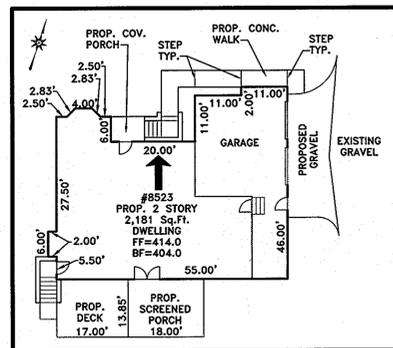


HOWARD COUNTY CONTROL POINTS			
NO.	NORTHING	EASTING	ELEV.
17FB	593,214.449	1,365,669.045	456.23
18DA	593,334.416	1,367,562.224	483.15

ALL BENCHMARKS CONSIST OF A STAMPED BRASS OR ALUMINUM DISC SET IN CONCRETE.
DRAWINGS ARE BASED ON MARYLAND COORDINATE SYSTEM (MCS).
HORIZONTAL - NAD 83
VERTICAL - NAVD 88



BUILDING ELEVATION
SCALE: 1" = 10'



DWELLING DETAIL
SCALE: 1" = 20'

BY THE DEVELOPER
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

M. Fleet 9/5/12
DEVELOPER DATE

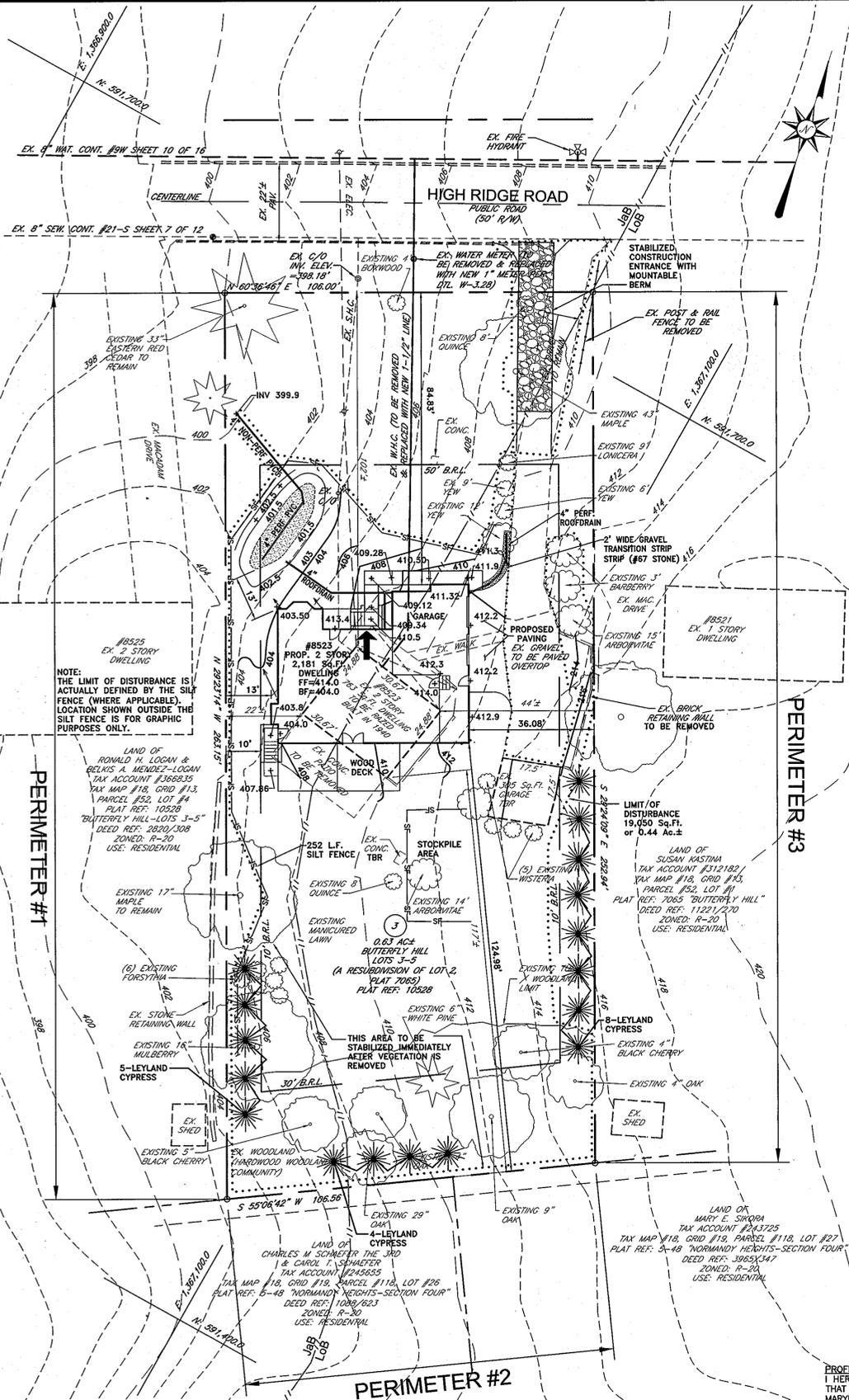
BY THE ENGINEER
I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John A. Schaefer 9/4/12
ENGINEER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
USDA - NATURAL RESOURCES CONSERVATION SERVICES DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John A. Schaefer 9/11/12
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad Edwards 9-18-12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Kurt Schaefer 9-20-12
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
David A. Leavelle 7/20/12
DIRECTOR DATE



SITE PLAN
SCALE: 1" = 20'
0' 20' 40' 60'

Richardson Engineering, LLC
30 East Padonia Road, Suite 500
Timonium, Maryland 21093
Phone: 410-585-1532 Fax: 443-901-1208

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 16597, EXPIRATION DATE: 08-15-2013

John A. Schaefer 9/4/12
REGISTERED PROFESSIONAL ENGINEER

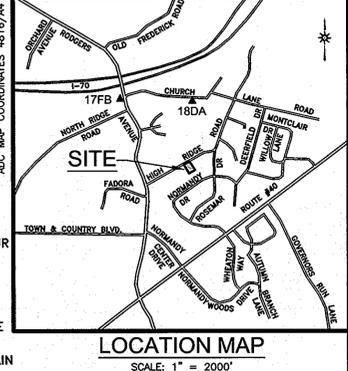
OWNERS/DEVELOPERS
SETH & MELISSA VAN FLEET
10623 ANGLHILL ROAD
COCKEYSVILLE, MD. 21030

SHEET INDEX

SHEET #	DESCRIPTION
1	SITE PLAN
2	NOTES & DETAILS
3	SWM NOTES & DETAILS

LEGEND

---	EX. SOILS
---	EX. BUILDING
---	EX. BOUNDARY
---	EX. INDEX CONTOUR
---	EX. INTERMEDIATE CONTOUR
---	EX. GRAVEL
---	EX. FENCELINE
---	EX. SEWER
---	EX. SETBACK LINE
---	EX. WATER
---	PROPOSED BUILDING
---	PROPOSED INDEX CONTOUR
---	PROPOSED INTERMEDIATE CONTOUR
---	PROPOSED PAVING EDGE
---	PROPOSED SEWER
---	PROPOSED WALK/CONCRETE
---	PROPOSED WATER
---	PROPOSED LIMIT OF DISTURBANCE
---	PROPOSED SILT FENCE
---	PROPOSED UNDERDRAIN/ROOFDRAIN



SITE ANALYSIS DATA CHART

- TOTAL AREA OF LOT: 27,361 Sq.Ft. or 0.63 AC. ±
- PURPOSE OF SDP: TO RAZE THE EXISTING SINGLE FAMILY DWELLING AND CONSTRUCT A NEW SINGLE FAMILY DWELLING.
- OWNER / DEVELOPER: SETH & MELISSA VAN FLEET 10623 ANGLHILL ROAD COCKEYSVILLE, MD. 21030
- REQUIRED SETBACKS:
FRONT: 5'
SIDE: 10'
REAR: 30'
- OPEN SPACE:
A FEE IN LIEU WAS PAID WITH F-87-89
- BUILDING COVERAGE: 2,735 Sq.Ft. or 0.06 AC. ± (10.0%)
- DISTURBED AREA: 4,996 Sq.Ft. or 0.11 AC. ±
- PREVIOUS APPROVALS: F-87-89, F-89-21 & F-97-171.
- SITE IS EXEMPT FROM FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202(b)(1)(i) OF THE HOWARD COUNTY LAND DEVELOPMENT AND REGULATIONS BECAUSE THE TOTAL AREA OF LOT 3 IS LESS THAN 40,000 SQ. FT. IN SIZE.
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE OCTOBER 2nd 2004 COMPREHENSIVE ZONING PLAN AND COMP-LITE ZONING AMENDMENT DATED JULY 28, 2008.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLING TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A. WIDTH: 12' MINIMUM SINGLE DRIVEWAY.
B. SURFACE: 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1 1/2" MIN.)
C. GEOMETRY: MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS.
D. STRUCTURES: CAPABLE OF SUPPORTING 25 GROSS TONS (425 LBS/LOADING)
E. DRAINAGE ELEMENTS: CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
- MAINTENANCE: SUFFICIENT TO INSURE ALL WEATHER USE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY JOSEPH THOMPSON & ASSOCIATES, LLC, PERFORMED ON OCTOBER 20TH 2011.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM, HOWARD COUNTY MONUMENTS NO. 17FB & 18DA WERE USED FOR THE PROJECT.
- IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME I, SECTION 5.1.2.B.2, THIS PROJECT REQUIRES STORMWATER MANAGEMENT SINCE THE SDP DISTURBS MORE THAN 5,000 SQ. FT. (TOTAL DISTURBANCE, 19,050 SF) BY THE USE OF A RAIN GARDEN AND DISCONNECTS.
- EXISTING UTILITIES ARE BASED ON FIELD LOCATED EVIDENCE AND UTILITY DRAWINGS AS FOLLOWS:
WATER-CONTRACT #9W, WATER MAIN EXTENSIONS SHEET 10 OF 16.
SEWER-CONTRACT #21-S, SEWER MAIN EXTENSIONS SHEET 7 OF 12.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPERS EXPENSE.
- SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06.
- THE PROPERTY SHOWN HEREON IS BASED ON THE RECORDED PLAT ENTITLED "BUTTERFLY HILL, LOTS 3-5" (A RESUBDIVISION OF LOT 2, PLAT 7065) DRAWN BY KCI TECHNOLOGIES, INC. DATED MARCH 1992.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED 17 EVERGREEN TREES AT \$150 PER TREE IN THE AMOUNT OF \$2,550.00 IS PART OF THE BUILDERS GRADING PERMIT APPLICATION FOR LOT.
- PROPOSED DWELLING WILL HAVE A AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.

ROOFTOP DRAINAGE NOTE:

DRAIN THE FRONT OF THE HOUSE, EXCLUDING THE EAST HALF OF THE GARAGE, AND THE REAR WEST PORTION OF THE HOUSE TO THE RAIN GARDEN. PROVIDE ROOF DRAINS WHERE NECESSARY.

PLANT LIST

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
LC	17	CUPRESSOCYPARIS LEYLANDII	LEYLAND CYPRESS	5'-6" TALL

NOTE:
ALL EXISTING TREES NOT LABELED "TO REMAIN" WILL BE, OR HAVE BEEN, REMOVED.

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	PERIMETER 1	PERIMETER 2	PERIMETER 3
LANDSCAPE TYPE	A	A	A
LINEAR FEET OF ROADWAY/ FRONTAGE/PERIMETER	263	107	253
CREDIT FOR EXISTING VEGETATION	1 SHADE TREE	0	0
CREDIT FOR WALL FENCE OR BERM (YES NO, LINEAR FEET)	0	0	0
NUMBER OF PLANTS REQUIRED:	263 [⊖]	107 [⊖]	253 [⊖]
SHADE TREES	1/60=4	1/60=2	1/60=4
EVERGREEN TREES	0	0	0
SHRUBS	0	0	0
NUMBER OF PLANTS PROVIDED:			
SHADE TREES	0	0	0
EVERGREEN TREES	5	4	8
OTHER TREES	0	0	0
SHRUBS	0	0	0

PLANT COMMUNITY CHART

PLANT COMMUNITY	SIZE	DOMINANT SPECIES	COMMENT
MANICURED TURF	0.5 ACRES	FESCUE TURF, SHRUBS INCLUDE YEW, LONCERA, ARBOVITAE, CRAB APPLE, SPECIMEN MAPLE	SPECIMEN MAPLE SHALL BE REMOVED DURING CONSTRUCTION, ALL OTHER PLANTS HAVE MINIMAL HORTICULTURAL VALUE. SPECIMEN MAPLE IN GOOD CONDITION
HARDWOOD WOODLAND	0.1 ACRES	MATURE OAK, B. CHERRY, ROSA MULTIFLORA	A MIX OF DOMINANT MATURE OAKS AND ROSA MULTIFLORA OAKS AND CANOPY TREES TO BE SAVED AND ROSA M. TO BE REMOVED.

SOILS CHART

SOILS SERIES	SEPTIC SYSTEM LIMITATIONS	HOMESITE LIMITATIONS W/BASEMENT	STREET AND PARKING LOTS LIMITATIONS	HYDRIC SOILS	SOIL GROUP	ERODIBILITY K FACTOR	SLOPES > 15%
JoB	VERY	VERY	VERY	NO	D	.43	NO
LoB	VERY	NOT	SOMEWHAT	NO	B	.02	NO

SOILS LEGEND

JoB - JACKLAND SILT LOAM, 3 TO 8 PERCENT SLOPES
LoB - LEGORE-MONTALTO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES

ADDRESS CHART

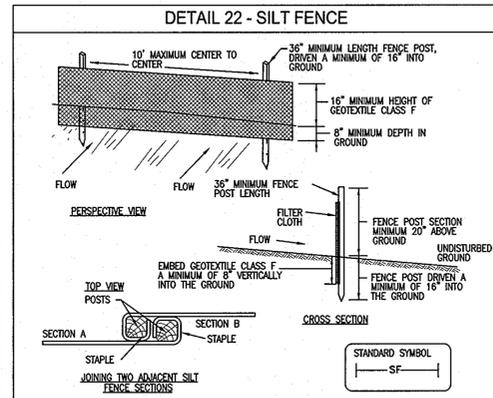
LOT/PARCEL#	STREET ADDRESS
3 / 52	8523 HIGH RIDGE ROAD

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL
BUTTERFLY HILL, LOTS 3-5	SECT. AREA	LOT/PARCEL #52
PLAT # OR 17F	GRID #	ELECTION DIST
10528	13	2ND
PLAT REF.	ZONING	CENSUS TRACT
10528	R-20	6026
WATER CODE	SEWER CODE	
9W	21-S	

BUTTERFLY HILL, LOT 3 8523 HIGH RIDGE ROAD SITE PLAN

DESIGNED BY:	SCALE	TAX MAP	A.D.C. MAP 12	JOB #	SHEET
PCR	1"=20'	18	GRID E-5	11085	1
DRAWN BY:	DEED REF.	GRID	PLAT REF.	FILES#	NO.
CND	13567/22	13	10528	11085	1
CHECKED BY:	PARCEL	SECTION	DATE	REVISION	BY
PCR	52	18	08-21-2012		



CONSTRUCTION SPECIFICATIONS

- FENCE POSTS SHALL BE A MINIMUM OF 16" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1-1/2" X 1-1/2" SQUARE (MINIMUM) CUT, OR 1 3/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WELDED NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
- GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL FT ² /MINUTE (MAX)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN)	TEST: MSMT 322

- WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEEDING BYPASS.
- SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FENCE HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E-15-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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24.0 MATERIALS SPECIFICATIONS

Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30 **	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

* US Std Sieve CW-02215 ** .50 mm. max. for Super Silt Fence

THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

- APPARENT OPENING SIZE MSMT 323
- GRAB TENSILE STRENGTH ASTM D 1682: 408" SPECIMEN, 1X2" CLAMPS, 12" MIN. STRAIN RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.
- BURST STRENGTH ASTM D 3788

THE FABRIC SHALL BE WET TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MILDLY WEAR RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS, AND COMPOSED OF A MINIMUM OF 80% BY WEIGHT OF POLYPROPYLENE, POLYESTERS, OR POLYAMIDES. THE GEOTEXTILE FABRIC SHALL RESIST DEGRADATION FROM ULTRAVIOLET EXPOSURE.

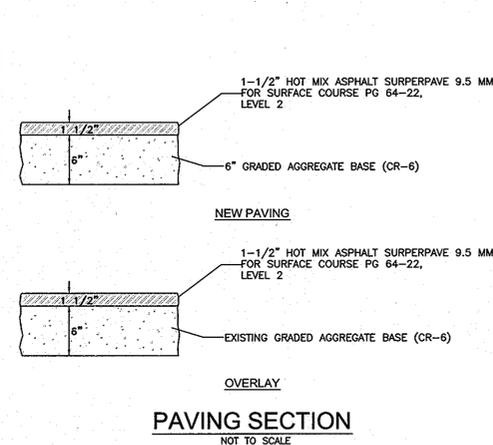
IN ADDITION, CLASSES A THROUGH F SHALL HAVE A 0.01 CM/SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND AN APPARENT MINIMUM CLOSURE OF 20 PERCENT (20%) WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.

SILT FENCE

CLASS F GEOTEXTILE FABRICS FOR SILT FENCE SHALL HAVE A 50 LB./IN. MINIMUM TENSILE STRENGTH AND A 20 LB./IN. MINIMUM TENSILE MODULUS WHEN TESTED IN ACCORDANCE WITH MSMT 509. THE MATERIAL SHALL ALSO HAVE A 0.3 GAL/FT²/MIN. FLOW RATE AND SEVENTY-FIVE PERCENT (75%) MINIMUM FILTERING EFFICIENCY WHEN TESTED IN ACCORDANCE WITH MSMT 322.

GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF SILT FENCE SHALL RESIST DEGRADATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 DEGREES F.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H-24-1	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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CONSTRUCTION SPECIFICATION

- LENGTH - MINIMUM OF 50' (30' FOR SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2"-3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 6:1 SLOPES AND A MINIMUM OF 6" STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE A CONSTRUCTION TRAFFIC ENTRIES OR LEAVES A CONSTRUCTION SITE, VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	MODIFIED F-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOIL, TEMPORARY SEEDING AND MULCHING SEC. 6 TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMSSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	27,361 SF / 0.63 Ac.±
AREA DISTURBED	18,930 SF / 0.43 Ac.±
AREA TO BE ROOFED OR PAVED	4,700 SF / 0.11 Ac.±
AREA TO BE VEGETATIVELY STABILIZED	1,442 SF / 0.32 Ac.±
TOTAL CUT	140 CU. YDS
TOTAL FILL	15 CU. YDS

 OFFSITE WASTE/BORROW AREA LOCATION - SITE WITH A CURRENTLY ACTIVE GRADING PERMIT.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIECE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

BY THE DEVELOPER

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mvor/fleet 8/17/12
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN OF 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.

R. Smith 8/2/12
ENGINEER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USA - NATURAL RESOURCES CONSERVATION SERVICES DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

J. N. Roberts 8/16/12
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 9.15.12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Vestibular 9-20-12
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

maske m. legu 7/2/12
DIRECTOR DATE

TOPSOIL SPECIFICATIONS

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

PURPOSE: 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:

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLY OF MOISTURE AND PLANT NUTRIENTS TO PLANT GROWTH.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- 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

- 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.
- 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 CONCRETES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERNARDIA GRASS, QUACKGRASS, JOHNSONGRASS, NUTBUSH, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - 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/1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
 - FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION IV - VEGETATIVE STABILIZATION METHODS & MATERIALS.
 - TOPSOIL APPLICATION:
 - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS & BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND SLIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - 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.
 - ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE EXCLUSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
 - COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - 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 ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 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 1 TON/1,000 SQUARE FEET.
 - COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB./1,000 SQUARE 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.

TEMPORARY SEEDING SUMMARY

SEED MIXTURE - HARDINESS ZONE 6b (FROM TABLE 26)

MIX #	SPECIES	APPLICATION RATE (Lbs/Ac)	SEEDING DATE	SEEDING DEPTH	FERTILIZER RATE (10-10-10)	LIME RATE
1	BARLEY	122 Lbs/Ac 2.8 Lbs/1,000 Sq Ft	3/1 thru 4/30 8/15 thru 10/15	1-2 INCHES	600 Lbs/Ac 15 Lbs/1,000 Sq Ft	2 Tons/Ac 100 Lbs/1,000 Sq Ft
	OATS	96 Lbs/Ac 2.21 Lbs/1,000 Sq Ft	3/1 thru 4/30	1-2 INCHES		
3	RYE	140 Lbs/Ac 3.22 Lbs/1,000 Sq Ft	3/1 thru 4/30 8/15 thru 11/15	1-2 INCHES		
	WEeping LOVE GRASS	4 Lbs/Ac 0.09 Lbs/1,000 Sq Ft	5/1 thru 8/14	1/4-1/2 INCH		
4	ANNUAL RYEGRASS	50 Lbs/Ac 1.15 Lbs/1,000 Sq Ft	3/1 thru 4/30 8/15 thru 11/1	1/4-1/2 INCH		

* FOR HYDROSEEDING OR DRY SEEDING, APPLY AT SURFACE. FOR DRILL OR CULTRIPACKER SEEDING, DEPTH = 1/4" MIN.

PERMANENT SEEDING SUMMARY

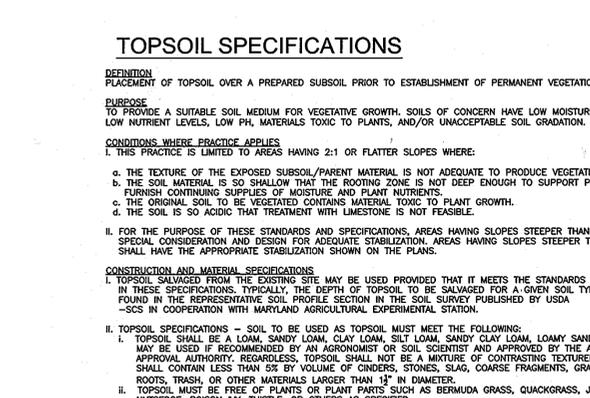
SEED MIXTURE - HARDINESS ZONE 6b (FROM TABLE 25)

MIX #	SPECIES	APPLICATION RATE (Lbs/Ac)	SEEDING DATE	SEEDING DEPTH	N	P205	K20	LIME RATE
1	TALL FESCUE (75%)	150 Lbs/Ac	3/1 thru 5/15	*	90 Lbs/Ac 2.0 Lbs/1,000 Sq Ft	175 Lbs/Ac 4 Lbs/1,000 Sq Ft	175 Lbs/Ac 4 Lbs/1,000 Sq Ft	2 Tons/Ac 100 Lbs/1,000 Sq Ft
	ORANGE BLUEGRASS (10%) RED TOP (5%)	3.4 Lbs/1,000 Sq Ft	8/15 thru 10/15					
2	TALL FESCUE (65%)	125 Lbs/Ac 2.9 Lbs/1,000 Sq Ft	3/1 thru 5/15	*				
	PERENNIAL RYE GRASS (10%)	15 Lbs/Ac 0.34 Lbs/1,000 Sq Ft	3/1 thru 5/15 8/15 thru 10/15					
3	KENTUCKY BLUEGRASS (5%)	10 Lbs/Ac 0.23 Lbs/1,000 Sq Ft	3/1 thru 5/15	*				

NOTE: FOR STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION, SEE SECTION "G" - VEGETATIVE PRACTICES IN THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".

** FOR HYDROSEEDING, APPLY AT SURFACE; FOR DRY SEEDING, DEPTH = 1/4"-1/2" MIN.; FOR DRILL OR CULTRIPACKER SEEDING, DEPTH = 1/4" MIN.

*** FOR THE PERIOD 5/16 THRU 8/14, ADD EITHER MILLET (10lbs/acre), OR WEeping LOVEGRASS (2lbs/acre) TO MIXTURES #1 AND 3 ABOVE.



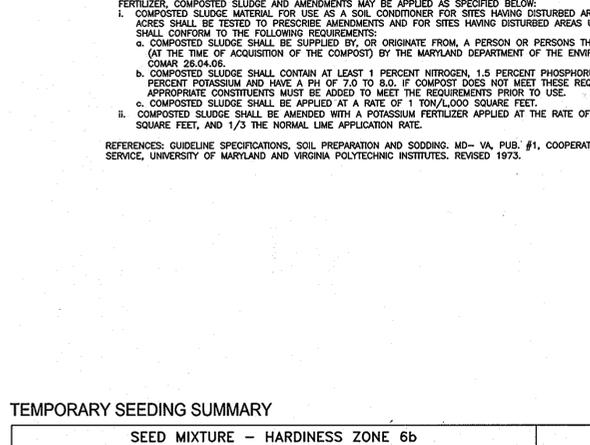
CONSTRUCTION SPECIFICATIONS

- FENCE POSTS SHALL BE A MINIMUM OF 16" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1-1/2" X 1-1/2" SQUARE (MINIMUM) CUT, OR 1 3/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WELDED NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
- GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL FT ² /MINUTE (MAX)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN)	TEST: MSMT 322

- WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEEDING BYPASS.
- SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FENCE HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E-15-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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CONSTRUCTION SPECIFICATION

- LENGTH - MINIMUM OF 50' (30' FOR SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2"-3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 6:1 SLOPES AND A MINIMUM OF 6" STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE A CONSTRUCTION TRAFFIC ENTRIES OR LEAVES A CONSTRUCTION SITE, VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	MODIFIED F-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOIL, TEMPORARY SEEDING AND MULCHING SEC. 6 TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMSSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	27,361 SF / 0.63 Ac.±
AREA DISTURBED	18,930 SF / 0.43 Ac.±
AREA TO BE ROOFED OR PAVED	4,700 SF / 0.11 Ac.±
AREA TO BE VEGETATIVELY STABILIZED	1,442 SF / 0.32 Ac.±
TOTAL CUT	140 CU. YDS
TOTAL FILL	15 CU. YDS

 OFFSITE WASTE/BORROW AREA LOCATION - SITE WITH A CURRENTLY ACTIVE GRADING PERMIT.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIECE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

BY THE DEVELOPER

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mvor/fleet 8/17/12
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN OF 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.

R. Smith 8/2/12
ENGINEER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USA - NATURAL RESOURCES CONSERVATION SERVICES DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

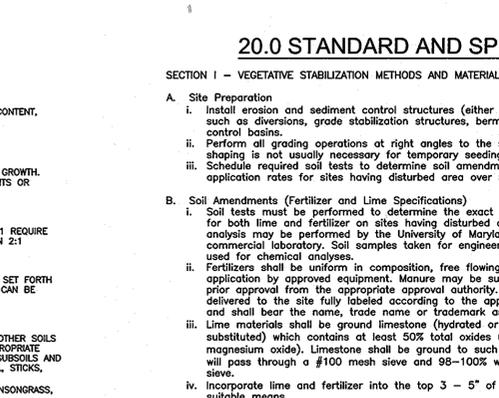
J. N. Roberts 8/16/12
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 9.15.12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Vestibular 9-20-12
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

maske m. legu 7/2/12
DIRECTOR DATE



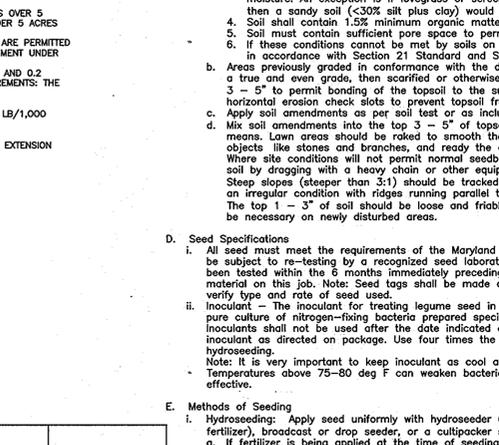
CONSTRUCTION SPECIFICATIONS

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TENSILE STRENGTH	50 LBS/IN (MIN)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL FT ² /MINUTE (MAX)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN)	TEST: MSMT 322

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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E-15-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	MODIFIED F-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UP

HOWARD COUNTY CONTROL POINTS

NO.	NORTHING	EASTING	ELEV.
17FB	593,214.449	1,365,669.045	456.23
18DA	593,334.416	1,367,562.224	483.15

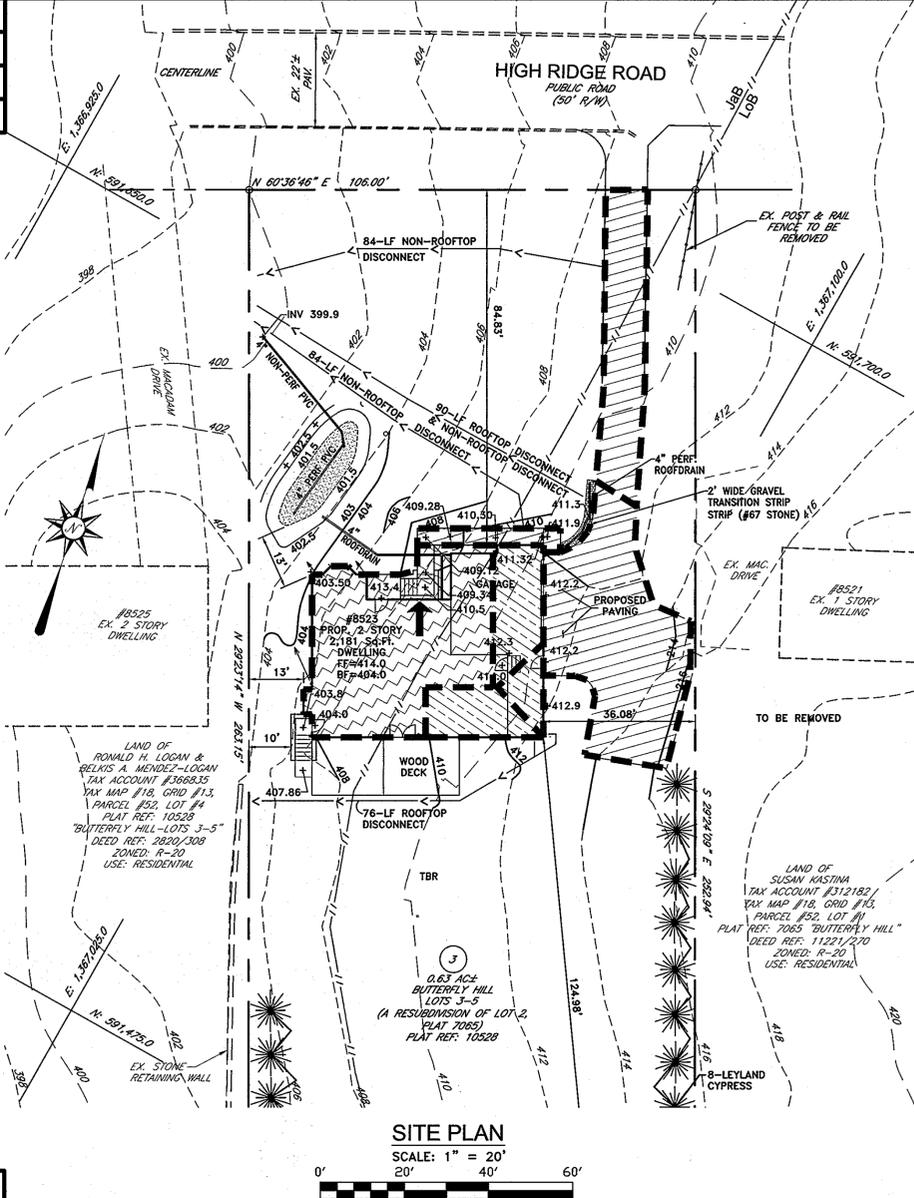
ALL BENCHMARKS CONSIST OF A STAMPED BRASS OR ALUMINUM DISC SET IN CONCRETE.
DRAWINGS ARE BASED ON MARYLAND COORDINATE SYSTEM (MCS).
HORIZONTAL - NAD 83
VERTICAL - NAVD 88

LEGEND

- IMPERVIOUS DRAINAGE AREA
- ROOFTOP DISCONNECT AREA
- NON-ROOFTOP DISCONNECT AREA
- AREA TO RAIN GARDEN

ROOFTOP DRAINAGE NOTE:

DRAIN THE FRONT OF THE HOUSE, EXCLUDING THE EAST HALF OF THE GARAGE, AND THE REAR PORTION OF THE HOUSE TO THE RAIN GARDEN. PROVIDE ROOF DRAINS WHERE NECESSARY.



SITE PLAN

SCALE: 1" = 20'



I. BIORETENTION AREA SOIL SPECIFICATION

- A. PLANTING SOIL:**
THE BIORETENTION AREA SHALL CONSIST OF A PLANTING SOIL HAVING A HOMOGENEOUS MIX OF 50% CONSTRUCTION SAND, 20-30% TOPSOIL WITH AN ALLOWABLE 5% MAXIMUM CLAY CONTENT, AND 20-30% ORGANIC COMPOST OR MULCH TO PROVIDE A SOIL MEDIUM WITH HIGH HYDROLOGIC CAPACITY.
THE PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUAKE GRASS, JOHNSON GRASS, MUGWART, NUTSEDGE, POISON IVY, CANDIAN THISTLE OR OTHER AS SPECIFIED.
IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH.
THE PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:
PH RANGE 5.5 - 6.5
ORGANIC MATTER 15 - 30%
THE FOLLOWING TESTING FREQUENCIES SHALL APPLY TO THE ABOVE SOILS:
PH ORGANIC MATTER: 1 TEST PER 90 CUBIC YARDS, BUT NOT MORE THAN 1 TEST PER BIORETENTION AREA.
ONE GRAIN SIZE ANALYSIS SHALL BE PERFORMED PER 90 CUBIC YARDS OF PLANTING SOIL, BUT NO LESS THAN 1 TEST PER BIORETENTION AREA.
- B. MULCH LAYER SPECIFICATION:**
A MULCH LAYER SHALL BE PROVIDED ON TOP OF PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCTS APPROVED BY THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES.
OF THE APPROVED MULCH PRODUCTS, ALL MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIALS, INCLUDING PLANT MATERIAL. MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCK PILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.
- C. SAND SPECIFICATION:**
THE SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN ONE INCH IN DIAMETER.
- D. COMPACTION:**
SOIL SHALL BE PLACED IN LIFTS LESS THAN 18 INCHES AND LIGHTLY COMPACTED.

II. BIORETENTION AREA PLANT SPECIFICATION

- GENERAL PLANTING:**
— ROOT STOCK OF PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM SOURCE TO THE JOB SITE AND UNTIL PLANTED.
— WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
— THE DIAMETER OF PLANTING PIT MUST BE A MINIMUM OF SIX INCHES LARGER THAN THE DIAMETER OF THE ROOT BALL.
— THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4 OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
— THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED AT THE BOTTOM OF THE PIT.
— THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED AT THE BOTTOM OF THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL. NEVER LIFT THE PLANT BY THE BRANCHES OR TRUNK.
— SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THE CENTER OF THAT THE BALL IS APPROXIMATELY 1/4 ABOVE THE FINAL GRADE.
— BACKFILL PLANTING PIT WITH EXISTING SOIL.
— MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
— NEVER COVER THE TOP OF THE BALL WITH SOIL. MOUND SOIL AROUND THE EXPOSED ? OF THE BALL.
— MAKE SURE MULCH DOES NOT CONTACT TREE'S TRUNK.
— TREE SHALL BE BRACED USING 2" X 2" WHITE OAK STAKES.
— STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS.
— STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. THE TREE IS BRACED TO THE STAKES UTILIZING HOSE AND WIRES.
- FERTILIZER:**
— TREE AND SHRUB FERTILIZER SHALL BE A 21 gm. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2-YEAR) FERTILIZER TABLET WITH MINIMUM GUARANTEED ANALYSIS OF 20-10-5:
TOTAL NITROGEN (N) - 20%
WATER SOLUBLE ORGANIC NITROGEN - 7%
WATER IN SOLUBLE ORGANIC NITROGEN - 13%
AVAILABLE PHOSPHORIC ACID (P2 O5) - 10%
SOLUBLE POTASH (K2O) - 5%
— FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:
1 GAL. CONTAINER 1 ea, 21 gm. TABLETS.
3 GAL. CONTAINER 2 ea, 21 gm. TABLETS.
5 GAL. CONTAINER 3 ea, 21 gm. TABLETS.
7 GAL. CONTAINER 5 ea, 21 gm. TABLETS.
- PLANTING NON-GRASS GROUND COVER:**
— THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWINGS: HAWKS AND SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASS OR LEGUMES).
— BEFORE PLANTING BIODEGRADABLE POTS, THEY SHALL BE SPLIT, AND NON BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF THE POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.
— THE GROUND COVER SHALL BE PLANTED SO THAT ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE-ROOT PLANTS SHALL BE COVERED TO THE CROWN.
— THE MULCH AND PLANTED GROUND COVER BED SHOULD BE SHOULD BE COVERED WITH A PRE-EMERGENT HERBICIDE.
— THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
1. Preferred: Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding harrow or disk into upper three inches of soil. At time of seeding apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.).
2. Acceptable: Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.
Seeding: For the periods March 1-April 30, and August 1-October 15, seed with 750 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1-July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs/acre (0.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 - February 28, protect 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 sod. Option 3 - Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.
Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2/8" gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.
Maintenance: Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short term vegetative cover is needed.
Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding if not previously loosened.
Soil Amendments: - Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).
Seeding: For periods March 1 - April 30 and from August 15 - October 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (0.07 lbs/1000 sq. ft.). For the period November 16 - February 28, site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.
Mulching: Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal. per acre (8 gal/1000 sq. ft.) for anchoring.
Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

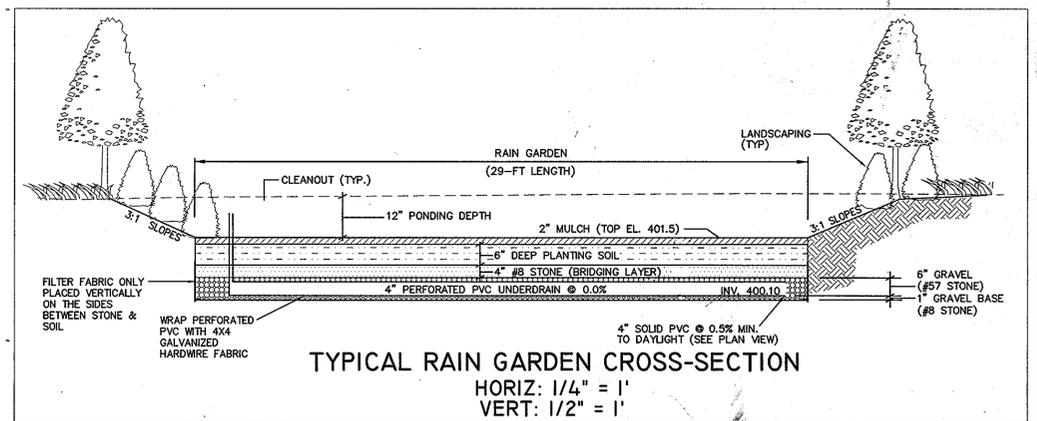
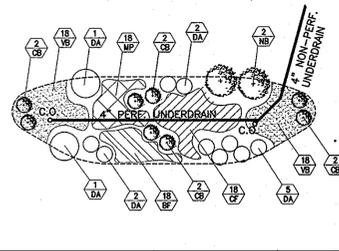
RAINGARDEN FACILITY

LANDSCAPING PLANTING SCHEDULE						
QUANT.	KEY	BOTANICAL NAME	COMMON NAME	CONDITION	SIZE	REMARKS
2	MP	MYRTICA PENNSYLVANICA	NORTHERN BAYBERRY	CONTAINER	12"-24"	
2	FB	LYONIA LUCIDA	FETTER-BUSH	CONTAINER	12"-24"	
9	DA	RHOIXODORON ATLANTICUM	DWARF AZALEA	CONTAINER	12"	
8	CB	CEPHALANTHUS OCCIDENTALIS	COMMON BUTTERBUSH	CONTAINER	12"	
18	MP	PHLOX MACULATA	MEADOW PHLOX	CONTAINER	6"	
18	CF	LOBELIA CARDINALIS	CARDINAL FLOWER	CONTAINER	6"	
36	VF	IRIS VIRGINICA	VIRGINIA BLUEBELLS	CONTAINER	6"	
18	VB	MERTENSIA VIRGINICA	VIRGINIA BLUEBELLS	CONTAINER	6"	

RAINGARDEN DIMENSION TABLE

RAINGARDEN	FILTER AREA L (ft) X W (ft)	EMBANKMENT ELEVATION	BOTTOM ELEVATION	SURFACE STORAGE DEPTH (ft)	UNDERDRAIN INV. OUT. ELEV.
1	29 X 8	402.5	401.5	1.0	400.10

RAIN GARDEN DETAIL
1/8" = 1'



BY THE DEVELOPER
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
M. von Fleet 8/7/12
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN OF 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.
Richardson 8/2/12
ENGINEER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
USA - NATURAL RESOURCES CONSERVATION SERVICES DATE 8/14/12

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Howard Soil Conservation District 9/6/12
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division 9-18-12
Chief, Division of Land Development 9-20-12
Director 9/6/12
DATE

STORMWATER MANAGEMENT PRACTICES																
LOT NUMBER	ADDRESS	GREEN ROOFS	PERMEABLE PAVEMENTS	REINFORCED TURF	DISCONNECTION OF ROOFTOP RUNOFF	DISCONNECTION OF NON-ROOFTOP RUNOFF	SHEETFLOW TO CONSERVATION AREAS	RAINWATER HARVESTING	SUBMERGED GRAVEL WETLANDS	LANDSCAPE INFILTRATION	INFILTRATION BERMS	DRY WELLS	MICRO-BIORETENTION	RAIN GARDENS	SWALES	ENHANCED FILTERS
		A-1	A-2	A-3	N-1	N-2	N-3	M-1	M-2	M-3	M-4	M-5	M-6	M-7	M-8	M-9
3	8523 High Ridge Road	(Y/N)	(Y/N)	(Y/N)	(NUMBER)	(Y/N)	(Y/N)	(NUMBER)	(NUMBER)	(NUMBER)	(NUMBER)	(NUMBER)	(NUMBER)	(NUMBER)	(NUMBER)	(NUMBER)

CERTIFICATION:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 16597, EXPIRATION DATE: 08-15-2013

Richardson Engineering, LLC

30 East Padonia Road, Suite 500
Timonium, Maryland 21093
Phone: 410-580-1502 Fax: 443-901-1208



OWNERS/DEVELOPERS
SETH & MELISSA VAN FLEET
10823 ANGLORHILL ROAD
COCKEYSVILLE, MD. 21030

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
3 / 52	8523 HIGH RIDGE ROAD

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL			
BUTTERFLY HILL, LOTS 3 - 5	SECTION 24	LOT #3, PARCEL #52			
PLAT # OR L/P	GRID #	ZONING	TAX MAP	ELECTION DIST	CENSUS TRACT
10528	13	R-20	18	2ND	6026
WATER CODE	SEWER CODE				
9W	21-S				

STORMWATER MANAGEMENT PLAN
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNED BY:	SCALE:	TAX MAP:	A.D.C. MAP:	JOB #:	SHEET
PCR	1" = 20'	18	GRD E-5	11085	3
DRAWN BY:	DEED REF.:	GRID:	PLAT REF.:	FILES:	NO.
CND	13567/22	13	10528	FILES: 11085, 2011, 11085	3
CHECKED BY:	PARCEL:				
PCR	52				

DRAWING COMPLETED 08-21-2012
DRAWING NO. 11085
DATE 9/6/12