONGER. ALL TEMPORARILY SEEDED AREAS SHALL BE INSPECTED PERIODICALLY TO ENSURE A GOOD STAND OF VEGETATION. ANY BAREEN AREAS SHALL BE RESEEDED IMMEDIATELY. WATER SEEDED AREAS AS NEEDED. THE TEMPORARY SEEDING MIX AND APPLICATION RATES ARE SHOWN ON THE PLANS. (FOR COMPLIANCE WITH PART II.B.2.C.(8) OF THE CONSTRUCTION GENERAL PERMIT)
- PERMANENT SEEDING (VESCH# 3.32): PERMANENT SEEDING IS PROPOSED TO BE IMMEDIATELY APPLIED FOR THE ENTIRE SITE ONCE FINAL GRADE IS REACHED OR FOR AREAS THAT WILL NOT BE DISTURBED FOR A PERIOD LONGER THAN 6 MONTHS. ALL PERMANENTLY SEEDED AREAS SHALL BE INSPECTED PERIODICALLY TO ENSURE A GOOD STAND OF VEGETATION. ANY BAREEN AREAS SHALL BE RESEEDED IMMEDIATELY. WATER SEEDED AREAS AS NEEDED. THE PERMANENT SEEDING MIX AND APPLICATION RATES ARE SHOWN ON THE PLANS. (FOR COMPLIANCE WITH PART II.B.2.C.(8) OF THE CONSTRUCTION GENERAL PERMIT)
- MULCHING (VESCH# 3.35) MULCHING IS TO BE PLACED OVER ALL DISTURBED AREAS THAT HAVE BEEN SEEDED (TEMPORARY OR PERMANENT) TO PROVIDE PROTECTION FOR THE SEED. STRAW MULCHING MUST BE ANCHORED. MULCHING APPLICATION RATES ARE SHOWN ON THE PLAN.

PERMANENT STABILIZATION:

ONCE THE SITE HAS BEEN BROUGHT TO FINAL GRADE AND GRAVEL HAS BEEN PLACED, TOPSOIL SHALL BE SPREAD ON ALL DISTURBED AREAS EVENLY. FERTILIZER, SEED, AND A COVERING SHALL THEN BE INSTALLED IN ACCORDANCE WITH PERMANENT SEEDING (VESCH# 3.32) FOLLOWING APPLICATION RATES SHOWN ON THE PLAN.

STORMWATER MANAGEMENT:

SEE STORMWATER MANAGEMENT NARRATIVE FOR DISCUSSION OF STORMWATER MANAGEMENT FOR THIS PROJECT.

MAINTENANCE:

THE RESPONSIBLE LAND DISTURBER SHALL CHECK ALL EROSION AND SEDIMENT CONTROLS DAILY, AND AFTER EACH MEASUREABLE RAINFALL EVENT. DEFICIENCIES SHALL BE REPAIRED IMMEDIATELY. SEE STRUCTURAL PRACTICES FOR SPECIFIC MAINTENANCE ITEMS. ALL SEEDED AREAS WILL BE CHECKED REGULARLY AND SHALL BE RE-SEEDED AND MULCHED AS NECESSARY.

STORMWATER MANAGEMENT NARRATIVE:

PROJECT DESCRIPTION:

THIS PROJECT PROPOSES THE CONSTRUCTION OF CAR WASH, VACUUM SPACES, AND PARKING IN THE ORCHARD MARKETPLACE DEVELOPMENT IN DALEVILLE, VA LOCATED OFF ROANOKE ROAD AND MARKETPLACE DRIVE. THIS SITE IS LOCATED IN A LARGER PLAN DEVELOPMENT THAT HAD STORMWATER QUANTITY DESIGNED FOR ULTIMATE BUILDOUT. APPROXIMATELY 1.35 ACRES WILL BE DISTURBED BY CONSTRUCTION ON A 1.46-ACRE PARCEL, AND 0.70 ACRES OF IMPERVIOUS AREA WILL BE ADDED. PLEASE SEE PRE-DEVELOPED AND POST-DEVELOPED LAND USE MAPS IN SECTION E.1 OF THE ENGINEERING CALCULATIONS. THIS PROJECT IS ESTIMATED TO TAKE ONE-YEAR TO COMPLETE ONCE THE OWNER OR CONTRACTOR PROPOSES A START DATE FOR CONSTRUCTION.

EXISTING CONDITIONS:

THE EXISTING SITE IS A GRADED PAD THAT DRAINS TO THE SOUTH AND WEST TO AN EXISTING STORMWATER CONVEYANCE CHANNEL THAT DISCHARGES TO A REGIONAL STORMWATER FACILITY, SWM LOT 2. SLOPES VARY ON THE SITE BUT ARE GENERALLY AROUND 5%. THERE ARE 0.02 ACRES OF IMPERVIOUS, 1.33 ACRES OF MANAGED TURF, AND 0.00 ACRES OF WOODED/OPEN SPACE. PLEASE SEE PRE-DEVELOPED LAND USE MAP IN SECTION E.1 OF THE ENGINEERING CALCULATIONS.

SOILS:

THIS ENTIRE SITE HAS BEEN PREVIOUSLY DISTURBED BY GRADING ACTIVITIES; HOWEVER, ACCORDING TO THE NCRS WEB SOIL SURVEY, THERE IS ONE SOIL ONSITE. THIS SOIL IS GROSBEOLOE SILT LOAM, ABBREVIATED 28C, WITH 7 TO 15 PERCENT SLOPES AND BELONGING TO HYDROLOGIC SOIL GROUP C.

STORMWATER MANAGEMENT:

THE PRE-DEVELOPED SITE IS 1.35 ACRES WITH 0.02 ACRES OF IMPERVIOUS AREA, 1.33 ACRES OF MANAGED TURF, AND 0.00 ACRES OF WOODED/OPEN SPACE. THE POST-DEVELOPED SITE IS 1.35 ACRES WITH 0.72 ACRES OF IMPERVIOUS AREA, 0.63 ACRES OF MANAGED TURF, AND 0.00 ACRES OF WOODED/OPEN SPACE. PLEASE SEE PRE-DEVELOPED AND POST-DEVELOPED LAND USE MAP IN SECTION E.1 OF THE ENGINEERING CALCULATIONS.

RUNOFF:

RUNNING THE POST-DEVELOPED LAND USE AREAS THROUGH THE VRMA NEW DEVELOPMENT SPREADSHEET YIELDS A TP LOAD REDUCTION REQUIREMENT OF 1.32 LBS/YR, AS PERMITTED IN 9VAC25-870-69.3, THIS REQUIREMENT WILL BE ADDRESSED BY THE PURCHASE OF NUTRIENT CREDITS. PLEASE SEE LETTERS OF AVAILABILITY IN SECTION E.3 OF THE ENGINEERING CALCULATIONS.

EXISTING CONDITIONS:

THIS SITE IS PART OF A LARGER PLAN DEVELOPMENT THAT WAS DESIGNED FOR ULTIMATE BUILDOUT. PER THE STORMWATER NARRATIVE DATED MARCH 18, 2009 BY BALZER & ASSOCIATES, THIS LOT (LOT C) WAS ASSIGNED TO BE 60% IMPERVIOUS FOR STORMWATER QUANTITY MANAGEMENT. THIS SITE PROPOSES 29,993 SF OF NEW IMPERVIOUS AREA ON THE 63,247 SF LOT. THIS RESULTS IN THE LOT BEING 47.4% IMPERVIOUS. SINCE 47.4% IS LESS THAN 60%, NO ADDITIONAL STORMWATER QUANTITY MANAGEMENT IS REQUIRED.

MAINTENANCE:

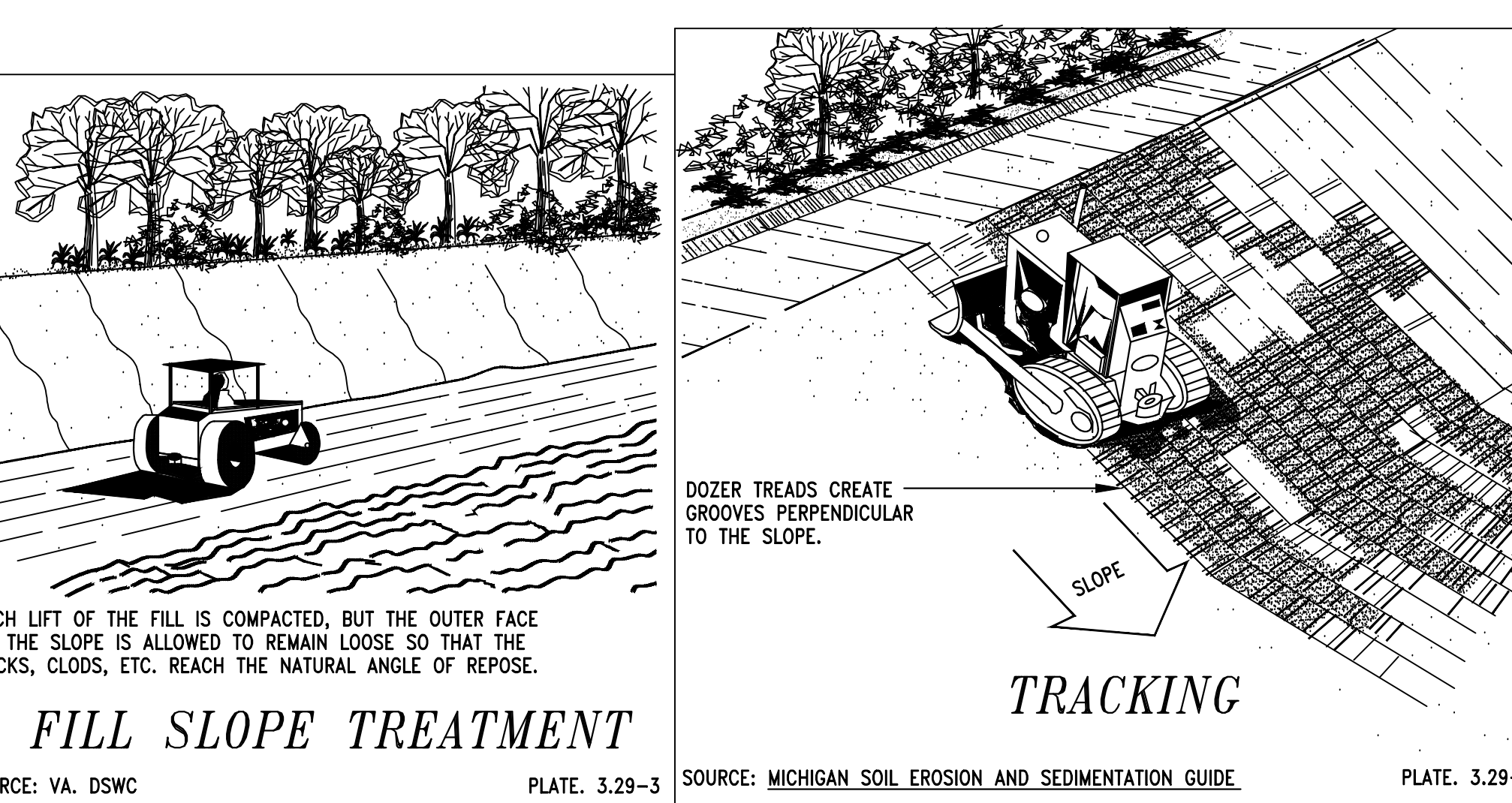
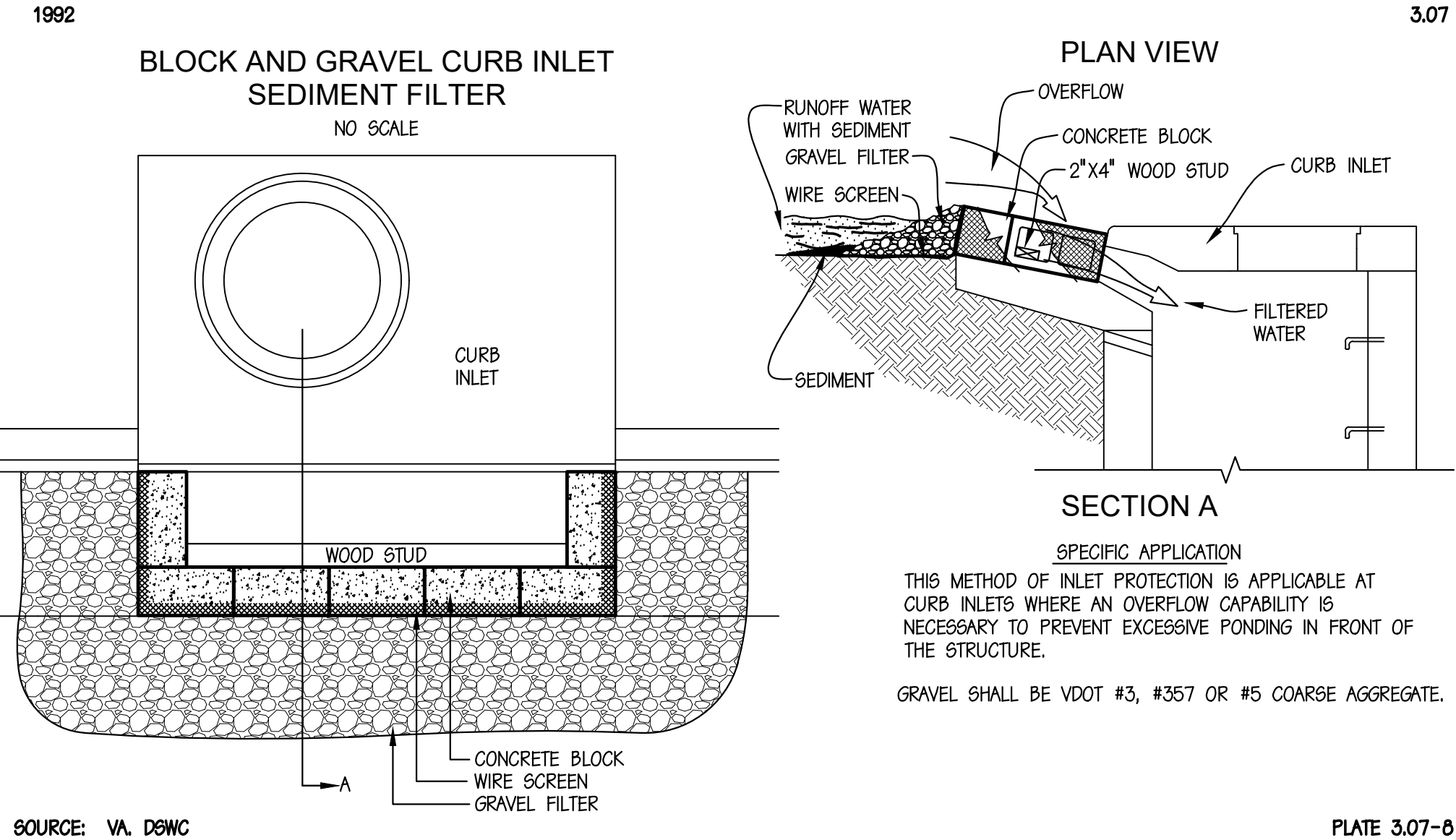
NO NEW STORMWATER MANAGEMENT BMPs ARE PROPOSED BY THIS PROJECT. THE EXISTING REGIONAL FACILITY SHOULD BE MAINTAINED ACCORDING TO THE ORIGINAL DESIGN PLAN.

SEEDING

SEEDS SHALL BE SCARIFIED INTO THE TOP 2" OF THE TOP SOIL, IF APPLIED BY HAND. SEEDING BY HYDRO SEEDING SHALL BE IN ACCORDANCE WITH VDOT SPECIFICATIONS. TEMPORARY SEEDING RATES AND SPECIFICATIONS SEE VESCH STD. 3.31 PERMANENT SEEDING RATES AND SPECIFICATIONS SEE VESCH STD. 3.32 FERTILIZER TYPE AND RATES SHALL BE PER SOIL TEST. MULCH SHALL BE PER VESCH STD. 3.35

EC-2 EROSION BLANKET (VESCH TREATMENT ONE) SHALL BE PER VDOT OR VESCH STD. 3.36.

EC-3 EROSION BLANKETS (VESCH TREATMENT TWO) SHALL BE PER VDOT OR VESCH STD. 3.36.



317 BROOK PARK PL. FOREST, VIRGINIA 24551

PHONE: 434-525-5985 FAX: 434-525-5986

EMAIL: pro@perkins-orrison.com

17 W. NELSON STREET LEXINGTON, VIRGINIA 24450

PHONE: 540-464-9001 FAX: 540-464-5009

EMAIL: pro@perkins-orrison.com

CONSULTANTS

SEAL:



JOB:

ORCHARD MARKETPLACE
 CAR WASH
 AMSTERDAM MAGISTERIAL DISTRICT
 DALEVILLE, VIRGINIA
 BOTETOURT COUNTY

CLIENT:

THOMAS BUILDERS

2	06/02/2022	PER WMA COMMENTS	
1	06/16/2022	PER COUNTY COMMENT	
MARK	DATE	DESCRIPTION	
ISSUE: 04/04/2022 CONTOUR INTERVAL: 2' DESIGNED BY: RHO DRAWN BY: PWS CHECKED BY: RHO			
SHEET TITLE			
EROSION & SEDIMENT CONTROL NOTES & DETAILS			
SHEET	C303	ASSOCIATION PROJECT #	DEV-SITE-22-00005
JOB NO.:	21442	SHEET NO	11 of 14