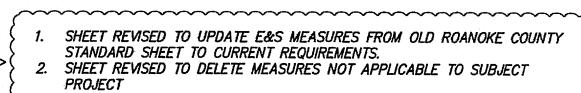
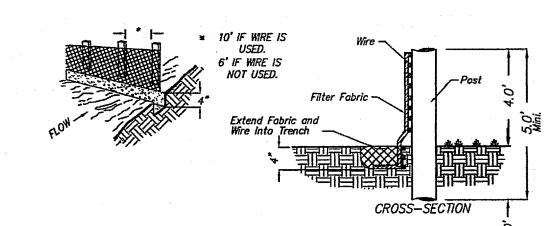
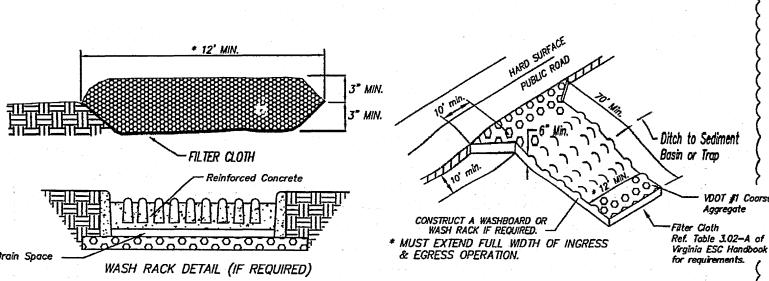
NO.	ΠΠΕ	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	SAF
3.02	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	CE	
3.03	CONSTRUCTION ROAD STABILIZATION	(CRS)	(RS)
3.04	STRAW BALE BARRIER	(STB)	
3.05	SILT FENCE	SF	
3.06	BRUSH BARRIER	BB)	(2000000)
	STORM DRAIN	$\dashv \sim$	(R)
3.07	INLET PROTECTION		П
3.08	CULVERT INLET PROTECTION	(CIP)	(1)
3.09	TEMPORARY DIVERSION DIKE	(DD)	
3.10	TEMPORARY FILL DIVERSION	(FD)	(FD)
3.11	TEMPORARY RIGHT—OF—WAY DIVERSION	(RWD)	RND
3.12	DIVERSION	DV	(DV)
3.13	TEMPORARY SEDIMENT TRAP	ST	
3.14	TEMPORARY SEDIMENT BASIN	SB	
3.15	TEMPORARY SLOPE DRAIN	TSD	(131)
3.16	PAVED FLUME	\bigcap_{PF}	PF
3.17	STORMWATER CONVEYANCE	(scc)	
3.18	CHANNEL OUTLET PROTECTION	(OP)	
3.19	RIPRAP	(RR)	######################################
3.20	ROCK CHECK DAMS	CD	488888P
3.21	LEVEL SPREADER	LS	7 7
3.22	VEGETATIVE STREAMBANK	$\dashv \sim$	(83)
	STABILIZATION STRUCTURAL STREAMBANK	(vss)	(333)
3.23	STABILIZATION TEMPORARY VEHICULAR	(SSS)	
3.24	STREAM CROSSING	(vsc)	對意
3.25	UTILITY STREAM CROSSING	(usc)	当無言
3.26	DEWATERING STRUCTURE	DS	─
3.27	TURBIDITY CURTAIN	TC	
3.28	SUBSURFACE DRAIN	SD	
3.29	SURFACE ROUGHENING	SR	\$R
3.30	TOPSOILING	70	70)
3.31	TEMPORARY SEEDING	75	(3)
3.32	PERMANENT SEEDING	PS	PS
3.33	SODDING	(50)	\$0)
3.34	BERMUDA GRASS AND	$ B_M$	B OR
3.35	ZOYSIAURASS ESTABLISHMENT MULCHING	MU	(M)
3.36	SOIL STABILIZATION	-	
	BLANKETS AND MATTING TREES, SHRUBS, VINES	BEZE	TREAT. 1 TREAT. 2
3.37	AND GROUND COVERS TREE PRESERVATION	(VEG)	(VEG)
3.38	AND PROTECTION		(P)
3.39	DUST CONTROL	(DC)	oc -



3. BOND ESTIMATE REVISED TO INCLUDE CONSTRUCTION ENTRANCES 4. TEMPORARY AND PERMANENT SEEDING REQUIREMENTS REVISED TO INCLUDE REQUIREMENTS OF TECHNICAL BULLETIN NO. 4



CONSTRUCTION OF A SILT FENCE



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

SOIL EROSION AND SEDIMENTATION CONTROL COST ESTIMATE ALL COSTS GIVEN ARE COMPLETE IN PLACE TOTAL COST QUANTITY UNIT COST DESCRIPTION 720 4.00 SILT FENCE 1000 SF 11.3 60.00 678 PERMANENT SEEDING *396* 1000 SF 11.3 *35.00* TEMPORARY SEEDING CONSTRUCTION 2,400 1,200 ENTRANCE SAN.SEWER LATERAL/ 1,000.00 1,000 CLEANOUT IN PUBLIC EASEMENT SUB-TOTAL 5,194 10% CONTINGENCY 519 TOTAL BONDABLE COST \$ 5,713

(STD & SPEC 3.31)

DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING MEASURES AS SHOWN HEREON, AND AS FURTHER DETAILED AS "STANDARD AND SPECIFICATION 3.31 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION. IN ADDITION TO AREAS OF GENERAL GRADING THAT WILL NOT BE FINE—GRADED FOR GREATER THAN 14 DAYS, THE FOLLOWING SPECIFIC E&S MEASURES SHALL BE STABILIZED WITH TEMPORARY SEEDING IMMEDIATELY UPON COMPLETION OF CONSTRUCTION OF

- DIKES, DAMS, AND SIDES OF SEDIMENT BASINS - TEMPORARY ROADWAY EMBANKMENTS

SEEDING DATES MAY NOT REQUIRE MULCH.

PRIOR TO SEEDING, INSTALL NECESSARY EROSION CONTROL PRACTICES SUCH AS DIKES, WATERWAYS, AND BASINS. PROVIDE PLANTS AS SPECIFIED HEREIN, OR ENGINEER-APPROVED EQUAL.

ADJUSTING THE SOIL PH BETWEEN 6.25 TO 6.5 IS EXTREMELY IMPORTANT FOR GRASS ESTABLISHMENT. A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL DH OF DENUDED SITES. HOWEVER, WHEN A SOIL TEST HAS NOT BEEN PERFORMED, APPLY 2 TONS/ACRE (90 POUNDS/1,000 SQUARE FEET) OF

FERTILIZER SHALL BE APPLIED AS 450 LBS/ACRE OF 10—10—10 OR EQUIVALENT NUTRIENTS. LIME (AS APPLICABLE)
AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4 TO 6 INCHES OF SOIL BY DISKING OR OTHER MEANS. WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN "EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES" AT http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf.

SURFACE ROUGHENING SHALL BE REQUIRED WHERE AREAS TO BE SEEDED HAVE BEEN COMPACTED, CRUSTED, OR HARDENED BY CONSTRUCTION TRAFFIC. AS REQUIRED, SEEDBEDS SHALL BE ROUGHENED IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.29 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. (TRACKING WITH BULLDOZER CLEATS SHALL BE USED IN SANDY SOILS)

SEEDING: SEED SHALL BE EVENLY APPLIED WITH THE SAME MEANS SPECIFIED HEREIN FOR PERMANENT SEEDING. SMALL GRAINS SHALL BE PLANTED NO MORE THAN ONE INCH DEEP. GRASSES AND LEGUMES SHALL BE PLANTED WITH NO LESS THAN

MULCHING:
SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED
ACCORDING TO STANDARD AND SPECIFICATION 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, EXCEPT THAT FIBER MULCH MAY NOT BE USED. STRAW MULCH SHALL BE USED DURING THESE PERIODS. TEMPORARY SEEDINGS MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL

RE—SFEDING: AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION SHALL BE RE—SEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS BY RANGE OF PLANTING DATES:

09/01 TO 02/15 ANNUAL RYEGRASS @ 50 LB / ACRE WINTER RYE @ 50 LB / ACRÉ 02/16 TO 04/30 ANNUAL RYEGRASS @ 100 LB / ACRE 05/01 TO 08/31 GERMAN MILLET @ 50 LB / ACRE

PERMANENT SEEDING MIXTURE (STD & SPEC 3.32)

DISTURBED AREAS SHALL BE PERMANENTLY SEEDED WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE, OR ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN ONE YEAR.

PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN / MOUNTAIN AREA

HIGH-MAINTENANCE LAWN

GENERAL SLOPE (3:1 OR LESS)

LOW-MAINTENANCE SLOPE

(STEEPER THAN 3:1)

LAND USE APPLICATION RATES MINIMUM CARE LAWN TALL FESCUE(1) 90-100% (COMMERCIAL OR RESIDENTIAL) PERENNIAL RYEGRASS (2) 0-10% KENTUCKY BLUEGRASS TOTAL 200-250LBS/ACRE

> MINIMUM OF THREE UP TO FIVE VARIETIES OF KENTUCKY BLUEGRASS

TOTAL 125 LBS/ACRE FROM APPROVED LIST FOR USE IN

TALL FESCUE (1)
RED TOP GRASS OR CREEPING RED FESCUE 2 LBS

SEASONAL NURSE CROP (3) TOTAL 150 LBS/ACRE

108 LBS RED TOP GRASS OR CREEPING RED FESCUE 2 LBS SEASONAL NURSE CROP (3) 20 LBS <u> 20 LBS</u>

TOTAL 150 LBS/ACRE

(1) WHEN SELECTING VARIETIES OF TURFGRASS, USE THE VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCIA)
RECOMMENDED TURFGRASS VARIETY LIST. QUALITY SED WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY VCIA. A CURRENT TURFGRASS VARIETY LIST IS AVAILABLE AT THE LOCAL COUNTY EXTENSION

TALL FESCUE (1)

CROWNVETCH (4)

OFFICE OR THROUGH VCIA AT 804-746-4884. (2) PERENNIAL RYEGRASS WILL GERMINATE FASTER AND AT LOWER SOIL TEMPERATURES THAN TALL FESCUES, THEREBY PROVIDING COVER AND EROSION RESISTANCE FOR SEEDBED.

(3) USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW: AUGUST 16TH - SEPTEMBER, OCTOBER---- ANNUAL RYE

NOVEMBER-FEBRUARY----- WINTER RYE (4) ALL LEGUME SEED MUST BE PROPERLY INOCULATED. IF FLATPEA IS USED, INCREASE TO 30 LBS/ACRE. IF WEEPING LOVEGRASS IS USED, INCLUDE IN ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING

PERIODS, INCREASE TO 30-40 LBS/ACRE. - APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS/ACRE (OR 12 LBS/1000 SQUARE FEET)

- APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 90 LBS/1000 SQUARE FEET) - A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL PH

OF SITE. — INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4—6 INCHES OF SOIL BY DISKING OR OTHER MEANS. - WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN "EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES" AT http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/ESCTechnicalBulletin4.pdf.

F REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING: INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE

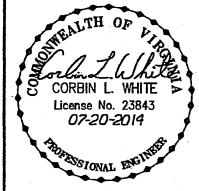
SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK,

- 2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH
- 3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED.
- 4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED. 5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST
- EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK. 6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

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



TOTAL DISTURBED AREA = 0.26 AC. = 11,300 SQ. FT. SOIL EROSION CONTROL DETAILS AND COST ESTIMATE

INITY 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 Drawn: C.L. White Date: June 10, 2014 Scale: N/A

Tax Parcel: <u>36.12-03-01.00</u>

Field Book: _____N/A

*CWA CALDWELL WHITE ASSOCIATES

ENGINEERS / SURVEYORS / PLANNERS 4203 MELROSE AVENUE P.O. BOX 6260 ROANOKE, VIRGINIA 24017-0260 (540) 366-3400 FAX: (540) 366-8702