

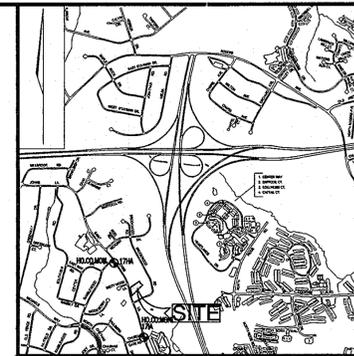
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 MISS UTILITY 1-800-257-7777
 VERIZON TELEPHONE CO. 725-9976
 HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 AT&T CABLE LOCATION DIVISION: 393-3553
 B.G.A.E. CO. CONTRACTOR SERVICES: 850-4620
 B.G.A.E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
 STATE HIGHWAY ADMINISTRATION: 531-5533
- SITE ANALYSIS:**
 TOTAL AREA OF SITE: 0.59 AC
 AREA OF PLAN SUBMISSION: 0.59 AC
 TOTAL NUMBER OF BUILDABLE LOTS: 1
 TOTAL NUMBER OF OPEN SPACE LOTS: 0
 PRESENT ZONING: R-20
 LIMIT OF DISTURBANCE: 11,707 SF
 PROPOSED USE OF SITE: SINGLE FAMILY DETACHED DWELLING
 TOTAL UNITS ALLOWED: 1
 TOTAL UNITS PROPOSED: 1
- PROJECT BACKGROUND:**
 LOCATION: TAX MAP: 17 PARCEL: 143
 ZONING: R-20
 WARREN PROPERTY
 DEED REFERENCE: 7719/34 & 7773/403
- 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 START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOILS TEST.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENT NO'S. 17HA AND 17IA.
- LOT 2 TOPOGRAPHY IS BASED ON A FIELD RUN SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, ON OCTOBER 2003 AS AVAILABLE RECORDS.
- THERE ARE NO STEEP SLOPES LOCATED ON THIS PROPERTY.
- NO BURIAL GROUNDS OR CEMETERIES ARE LOCATED ON THIS PROPERTY.
- 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 BACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- DRIVEWAYS/ROADWAYS SERVING TWO (2) OR MORE LOTS ARE REQUIRED TO MEET THE FOLLOWING SPECIFICATIONS FOR FIRE AND EMERGENCY VEHICLES ACCESS:
 1) WIDTH - RESIDENTIAL DRIVEWAY 12'(14' SERVING MORE THAN ONE RESIDENCE).
 2) CONSTRUCTION - SIX (6) INCHES OF COMPACTED "CRUSHED RUN" BASE WITH A "TAR AND CHIP" COATING
 3) TURNING RADIUS - FORTY-FIVE (45) FEET.
 4) BRIDGES AND CULVERTS - DESIGNED TO SUPPORT VEHICLES WITH A GROSS VEHICLE WEIGHT OF TWENTY-FIVE (25) TONS.
 5) OVERHEAD CLEARANCE - TWELVE (12) FEET.
 6) MAINTENANCE - DRIVEWAYS MUST BE MAINTAINED FOR ALL-WEATHER USE.
 7) GRADE - THE MAXIMUM ALLOWABLE GRADE SHALL BE 15%, WITH THE DURABLE AND SUSTAINABLE GRADE OF 8%. THE TRANSITION FROM THE ROAD TO THE DRIVEWAY SHALL NOT EXCEED 8%.
 8) HOUSE NUMBERING - WHERE ONE (1) DRIVEWAY SERVES MORE THAN ONE (1) LOT (COMMON DRIVEWAYS), A HOUSE NUMBER SIGN MUST BE PLACED AT EACH LOT ENTRANCE AND A RANGE OF STREET ADDRESS HOUSE NUMBERING SIGN WHERE THE COMMON DRIVEWAY INTERSECTS WITH THE MAIN ROAD.
- NO 100 YEAR FLOODPLAINS EXISTS WITHIN THIS SITE.
- THIS PLAN IS SUBJECT TO THE AMENDED 5TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS AMENDED UNDER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATION AS AMENDED UNDER COUNCIL BILL #75-2003.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL 16-100.
- THERE ARE NO HISTORIC SITES ON THE PROPERTY.
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 02/02/04 COMPREHENSIVE ZONING PLAN.
- STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED BY 2 RAINGARDENS TO PROVIDE THE REQUIRED WOV AND REV FOR THE HOUSE AND A GRASS SWALE ALONG THE DRIVEWAY FOR ADDITIONAL WOV & REV. CFI IS EXEMPT SINCE THE ONE (1) YEAR STORM IS LESS THAN 2 CFS.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. CREDIT WILL BE TAKEN FOR EXISTING LANDSCAPING.
- THIS PLAN IS EXEMPT FROM FOREST CONSERVATION BECAUSE THE LOT IS LESS THAN 40,000 SQUARE FEET, PER SECTION 16.1202(b)(1)(i) OF THE HOWARD COUNTY CODE.
- THE BOUNDARY SURVEY AND THE LOCATION OF EXISTING STRUCTURES ON LOT 1 ARE IN ACCORDANCE WITH SURVEY PREPARED BY MARKS & ASSOCIATES L.L.C. OCTOBER 2003.
- A DECLARATION OF MAINTENANCE OBLIGATION AGREEMENT FOR THE USE-IN-COMMON DRIVEWAY WAS RECORDED IN THE LAND RECORDS OF HOWARD COUNTY ON 10/30/03 IN LIBER 7773 FOLIO 423.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- AT THE TIME OF INSTALLMENT, ALL LANDSCAPE PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPERTY HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISION ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- IF WELL IS ENCOUNTERED CONTACT HOWARD COUNTY HEALTH DEPARTMENT FOR PROPER ABANDONMENT PROCEDURE.
- ON SEPTEMBER 25, 2003 THE WAIVER PETITION WP-04-23 REQUEST TO WAIVE SECTION 16.102 WHICH REQUIRED SUBMISSION OF A SUBDIVISION PLAN TO REVISE THE BOUNDARIES OF EXISTING PROPERTIES OR TO CREATE NEW LOTS/PARCELS; AND SECTION 16.147, WHICH REQUIRES SUBMISSION OF A FINAL PLAN FOR SUBDIVISIONS WAS APPROVED.

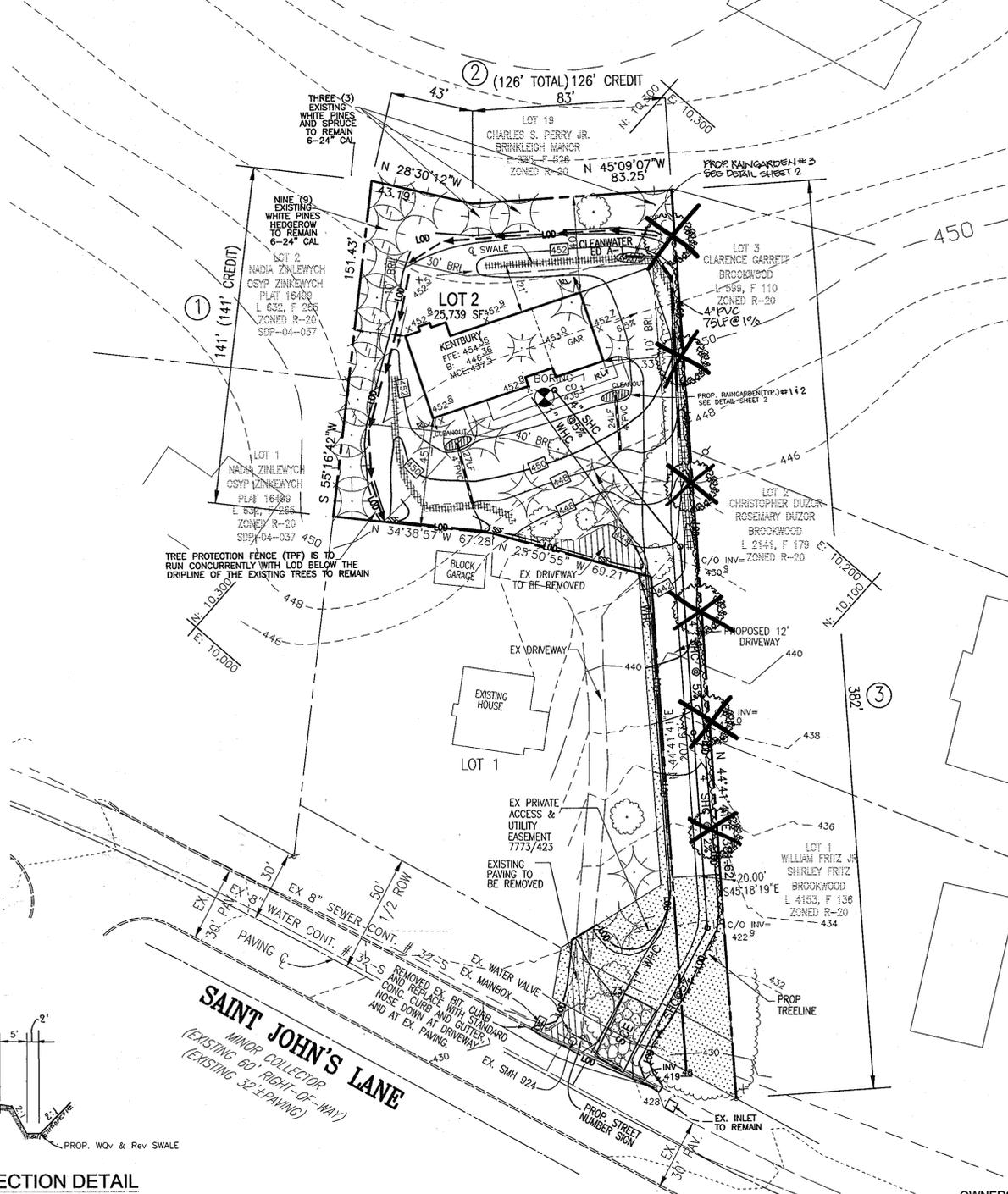
APPROVAL WAS SUBJECT TO THE FOLLOWING CONDITIONS:

- THE DEED ADJONDER SHALL BE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, WITHIN ONE YEAR OF THE DATE OF APPROVAL OF THE WAIVER (BY 9/25/04). A COPY OF THIS RECORDED DEED MUST BE SUBMITTED WITH THE SITE DEVELOPMENT APPLICATION FOR THE HOME ON PROPOSED LOT 2.
- THE DEVELOPMENT/CONSULTANT MUST ADDRESS THE CONCERNS OF THE DEVELOPMENT ENGINEERING DIVISION CONCERNING STORMWATER MANAGEMENT AND SIGHT DISTANCE AS PART OF THE FORTHCOMING SITE DEVELOPMENT PLAN SUBMISSION FOR LOT 2. IF, IN ADDRESSING THOSE ISSUES, FURTHER LOT RECONFIGURATION IS NECESSARY, THE OWNER/DEVELOPER/CONSULTANT MUST MAKE THE APPROPRIATE CHANGES. IF A SHARED DRIVEWAY IS DETERMINED TO BE ACCEPTABLE OR REQUIRED, THE DEVELOPER MUST RECORD BOTH AN ACCESS EASEMENT AND A SHARED DRIVEWAY MAINTENANCE AGREEMENT PRIOR TO SIGNATURE APPROVAL OF THE SITE DEVELOPMENT PLAN.
- TO AVOID THE CREATION OF A SETBACK VIOLATION, THE OWNER/DEVELOPER MUST REMOVE THE BLOCK GARAGE PRIOR TO THE RECORDATION OF THE DEED ADJONDER.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH AN EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- THE SIGHT DISTANCE FOR THE NEW DRIVEWAY LOCATION IS APPROVED BASED ON THE EXISTING TREES AND SHRUBS AT THE ENTRANCE BE TRIMMED IN ACCORDANCE WITH THE APPROVED PLAN TO PROVIDE ADEQUATE SIGHT DISTANCE.

SITE DEVELOPMENT AND LANDSCAPE PLAN WARREN PROPERTY LOT 2 HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE 1" = 2000'



BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
17HA	588,803.622	1,361,007.459	421.600	CONCRETE MONUMENT
17HA	590,619.830	1,360,433.448	438.372	CONCRETE MONUMENT

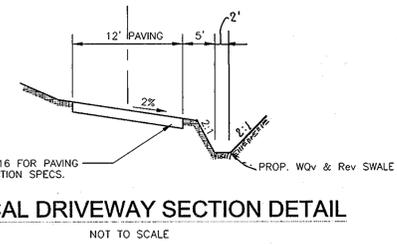
PERMIT INFORMATION CHART					
PROJECT NAME		SECTION/AREA	PARCEL NUMBER		
WARREN PROPERTY		N/A	143		
DEED	BLOCK NO.	ZONE	TAX MAP	ELECT. DIST.	CENSUS TR.
7773/403	23	R-20	17	2ND	6022.00
WATER CODE:		SEWER CODE:			
H 04		1403700			

ADDRESS CHART	
LOT	STREET ADDRESS
2	3079 ST. JOHN'S LANE

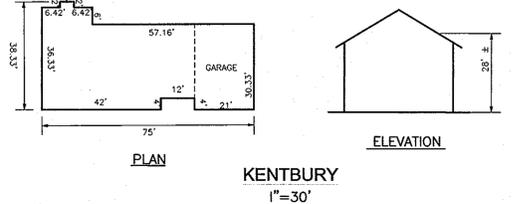
SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
MIB2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B

NOTE: HOWARD SOIL SURVEY, MAP NUMBER 16

SHEET INDEX	
DESCRIPTION	SHEET NO.
SITE DEVELOPMENT AND LANDSCAPE PLAN	1 OF 2
DETAILS SHEET	2 OF 2



TYPICAL DRIVEWAY SECTION DETAIL
NOT TO SCALE



OWNERS/BUILDER
S. BRUCE JAFFE
11628 LOC JUMP TRAIL
ELLICOTT CITY, MD 21104
301-996-0222

LEGEND	
--- 585 ---	EXISTING 2 FT CONTOUR
--- 580 ---	EXISTING 10 FT CONTOUR
--- 582 ---	PROPOSED 2 FT CONTOUR
--- 580 ---	PROPOSED 10 FT CONTOUR
--- SSF --- SSF	SUPER SILT FENCE
---	CLEANWATER EARTH DIKE
---	LIMIT OF DISTURBANCE
---	EX. TREES
[Symbol]	STABILIZED CONSTRUCTION ENTRANCE
[Symbol]	EROSION CONTROL MATTING
[Symbol]	PRIVATE DRIVEWAY ACCESS, MAINTENANCE & UTILITY EASEMENT TO BENEFIT LOT 2
[Symbol]	RAIN GARDEN
[Symbol]	ROOF LEADER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5/11/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 5/11/04
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 5/12/04
 DIRECTOR

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 [Signature] 5/7/04
 [Signature] 5/7/04
 [Signature] 5/7/04
 HOWARD SCD

ENGINEERS CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.
 [Signature] 4/7/04
 SIGNATURE OF ENGINEER
 ROBERT H. VOGEL, PE 16193

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 04/08/04
 SIGNATURE OF DEVELOPER

NO.	REVISION	DATE
1	REMOVE 6 SHADE TREES, ADD CREDIT	7/10/08

**SITE DEVELOPMENT AND LANDSCAPE PLAN
WARREN PROPERTY
LOT 2
SINGLE FAMILY DETACHED**

TAX MAP #17 GRID: 23
PARCEL: 143 DEED REF. 7719/34 & 7773/403 2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FREderick WARD ASSOCIATES, INC.
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS | www.frederickward.com

7125 RIVERWOOD DRIVE
COLUMBIA, MARYLAND 21046-2354
410-720-6900
410-720-8226 fax

REGIONAL OFFICES:
BEL AIR, MARYLAND AND WARRINGTON, VIRGINIA

DESIGN BY: ELG
 DRAWN BY: ELG
 CHECKED BY: RHV
 DATE: APRIL 6, 2004
 SCALE: 1" = 30'
 W.O. NO.: 2034075.00

1 SHEET OF 2
SDP-04-099

M:\PROJECTS\2007\001\LENGER\Warren\01COVER.dwg Wed Apr 07 15:30:01 2004 EA

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

PURPOSE
 TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE 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
 I. 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-SOS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
 II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 1. 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 A 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 1 AND 1/2" 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 WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
 II. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 1. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS INDICATING FERTILIZER AND LIME AMENDMENTS 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 PRESCRIBED 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 HAVING 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 APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION-SECTION I-VEGETATIVE STABILIZATION METHODS AND MATERIALS.

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 SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE 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.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
 SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING 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 PER ACRE DOLOMITIC LIMESTONE (92 LBS./100 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.)
 2) ACCEPTABLE-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND APPLY 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 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 31 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 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.
 MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES
 SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)
 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.) FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER 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 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 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.
 REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

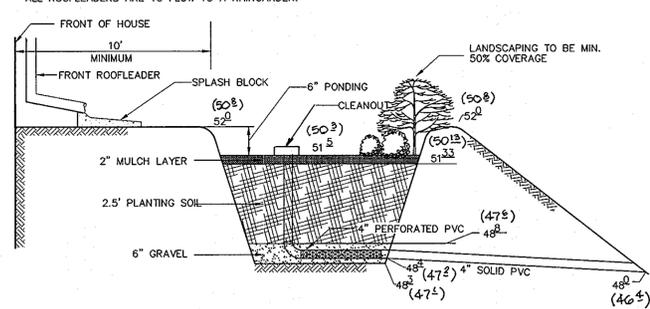
SEQUENCE OF CONSTRUCTION
 1. OBTAIN GRADING PERMIT.
 2. INSTALL SEDIMENT CONTROL AS SHOWN ON PLAN IN ACCORDANCE WITH DETAILS (1 DAY)
 (NOTE: A TREE PROTECTION FENCE IS TO BE INSTALLED PRIOR TO INSTALLATION OF SEDIMENT AND EROSION CONTROL DEVICES.)
 3. CLEAR AND ROUGH GRADE SITE (1 WEEK)
 4. CONSTRUCT HOUSE (4 MONTHS)
 5. FINE GRADE AND STABILIZE THE SITE WITH TOPSOIL AND SEEDING (SEE NOTES THIS PLAN) (3 DAYS)
 6. AFTER THE SITE IS PERMANENTLY STABILIZED AND AND PERMISSION IS GRANTED FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATION 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: (A) 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1, (B) 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, 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, SOD, TEMPORARY SEEDING AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

	TOTAL
TOTAL AREA	0.59 AC
AREA DISTURBED	11,707 SF
AREA TO BE ROOFED OR PAVED	7,097 SF
AREA TO BE VEGETATIVELY STABILIZED	4,610 SF
TOTAL CUT	320 CY
TOTAL FILL	320 CY
OFFSITE WASTE/BORROW AREA LOCATION	*
- 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 CONTROLS 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 PERMETER 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 PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT

NOTE: ALL ROOFLEADERS ARE TO FLOW TO A RAINGARDEN.



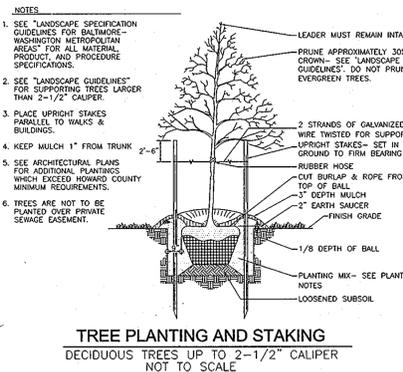
TYPICAL RAIN GARDEN CROSS SECTION #3 (ELEVATIONS FOR RAIN GARDEN #3 ARE SHOWN IN PARENTHESIS.)

NOT TO SCALE

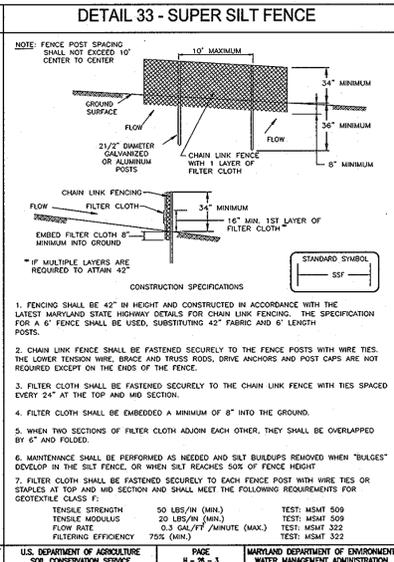
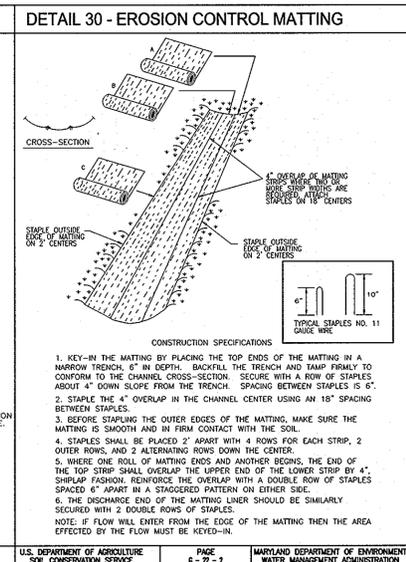
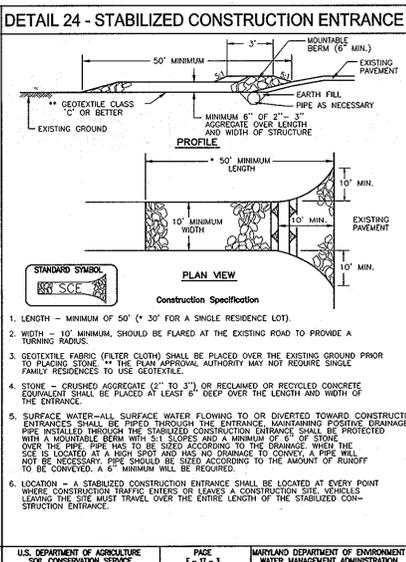
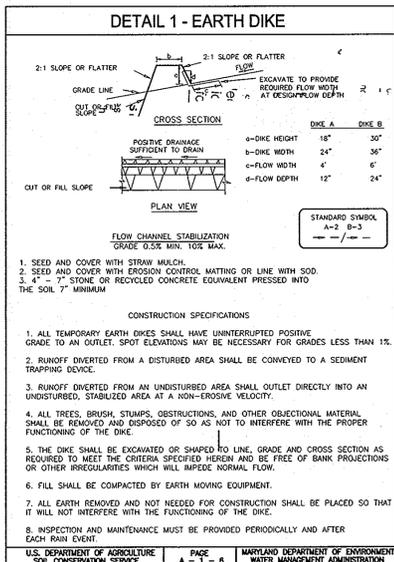
ELEVATIONS FOR RAIN GARDEN #3 ARE SHOWN IN PARENTHESIS.

12' x 4' - RAINGARDEN PLANT LIST(EACH)				
QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	
1	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	2 1/2"-3" Col.	
1	ILEX GLABRA	INK BERRY	2'-3" HT.	
6	LOBELIA CARDINALIS	CARDINAL FLOWER LOBELIA	1 GAL. CONTAINER	
4	DRYOPTERIS SP.	WOOD FERN	1 GAL. CONTAINER	
3	ASTER NOVAE-ANGLAE	NEW ENGLAND ASTER	1 GAL. CONTAINER	

TABLE B.3.2 MATERIALS SPECIFICATION FOR BIORETENTION/RAINGARDEN			
MATERIALS	SPECIFICATIONS	SIZE	NOTES
PLANTINGS	SEE APPENDIX A, TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.5' TO 4' DEEP)	SAND 35-60% SILT 30-55% CLAY 10-25%	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDED HARDWOOD		AGED 6 MONTHS, MINIMUM
PEA GRAVEL DIAPHRAGM AND CURTAIN DRAIN	PEA GRAVEL: ASTM-D-448 ORNAMENTAL STONE: WASHED COBBLIES	PEA GRAVEL: NO. 6 STONE: 2" TO 5"	
GEOTEXTILE	CLASS "C" - APPARENT OPENING SIZE (ASTM-D-4751), GRAVITY TENSILE STRENGTH (ASTM-D-4632), PUNCTURE RESISTANCE (ASTM-D-4833)	N/A	FOR USE BENEATH UNDERDRAINS ONLY
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.75"	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER IPES; NOT NECESSARY UNDERNEATH PIPES
POURED IN PLACE CONCRETE (IF REQUIRED)	PSH MIX NO. 3; F'C=3500 PSH#28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED,REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUM TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED SITE OR LOCAL STANDARDS. REQUIRED DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND DESIGN TO INCLUDE MEETING ACI CODE 350.R/89; VERTICAL LOADING (H-10 OR H-20); ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
SAND (1' DEEP)	AASHTO-M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.



TREE PLANTING AND STAKING
 DECIDUOUS TREES UP TO 2-1/2" CALIPER
 NOT TO SCALE



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER		
	1	2	3
LANDSCAPE TYPE	A	A	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	141 LF	126 LF	382 LF
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES*	YES**	YES
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NA	NA	NA
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	3 NA NA NA	2 NA NA NA	NA NA NA NA
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (1:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	NA NA NA NA	NA NA NA NA	0 NA NA NA
*CREDIT FOR EXISTING HEDGEROW OF WHITE PINES TO REMAIN ALONG PERIMETER 1 (102)			
**CREDIT FOR EXISTING SPRUCE AND PINE TREES TO REMAIN ALONG PERIMETER 2 (4)			

PERIMETER PLANT LIST

TYPE	KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
SH. TREE	6		ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" Col.	B & D

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/14/04

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 JIM MAYRA 5/14/04
 DATE: 5/14/04

ENGINEERS CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.
 ROBERT H. VOGEL, PE 16193
 DATE: 4/17/04

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 ALL 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.
 SIGNATURE OF DEVELOPER
 DATE: 01/08/04

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 SIGNATURE OF DEVELOPER
 DATE: 01/08/04

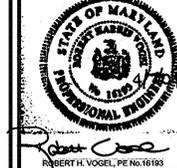
NO.	REVISION	DATE
1	REVISE SCHEDULE A	7/10/00

DETAILS SHEET WARREN PROPERTY LOT 2 SINGLE FAMILY DETACHED

TAX MAP #17 GRID: 23
 PARCEL: 143 DEED REF. 7719/34 & 7773/403

2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 7125 RIVERWOOD DRIVE
 COLUMBIA, MARYLAND 21046-2354
 410-720-6900
 410-720-6226 fax

FREDERICK WARD ASSOCIATES, INC.
 ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS | www.frederickward.com



DESIGN BY: ELG
 DRAWN BY: ELG
 CHECKED BY: RHV
 DATE: APRIL 6, 2004
 SCALE: 1"=30'
 W.O. NO.: 2034075.00
 2 SHEET OF 2