SOIL EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS THE CONSTRUCTION OF A NEW SANITARY SEWER LATERAL FOR UNITY OF ROANOKE VALLEY. THE SITE IS CURRENTLY SERVED BY A SEPTIC SYSTEM, AND THE OWNER DESIRES TO ABANDON THE SEPTIC AND CONSTRUCTION OF THE NEW SANITARY SEWER LATERAL IS THE ONLY WORK COVERED UNDER THESE PLANS. THE SITE IS LOCATED SOUTHWEST OF THE INTERSECTION OF GREEN RIDGE ROAD AND WOOD HAVEN ROAD IN THE CATAWBA MAGISTERIAL DISTRICT OF THE COUNTY OF ROANOKE, VIRGINIA. THE AREA OF LAND DISTURBANCE IS ESTIMATED TO BE 0.26 ACRES (11,300 SQ. FT.).

EXISTING SITE CONDITIONS: THE SITE IS CURRENTLY PRIMARILY WOODLAND WITH SPARSE TO HEAVY UNDERBRUSH, AND DRAINS AS DESCRIBED ABOVE. THE SUBJECT SITE LIES WITHIN "ZONES "AE" AND X" AS SHOWN ON FEMA FLOOD INSURANCE RATE MAPS (FIRM MAP NUMBER 51161C0134G, EFFECTIVE DATE 09/28/2007).

EXISTING SOIL CONDITIONS:

THERE HAVE BEEN NO COMPREHENSIVE SUBSURFACE INVESTIGATIONS FOR THE SUBJECT DEVELOPMENT. THE USDA SOIL SURVEY FOR ROANOKE COUNTY, VIRGINIA IDENTIFIES THE SOILS IN THE AREA OF PROPOSED CONSTRUCTION AS BELONGING TO THE FOLLOWING SOIL UNIT GROUPS, AND PROVIDES THE SPECIFIC SOIL CHARACTERISTICS INDICATED. UNIT CODE NAME EROSION POTENTIAL DEPTH TO SEASONAL HIGH WATER HYDROLOGIC GROUP **CHARACTERISTICS** PERMEABILITY DEPTH TO BEDROCK

COMBS LOAM, 0-2% SLOPE, OCCASIONALLY FLOODED DARK YELLOW AND BROWN LOAMS MODERATELY RAPID >60 INCHES 8A LOW > 72 INCHES SEQUOIA SILT LOAM, 7-15% SLOPE SILT LOAMS AND SILTY CLAYS MODERATELY SLOW 20-40 INCHES (SOFT SHALES) HIGH > 72 INCHES WEIKERT-BERKS COMPLEX, 15-45% SLOPE CHANNERY SILT LOAMS MODERATELY RAPID 10-40 INCHES (SHALES) HIGH > 72 INCHES

ALL AREAS IN THE NEAR VICINITY OF PROPOSED CONSTRUCTION ARE UNDER THE OWNERSHIP OF TRUSTEES OF UNITY OF ROANOKE VALLEY. SEE PLAN FOR ADJOINING PROPERTY OWNERS.

GIVEN THE PROJECT IS SOLELY THE CONSTRUCTION OF A NEW SANITARY SEWER LATERAL, NO EXCESS CUT OR FILL IS ANTICIPATED, AND THEREFORE NO OFF—SITE AREAS ARE EXPECTED TO BE INVOLVED IN THE PROPOSED CONSTRUCTION. IN THE EVENT THAT UNFORESEEN CIRCUMSTANCES CAUSE THE NEED FOR IMPORT OF MATERIAL TO / FROM THE SITE, THE CONTRACTOR HOLDING THE LAND DISTURBING PERMIT WILL BE REQUIRED TO VERIFY THAT AN APPROVED SOIL EROSION CONTROL PLAN AND PERMIT ARE IN PLACE FOR ANY OFF—SITE AREA(S) USED IN CONJUNCTION WITH THIS PROJECT. THE COUNTY OF ROANOKE OR ITS APPROVED PLANS AND PERMITS NOT EXIST FOR ALL SITES. ANY SEDIMENT FROM THE PROPOSED DEVELOPMENT THAT ENCROACHES OUTSIDE THE LIMITS OF CONSTRUCTION OR ONTO ADJACENT PROPERTIES SHALL BE IMMEDIATELY REMOVED AND THE AFFECTED AREAS RESTORED TO PRE-CONSTRUCTION CONDITIONS OR BETTER, IN ACCORDANCE WITH THESE PLANS.

- SILT FENCE BARRIERS SHALL BE INSPECTED DAILY AND CLEANED OR REPLACED AS REQUIRED. CLEAN SILT FENCE WHEN SILT MEASURES ONE-HALF THE HEIGHT OF THE FENCE, OR AS REQUIRED.
- EXISTING AND PROPOSED SLOPES SHALL BE PROTECTED FROM EROSION. UNDER NO CIRCUMSTANCES SHALL CONCENTRATED RUNOFF BE ALLOWED TO FLOW DOWN SLOPES, OR ONTO UNPROTECTED AREAS. SURFACE ROUGHENING OF ALL DISTURBED SLOPES SHALL BE MAINTAINED AT ALL TIMES. - PUBLIC STREETS AND ADJACENT PAVED AREAS SHALL REMAIN IN A DUST AND MUD-FREE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. SHOULD OFF-SITE SEDIMENTATION OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO RETURN ALL AFFECTED AREAS TO A CONDITION EQUAL TO OR
- BETTER THAN THE ORIGINAL CONDITION, AT NO ADDED COST TO THE OWNER.
- DISTURBED AREAS THAT ARE NOT PERMANENTLY STABILIZED WITHIN FOURTEEN (14) DAYS SHALL BE TEMPORARILY SEEDED IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.31 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- ALL PROTECTIVE MEASURES WHICH PERTAIN TO, OR INCLUDE CUT AND FILL SLOPES (SILT FENCE, DIVERSION DIKES, ETC.) SHALL BE INSTALLED AND MAINTAINED AS THE SLOPES COME TO GRADE. ADDITIONAL DIVERSION DIKES WILL BE REQUIRED TO PROTECT DISTURBED AREAS, UNTIL SUCH TIME THAT THE STORM DRAIN SYSTEM IS IN PLACE, AND FUNCTIONALLY PROTECTED FROM SEDIMENT INFILTRATION. TEMPORARY SEEDING OF SLOPES IS TO BE PERFORMED ON A WEEKLY BASIS, UNLESS THE SLOPES ARE TO FINAL GRADE. SLOPES AT FINAL GRADE ARE TO BE PERMANENTLY SEEDED
- THE CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES AT THEIR OPTIMUM PERFORMANCE, SUCH THAT ADJOINING AREAS AND DRAINAGEWAYS ARE PROVIDED THE BEST AVAILABLE PROTECTION AT EVERY PHASE OF CONSTRUCTION. IT IS IMPERATIVE THAT SEDIMENT TRANSFER FROM THIS SITE IS MINIMIZED.

EROSION AND SEDIMENT CONTROL MEASURES: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK". THIRD EDITION.

- 1. REGARDLESS OF FUTURE DEVELOPMENT PLANS, THE CONTRACTOR SHALL IMMEDIATELY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS. THIS WORK SHALL BE COORDINATED IN ORDER TO PROTECT AREAS FROM THE WORK WHICH IS TO FOLLOW. CONTROL AT CENTERS OF FLOW AND OTHER POINTS OF CONCENTRATION SHOWN HEREIN SHALL BE CONSTRUCTED FIRST.
- 2. FOLLOWING INSTALLATION OF THE PERIMETER CONTROLS, THE SITEWORK CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE STEWORK CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE STEWORK CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE STEWORK CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE STEWORK CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE CONTRACTOR SHALL BEGIN EARTHWORK OPER ACCORDANCE WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK". THIRD EDITION.
- 3. IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. IN PARTICULAR:
- A. THE CONSTRUCTION ENTRANCE (STD & SPEC 3.02) SHALL BE MAINTAINED IN A CONDITION TO PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAYS.
- B. ALL SILT FENCE BARRIERS (STD & SPEC 3.05) SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP.

C. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS NEEDED. 4. THE SOIL EROSION CONTROL MEASURES INSTALLED FOR THIS CONTRACT SHALL REMAIN IN PLACE UNTIL REMOVAL IS APPROVED BY THE COUNTY OF ROANOKE INSPECTOR, AT WHICH TIME IT SHALL BE THE SITEWORK CONTRACT SHALL REMAIN IN PLACE UNTIL REMOVAL IS APPROVED BY THE COUNTY OF ROANOKE INSPECTOR, AT WHICH TIME IT SHALL BE THE SITEWORK CONTRACT SHALL BE THE SITEWORK CONTRACT SHALL BE THE SITEWORK CONTRACT SHALL REMAIN IN PLACE UNTIL REMOVAL IS APPROVED BY THE COUNTY OF ROANOKE INSPECTOR, AT WHICH TIME IT SHALL BE THE SITEWORK CONTRACT SHALL BE THE SITEWORK SHALL

PERMANENT STABILIZATION:

UPON ACHIEVING FINISH GRADE ELEVATIONS, ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED (STD & SPEC 3.32) AS OUTLINED HEREON AND ON THE SOIL EROSION CONTROL PLAN AND DETAIL SHEETS, UNLESS OTHER STABILIZATION MEASURES SUCH AS LANDSCAPE MULCHING ARE REQUIRED HEREIN.

THE RESPONSIBLE LAND DISTURBER ON RECORD WITH THE COUNTY FOR THIS PROJECT IS RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL MEASURES, AS APPLICABLE. ALL MEASURES REQUIRED HEREIN SHALL BE MAINTAINED AS OUTLINED IN "CRITICAL AREAS" AND "EROSION AND SEDIMENT CONTROL MEASURES" SECTIONS ABOVE.

GENERAL COMMENTS:

- 1. THE SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
- 2. THE COUNTY OF ROANOKE OR THEIR AUTHORIZED AGENT RESERVES THE RIGHT TO ADD TO, DELETE, OR OTHERWISE CHANGE EROSION CONTROL DEVICES AS MAY BE DEEMED NECESSARY, BY WRITTEN NOTIFICATION TO THE CONTRACTOR.
- 3. NO WORK SHALL PROCEED ON THE SITE UNTIL THE PROPER AUTHORIZATION OR PERMIT HAS BEEN OBTAINED FROM THE COUNTY OF ROANOKE. 4. THE ENGINEER, CALDWELL WHITE ASSOCIATES, ASSUMES NO RESPONSIBILITY FOR ANY WORK BEING PERFORMED.

VESCH TABLE 6-1: 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 PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND SEDIMENT CONTROL PRACTICES ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE- CONSTRUCTION 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 SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION 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 LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED. ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (\$ 10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC50-60-48 OF

THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS. N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC50—60—66 OF THE

rginia stormwater management program (VSMP) permit regulations shall be deemed to satisfy the requirements of minimum standard 19.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUN-OFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

STATE IMPOSED MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 10,000 S.F. IN AREA OF DISTURBANCE THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL APPROVING AUTHORITY OR THE CONSULTING ENGINEER.

		
No.	CRITERIA, TECHNIQUE OR METHOD	REMARKS
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN FOURTEEN (14) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.	SEE "PERMANENT SEEDING" AND "TEMPORARY SEEDING" REQUIREMENTS, THIS SHEET AND SHEET C-06.
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	N/A, NO STOCKPILES PROPOSED ON—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, IN THE OPINION OF THE LOCAL PROGRAM ADMINISTRATOR OR DESIGNATED AGENT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	SELF EXPLANATORY - REFER TO THE SEEDING SPECS, THIS SHEET.
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.	INSTALL NEW SILT FENCE IN ACCORDANCE WITH REQUIREMENTS HEREIN
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
6	SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
7	CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
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.	NOT APPLICABLE TO PROPOSED DEVELOPMENT-NO PROPOSED CUT OR FILL SLOPES
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	REPORT EVIDENCE OF SEEPS TO ENGINEER IMMEDIATELY UPON DISCOVERY. ADDITIONAL MEASURES MAY BE REQUIRED.
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.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS 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.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
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.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX (6) MONTH PERIOD, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. THE BEDS AND BANKS OF ANY WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE TO SUBJECT DEVELOPMENT
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: 1)NO MORE THAN 500 LINEAR FEET OF ANY TRENCH MAY BE OPENED AT ONE TIME. 2)EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3)EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5)RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS. 6)APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.	SELF-EXPLANATORY. NEW SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THESE 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.	PROVIDE CONSTRUCTION ENTRANCES AS REQUIRED BY PLAN. ALL VEHICLES AND EQUIPMENT SHALL ACCESS THE CONSTRUCTION AREA ONLY VIA THE CONSTRUCTION ENTRANCES.
18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	REMOVAL OF TEMPORARY MEASURES SHALL BE IN ACCORDANCE WITH MS—18 AND "SOIL EROSION CONTROL CONSTRUCTION SEQUENCING—GENERAL", THIS SHEET
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 FOLLOMING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION 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 AND VELOCITY AND VELOCITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN—MADE CHANNELS: A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCORDED. BY ATTURN AND REVER 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 PREFORMED. 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 AND BY THE USE OF A TWO—YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF	THE PROPOSED SANITARY SEVER LATERAL CONSTRUCTION DOES NOT WARRANT THE IMPLEMENTATION OF STORMWATER MANAGEMENT FACILITIES, AS GROUND COVER CONDITIONS ARE NOT CHANGED BY THE PROPOSED CONSTRUCTION.
-	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 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 PLAN—APPROVING 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 LOCALITY OF A PLAN FOR MAINTENANCE OF THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND EIENTED TO BE ADEQUATE I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT	

NEW SANITARY SEWER LATERAL CONSTRUCTION SEQUENCING— SITE SPECIFIC

- FOLLOWING ISSUANCE OF THE LAND DISTURBING PERMIT BY ROANOKE COUNTY, THE CONTRACTOR SHALL PERFORM FIELD INVESTIGATIONS TO DETERMINE THE EXACT POINT OF INTERCONNECTION OF THE NEW SANITARY SEWER LATERAL AT THE EXISTING SEPTIC TANK. THE EXISTING SEPTIC SYSTEM SHALL REMAIN IN-PLACE AND FUNCTIONAL AS LONG AS POSSIBLE DURING THE CONSTRUCTION OF THE NEW LATERAL. IN THE EVENT THAT THE PROPOSED CONSTRUCTION WILL DISPLACE EXISTING FIELD LINES OR DISTRIBUTION BOX(ES). THE CONTRACTOR SHALL FIRST COORDINATE WITH THE OWNER. IN THIS EVENT, THE OWNER WILL PUMP THE SEPTIC TANK. AND THE CONTRACTOR SHALL PLUG THE EFFLUENT LINE FROM THE SEPTIC TANK PRIOR TO DISTURBANCE OF ANY PORTION OF THE SEPTIC SYSTEM. THE OWNER WILL HAVE THE EXISTING TANK PUMPED AS NECESSARY UNTIL SUCH TIME THAT THE INTERCONNECTION TO THE NEW LATERAL IS PERFORMED AND FUNCTIONAL IT WILL BE THE CONTRACTOR'S REQUIREMENT TO REMOVE THE SEPTIC TANK FROM THE
- DURING THE INITIAL FIELD INVESTIGATION, THE CONTRACTOR SHALL DETERMINE THE APPROXIMATE INVERT OF THE EXISTING LATERAL AT ITS POINT OF INTERCONNECTION WITH NEW, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT WILL AFFECT THE INSTALLATION OF IMPROVEMENTS SHOWN HEREIN.
- UPON PROGRESSIVE INSTALLATION OF SEWER, INSTALL SILT FENCE BARRIERS AS INDICATED ON THESE PLANS, AND MAINTAIN UNTIL STABILIZATION OF DISTURBED AREAS IS
- COORDINATE LOCATION AND INVERT ELEVATION OF TERMINAL CLEANOUT NUMBER 110 WITH PLUMBING SHEETS OF ARCHITECTURAL PLANS.
- PERFORM PIPELINE INSTALLATION IN ACCORDANCE WITH MINIMUM STANDARDS SHOWN

SITE AND DISPOSE OF PROPERLY.

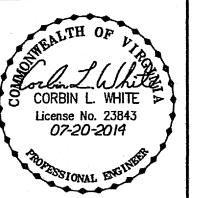
SOIL EROSION CONTROL CONSTRUCTION SEQUENCING—GENERAL FOLLOWING ISSUANCE OF A LAND DISTURBING PERMIT FROM THE COUNTY OF ROANOKE, THE CONTRACTOR SHALL

PERFORM HIS SITEWORK IN GENERAL CONFORMANCE WITH THE FOLLOWING: 1. INSTALL NEW CONSTRUCTION ENTRANCE. 2. PROVIDE AND INSTALL PERIMETER CONTROLS. INCLUDED IS THE INSTALLATION OF SILT FENCE BARRIERS,

- TEMPORARY DIVERSION DIKES, SEDIMENT TRAPS, TEMPORARY SEDIMENT BASINS, ETC. SEE PLAN FOR APPLICABILITY OF REFERENCED MEASURES. TEMPORARY DIVERSIONS SHALL BE MAINTAINED AS EARTHWORK PROGRESSES TO DIRECT RUNOFF TO THE PERIMETER CONTROLS. 3. ALL DISTURBED AREAS NOT TO RECEIVE HARD SURFACING SHALL BE SEEDED, FERTILIZED, LIMED, MULCHED,
- AND WATERED IN ACCORDANCE WITH THESE PLANS AND THE VIRGINIA EROSION AND SEDIMENTATION
- 4. THE SITEWORK CONTRACTOR SHALL CLEAN, REPAIR, OR OTHERWISE MAINTAIN CONTROL MEASURES
- THROUGHOUT THE CONSTRUCTION, INCLUDING THE INSTALLATION OF NEW UTILITIES. 5. WITHIN 30 DAYS FOLLOWING SUBSTANTIAL VEGETATIVE COVER OF DISTURBED AREAS (80% MIN. COVERAGE),
- AND ONLY UPON AUTHORIZATION FROM ROANOKE COUNTY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY MEASURES FROM THE SITE (SEE ALSO SOIL EROSION CONTROL NARRATIVE—EROSION AND SEDIMENT CONTROL MEASURES-ITEM 4, THIS SHEET).

LAND DISTURBANCE NOTES

ALL OFF-SITE DISPOSAL OF MATERIALS, AND ASSOCIATED FEES, WILL BE THE SITEWORK CONTRACTOR'S RESPONSIBILITY, AND IS TO BE PERFORMED IN A LEGAL FASHION (APPROVED WASTE SITE). ALL HAULING IS TO BE PERFORMED IN STRICT ACCORDANCE WITH LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS PERTAINING THERETO.



SOIL EROSION CONTROL NARRATIVE, MEASURES, AND CONSTRUCTION SEQUENCING

UNITY OF ROANOKE VALLEY SHOWING THE CONSTRUCTION OF A NEW PRIVATE SANITARY SEWER LATERAL AND ABANDONMENT OF AN EXISTING SEPTIC

> SITUATE 3300 GREEN RIDGE ROAD CATAWBA MAGISTERIAL DISTRICT COUNTY OF ROANOKE, VIRGINIA

Designed: C.L. White C.L. White June 10, 2014

Tax Parcel: 36.12-03-01.00

Field Book: N/A

REVISED JULY 20, 2014 PER 1ST COUNTY REVIEW - CLW W.O. No.: 14-0045

m CWA CALDWELL WHITE ASSOCIATES

ENGINEERS / SURVEYORS / PLANNERS 4203 MELROSE AVENUE

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