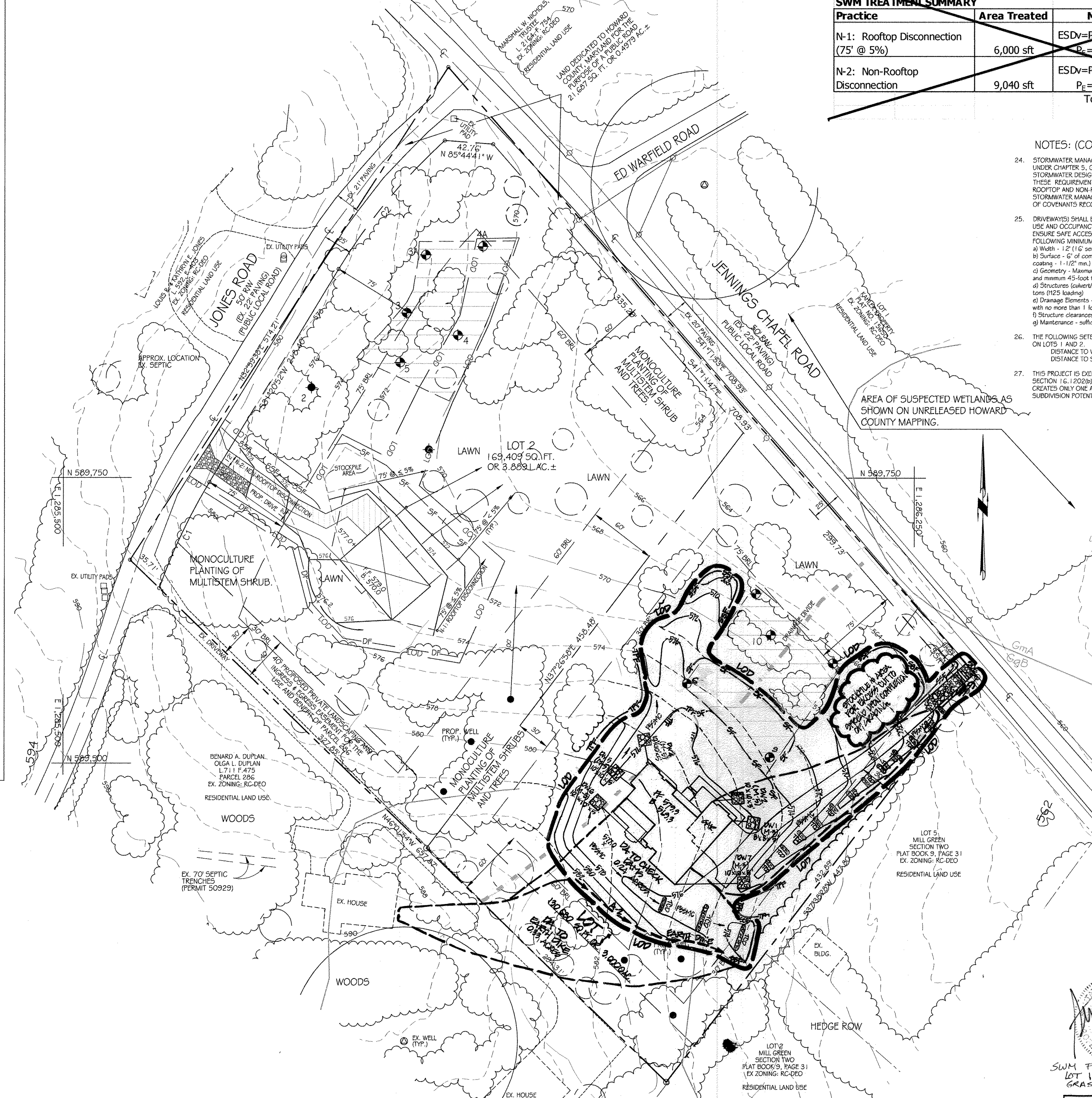
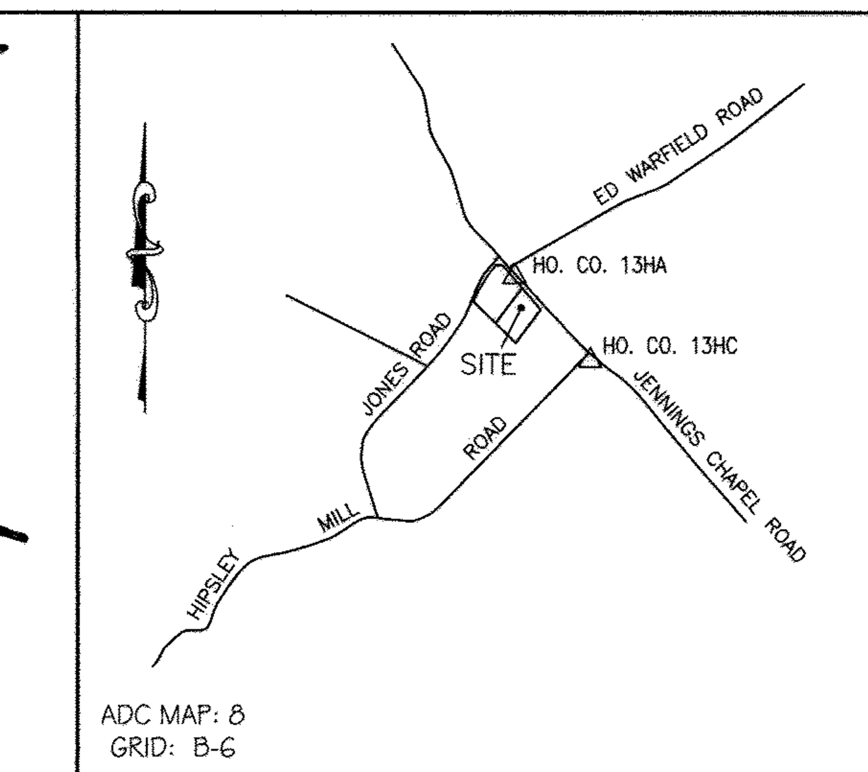
LEGEND

PROPERTY LINE	— - - — - - —
PROPOSED SEPTIC SYSTEM	(hatched box)
SILT FENCE	SF ——— SF ——— SF
SUPER SILT FENCE	SSF ——— SSF ——— SSF
DIVERSION FENCE	DF ——— DF ——— DF
LIMIT OF DISTURBANCE	——— LOD ———
(PASSED) PERCOLATION TEST SITE:	
(FAILED) PERCOLATION TEST SITE:	
EXISTING WELL:	
PROPOSED HOUSE SITE:	
PROPOSED WELL SITE:	
EXISTING TREELINE	
EXISTING MONOCULTURE SHRUBBERY	MONOCULTURE PLANTING OF MULTISTEM AND TREES
EXISTING TREE	
STABILIZED CONSTRUCTION ENTRANCE	SCE
DRAINAGE DIVIDE	
SOIL LINE	GmA / GgB
EXISTING O/H UTILITY LINES & POLES	
EXISTING UTILITY PADS	



~~**SWM TREATMENT SUMMARY**~~

Practice	Area Treated	Methodology	Volume (ESDv)	
N-1: Rooftop Disconnection (75' @ 5%)	6,000 sft	ESDv=P_E*Rv*DA/12 where P_E=1.0" & Rv=0.95	475	cft
N-2: Non-Rooftop Disconnection	9,040 sft	ESDv=P_E*Rv*DA/12 where P_E=1.0" & Rv=0.95	653	cft
		Total ESDv Provided =	1,128	cft
		ESDv Required =	1,128	cft



VICINITY MAP
SCALE: 1 "= 2,000' TAX MAP 3 PARCEL 87

NOTES: (CONT.)

24. STORMWATER MANAGEMENT FOR LOTS 1 AND 2 IS PROVIDED UNDER CHAPTER 5, OF THE 2009 REVISIONS TO THE 2000 MD STORMWATER DESIGN MANUAL AND MEETS ESD TO THE MEP. THESE REQUIREMENTS ARE BEING MET BY THE USE OF ROOFTOP AND NON-ROOFTOP DISCONNECTIONS. ALL ONLOT STORMWATER MANAGEMENT IS SUBJECT TO THE DECLARATION OF COVENANTS RECORDED SIMULTANEOUSLY WITH THE PLAT.

25. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCIES PER TO FOLLOWING MINIMUM REQUIRMENTS:
a) Width - 12' (16' serving more than one residence).
b) Surface - 6" of compacted crusher run base with tar and chip coating - 1-1/2" min.)
c) Geometry - Maximum 15% grade, maximum 10% grade change and minimum 45-foot turning radius.
d) Structures (culvert/bridges) - Capable of supporting 25 gross tons (H25 loading)
e) Drainage Elements - Capable of safely passing 100 year flood with no more than 1 foot depth over driveway surface.
f) Structure clearances - minimum 12 feet.
g) Maintenance - sufficient to ensure all weather use.

26. THE FOLLOWING SETBACKS APPLY TO THE PROPOSED HOUSES ON LOTS 1 AND 2.
DISTANCE TO WELL: 30'
DISTANCE TO SEPTIC: 20'

27. THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION PER SECTION 16.1202(b)(1)(viii). IT IS A MINOR SUBDIVISION THAT CREATES ONLY ONE ADDITIONAL LOT AND HAS NO FURTHER SUBDIVISION POTENTIAL.

GENERAL NOTES:

1. OWNER: BERNARD A. DUPLAN & OLGA L. DUPLAN
DEED REFERENCE: LIBER 1102 AT FOLIO 002
DATE: MAY 14, 1982
GRANTOR: PAUL KOVAL & DOROTHY KELLY KOVAL
2. TAX MAP: 13 GRID: 22 PARCEL: 87
3. NEAREST POTABLE WATER SUPPLY: MT. AIRY DISTANCE: 6 MILES ±.
4. THE SUBJECT PROPERTY IS NOT LOCATED IN SPECIAL FLOOD HAZARD AREA PER NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP,COMMUNITY PANEL NO. 24027C0040D.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY VANMAR ASSOCIATES, INC. DATED OCTOBER 29, 2013.
6. THE BASIS OF BEARINGS FOR THIS PLAN IS THE MARYLAND COORDINATE SYSTEM (NAD83/91) PER HOWARD COUNTY SURVEY CONTROL STATIONS
13HA N.589965.1613 E.1285964.8683
13HC N.589119.3143 E.1286752.3633
DISTANCES SHOWN HEREON ARE GROUND DISTANCES.
7. THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY BOUNDARY UNLESS OTHERWISE SHOWN HEREON.
8. THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES OR TAKEN FROM AVAILABLE RECORDS AND ACCURATELY SHOWN.
9. SOIL TYPE: GLENELG LOAM (GgA), (GgB)
SOILS MAP NO. 7
10. THE SUBJECT PROPERTY IS ZONED RC-DEO IN ACCORDANCE WITH THE OCTOBER 6, 2013 COMPREHENSIVE ZONING REGULATIONS.
11. ANY CHANGES TO A PRIVATE SEPTIC AREA WILL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
12. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREAS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
13. THERE ARE NO HISTORIC STRUCTURES, CEMETERIES OR ENVIRONMENTAL FEATURES FOUND ON THIS PROPERTY.
14. NO ENVIRONMENTAL FEATURES EXIST WITHIN THE LOD.
15. NO SPECIMEN TREES ARE PROPOSED FOR REMOVAL.
16. DEVELOPER RESERVES UNTO ITSELF, ITS SUCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE, OTHER PUBLIC UTILITIES LOCATED IN, ON, OVER AND THROUGH LOTS/PARCELS. ANY CONVEYANCES OF THE AFORESAID LOTS/PARCELS SHALL BE SUBJECT TO THE EASEMENTS HEREIN RESERVED, WHETHER OR NOT EXPRESSLY STATED IN THE DEED CONVEYING SAID LOTS/PARCELS. DEVELOPER SHALL EXECUTE AND DELIVER DEEDS FOR THE EASEMENTS HEREIN RESERVED TO HOWARD COUNTY WITH A METES AND BOUNDS DESCRIPTION. UPON COMPLETION OF THE PUBLIC UTILITIES AND THEIR ACCEPTANCE BY HOWARD COUNTY, THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEEDS OF EASEMENTS IN THE LAND RECORDS OF HOWARD COUNTY.
17. ALL AREAS SHOWN HEREON ARE + OR -, MORE OR LESS.
18. TOTAL LIMIT OF DISTURBANCE = 1.94 AC.
19. THE PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT.
20. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
21. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
22. PREVIOUS FILE NUMBERS: ECP-14-038
23. THERE ARE NO STEEP SLOPES, WETLANDS, STREAMS, FLOODPLAINS OR BUFFERS ON THIS SITE.

SITE ANALYSIS DATA SHEET	ACRES
PROPOSED SITE USE	RESIDENTIAL
WETLANDS	0.00
WETLANDS BUFFER	0.00
FLOODPLAIN	0.00
FORESTS	0.00
STEEP SLOPES (15-24%)	0.00
STEEP SLOPES (25% OR GREATER)	0.00
TOTAL PROJECT AREA	7.39
LOD AREA	1.94
GREEN OPEN SPACE AREA	0.00
EX. IMPERVIOUS AREA	0.00
PROP. IMPERVIOUS AREA	0.33
HIGHLY ERODIBLE SOILS IN PROJECT AREA	0.00

SOIL LEGEND

MAP SYMBOL	MAPPING UNIT	HYDROLOGIC SOIL GROUP	HYDRIC COMPONENTS	Kw	SLOPE
GgA	GLENELG loam	B	NO	0.20	0-3%
GgB	GLENELG loam	B	NO	0.20	3-8%

HOWARD COUNTY SOILS MAP NO. 7

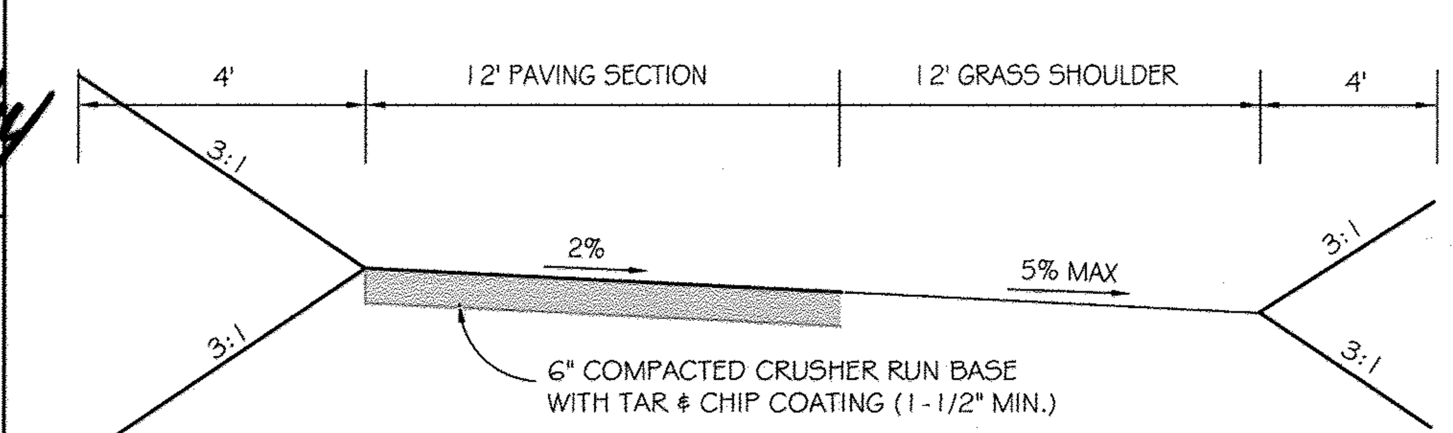
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[signature] 7/31/14
HOWARD SCD DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] 8/02/14
CHIEF, DIVISION OF LAND DEVELOPMENT NH DATE

[signature] 8/7/14
FOR: CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



PAVING SECTION
INDIVIDUAL DRIVEWAYS
NOT TO SCALE

OWNERS:
BERNARD A. & OLGA L. DUPLAN
3211 JONES ROAD
WOODBINE, MARYLAND 21797

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licenced professional engineer under the laws of the State of Maryland, License No. 43203, Expiration Date: 12-20-2014.

SHEET INDEX

NO.	TITLE
1	SOILS/TOPOGRAPHY/GRADING/STORMWATER MANAGEMENT
2	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
3	FOREST STAND DELINEATION
4	LANDSCAPE PLAN

[signature] 5/12/17 REV 1 & 4/20/18 REV 2

SWM PROVIDED FOR LOT 1 BY DRYWELLS (M-5), GRASS SWALE (M-8)

ESDv REQUIRED LOT 1: 869 CU FT
ESDv PROVIDED LOT 1: 1,190 CU FT

DATE	REVISIONS	
5/12/17	REVISE HOUSE, DRIVEWAY, GRADING, LOD, SEDIMENT CONTROL & SWM ON LOT 1	REV 1
4/20/18	REMOVE CIRCULAR DRIVEWAY AND ASSOCIATED DRYWELL & REVISE SWM COMPUTATIONS	REV 2

SUPPLEMENTAL PLAN
SOILS/TOPOGRAPHY/ GRADING/ STORMWATER MANAGEMENT

DUPLAN SUBDIVISION

LOTS 1 & 2

TAX MAP: 13 ELECTION DISTRICT: No. 4 SCALE: 1" = 50'
GRID NO: 22 HOWARD COUNTY, MARYLAND DATE: JULY, 2014
PARCEL NO: 87 EX. ZONING: RC-DEO SHEET 1 OF 4

[seal: STATE OF MARYLAND, MELANIE LYNN RUPP, No. 43203, PROFESSIONAL ENGINEER] [signature] 7/21/14

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (410) 549-2751
Fax (301) 831-5603
vanmar.com

F-14-094

JOB NO. 83-5350

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition:
The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose:
To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies:
Where vegetative stabilization is to be established.

Criteria:
A. Soil Preparation
1. Temporary Stabilization
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches 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 must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
b. Apply fertilizer and lime as prescribed on the plans.
c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.
b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches. B.13
d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.
B. Topsoiling
1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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.
2. Topsoil salvaged from an existing site may be used provided 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-NRCS.
3. Topsoiling 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.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
c. 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.
6. Topsoil Application
a. Erosion and sediment control practices must be maintained when applying topsoil.
b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to 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 topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
c. Topsoil must not be placed if 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 B.14 and seedbed preparation.
C. Soil Amendments (Fertilizer and Lime Specifications)
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition:
The application of seed and mulch to establish vegetative cover.

Purpose:
To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies:
To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria:
A. Seeding
1. Specifications
a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the 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 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
d. Sod or seed must not 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.
2. Application
a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact. B.16
b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
i. 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.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2
O5 (phosphorous),
200 pounds per acre; K2
O (potassium), 200 pounds per acre.
ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
iii. Mix seed and fertilizer on site and seed immediately and without interruption.
iv. When hydroseeding do not incorporate seed into the soil.
B. Mulching
1. Mulch Materials (in order of preference)
a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
i. WCFM is to 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.
ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
iii. WCFM materials are to 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 must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum. B.17
2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the 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 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 follow the contour.
ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

Definition:
To stabilize disturbed soils with vegetation for up to 6 months.

Purpose:
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. For longer duration of time, Permanent stabilization practices are required.

Criteria:
1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.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 B.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 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 B-4-3.A.1.b and maintain until the next seeding season.

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1):					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	ANNUAL RYEGRASS	40	MAR. 1 - MAY 15 AUG. 1 - OCT. 15	0.5 INCHES	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	FOXTAIL MILLET	30	JUNE 1 - JULY 31	0.5 INCHES		

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition:
To stabilize disturbed soils with permanent vegetation.

Purpose:
To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies:
Exposed soils where ground cover is needed for 6 months or more.

Criteria:
A. Seed Mixtures
1. General Use
a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
2. Turfgrass Mixtures
a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where B.22 rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3): 11					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
	KENTUCKY BLUEGRASS	20	MAR. 1 - MAY 15 AUG. 1 - OCT. 15	1/4-1/2 in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/1000 sf)	90 lb/ac (90 lb/1000 sf)	2 tons/ac (90 lb/ 1000 sf)
				1/4-1/2 in				
				1/4-1/2 in				

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

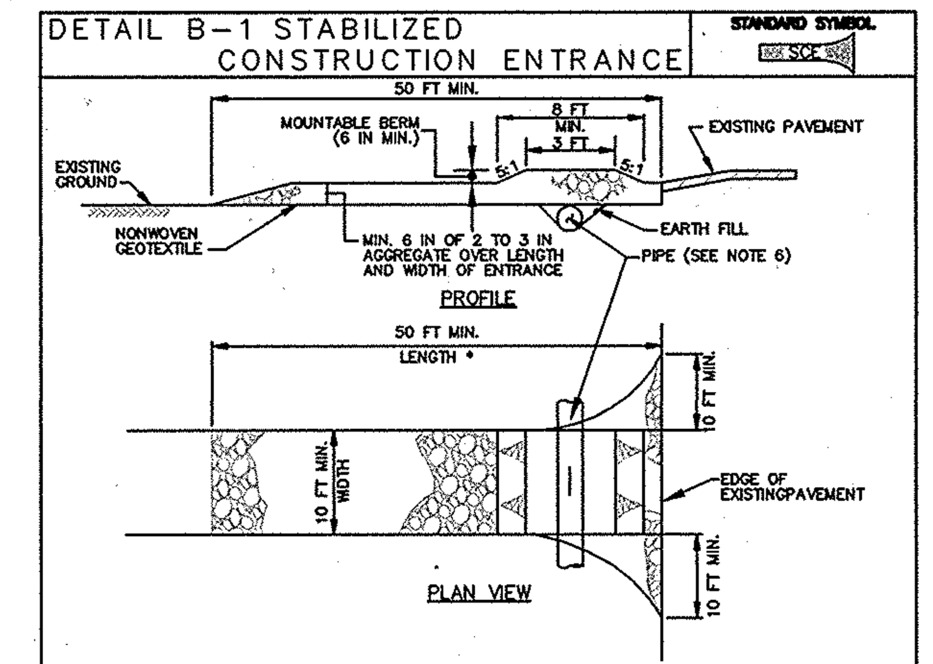
1. General Specifications
a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation
a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
d. Water the sod immediately following rolling and tamping until the underside of the ne

3. Sod Maintenance
a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day
to prevent wilting.
b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
c. Do not mow until the sod is firmly rooted. No more than □ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL
SCE



CONSTRUCTION SPECIFICATIONS

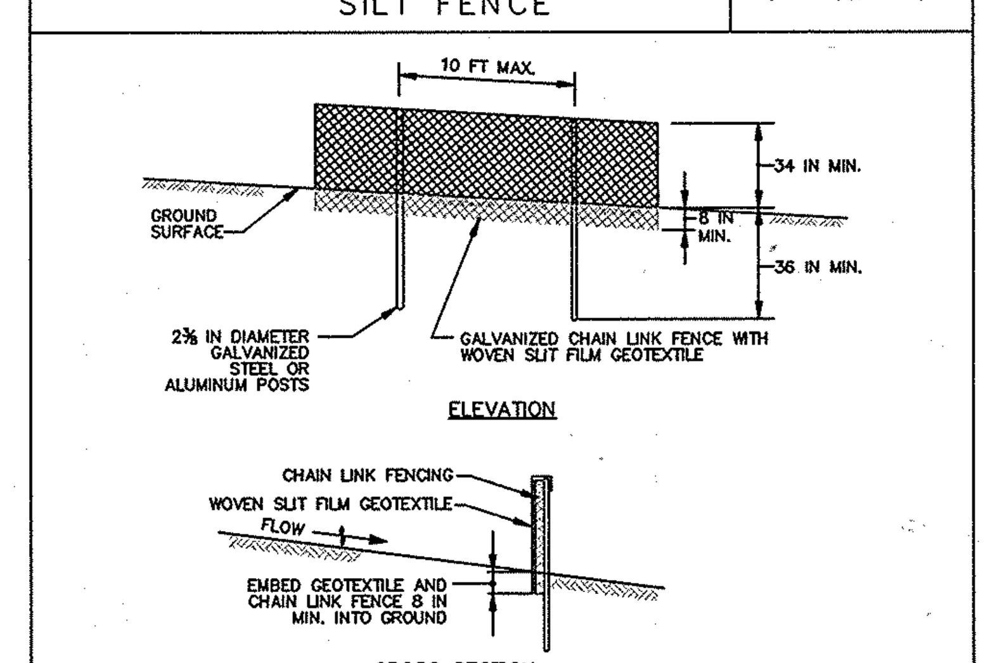
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. 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 NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. 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.
5. 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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL
SSF



CONSTRUCTION SPECIFICATIONS

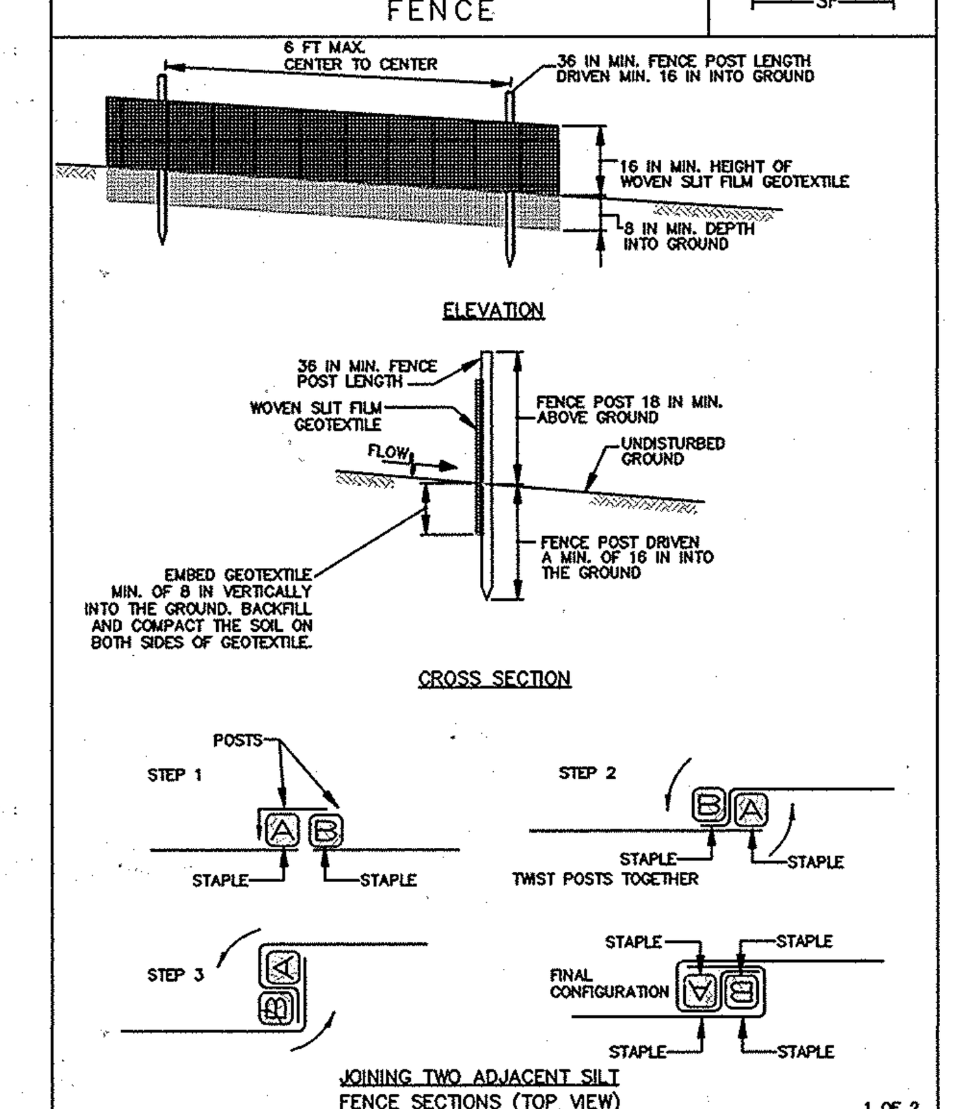
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY 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 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, 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 AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL
SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL
SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅙ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 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.

2 OF 2

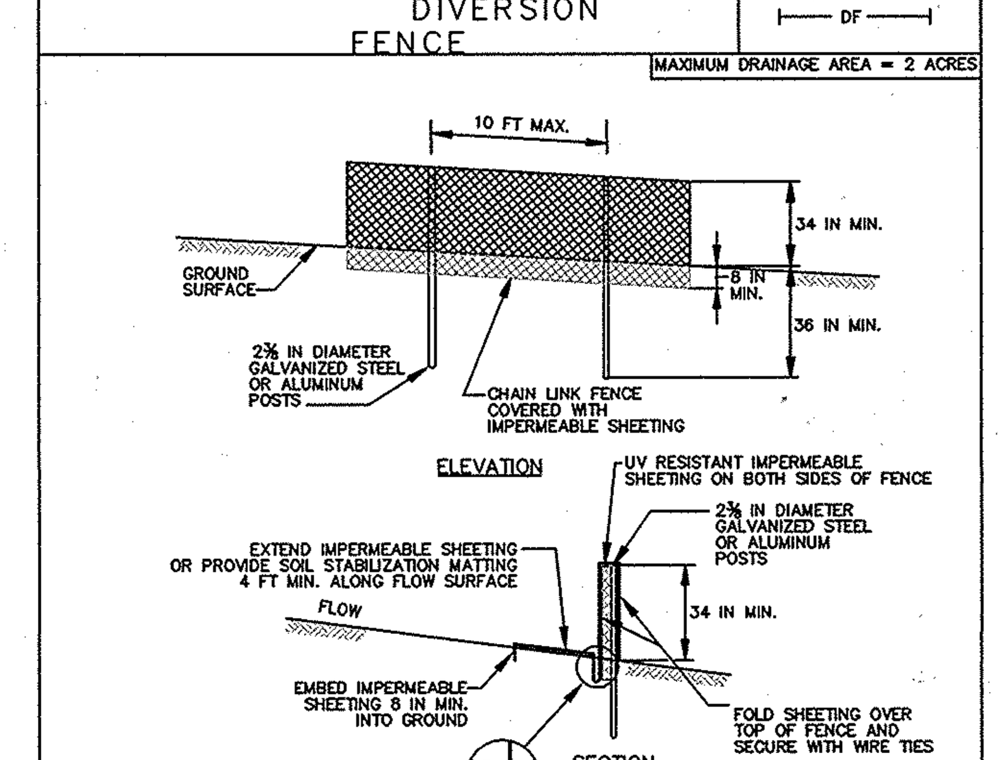
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL
DF

MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

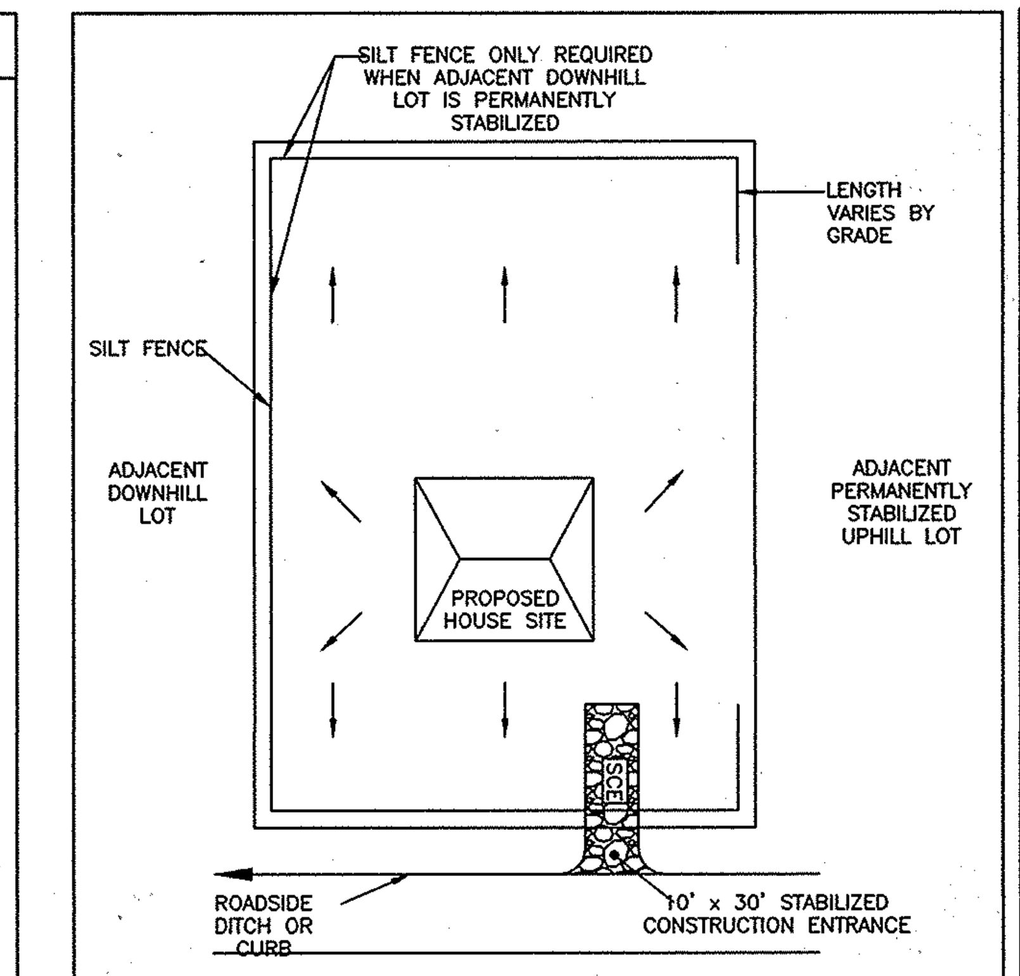
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TABLE - STONE SIZE

	SIZE RANGE	D 50	D 100	AASHTO	WEIGHT
NUMBER 57*	3/8"-1 1/2"	1/2"	1 1/2"	M-43	N/A
NUMBER 1	2" - 3"	2 1/2"	3"	M-43	N/A
RIP-RAP**	4" - 7"	2 1/2"	7"	N/A	N/A
CLASS I	N/A	9 1/2"	5"	N/A	150 LB MAX
CLASS II	N/A	16"	24"	N/A	700 LB MAX
CLASS III	N/A	23"	34"	N/A	2000 LB MAX

* THIS CLASSIFICATION IS TO BE USED ON THE INSIDE FACE OF STONE OUTLETS AND CHECK DAMS.

** THIS CLASSIFICATION IS TO BE USED WHENEVER SMALL RIP-RAP IS REQUIRED. THE STATE HIGHWAY ADMINISTRATION DDESIGNATION FOR THIS STONE IS STONE FOR GABIONS (905.01.04)



TYPICAL SOIL EROSION CONTROLS FOR HOUSE CONSTRUCTION
NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN ALL REQUIRED GRADING, MDE PERMITS, APPROVALS AND LICENSES FROM APPROPRIATE AGENCIES. (1 WEEK)
2. NOTIFY SEDIMENT CONTROL INSPECTOR AT LEAST THREE (3) WORKING DAYS PRIOR TO STARTING WORK. (1 DAY)
3. INSTALL STABILIZED CONSTRUCTION ENTRANCES. INSTALL DIVERSION FENCE, SILT FENCE AND SUPER SILT FENCE AS SHOWN IN THE SEDIMENT CONTROL PLAN. (1 WEEK)
4. STABILIZE ALL THE GRADED AREAS UP TO 20' OUTSIDE OF THE LIMIT OF GRADING AS PER PERMANENT SEEDING NOTES. (2 WEEKS)
5. ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED THE PERMITTEE MUST OBTAIN APPROVAL FROM THE INSPECTOR BEFORE PROCEEDING WITH ADDITIONAL CLEARING, GRUBBING OR GRADING. (1 WEEK)
6. GRADING FOR DRIVEWAY. (1 WEEK)
7. ANY AREAS THAT CAN BE TEMPORARILY SEEDED DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED PER SEEDING NOTES.
8. CONSTRUCT HOMES AND DRIVEWAYS (8 MONTHS)
9. FINAL GRADING OF SITE, STABILIZE DISTURBED AREAS PER PERMANENT SEEDING NOTES.
10. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR; REMOVE ALL TEMPORARY SEDIMENT CONTROL DEVICES FOR HOUSE CONSTRUCTION.
11. NOTIFY INSPECTOR FOR FINAL INSPECTION.

DUST CONTROL
DUST CONTROL METHOD FOR THIS SITE TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES: CALCIUM CHLORIDE SHALL BE APPLIED TO EXPOSED SURFACES AT A RATE THAT WILL KEEP SURFACE MOIST UNTIL SOIL IS STABILIZED ACCORDING TO VEGETATIVE SPECS. FOR THIS SITE AND AREAS TO BE PAVED ARE COMPLETED.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1) 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, (313-1855).
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 THE SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 3 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater 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 for permanent seeding (Sec. B-4-4), temporary seeding (Sec. B-4-4) and mulching (Sec. B-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.
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	6.70 Acres.
Area Disturbed	1.94 Acres.
Area to be roofed or paved	0.33 Acres.
Area to be vegetatively stabilized	1.57 Acres.
Total Cut	- Cu. Yds.
Total Fill	- Cu. Yds.

Offsite waste/borrow area location N/A.
Location must have active grading permit and as approved by inspector.
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 control 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 can be back filled and stabilized within one working day, whichever is shorter.
11) Any changes or revisions to the sequence of construction must be reviewed and 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 stabilized and approved by the enforcement authority. Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time.
13) Either temporary or permanent stabilization is to be performed at the direction of the sediment control inspector or at the intervals required by the 2011 Maryland Standards and Specifications whichever is more restrictive.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

FOR UTILITY WORK ONLY OR FOR OFF-SITE UTILITY WORK
1. CAN NOT EXCEED 5,000 SQUARE FEET
2. PLACE ALL EXCAVATED MATERIAL ON HIGH SIDE OF TRENCH.
3. ONLY DO AS MUCH WORK AS CAN BE DONE IN ONE DAY SO BACKFILLING, FINAL GRADING, SEEDEING AND MULCHING CAN OCCUR.
4. ANY SEDIMENT CONTROL MEASURES DISTURBED BY CONSTRUCTION WILL BE REPAIRED THE SAME DAY.

STOCKPILE NOTES:
1. NO STOCKPILING ALLOWED ON ASPHALT.
2. ALL STOCKPILES LEFT AT THE END OF THE NEXT DAY NEED TO BE STABILIZED UNTIL THE NEXT REDISTURBANCE.
3. SHOULD THE STOCKPILE AREA EXCEED 15 FEET IN HEIGHT, IT MUST BE BENCHED.

NOTE:
EARTHWORK CUT AND FILL QUANTITIES AND AREA OF DISTURBANCE INDICATED ON THIS PLAN ARE SHOWN FOR PURPOSE OF OBTAINING SEDIMENT CONTROL PLAN APPROVAL AND ARE NOT TO BE USED FOR CONTRACTUAL OBLIGATION.

DEVELOPER'S CERTIFICATE:

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

[signature] 7/22/14
DEVELOPER DATE

ENGINEER'S CERTIFICATE:

"I HEREBY 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 AND THE 2011 MARYLAND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

Melanie L. Repp 7/21/14
MELANIE L. REPP, P.E. DATE

OWNERS:
BERNARD A. & OLGA L. DUPLAN
3211 JONES ROAD
WOODBINE, MARYLAND 21797

APPROVED

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] 8/08/14
CHIEF, DIVISION OF LAND DEVELOPMENT NH DATE

[signature] 8/7/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

[signature] 7/31/14
HOWARD SOIL CONSERVATION DISTRICT DATE

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licenced professional engineer under the laws of the State of Maryland, License No. 43203, Expiration Date: 12-20-2014.

STATE OF MARYLAND MELANIE LENN REPP No. 43203 PROFESSIONAL ENGINEER 7/21/14

DATE	REVISIONS

SUPPLEMENTAL PLAN
SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

DUPLAN SUBDIVISION

LOTS 1 & 2

TAX MAP: 13	ELECTION DISTRICT: No. 4	SCALE: 1" = 50'
GRID NO: 22	HOWARD COUNTY, MARYLAND	DATE: JULY, 2014
PARCEL NO: 87	EX. ZONING: RC-DEO	SHEET 2 OF 4

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (410) 549-2751
vanmar.com Fax (301) 831-5603

F-14-094
JOB NO. 83-5350

LEGEND

PROPERTY LINE

EXISTING WELL:

EXISTING TREELINE

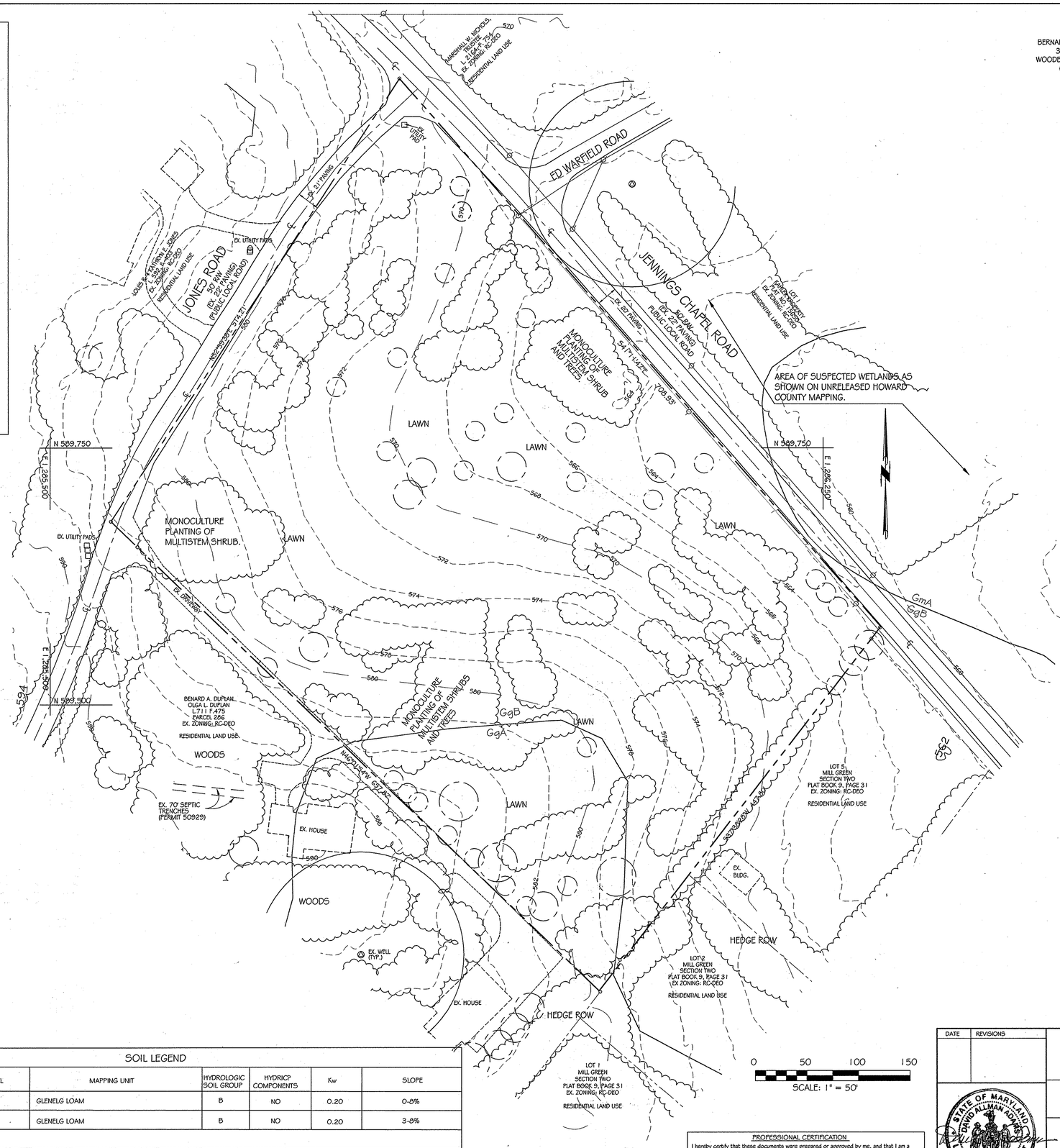
EXISTING MONOCULTURE SHRUBBERY

EXISTING TREE

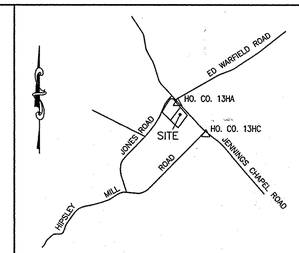
SOIL LINE

EXISTING O/H UTILITY LINES & POLES

EXISTING UTILITY PADS



OWNERS:
BERNARD A. & OLGA L. DUPLAN
3211 JONES ROAD
WOODBINE, MARYLAND 21797
(301) 370-1270



ADC MAP: 8
GRID: B-6

VICINITY MAP
SCALE: 1" = 2,000' TAX MAP 3 PARCEL 87

GENERAL NOTES

1. OWNER: BERNARD A. DUPLAN & OLGA L. DUPLAN
   DEED REFERENCE: LIBER 1102 AT FOLIO 002
   DATE: MAY 14, 1982
   GRANTOR: PAUL KOVAL & DOROTHY KELLY KOVAL
2. TAX MAP: 13 GRID: 22 PARCEL: 87
3. NEAREST POTABLE WATER SUPPLY: MT. AIRY DISTANCE: 6 MILES ±.
4. THE SUBJECT PROPERTY IS NOT LOCATED IN SPECIAL FLOOD HAZARD AREA PER NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP,COMMUNITY PANEL NO. 24027C0040D.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY VANMAR ASSOCIATES, INC. DATED OCTOBER 29, 2013.
6. THE BASIS OF BEARINGS FOR THIS PLAN IS THE MARYLAND COORDINATE SYSTEM (NAD83/91) PER HOWARD COUNTY SURVEY CONTROL STATIONS
   13HA N.589965.1613 E.1285964.8683
   13HC N.589119.3143 E.1286752.3633
   DISTANCES SHOWN HEREON ARE GROUND DISTANCES.
7. THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY BOUNDARY UNLESS OTHERWISE SHOWN HEREON.
8. THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES OR TAKEN FROM AVAILABLE RECORDS AND ACCURATELY SHOWN.
9. SOIL TYPE: GLENELG LOAM (GgA), (GgB)
   SOILS MAP NO. 7.
10. THE SUBJECT PROPERTY IS ZONED RC-DEO IN ACCORDANCE WITH THE OCTOBER 6, 2013 COMPREHENSIVE ZONING REGULATIONS.
11. THERE ARE NO HISTORIC SITES OR CEMETERIES ON THIS PROPERTY.
12. THE SECTION OF JENNINGS CHAPEL ROAD ADJACENT TO THE SITE IS LISTED AS A SCENIC ROAD. THE DEVELOPMENT OF THE PROPERTY ALONG THE SCENIC ROADWAY SHALL BE DIRECTED SO AS TO PRESERVE THE SCENIC CHARACTER OF THE ROADWAY.

FOREST STAND NARRATIVE

1. A FIELD INVESTIGATION WAS PERFORMED ON DECEMBER 11, 2013 TO DETERMINE SITE CONDITIONS LISTED IN THIS NARRATIVE.
2. NO ENVIRONMENTAL FEATURES EXIST WITHIN THE LOD.
3. THERE ARE NO STEEP SLOPES, FLOODPLAINS, WETLANDS OR FOREST LOCATED ON THE SITE .
4. NO STREAMS EXIST WITHIN THE SITE. NO HYDRIC OR ERODIBLE SOILS EXIST WITHIN THE SITE.
5. NO SPECIMEN TREES EXIST WITHIN THE SITE.
6. TYPICAL COVER IS MOWED FIELD GRASS, LANDSCAPE PLANTINGS OF TREES, SHRUBBERY, AND EVERGREENS. NO FOREST.
7. AS THERE IS NO FOREST ON THE SITE, A FOREST STAND ANALYSIS TABLE WAS NOT PROIVIDED.
8. BRIGHTON DAM WATERSHED, #02131108, PATUXENT TRIBUTRAY BASIN.

APPROVED

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/02/14

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/14

SOIL LEGEND

MAP SYMBOL	MAPPING UNIT	HYDROLOGIC SOIL GROUP	HYDRIC? COMPONENTS	Kw	SLOPE
GgA	GLENELG LOAM	B	NO	0.20	0-8%
GgB	GLENELG LOAM	B	NO	0.20	3-8%
HOWARD COUNTY SOILS MAP NO. 7					

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date: 08-16-2015.

STATE OF MARYLAND — DAVID ALLMAN ADAMS — No. 569 — LANDSCAPE ARCHITECT — 7/21/14

DATE	REVISIONS

FOREST STAND DELINEATION

DUPLAN SUBDIVISION

LOTS 1 & 2

TAX MAP: 13 GRID NO: 22 PARCEL NO: 87
ELECTION DISTRICT: No. 4 HOWARD COUNTY, MARYLAND EX. ZONING: RC-DEO
SCALE: 1" = 50' DATE: JULY, 2014 SHEET 3 OF 4

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (410) 549-2751
vanmar.com Fax (301) 831-5603

F-14-094

JOB NO. 83-5350

DESCRIPTION OF EXISTING LANDSCAPE EDGE

KEY

P3

1 DENSE HEDGE ROW OF APPROX. 40 VIRGINIA CEDAR, 12'-16' HT. GOOD HEALTH.
2 STAND OF APPROX. 8 RED MAPLES, 12" CAL. GOOD HEALTH.

P4

3 STAND OF APPROX. 12 RED MAPLES, 12 " CAL. GOOD HEALTH.
4 3 RED MAPLES, 12" CAL., GOOD HEALTH.
5 APPROX. 20 HORNBEAM AND COUSA DOGWOOD, MULTI STEM, 4" CAL, 12-16' HT. GOOD HEALTH.
6 APPROX. 6 ZELKOVA, 12"-16" CAL., 30' HT. GOOD HEALTH.
7 6 PIN OAK, 8-12" CAL., 35'-40' HT. GOOD HEALTH.
8 CLUSTER OF 8 BRADFORD PEAR, 8"CAL, 20' HT. GOOD HEALTH.

P1

9 12 RED MAPLES, 10"-18" CAL., 30-40'HT., 5 AMERICAN HOLLY, 12'-16' HT., 3 COUSA DOGWOOD, 8" CAL, 16' HT. GOOD HEALTH.
10 2 SOULAGEANA MAGNOLIAS, 18" CAL, MULTISTEM, 18' HT.
11 APPROX. 10 COUSA DOGWOOD, 6-8" CAL., 12' HT. GOOD HEALTH.
12 APPROX. 10 COUSA DOGWOOD, 6-8" CAL., 12' HT. GOOD HEALTH.
13 GROVE OF 7 HORNBEAM, 16-18" CAL., 24-30' HT.; 6 COUSA DOGWOOD, 6" CAL, 12' HT.
14 GROVE OF 3 HORNBEAM, 16-18" CAL., 24-30' HT.; 16 COUSA DOGWOOD, 6" CAL, 12' HT.

P2

15 2 COUSA DOGWOOD, 6-8" CAL, 12' HT.
16 8 AMELANCHIER CANADENSIS, MULTI STEM, 4-6" CAL., 16' HT.
17 THICKET OF 20-30 BRADFORD PEAR, 8-12" CAL., 30-' HT.
18 APPROX. 15 GOLDEN RAIN TREE, 6-8" CAL., 25-30'HT.

SCHEDULE A
PERIMETER LANDSCAPE EDGE

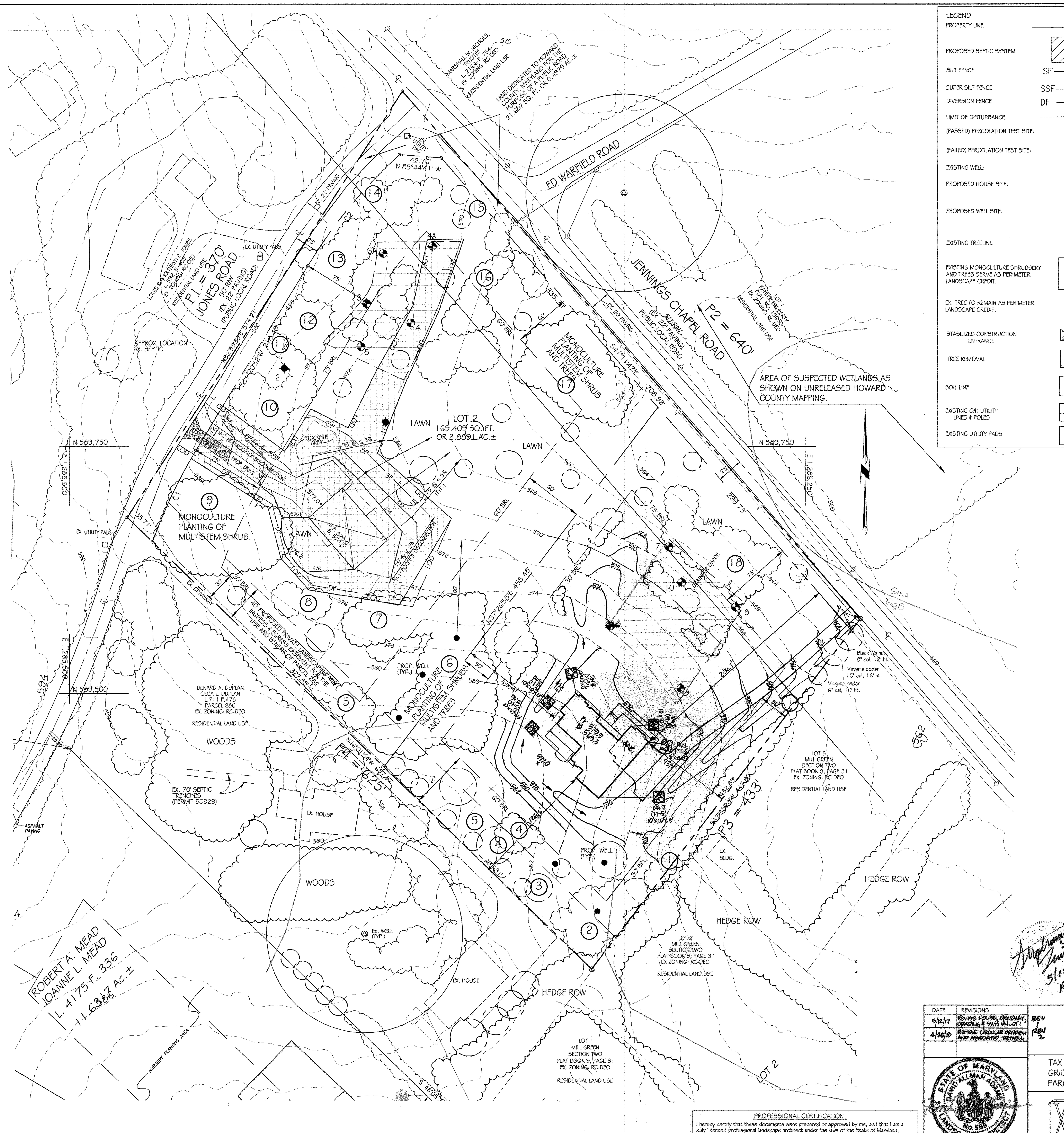
CATEGORY	ADJACENT TO PERIMETER PROPERTIES				
LANDSCAPE TYPE	P1=B/370'	P2=B/640'	P3=A/433'	P4=A/625'	TOTAL
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	N/A	N/A	N/A	N/A	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 370'	YES 640'	YES 433'	YES 625'	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	8 10 0	13 16 0	8 0 0	11 0 0	40 26 0
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SHRUB OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	0* 0* 0* 0* 0*	0* 0* 0* 0* 0*	0* 0* 0* 0* 0*	0* 0* 0* 0* 0*	0* 0* 0* 0* 0*
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	MULTISTEM TREES	MULTISTEM TREES	MULTISTEM TREES	MULTISTEM TREES	

SUBSTITUTE THICKETS OF MULTISTEM TREES FOR EVERGREEN TREES
LANDSCAPE EDGE "A" = 1 SHADE TREE/60'
LANDSCAPE EDGE "B" = 1 SHADE TREE/50' & 1 EVERGREEN TREE/40'

* EXISTING PLANTINGS PROVIDE TOTAL CREDIT FOR REQUIRED PERIMETER LANDSCAPE EDGE PLANTING REQUIREMENTS. NO NEW LANDSCAPE PLANTINGS ARE TO BE PROVIDED.

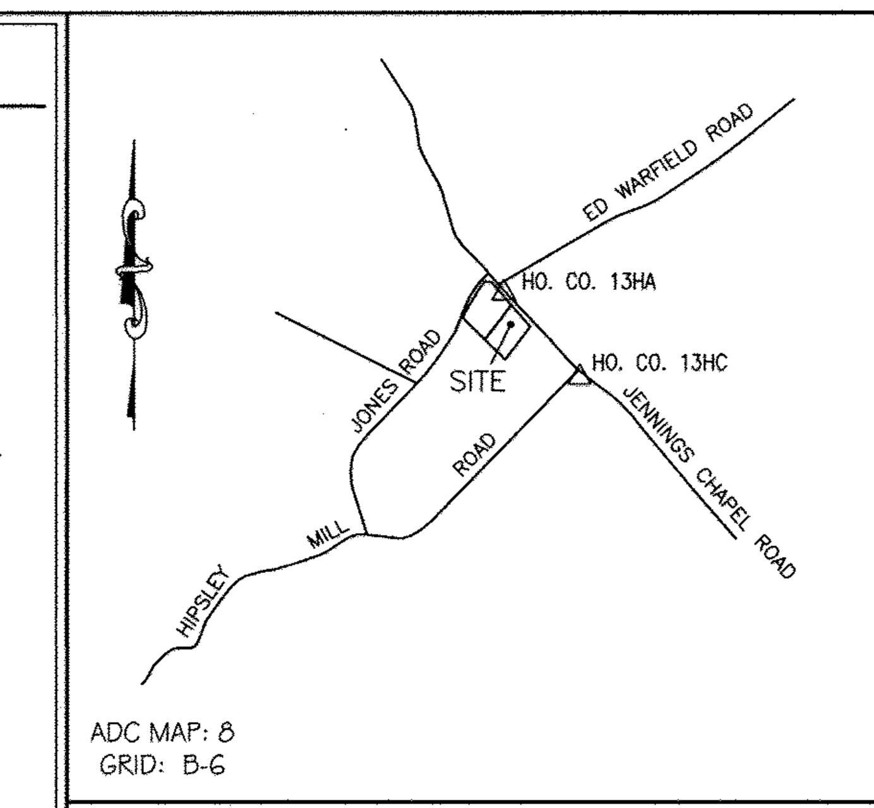
SOIL LEGEND

MAP SYMBOL	MAPPING UNIT	HYDROLOGIC SOIL GROUP	HYDRIC? COMPONENTS	Kw	SLOPE
GgA	GLENELG LOAM	B	NO	0.20	0-8%
GgB	GLENELG LOAM	B	NO	0.20	3-8%
HOWARD COUNTY SOILS MAP NO. 7					



LEGEND

PROPERTY LINE	
PROPOSED SEPTIC SYSTEM	
SILT FENCE	SF——SF——SF
SUPER SILT FENCE	SSF——SSF——SSF
DIVERSION FENCE	DF——DF——DF
LIMIT OF DISTURBANCE	——LOD——
(PASSED) PERCOLATION TEST SITE:	
(FAILED) PERCOLATION TEST SITE:	
EXISTING WELL:	
PROPOSED HOUSE SITE:	
PROPOSED WELL SITE:	
EXISTING TREELINE	
EXISTING MONOCULTURE SHRUBBERY AND TREES SERVE AS PERIMETER LANDSCAPE CREDIT.	
EX. TREE TO REMAIN AS PERIMETER LANDSCAPE CREDIT.	
STABILIZED CONSTRUCTION ENTRANCE	SCE
TREE REMOVAL	
SOIL LINE	GmA / GgB
EXISTING O/H UTILITY LINES & POLES	
EXISTING UTILITY PADS	



VICINITY MAP
SCALE: 1 "= 2,000' TAX MAP 3 PARCEL 87

OWNERS:
BERNARD A. & OLGA L. DUPLAN
3211 JONES ROAD
WOODBINE, MARYLAND 21797

0 50 100 150
SCALE: 1" = 50'

GENERAL NOTES

1. OWNER: BERNARD A. DUPLAN & OLGA L. DUPLAN
DEED REFERENCE: LIBER 1102 AT FOLIO 002
DATE: MAY 14, 1982
GRANTOR: PAUL KOVAL & DOROTHY KELLY KOVAL
2. TAX MAP: 13 GRID: 22 PARCEL: 87
3. NEAREST POTABLE WATER SUPPLY: MT. AIRY DISTANCE: 6 MILES ±.
4. THE SUBJECT PROPERTY IS NOT LOCATED IN SPECIAL FLOOD HAZARD AREA PER NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP,COMMUNITY PANEL NO. 24027C0040D.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY VANMAR ASSOCIATES, INC. DATED OCTOBER 29, 2013.
6. THE BASIS OF BEARINGS FOR THIS PLAN IS THE MARYLAND COORDINATE SYSTEM (NAD83/91) PER HOWARD COUNTY SURVEY CONTROL STATIONS
13HA N.589965.1613 E.1285964.8683
13HC N.589119.3143 E.1286752.3633
DISTANCES SHOWN HEREON ARE GROUND DISTANCES.
7. THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY BOUNDARY UNLESS OTHERWISE SHOWN HEREON.
8. THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES OR TAKEN FROM AVAILABLE RECORDS AND ACCURATELY SHOWN.
9. SOIL TYPE: GLENELG LOAM (GgA), (GgB)
SOILS MAP NO. 7.
10. THE SUBJECT PROPERTY IS ZONED RC-DEO IN ACCORDANCE WITH THE OCTOBER 6, 2013 COMPREHENSIVE ZONING REGULATIONS.
11. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREAS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
12. THERE ARE NO HISTORIC SITES OR CEMETERIES ON THIS PROPERTY.
13. THE SECTION OF JENNINGS CHAPEL ROAD ADJACENT TO THE SITE IS LISTED AS A SCENIC ROAD. THE DEVELOPMENT OF THE PROPERTY ALONG THE SCENIC ROADWAY SHALL BE DIRECTED SO AS TO PRESERVE THE SCENIC CHARACTER OF THE ROADWAY.
14. CREDIT FOR EXTENSIVE LANDSCAPE PLANTINGS THAT EXIST ON THE PROPERTY IS DESCRIBED IN SCHEDULE A. PERIMETER LANDSCAPING FOR LOTS 1 AND 2 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. LANDSCAPE SURETY IN THE AMOUNT OF $0 FOR NO SHADE TREES ($300.00 EACH, $0 FOR TWO LOTS) WILL BE POSTED WITH THE BUILDER'S GRADING PERMIT.
15. THIS IS A TWO LOT MINOR SUBDIVISION WITH NO FURTHER SUBDIVISION POTENTIAL AND IS THEREFORE EXEMPT FROM FOREST CONSERVATION PER SECTION 16.1202(b)(1)(viii) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGSULATIONS.

FOREST STAND NARRATIVE

1. A FIELD INVESTIGATION WAS PERFORMED ON DECEMBER 11, 2013 TO DETERMINE SITE CONDITIONS LISTED IN THIS NARRATIVE.
2. NO FOREST, WETLANDS, STEEP SLOPES, OR FLOOD PLAINS EXIST WITHIN THE SITE.
3. NO STREAMS EXIST WITHIN THE SITE. NO HYDRIC OR ERODIBLE SOILS EXIST WITHIN THE SITE.
4. NO SPECIMEN TREES EXIST WITHIN THE SITE.
5. TYPICAL COVER IS MOWED FIELD GRASS, LANDSCAPE PLANTINGS OF TREES, SHRUBBERY, AND EVERGREENS. NO FOREST.
6. AS THERE IS NO FOREST ON THE SITE, A FOREST STAND ANALYSIS TABLE WAS NOT PROIVIDED.
7. BRIGHTON DAM WATERSHED, #02131108, PATUXENT TRIBUTRAY BASIN.

5/12/17 REV. 1 & 4/20/18 REV 2

APPROVED

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/08/14

FOR: CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/14

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licenced professional landscape architect under the laws of the State of Maryland, License No. 569, Expiration Date: 08-16-2015.

STATE OF MARYLAND — DAVID ALLMAN ADAMS — LANDSCAPE ARCHITECT — No. 569 — 7/21/14

DATE	REVISIONS	
5/12/17	REVISE HOUSE, DRIVEWAY, GRADING & SWM ON LOT 1	REV 1
4/20/18	REMOVE CIRCULAR DRIVEWAY AND ASSOCIATED DRYWELL	REV 2

LANDSCAPE PLAN
DUPLAN SUBDIVISION
LOTS 1 & 2

TAX MAP: 13	ELECTION DISTRICT: No. 4	SCALE: 1" = 50'
GRID NO: 22	HOWARD COUNTY, MARYLAND	DATE: JULY, 2014
PARCEL NO: 87	EX. ZONING: RC-DEO	SHEET 4 OF 4

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