

REVISIONS

DATE

EROSION-SILTATION CONTROL COST ESTIMATE QUANTITY UNIT COST TOTAL CULVERT INLET PROTECTION \$250.00 per EA \$250.00 1 EA CONST. ROAD STABILIZATION 435 LF \$4.00 per LF \$1,740.00 SILT FENCE 545 LF \$2,180.00 \$3.00 per LF INLET PROTECTION \$150.00 per EA \$1,800.00 12 EA FILL DIVERSION 400 LF \$3.00 per LF \$1,200.00 DIVERSION 145 LF \$3.00 per LF \$435.00 RIP-RAP 4.5 CY \$50.00 per CY \$225.00 SOIL STABILIZATION MATTING 2450 SY \$1.50 per SY \$3,675.00 SUB-TOTAL \$11,505.00 10% CONTINGENCY \$1,150.00 ESTIMATED TOTAL = \$12,655.00THIS ESTIMATE IS FOR BONDING PURPOSES ONLY. ACTUAL QUANTITIES AND COSTS MAY VARY, BASED ON ACTUAL FIELD CONDITIONS AND CURRENT ECONOMIC CONDITIONS. TEMPORARY SEEDING DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 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 30 DAYS, THE FOLLOWING SPECIFIC E&S MEASURES SHALL BE STABILIZED WITH TEMPORARY SEEDING IMMEDIATELY UPON COMPLETION OF CONSTRUCTION OF THE TEMPORARY MEASURE: - SOIL STOCKPILES - DIKES, DAMS, AND SIDES OF SEDIMENT BASINS - TEMPORARY ROADWAY EMBANKMENTS PRIOR TO SEEDING, INSTALL NECESSARY EROSION CONTROL PRACTICES SUCH AS DIKES, WATERWAYS, AND BASINS. PROVIDE PLANTS AS SPECIFIED HEREIN, OR ENGINEER-APPROVED EQUAL. SEEDRED PREPARATION: LIME SHALL BE APPLIED IF DISTURBED AREAS WILL REMAIN DORMANT BETWEEN 30 DAYS AND 120 DAYS. IF REQUIRED, LIME SHALL BE APPLIED AS SHOWN, BASED ON SOIL ACIDITY. APPLICATION OF AGRICULTURAL LIMESTONE BELOW 4.2 3 TONS PER ACRE 2 TONS PER ACRE TON PER ACRE ABOVE 6.0 LIME NOT REQUIRED

FERTILIZER SHALL BE APPLIED AS 600 LBS/ACRE OF 10-20-10 OR EQUIVALENT NUTRIENTS. LIME (AS APPLICABLE) AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF SOIL, IF POSSIBLE. SURFACE ROUGHENING SHALL BE REQUIRED WHERE AREAS TO BE SEEDED HAVE BEEN COMPACTED, CRUSTED, OR

STANDARD AND SPECIFICATION 3.29 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. (TRACKING WITH BULLDOZER CLEATS SHALL BE USED IN SANDY SOILS)

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
TO BE THE MEDICINE AND SEDIMENT CONTROL HANDBOOK 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 SEEDING DATES MAY NOT REQUIRE MULCH.

RE—SEEDING: 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 / ACRE 02/16 TO 04/30 ANNUAL RYEGRASS @ 100 LB / ACRE 05/01 TO 08/31 GERMAN MILLET @ 50 LB / ACRE

PERMANENT SEEDING

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.

03/15 TO 05/15 OR 08/16 TO 10/31: ANNUAL RYEGRASS @ 20 LB / ACRE RED TOP @ 2 LB / ACRE TALL FESCUE @ 150 LB / ACRE 05/16 TO 08/15:

03/15 TO 05/15 <u>OR</u> 08/16 TO 10/31: CROWN VETCH @ 20 LB / ACRE ANNUAL RYEGRASS @ 20 LB / ACRE RED TOP @ 20 LB / ACRE KY 31 FESCUE @ 108 LB / ACRE

FOXTAIL MILLET @ 20 LB / ACRE RED TOP @ 20 LB / ACRE TALL FESCUE @ 150 LB / ACRE 11/01 TO 02/28:

05/16 TO 08/15: CROWN VETCH @ 20 LB / ACRE FOXTAIL MILLET @ 20 LB / ACRE RED TOP @ 20 LB / ACRE KY 31 FESCUE @ 108 LB / ACRE

TYPE B (SLOPES 3:1 OR STEEPER)

11/01 TO 02/28: WINTER RYE @ 20 LB / ACRE CROWN VETCH @ 20 LB / ACRE RED TOP @ 20 LB / ÁCRE WINTER RYE @ 20 LB / ACRE RED TOP @ 20 LB / ÁCRE TALL FESCUE @ 150 LB / ACRE KY 31 FESCUE @ 108 LB / ACRE

LIME: 140 LB / ACRE PULVERIZED AGRICULTURAL LIMESTONE

5-20-10 @ 25 LB / ACRE 38-0-0 @ 7 LB / ACRE

MULCH: SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN STRICT ACCORDANCE WITH STANDARD AND SPECIFICATION 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK,

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 CITY ENGINEER.

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.

DESIGNED BY: APPROVED BY: GWS.III

FAIRWAYS AT HANGING ROCK SECTION 2

EROSION & SEDIMENT CONTROL STORMWATER MANAGEMENT DETAILS Sheet