

USING VEGETATION AS COVER FOR BARREN SOIL TO PROTECT IT FROM FORCES THAT CAUSE EROSION

PURPOSE VEGETATIVE STABILIZATION SPECIFICATIONS ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED H WITH VEGETATION. THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUN-OFF TO EXWINSTREAM AREAS, AND IMPROVING WILDLIFE HABITAT AND VISUAL RESOURCES.

CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE SHALL BE USED ON DENUDED AREAS AS SPECIFIED ON THE PLANS AND MAY BE USED ON HIGHLY ERODIBLE OR CRITICALLY ERODING AREAS. THIS SPECIFICATION IS DIVIDED INTO TEMPORARY SEEDING, TO QUICKLY ESTABLISH VEGETATIVE COVER FOR SHORT DURATION (UP TO ONE YEAR), AND PERMANENT SEEDING, FOR LONG TERM VEGETATIVE COVER. EXAMPLES OF APPLICABLE AREAS FOR TEMPORARY SEEDING ARE TEMPORARY SOIL STOCKPILES, CLEARED AREAS BEING LEFT IDLE BETWEEN CONSTRUCTION PHASES, EARTH DIKES, ETC. AND FOR PERMANENT SEEDING are lawns, dims, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF. INFILTRATION EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. VEGETATION, OVER TIME, WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH. VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE. SEDIMENT CONTROL DEVICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING AND VEGETATIVE ESTABLISHMENT to prevent large quantities of sediment and associated chemicals and nutrients from Washing into Surface Waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. SITE PREPARATION I. INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GYADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENT CONTROL BASINS.

IL PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEFOING III. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HUVING DISTURBED AREA OVER 5 ACRES. (NOT APPLICABLE TO THIS SITE.)

SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS) SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF MARYLAND OR A RECOGNIZED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES. (NOT APPLICABLE TO THIS SITE.)

B. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A \$100 MESH SIEVE AND 98-100% WILL PASS THROUGH A \$20 IN. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

III. LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS

SEEDBED PREPARATION TEMPORARY SEEDING A. SEEDBED PREPARATION SHALL CONSIST OF LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED IT SHOULD NOT BE ROLLED OR DRAGGED SMOOTH, BUT LEFT IN THE ROUGHENED CONDITION. SLOPED AREAS (GREATER THAN 3:1) SHOULD BE TRACKED LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES

RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

A. MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:
1. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM). THE SOIL SHALL CONTAIN LESS THAN 40% CLAY, BUT ENOUGH FINE GRAINED MATERIAL (>30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERECIA LESPEDEZAS IS TO BE PLANTED, THEN A SANDY SOIL (<30% SILT

PLUS CLAY) WOULD BE ACCEPTABLE. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED

IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL. AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3"-5" TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN A SLOPE

APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS.

MIX SOIL AMENDMENTS INTO THE TOP 3"-5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN areas should be raked to smooth the surface, remove large objects like stones and branches, AND READY THE AREA FOR SEED AND APPLICATION. WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. STEEP SLOPES (STEEPER THAN 3:1) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1"-3" OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON

D. SEE() SPECIFICATIONS ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED SHALL BE SUBJECT TO RE-TESTING BY A RECOCNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON THIS JOB. NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.

II. INCCULANT - THE INCCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN-FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANT AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING, NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75°-80° F. CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE. E. METHODS OF SEEDING APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER), BROADCAST

HYDROSEEDING: APPLY SEED UNIFORMLY WITH HY OR DROP SEEDED, OR A CULTIPACKER SEEDER. A. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN; MAXIMUM OF 100 LBS. PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS); 200 LBS/AC; K20 (POTASSIUM): 200 LBS/AC. B. LIME - USE ONLY GROUND AGRICULTURAL LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY

HYDROSEFDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING. SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

IL DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS A. SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 265 OR 26. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER.
APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

III. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOI A. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER.

MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE) STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLE BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW.

II. WOOD CELLULOSE FIBER MULCH (WCFM)

A. WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM fibrous physical state.

WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY. WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS. WCFM MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY THE MULCH MATERIAL SHALL FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING

MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTOL-TOXIC.

F. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM., DIAMETER APPROXIMATELY 1 MM., PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS 15 DESIRED.

G. MULCHING SEEDED AREAS - MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING SEASON, MULCH ALONG SHALL BE APPLIED AS PRESCRIBED IN THIS SECTION AND MAINTAINED UNTIL THE SEEDING SEASON RETURNS AND SEEDING CAN BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS.

II. WHEN STRAW MULCH IS USED. IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF BETWEEN 1" AND 2". MULCH APPLIED SHALL ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5 TONS/ACRE.

III. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. SECURING STRAW MULCH (MULCH ANCHORING): MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY Preference), depending upon size of area and erosion Hazard:

I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF TWO (2) INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE.

II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS/ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS

III. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND CREST OF BANKS. THE REMAINDER OF AREA SHOULD BE APPEAR UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS - SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70 PETROSET, TERRA TAX , terra tack ar or other approved equal may be used at rates recommended by the IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOM-

MENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4' TO 15' FEET WIDE AND 300 TO 3.000 FEET LONG. I INCREMENTAL STABILIZATION - CUT SLOPES 1. ALL CUTS SLOPES SHALL BE DRESSED, PREPARED, SEEDED AND MULCHED AS THE WORK PROCRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 15'. II. CONSTRUCTION SEQUENCE (REFER TO FIGURE 3 BELOW):

A. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION. PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE PERFORM PHASE 2 EXCAVATION, DRESS AND STABILIZE. OVERSEED PHASE 1 AREAS AS PERFORM FINAL PHASE EXCAVATION, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OF COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY

J. INCREMENTAL STABILIZATION OF EMBANKMENTS - FILL SLOPES EMBANKMENTS SHALL BE CONSTRUCTED IN LIFTS AS PRESCRIBED ON THE PLANS. SLOPES SHALL BE STABILIZED IMMEDIATELY WHEN THE VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15", OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.

AT THE END OF EACH DAY, TEMPORARY BERMS AND PIPE SLOPE DRAINS SHOULD BE CONSTRUCTED ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A SEDIMENT TRAPPING DEVICE. A. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED

O DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SLOPE SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA. PLACE PHASE 1 EMBANKMENT, DRESS AND STABILIZE. PLACE PHASE 2 EMBANKMENT, DRESS AND STABILIZE.

PLACE FINAL PHASE EMBANKMENT, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF AND PLACEMENT OF TOPSOIL (IF REQUIRED) GRADING AND PERMANENT SEED AND MULCH. ANY interruptions in the operation or completing the operation out of the seeding season will necessitate

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. PURPO5

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES 1. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS. C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE

SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS. CONSTRUCTION AND MATERIAL SPECIFICATIONS I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE

Found in the representative soil profile section in the soil survey published by USDA-SCS in COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION. II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE

FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 11/2" IN DIAMETER. II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED. III. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL, LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKEDL

INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES. il for sites having, disturbed areas under 5 acres: I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENOMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS. III. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENOMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING: A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0. SUFFICIENT LIME SHALL BE PERSCRIBED TO RAISE THE PH TO 6.5 OR HIGHER. B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT. C. TOPSOIL HAVINA SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS. NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPOPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE

STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS. V. TOPSOIL APPLICATION I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS.
GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS. II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE

MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION. III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDINE CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN TH surface resulting from topsoiling or other operations shall be corrected in order to prevent the FORMATION OF DEPRESSIONS OR WATER POCKETS.

IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER Grading and Seedbed Preparation. VI. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENOMENTS MAY BE APPLIED AS SPECIFIED BELOW:

I. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS: A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENTIRONMENT UNDER COMAR 26.04.06. B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST I PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2

PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF I TON/1,000 SQUARE FEE IV. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SOUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE. REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE extension service, university of maryland and virginia polytechnic institutes, revised 1973.

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 40 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL

DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1055). 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED according to the provisions of this plan and are to be in CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD

SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS and specifications for soil erosion and sediment control for PERMANENT SEEDING (SEC. 8-4-5), TEMPORARY SEEDING (SEC. 8-4-4). AND MULCHING (SEC. 8-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING

SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1. CHAPTER 12. OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE. 5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT

CONTROL INSPECTOR. 6) SITE ANALYSIS: TOTAL AREA OF SITE 3.458 ACRES area disturbed 2.76 ACRES area to be roofed or paved 0.78 ACRES 1.98 ACRES area to be vegetatively stabilized 1443 CU.YOS. 1616 CU.YD5. OFFSITE WASTE/BORROW AREA LOCATION:

7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF Disturbance. 8) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY

BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS. BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE

approved by the plan approval authority prior to proceeding WITH CONSTRUCTION. 12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEEDING GRADING UNIT HAS BEEN

CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE

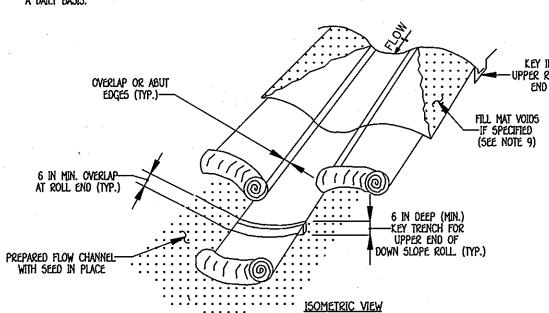
SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES

SEQUENCE OF CONSTRUCTION

OBTAIN A GRADING PERMIT. (1 WEEK) NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK. REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY. CLEAR AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS. (1 DAY) INSPECT AND REPAIR THE PORTIONS OF THE EXISTING SILT FENCE FROM F-12-060 THAT ARE TO REMAIN. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES. INSTALL NEW SILT FENCE AND SILT FENCE/TREE PROTECTION FENCE

CONSTRUCT BUILDINGS. (9 MONTHS) FINALIZE GRADING OF AREA WITH LO.D. AND PROMOE PERMANENT SEEDING AND LANDSCAPING. (2 DAYS) Contractor shall remove all old and new junk, trash, and debris from forests, floodplain, streams, WETLANDS AND THEIR BUFFERS.

10. OBTAIN APPROVAL OF APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (3 DAYS) REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS. 12. NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE AFTER EACH RAINFALL AND ON a daily basis.



CONSTRUCTION SPECIFICATIONS

Use matting that has a design value for shear stress equal to or higher than the shear stress designated

approved plans. 2. Use permanent soil stabilization matting made of open weave synthetic, non-degradable fibers or elements of uniform thickness and distribution throughout. Chemicals used in the mat must be non-leaching and non-toxic

to vegetation and seed germination and non-injurious to the skin. If present, netting must be extruded plastic with a maximum mesh opening of 2x2 inches and sufficiently bonded or sewn on 2 inch centers along longitudinal axis of the material to prevent separation of the net from the parent material. 3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM gauge of no. 11 and no. 0 respectively. "U" shaped staples must average 1 to 1 1/2 inches wide and be a minimum of 6 inches long. "T" shaped staples must have a minimum 8 inch main leg, a minimum 1 inch secondary leg and minimum 4 inch head. Wood stakes must be rough-sawn hardwood, 12 to 24 inches in length, 1x3 inch in cross

SECTION, AND WEDGE SHAPE AT THE BOTTOM. 4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 40 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION is specified on the approved erosion and sediment control plan.

5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER of channel outward when placing rolls. Lay matting smoothly and firmly upon the seeded surface. Avoid stretching 6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM),

WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT. 7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE trench, stapling the mat in place, replacing the excavated material, and tamping to secure the mat end in the key.

6. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING is keyed and stapled in place, fill the mat voids with top soil or granular material and lightly compact or roll

to maximize soil/mat contact without crushing mat. 10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION 8-4 VEGETATIVE STABILIZATION.

PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION NOT TO SCALE

TEMPORARY SEEDING NOTES (B-4-4)

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

1,000 5Q.FT.) OF 10-20-20 FERTILIZER.

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING

APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/

(14 LB5./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC.

INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING,

APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER

(9 LB5./1,000 SQ.FT.) AND 500 LB5. PER ACRE (11.5 LB5./

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST

185./1.000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE

PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE

(1.4 LBS./1.000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND

2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPING

LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH

FEBRUARY 20. PROJECT SITE BY: OPTION (1) - TWO TONS PER

ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS

POSSIBLE IN THE SPRING; OPTION (2) -- USE 500; OPTION (3) -- SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH

WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD

APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.)

OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.

ASPHALT ON FLAT ACRES. ON SLOPES & FEET OR HIGHER USE

* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNVETCH AT 15

LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS

THE SEEDING REQUIRMENT. OPTIMUM SEEDING DATE FOR THIS

CHAIN LINK FENCING -

embed filter cloth &— Minimum into ground

* IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42"

6 FEET APART.

AT TOP AND MID-SECTION.

REQUIREMENTS IN SECTION H-1 MATERIALS

IN ACCORDANCE WITH THIS DETAIL.

AROUND THE ENDS OF THE SILT FENCE.

if undermining occurs, reinstall fence.

36 IN MIN. FENCE POST LENGTH—

NIN DE

This development plantis approved for soil erosion and sediment control by

ATTN: MICHAEL J. McCANN

AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.

FILTER CLOTH-

34 MINIMUM

CONSTRUCTION SPECIFICATIONS

SECTION STELL POSTS WEIGHING NOT LESS THAN I POUND PER LINEAR FOOT.

2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN

3. Use woven slit film geotextile as specified in section H-1 materials and fasten

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE

INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE

· EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL

WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST

EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE

AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE

OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN.

<u>ELEVATION</u>

CROSS SECTION

SILT FENCE/TREE PROTECTION FENCE

ALVINIA KANING

GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES

1. USE WOOD POSTS 1 3/4 X 1 3/4 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND

QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U"

STANDARD SYMBOL

348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING

ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200

GALLONS PER ACRE (5 GAL./1.000 SQ.FT.) OF EMULSIFIED

INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS,

REPLACEMENTS AND RESEEDINGS.

MIXTURE 15 MARCH 1 TO APRIL 30.

1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3

1,000 5Q.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER

SEEDBED PREPARATION:

<u>501L AMENOMENTS:</u>

MAINTENANCE:

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS.

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3). AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES. SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE 8.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN. 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY

FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING. 3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION 8-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

!	ZONE (FROM FIGURE URE (FROM TABLE B.	FERTILIZER RATE (10-20-20)	lime rate		
SPECIES	APPLICATION RATE (LB/AC)	SEEDING Dates	SEEDING DEPTHS		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 LB/AC (10 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 5F)
OAT5	72		1"		
RYE	112		1*		

DUST CONTROL DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS. <u>PURPOSE</u> TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES. ON AND OFF-SITE DAMAGE. HEALTH HAZZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. mulch should be crimped of tacked to prevent blowing. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER). TILLAGE — TO ROUGHEN SURFACE AND BRING CLOOS TO THE SURFACE. THIS IS AN emergency measure which should be used before soil blowing starts. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED about 12° apart, spring-toothed harrows and similar plows are examples OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS sprinkled with WATER UNTIL THE SURFACE IS MOIST. REPEAT AT NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THE RUNOFF BEGINS TO FLOW. . Barriers – 50110 Board Fences, Silt Fences, Snow Fences, Burlap Fences, straw bale dikes and similar material can be used to control air CURRENTS AND SOIL BLOWING, BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING currents at intervals of about 10 times their height are effective in

CONTROLLING SOIL BLOWING 6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEFD PERMANENT METHODS

3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER and permanent stabilization with sod. Existing trees or large shrubs may AFFORD VALUABLE PROTECTION IF LEFT IN PLACE. 2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR

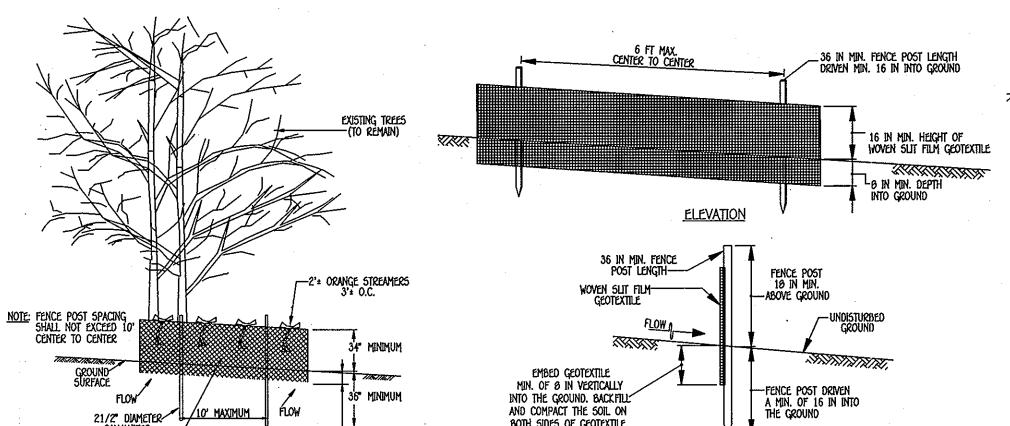
---EARTH FILL * Geotextile Class 'C' — Or Better - PIPE AS NECESSARY MINIMUM 6" OF 2"-3" AGGREGATE OVER LENGTH AND WIDTH OF * 50' MINIMUM LENGTH muminim ¹01 Widih STANDARD SYMBOL PLAN VIEW <u>CONSTRUCTION SPECIFICATION</u> - PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

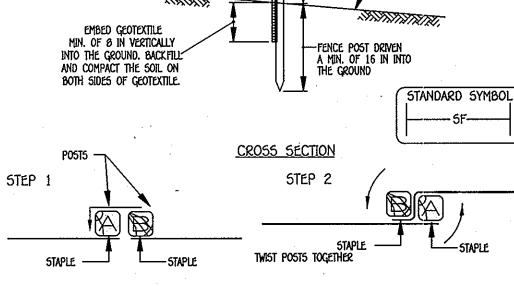
PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE.

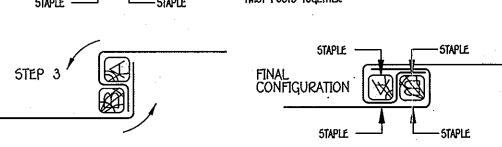
MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.

PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE







JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW) CONSTRUCTION SPECIFICATIONS

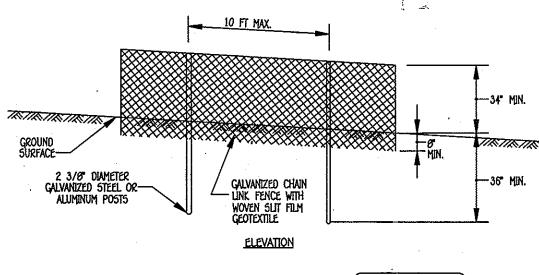
1. USE WOOD POSTS 1 3/4" X 1 3/4" 1/16" (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN I POUND PER LINEAR FOOT.

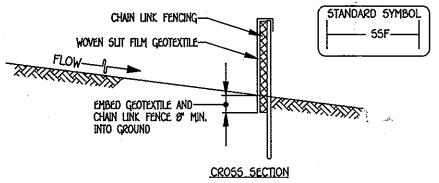
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART. 3. Use woven slit film geotextile as specified in section H-1 materials and fasten geotextile SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION 4. Provide manufacturer certification to the authorized representative of the inspection/enforcement AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL on both sides of fabric. 6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH

this detail 7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE. 8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT

REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE. SILT FENCE NOT TO SCALE





CONSTRUCTION SPECIFICATIONS 1. INSTALL 2 3/8" DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 5IX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36" INTO THE GROUND. 2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 3/8" MAXIMUM OPENING) 42" IN HEIGHT

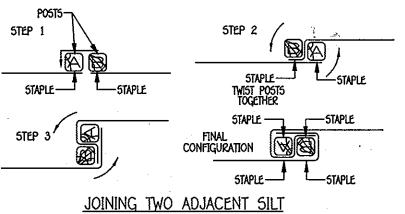
SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. 3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8" INTO THE GROUND.

4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6", FOLDED AND STAPLED TO PREVENT SEDIMENT BY PASS. 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES

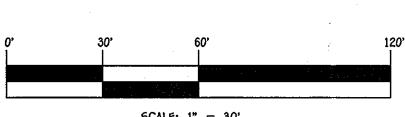
TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. 6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING

SUPER SILT FENCE NOT TO SCALE



FENCE SECTIONS (TOP VIEW)



SCALE: 1" = 30' SEDIMENT/EROSION CONTROL, STORMWATER MANAGEMENT DETAILS & NOTES

SINGLE FAMILY DETACHED

NORMANDY OAKS

LOTS 2 THRU 7

ZONED: R-20 TAX MAP No.: 10 PARCEL NO.: 51 GRID NO.: 13 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET 4 OF 6

SCALE: 1" = 30' DATE: DECEMBER 02, 2013 50P-14-018

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855



DATE

REVISION

SURVEYOR'S CERTIFICATE I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

KEVIN BOWSER

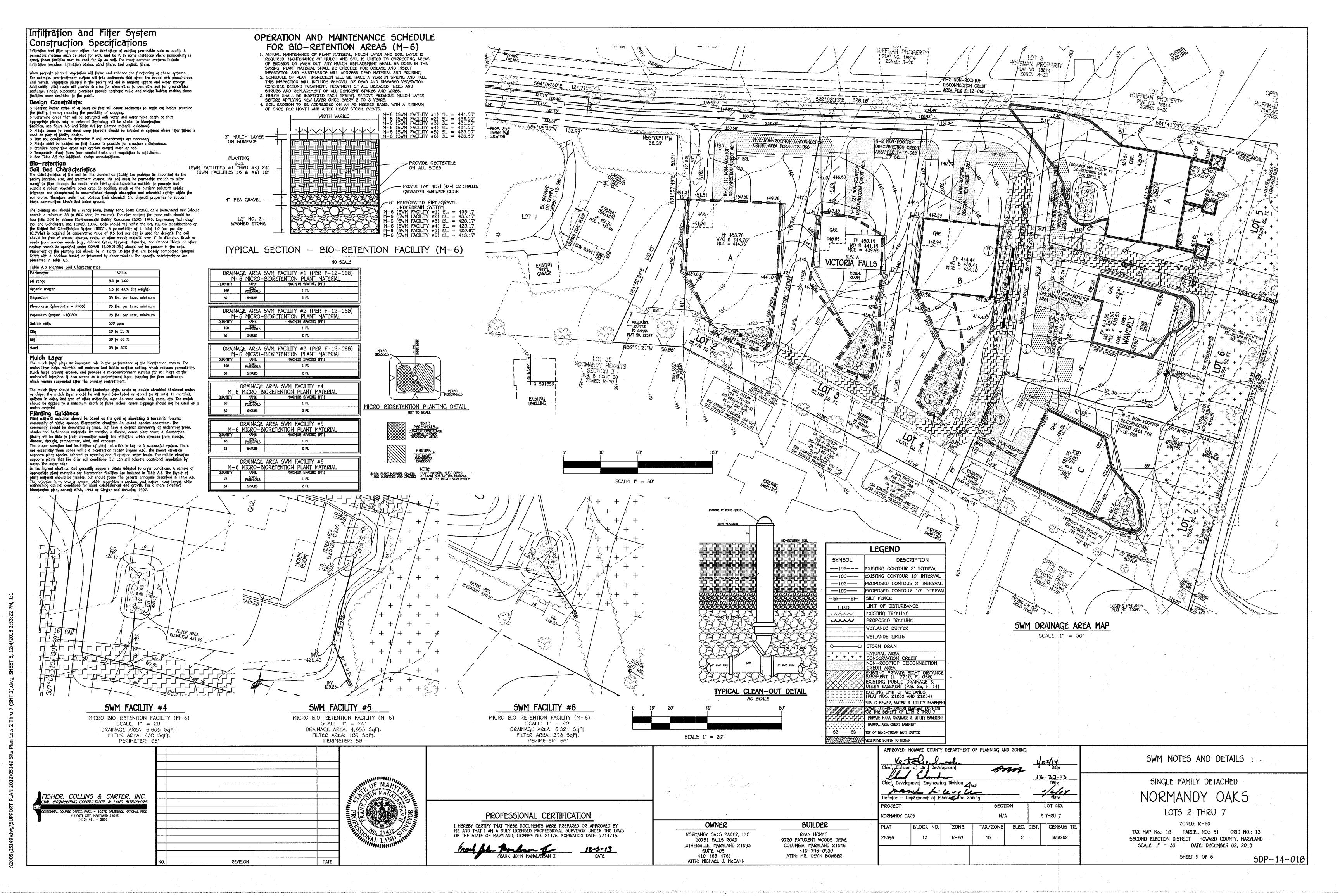
DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

OWNER BUILDER NORMANDY OAKS BAKER, LLC RYAN HOMES 9720 PATUXENT WOODS DRIVE 10751 FALLS ROAD COLUMBIA, MARYLAND 21046 LUTHERVILLE, MARYLAND 21093 410-796-0980 SUITE 405 ATTN: MR. KEVIN BOWSER 410-465-4761

22396

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 1/02/14 Date irector - Department of Planning and Joning PROJECT SECTION 2 THRU 7 NORMANDY OAKS N/A TAX/ZONE ELEC. DIST. BLOCK NO. ZONE CENSUS T R-20 6068.02

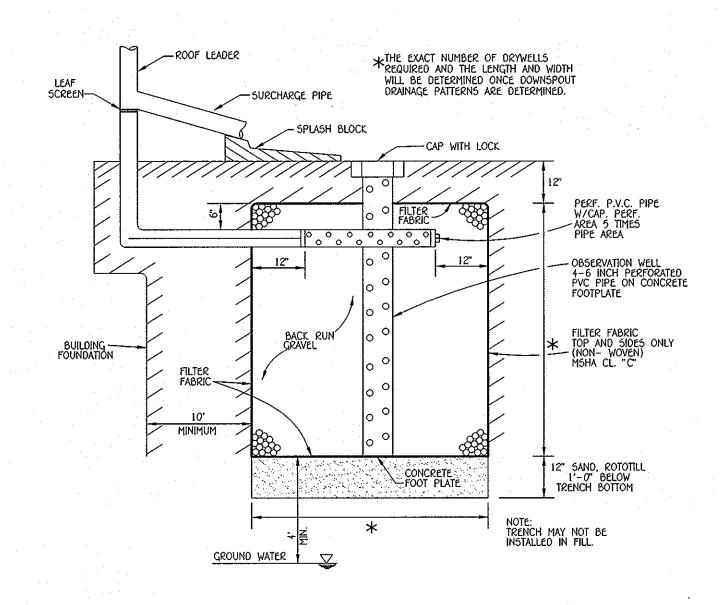




TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF NONROOFTOP RUNOFF (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD



OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS. D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR
- TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN. E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE
- WITH OPERATION AND MAINTENANCE CRITERIA.
- F. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

 DRY WELL CHART					
LOT NO.	AREA OF ROOF PER DOWNSPOUT	VOLUME REQUIRED	VOLUME PROVIDED	NUMBER OF DRYWELLS	DXLXW
i	631 5Q. FT.	198 CU. FT.	315 CU. FT.	3	10' x 10' x 3.5'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Normandy Oaks SWM Howard County, Maryland Brown, maist, soft, slit, trace san 1/1/1 Brown and gray, moist, dense, silty sand and rock fragments 27-27-17 117 Light brown, moist, soft to stiff. al trace sand (ML) 8-10-10 11 1 1 Groundwater Ĭ, incountered @ 10.0° while drilling Bottom of boring @ 12.0' SAMPLER TYPE AT COMPLETION DRIVEN SPLIT SPOON UNLESS OTHERWISE HSA - HOLLOW STEM AUGERS PT - PRESSED SHELBY TUBE I - INTACT AFTER 24 HRS. CFA - CONTINUOUS FLIGHT AUGER CA - CONTINUOUS FLIGHT AUGER U - UNDISTURBED AFTER ____ HRS.

OPERATION AND MAINTENANCE SCHEDULE FOR H.O.A. OWNED AND MAINTAINED UNDERGROUND 5.W.M. FACILITY PREVIOUS PROVIDED ON F-12-068

- A. H.O.A. ROUTINE MAINTENANCE RESPONSIBILITIES:
- 1. THE UNDERGROUND S.W.M. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- 2. MAINTENANCE OF THE 48-INCH PIPE SHALL BE PERFORMED BY FLUSHING THE SYSTEM THROUGH I-2 AND BY VACUUMING AT MANHOLE M-1. THE DISCHARGE ORIFICE OF THE UNDERGROUND S.W.M. FACILITY SHALL BE TEMPORARILY
- BLOCKED DURING SAID MAINTENANCE OPERATION. 3. DISPOSAL OF MATERIAL SHALL BE IN ACCORDANCE WITH SIMILAR B.M.P. THAT RANGE FROM DISPOSAL IN A SANITARY LANDFILL TO INCINERATION IN A LICENSED FACILITY. PETROLEUM WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY.
- B. H.O.A. NON-ROUTINE MAINTENANCE:
- 1. STRUCTURAL COMPONENTS OF THE UNDERGROUND FACILITY SUCH AS THE MANHOLE, PIPE AND ORIFICE SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS. INSPECTION REPORTS SHALL BE KEPT UNTIL THE NEXT SUBSEQUENT INSPECTION.
- 2. PROBLEMS IDENTIFIED DURING INSPECTION WILL BE PROMPTLY CORRECTED. MAJOR PROBLEMS SHALL ALSO BE BROUGHT TO THE ATTENTION OF THE HOWARD COUNTY DEPT. OF PUBLIC WORKS TO INSURE THAT PUBLIC SAFETY IS MAINTAINED. BLOCKED DURING SAID MAINTENANCE OPERATION.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Normandy Oaks SWM

Brown to light brown, maist, medium stiff to stiff, silt, trace sand and mica (ML) Sample 2 contains trace rock fragments Brown, moist, medium dense sandy slit, trace mica (ML) 8-10-15-20 countered @ 10.0" while drilling Bottom of boring @ 12.0' SAMPLER TYPE AT COMPLETION DRIVEN SPLIT SPOON UNLESS OTHERWISE HSA - HOLLOW STEM AUGERS PT - PRESSED SHELBY TUBE AFTER 24 HRS. CFA - CONTINUOUS FLIGHT AUGE CA - CONTINUOUS FLIGHT AUGER U-UNDISTURBED DC - DRIVING CASING RC - ROCK CORE L-LOST makinam dalama kambi mam mamini da A. K. dalam ma aifiimi i sanatraan ma dalam na dalam ha dalam ta dalam ta d

- 4 to 7 in Stone (typ.)

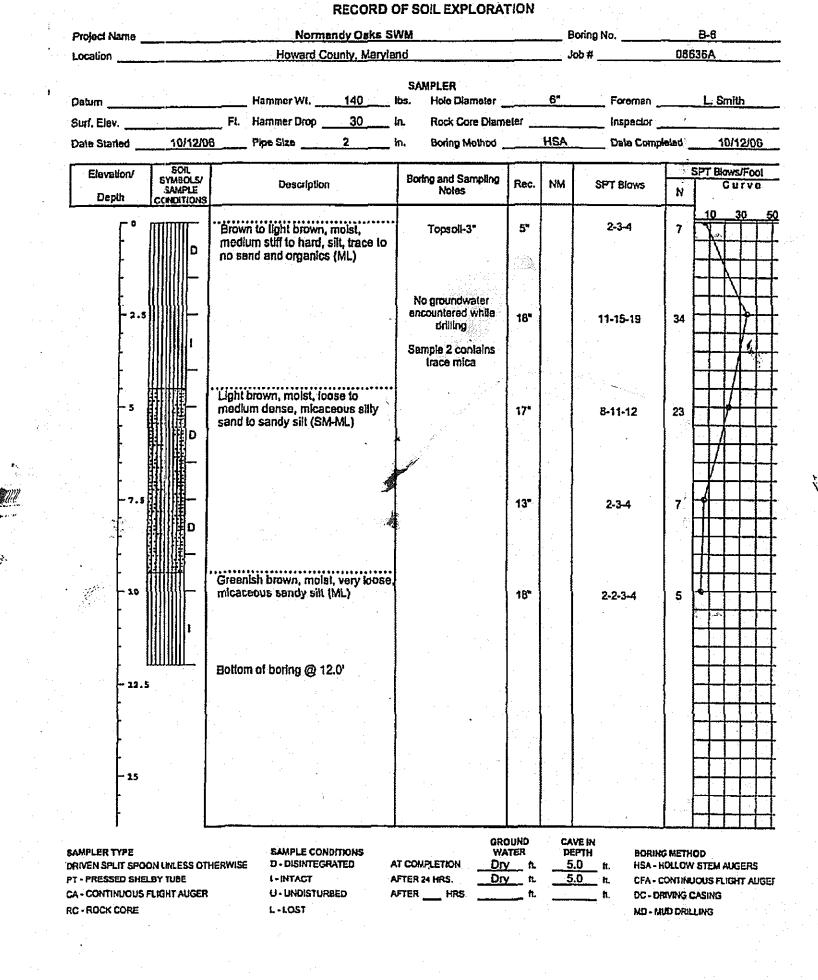
WASHED AGGREGATE

STANDARD SYMBOL

GEOTEXTILE 6 IN

EIGHT TO WEIR CREST, Y

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.



STANDARDS & SPECIFICATIONS FOR STOCK PILE AREA DEFINITION

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

- 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN. 2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL
- AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING. 3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
- 5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER 6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT
- CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE. 7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
- 8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAININATED MATERIAL MUST BE COVERED WITH IMPERMEABLE MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN accordance with Section 8–4 vegetative stabilization. Side slopes must be maintained at no steeper RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED N ACCORDANCE WITH SECTION B-3 LAND GRADING.

MAINTAIN LINE, GRADE, AND CROSS SECTION. STONE CHECK DAM NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR

1. PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION

2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WASHED 4 TO

FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY

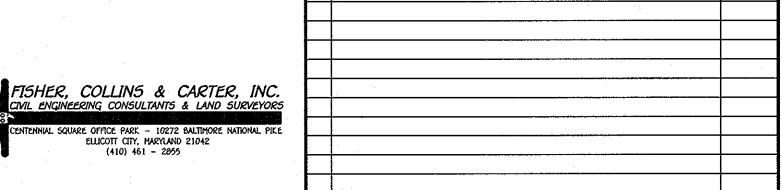
COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE

FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (3/4 INCH TO 1 1/2 INCH). 3. SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR OTTCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET. 4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST.

OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSTREAM

C-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.

-NONWOVEN



REVISION



DATE

SURVEYOR'S CERTIFICATE "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorized stocking inspection by the Howard Soil 12573

4 TO 7 IN STONE

OWNER	BUILDER		
NORMANDY OAKS BAKER, LLC 10751 FALLS ROAD LUTHERVILLE, MARYLAND 21093 SUITE 405	RYAN HOMES 9720 PATUXENT WOODS DRIVE COLUMBIA, MARYLAND 21046 410-796-0980		
410-465-4761 ATTN: MICHAEL J. McCANN	ATTN: MR. KEVIN BOWSER		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 1/152/14 GRIB [2.23.13 Pirector - Department of Planking and Zoning NORMANDY OAKS 2 THRU 7 BLOCK NO. ZONE TAX/ZONE | ELEC. DIST. | CENSUS 1 R-20 6068.02

SEDIMENT/EROSION CONTROL, SWM NOTES AND DETAILS

SINGLE FAMILY DETACHED NORMANDY OAKS

LOTS 2 THRU 7

ZONED: R-20 TAX MAP No.: 18 PARCEL NO.: 51 GRID NO.: 13 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND 5CALE: 1" = 30' DATE: DECEMBER 02, 2013

SHEET 6 OF 6

5DP-14-018