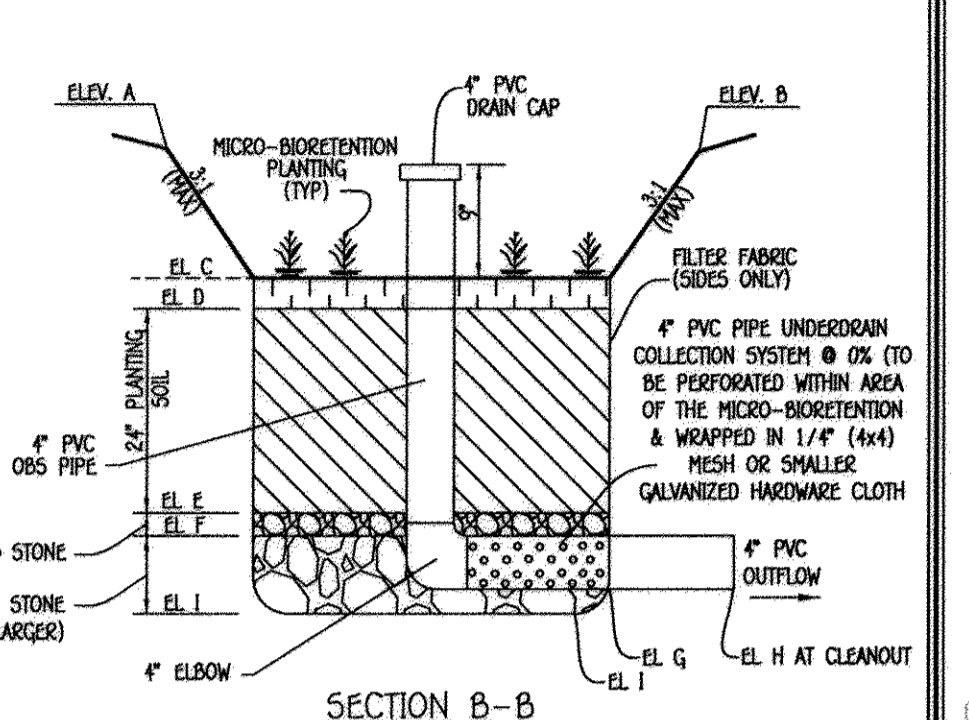
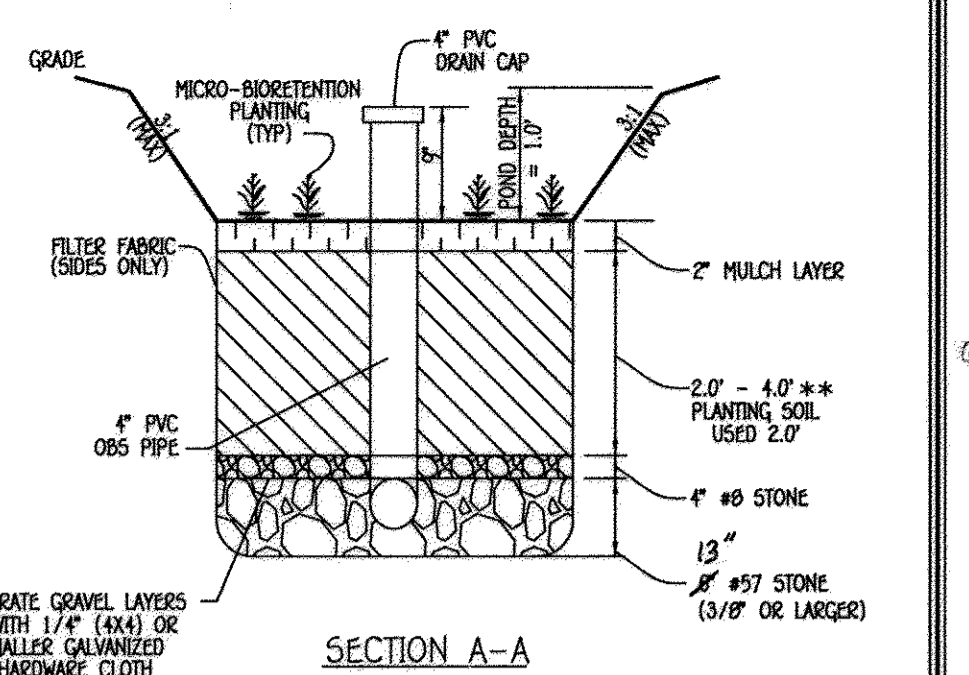
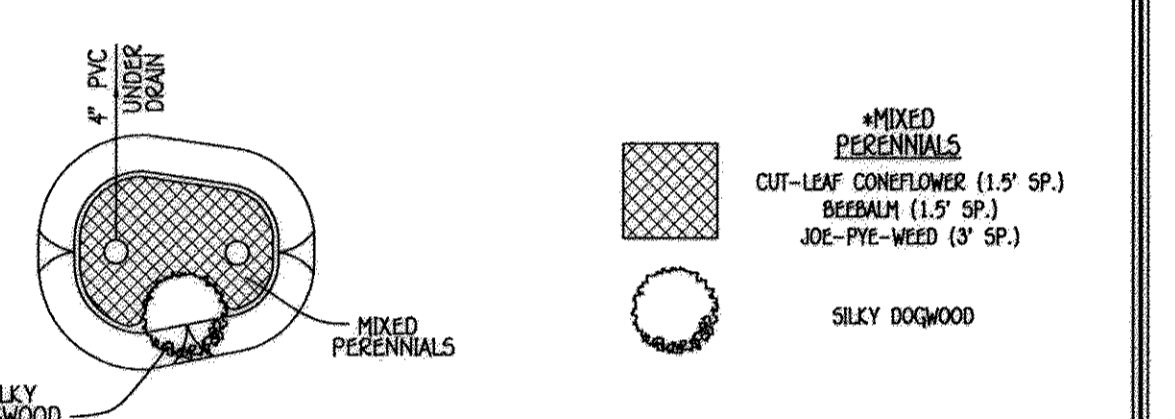


KEY	SPECIES	SIZE (DBH)	CRZ (FT RADIUS)	COMMENTS
1	WHITE OAK	34"	51	GOOD CONDITION
2	BLACK OAK	40.5"	60.75	GOOD CONDITION
3	BLACK OAK	41.5"	62.25	GOOD CONDITION
4	RED OAK	49"	73.5	FAIR CONDITION, SPLITS ABOVE BREAST HEIGHT, SOME LIMB DIEBACK
5	RED OAK	46"	69	POOR CONDITION, TRUNK ROT EVIDENT
6	BLACK OAK	36"	54	POOR CONDITION, TRUNK ROT EVIDENT
7	TULIP POPLAR	30"	45	
8	BLACK OAK	31.5"	47.25	FAIR CONDITION, LIMB DIEBACK NOTED



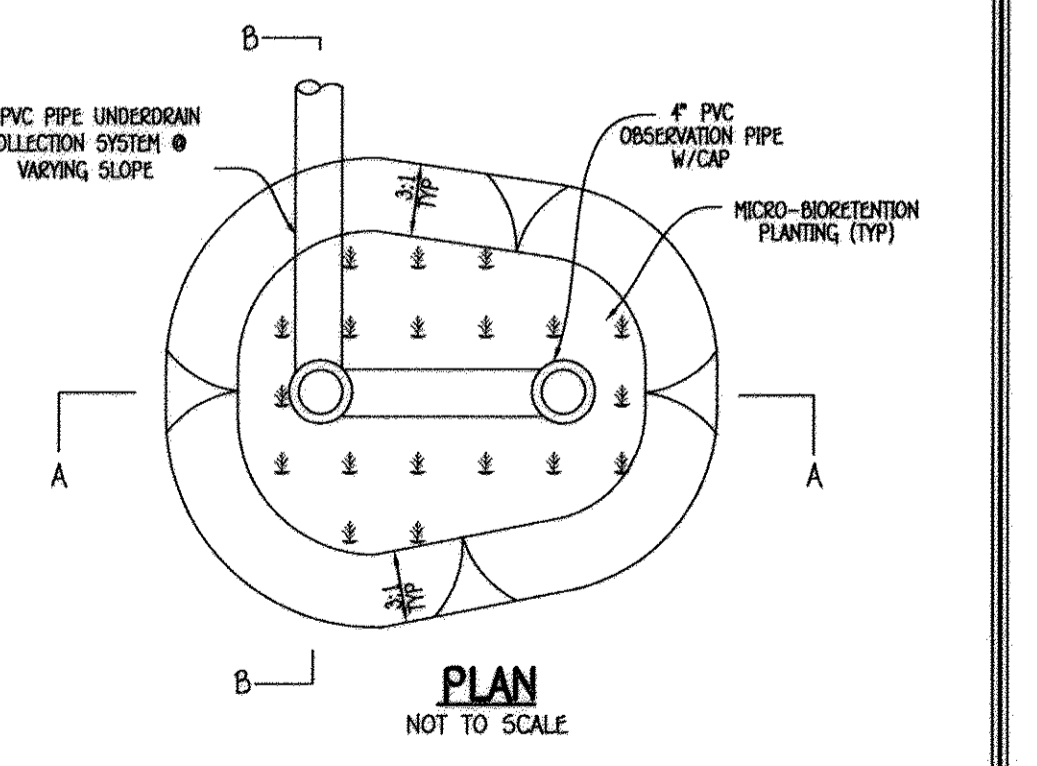
MICRO-BIORETENTION DETAIL (M-6)  
NOT TO SCALE

BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
1 (LOT 3)	536.00	536.00	535.00	534.83	532.83	532.50	532.17	531.74	531.42



MICRO-BIORETENTION PLANTING DETAIL  
NOT TO SCALE

MICRO-BIO 1 QUANTITY	NAME	MAXIMUM SPACING (FT.)
30	MIXED PERENNIALS	1.5 TO 3.0 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION



SUPPLEMENTAL PLAN - TOPOGRAPHY, LANDSCAPE, FOREST CONSERVATION & SOILS  
**FIVE HILLS FARM**  
 LOTS 1 THRU 4  
 ZONED RC-DEO  
 TAX MAP No. 9 GRID No. 7 PARCEL No. 117  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: NOVEMBER, 2016  
 SHEET 2 OF 5

SOIL	NAME	CLASS	K FACTOR
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GmB	Glenville silt loam, 3 to 8 percent slopes	C	0.37
GmC	Glenville-Baile silt loams, 0 to 8 percent slopes	C	0.37
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	D	0.37
MaD	Manor loam, 15 to 25 percent slopes	B	0.24
McC	Manor-channery loam, 8 to 15 percent slopes	B	0.24

**DEVELOPER'S / BUILDER'S CERTIFICATE**  
 I/WE CERTIFY THAT THE LANDSCAPE SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature: *Joseph Hill*  
 DNR QUALIFIED PROFESSIONAL  
 DATE: 11-21-16

1 REMOVE HOUSE, GARAGE, DRIVEWAY & SWM LOT 1  
 2 REVISION  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DATE: 5/1/17

**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 NO. 38386, EXPIRATION DATE: 01/12/2018.

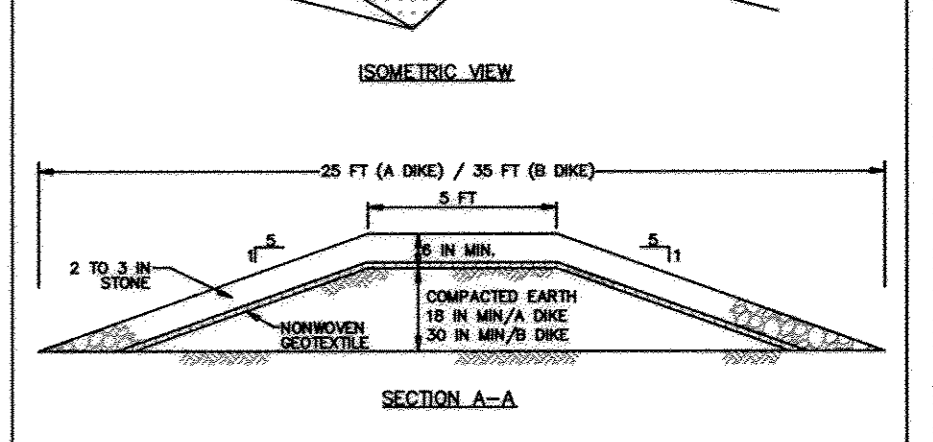
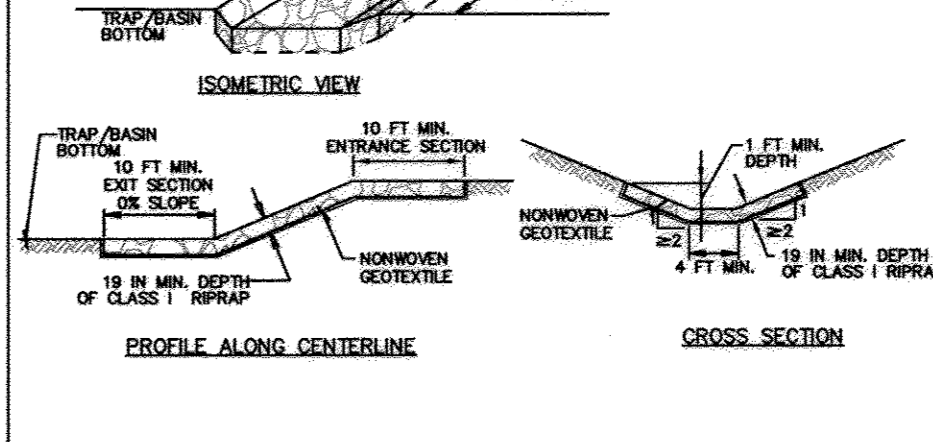
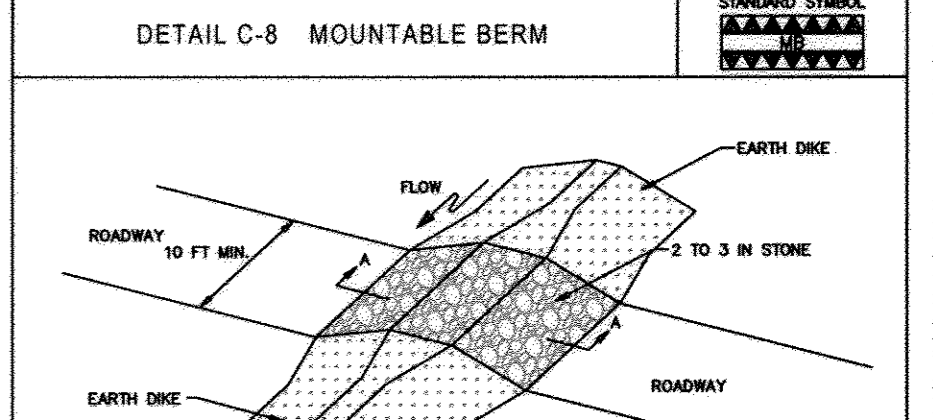
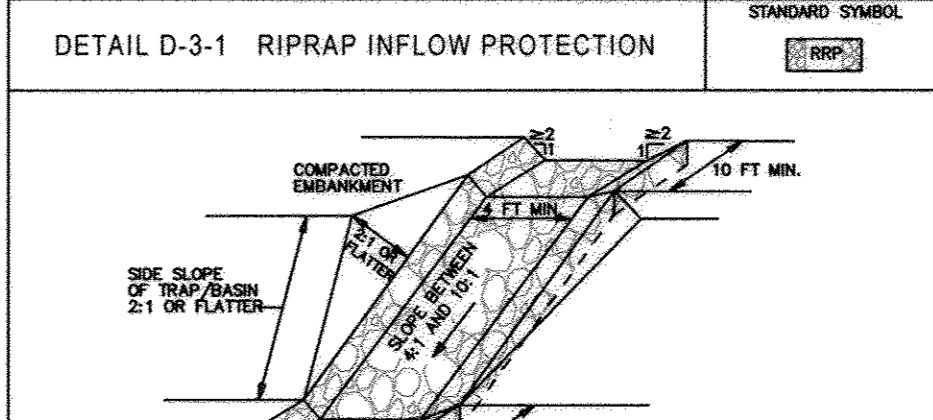
Signature: *Walter D. Collins* 12-5-16  
 Chief, Division of Land Development  
 Date: 12-5-16

Signature: *Walter D. Collins* 12-2-16  
 Chief, Development Engineering Division  
 Date: 12-2-16

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 SALTBRIDGE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21142  
 (410) 461-2095

NOTE: HOUSES MAY NOT BE BUILT USING THIS PLAN.

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GmB	Glenville silt loam, 3 to 8 percent slopes	C	0.37
GmD	Glenville-Balle silt loams, 0 to 8 percent slopes	C	0.37
HA	Harboro-Codorus silt loams, 0 to 3 percent slopes	D	0.37
MaD	Manor loam, 15 to 25 percent slopes	B	0.24
McC	Manor-channery loam, 8 to 15 percent slopes	B	0.24



**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
- CONSTRUCT INFLOW CHANNEL, WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 18 INCHES (2' DOWN) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- BLEND RIPRAP INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011

**CONSTRUCTION SPECIFICATIONS**

- USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
- PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
- PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN THE SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011

**CONSTRUCTION SPECIFICATIONS**

- CONSTRUCT BERM ON AN UNDISTURBED, CONTIGUOUS GRADE.
- INSTALL BERM TO CONFORM TO CROSS SECTION DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 36 FEET.
- PROVIDE OUTLET PROTECTION AS REQUIRED ON PLAN.
- COMPACT ASPHALT BERM.
- REPAIR DAMAGED ASPHALT. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.
- UPON REMOVAL OF ASPHALT BERM, RETURN TO ORIGINAL CONDITIONS OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011

**CONSTRUCTION SPECIFICATIONS**

- CONSTRUCT BERM ON AN UNDISTURBED, CONTIGUOUS GRADE.
- INSTALL BERM TO CONFORM TO CROSS SECTION DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 36 FEET.
- PROVIDE OUTLET PROTECTION AS REQUIRED ON PLAN.
- COMPACT ASPHALT BERM.
- REPAIR DAMAGED ASPHALT. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.
- UPON REMOVAL OF ASPHALT BERM, RETURN TO ORIGINAL CONDITIONS OR AS SPECIFIED ON APPROVED PLAN.

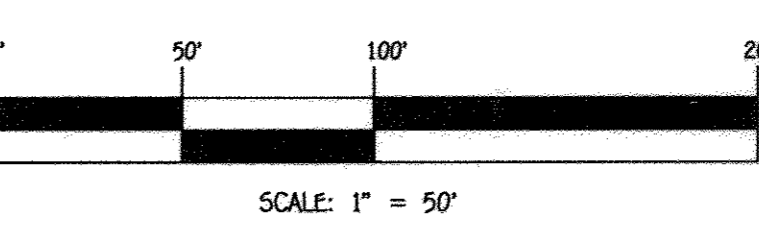
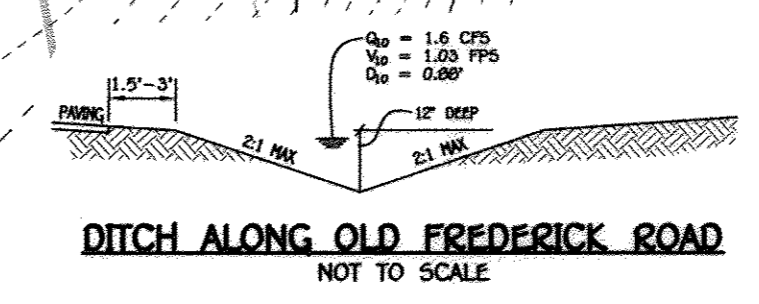
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011

**STONE OUTLET SEDIMENT TRAP #1**

TRAP TYPE = ST-II  
DRAINAGE AREA = 1.01 AC.  
TOTAL STORAGE REQUIRED = 3,636 CU.FT.  
TOTAL STORAGE PROVIDED = 3,643 CU.FT.  
WET STORAGE REQUIRED = 1,818 CU.FT.  
WET STORAGE PROVIDED = 1,825 CU.FT. @ 552.45  
DRY STORAGE REQUIRED = 1,818 CU.FT.  
DRY STORAGE PROVIDED = 1,818 CU.FT. @ 553.75  
EXISTING GROUND ELEV AT OUTLET = 550.76  
BOTTOM OF TRAP ELEV = 550.50  
BOTTOM OF TRAP DIMENSIONS = 49 FT x 23 FT  
WEIR LENGTH = 4 FT  
WEIR CREST ELEV = 553.75  
CLEANOUT ELEV = 551.47  
TOP OF EMBANKMENT = 554.75  
SIDE SLOPES = 2:1  
EMBANKMENT WIDTH = 4 FT  
EMBANKMENT HEIGHT = 4 FT  
OUTLET PROTECTION APRON LENGTH = 15 FT  
OUTLET PROTECTION DEPTH = 19 INCHES

**STONE OUTLET SEDIMENT TRAP #2**

TRAP TYPE = ST-II  
DRAINAGE AREA = 1.57 AC.  
TOTAL STORAGE REQUIRED = 5,652 CU.FT.  
TOTAL STORAGE PROVIDED = 5,973 CU.FT.  
WET STORAGE REQUIRED = 2,826 CU.FT.  
WET STORAGE PROVIDED = 2,983 CU.FT. @ 539.75  
DRY STORAGE REQUIRED = 2,826 CU.FT.  
DRY STORAGE PROVIDED = 2,990 CU.FT. @ 541.10  
GROUND ELEV AT OUTLET = 540  
BOTTOM OF TRAP ELEV = 538.00  
BOTTOM OF TRAP DIMENSIONS = 46 FT x 34 FT  
WEIR LENGTH = 6 FT  
WEIR CREST ELEV = 541.10  
CLEANOUT ELEV = 539.89  
TOP OF EMBANKMENT = 542.10  
SIDE SLOPES = 2:1  
EMBANKMENT WIDTH = 4 FT  
EMBANKMENT HEIGHT = 1.1 FT  
OUTLET PROTECTION APRON LENGTH = 16 FT  
OUTLET PROTECTION DEPTH = 19 INCHES



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE  
ELLETTT CITY, MARYLAND 21042  
(410) 461 - 2295

NO.	REVISION	DATE
1	REMOVE HOUSE, DRIVEWAY, DRIVEWAY, GRASS CONTROL, SWM + LOT 1	8/1/17
2	REVISION	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Victoria Dovich* 12-5-16  
Chief, Division of Land Development Date

*Michael* 12-2-16  
Chief, Development Engineering Division Date

**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 NO. 36066, EXPIRATION DATE: 01/12/2018.

*Arifan Jivir* 11/18/16  
Signature of Professional Engineer DATE

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

*John K. Roston* 4/29/16  
Signature of Engineer DATE

**ENGINEER'S 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."

*Arifan Jivir* 11/18/16  
Signature of Engineer DATE

**OWNER / DEVELOPER**

Joe & Jennifer Hill  
P.O. Box 189  
Woodbine, MD 21797  
410-339-7583

**SUPPLEMENTAL PLAN - GRADING & SEDIMENT AND EROSION CONTROL**

**FIVE HILLS FARM**  
LOTS 1 THRU 4

ZONED RC-DEO  
TAX MAP No. 9 GRID No. 7 PARCEL No. 117  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: NOVEMBER, 2016  
SHEET 3 OF 5

**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."

*Joe Hill* 11-27-16  
Signature of Developer Date

F-16-031

PLANTING / SOIL SPECIFICATIONS

- 1. Planting Of Nursery Stock Shall Take Place Between March 15th And April 30th Of September 15th And November 15th.
2. A Twelve (12) Inch Layer Of Topsoil Shall Be Spread Over All Restoration Areas Impacted By Site Grading To Assure A Suitable Planting Area. If Applicable, Disturbed Areas Shall Be Seeded And Stabilized In Accordance With The Sediment & Erosion Control Plan For This Project. Planting Areas Not Impacted By Site Grading Shall Have No Additional Topsoil Installed.
3. All Bare Root Planting Stock Shall Have Their Root System Dipped Into An Anti-Desiccant Gel Prior To Planting.
4. Plants Shall Be Installed So That The Top Of The Root Mass Is Level With The Top Of Existing Grade. Backfill In The Planting Pits Shall Consist Of 3 Parts Existing Soil To 1 Part Fine Fines Or Equivalent.
5. Fertilizer Shall Consist Of Agriform 22-9-2, Or Equivalent, Applied As Per Manufacturer's Specifications.
6. A Two (2) Inch Layer Of Hardwood Mulch Shall Be Placed Over The Root Area Of All Plantings. See Planting Detail.
7. Plant Material Shall Be Transported To The Site In A Tarped Or Covered Truck. Plants Shall Be Kept Moist Prior To Planting.
8. All Non-Organic Debris Associated With The Planting Operation Shall Be Removed From The Site By The Contractor.

SEQUENCE OF CONSTRUCTION FOR REFORESTATION AREAS

- 1. Sediment Controls And Tree Protection Devices Shall Be Installed In Accordance With Sediment & Erosion Control Plans For This Site, If Applicable. Site Shall Be Graded In Accordance With The Plans. (2 Days)
2. Proposed Reforestation Areas Impacted By The Site Grading Shall Be Topsoiled And Stabilized As Per Note 2 Of The "Planting / Soil Specifications". (1 Day)
3. Plants Shall Be Installed And Maintained As Per Notes And Specifications For This Project. (1 Week)
4. Upon Completion Of The Plantings, Signage Shall Be Installed As Per The Signage Detail. (1 Week)
5. Plantings Shall Be Guaranteed And Maintained In Accordance With The "Guarantee Requirements" And "Maintenance Of Plantings" Associated With This Project. (2 Years)

MAINTENANCE OF PLANTINGS

- 1. Maintenance Of Plantings Shall Last For A Period Of 26 Months.
2. All Plant Material Shall Be Generally Watered Twice A Month During The 1st Growing Season. Watering May Be More Or Less Frequent Depending On Weather Conditions.
3. During The 2nd Growing Season, Plant Material Shall Be Watered Once A Month From May To September, As Needed.
4. Invasive Exotics And Noxious Weeds Shall Be Removed From The Reforestation Area(s). Old Field Successional Species Shall Be Retained.
5. Plants Shall Be Examined A Minimum Of Two (2) Times During The Growing Season For Serious Plant Pests And Diseases With The Appropriate Agent.
6. Dead Branches Shall Be Pruned From The Plantings.

GUARANTEE REQUIREMENTS

A 75% Survival Rate For The Reforestation Plantings Is Required At The End Of The 24 Month Maintenance Period. All Plant Material Below The 75% Threshold Is Required To Be Replaced At The Beginning Of The Next Growing Season.

MULTIFLORA ROSE CONTROL NOTE:

PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Season And Once In The Spring And Once In The Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturer's Specifications. Care Should Be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth Of Roses Is Able To Be More Successfully Managed.

REFORESTATION PLANTING NOTES

- 1. Plants, Related Material, And Operations Shall Meet The Detailed Description As Given On The Plans And As Described Herein.
2. Plant Material, Unless Otherwise Specified, Shall Be Nursery Grown, Uniformly Branched And Have A Vigorous Root System. Plant Material Shall Be Healthy, Vigorous Plants Free From Defects, Decay, Disturbing Roots, Sunscald Injuries, Abrasions Of The Bark, Plant Disease, Insect Pest Eggs, Bothers, Infestations Or Objectionable Disfigurements. Plant Material That Is Weak Or Which Has Been Cut Back From Larger Grades To Meet Specified Requirements Will Be Rejected. Trees With Forked Leaders Will Not Be Accepted. Plants Shall Be Freshly Dig; No Heeled-In Plants Or Plants From Cold Storage Will Be Accepted.
3. Unless Otherwise Specified, Plant Material Shall Conform To "American Standard For Nursery Stock" ANSI Z60.1-1990, Published By The American Association Of Nurserymen, Including All Addenda.
4. Contractor Will Be Required To Guarantee Plant Material For A Period Of Two (2) Years After The Date Of Acceptance And Maintain A 75% Survivability At The End Of The Two (2) Years.
5. To Lessen The Chance Of Loss, The Plantings Should Be Checked From Time To Time To Insure That They Are Receiving Sufficient Water. See "Maintenance Of Plantings" For Guidelines.
6. The Location And Orientation Of All Plant Material Shall Be Randomly Planted In Designated Reforestation Areas By The Contractor. Contractor Shall Be Responsible For Mowing Any Plant Material Installed Without Approval.
7. Mowing And Applying Herbicides To The Reforestation Area Is Prohibited At Any All Stages Of The Planting Process In Order To Encourage The Existing Saplings To Grow.
8. Contractor Is Responsible For Installing And Pruning Plant Material In The Proper Planting Season For Each Plant Type. See Tree Planting & Maintenance Calendar.
9. Upon Completion Of Installation, Signage Shall Be Installed As Shown.

FOREST PROTECTION GENERAL NOTES

- 1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC FENCING, AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
2. THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
3. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
4. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
5. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
6. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
9. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

- 1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIFIC TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
C. MAKE ALL NECESSARY ADJUSTMENTS;
D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

- 1. THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
2. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.
3. THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

FOREST CONSERVATION WORKSHEET

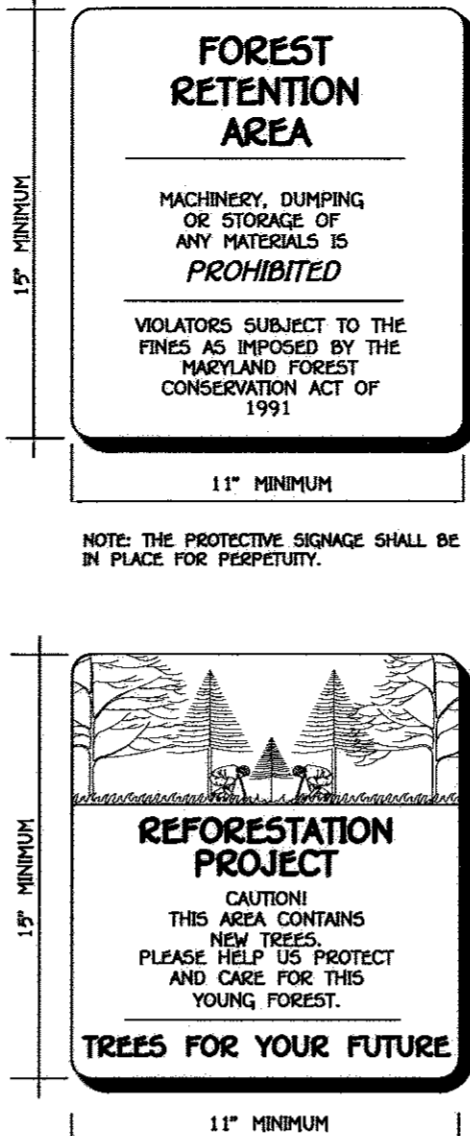
Table with columns for NET TRACT AREA, A. TOTAL TRACT AREA, B. DEDUCTIONS (AREA WITHIN 100 YEAR FLOODPLAIN), C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION, D. NET TRACT AREA, LAND USE CATEGORY: MEDIUM DENSITY RESIDENTIAL, E. AFFORESTATION THRESHOLD (NET TRACT AREA (CI) x 25%), F. CONSERVATION THRESHOLD (NET TRACT AREA (CI) x 25%), EXISTING FOREST COVER, G. EXISTING FOREST COVER WITHIN THE NET TRACT AREA, H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD, I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD, BREAK-EVEN POINT, J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION, BREAK-EVEN POINT, E. CLEARING PERMITTED WITHOUT MITIGATION, PROPOSED FOREST CLEARING, L. TOTAL AREA OF FOREST TO BE RETAINED, M. TOTAL AREA OF FOREST TO BE CLEARED OR RETAINED OUTSIDE FCE, PLANTING REQUIREMENTS, N. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD, P. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD, Q. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD, R. TOTAL REFORESTATION REQUIRED, S. TOTAL AFFORESTATION REQUIRED, T. TOTAL PLANTING REQUIREMENT.

NOTE: 1. LOT 2 IS SUBJECT TO A DECLARATION OF INTENT FOR AGRICULTURAL ACTIVITIES AND HAS BEEN EXCLUDED FROM FOREST CONSERVATION CALCULATIONS. FOREST CONSERVATION SHALL BE ADDRESSED FOR LOT 2 PRIOR TO GRADING PERMIT ISSUANCE.
2. OFF-SITE RETENTION OF 0.68 ACRES OF FOREST ON LOT 2 AND OFF-SITE REFORESTATION PLANTING ON LOT 2 OF 0.68 ACRES OF FOREST.

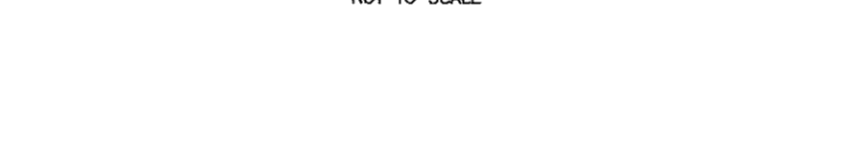
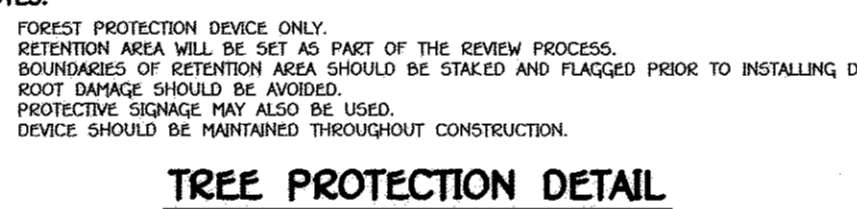
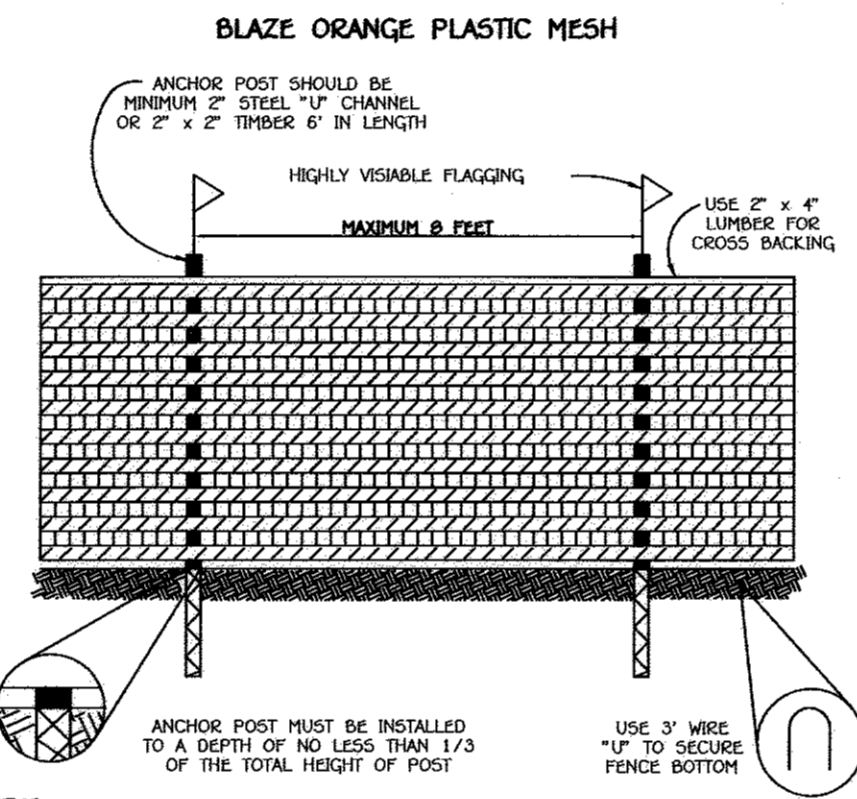
FCE # 5 (REFORESTATION) - 0.68 acres

Table with columns for Qty, Species, Size (Spacing), including entries for Acer rubrum - Red maple, Betula nigra - Silver Birch, Carya tomentosa - Mockernut Hickory, etc.

NOTE: (1) SEE RESPONSE TO THE UTILITIES AND PLANTING AT 300 TREES PER ACRE (300 TREES/ACRE x 0.68 ACRES = 204 TREES). GARDENS (WILLOW) NOT INCLUDED IN TOTAL QUANTITY.



FOREST CONSERVATION SIGN DETAIL NOT TO SCALE



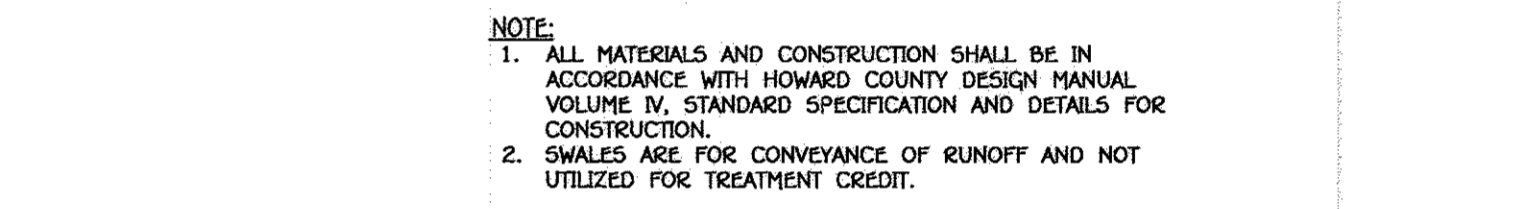
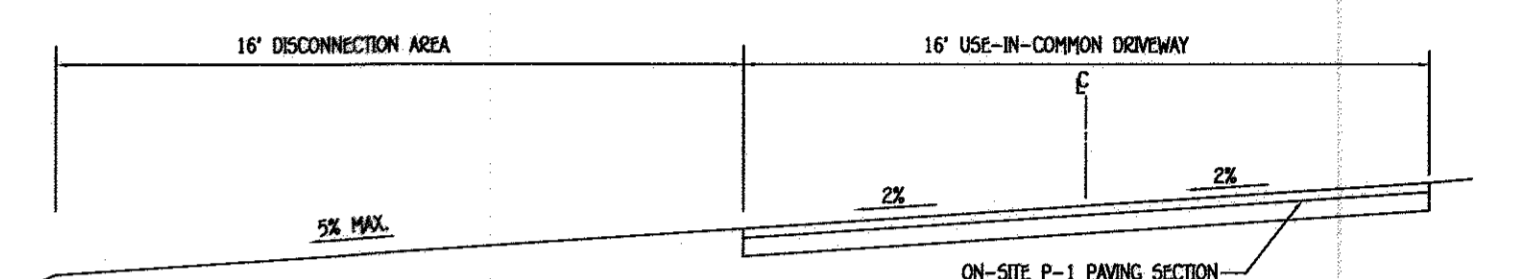
Forest Conservation Data table with columns for Easement No., Total Retention Area, Retention Outside Floodplain, Retention Inside Floodplain, Planting, and Total Easement. Includes a total row: 3.07 AC., 3.07 AC., 0.00 AC., 0.68 AC., 3.75 AC.

Schedule A - Perimeter Landscape Edge table with columns for Perimeter, Category, Adjacent to Roadway, Adjacent to Perimeter Properties, Adjacent to Perimeter Properties, Adjacent to Perimeter Properties, and Total. Includes a note: 'NOTE: LOT 1 CONTAINS THE EXISTING HOUSE WHICH IS TO BE REPLACED AND HAS BEEN EXCLUDED FROM THE LANDSCAPE OBLIGATIONS DUE TO THE FACT THAT IT CONTAINS THE CURRENTLY DEVELOPED PORTION OF THE PROPERTY. CREDIT IS BEING TAKEN FOR AN EXISTING 30' TULIP ALONG PERIMETER 4.'

Landscape Plant List table with columns for Qty., Key, Name, and Size. Lists Acer rubrum 'Red Sunset', Red Sunset Red Maple, and Quercus pallustris (Pin Oak).

NOTES

- 1. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 2.69 ACRES OF FOREST, OFF-SITE RETENTION OF 0.38 ACRES OF FOREST ON LOT 2, AND OFF-SITE REFORESTATION PLANTING ON LOT 2 OF 0.68 ACRES (29,620.8 SQ.FT.) OF FOREST. SURETY IN THE AMOUNT OF \$14,810.00 (29,620.8 SQ.FT. x \$0.50) WILL BE POSTED AS PART OF OPW DEVELOPERS AGREEMENT. LOT 2 IS SUBJECT TO A DECLARATION OF INTENT FOR AGRICULTURAL ACTIVITIES AND HAS BEEN EXCLUDED FROM FOREST CONSERVATION CALCULATIONS.
2. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL, A LANDSCAPE SURETY FOR 9 SHADE TREES IN THE AMOUNT OF (\$2,700.00) WILL BE POSTED AS PART OF THE BUILDERS GRADING PERMIT FOR LOT 2.
3. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HERewith LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING 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 REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
4. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERRIS, 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.
5. SEE THE RECORD PLAT FOR THE BEARING AND DISTANCE DESCRIPTIONS OF THE FOREST CONSERVATION EASEMENTS.
6. NO GRADING OR REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
7. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. SHOULD DISTURBANCE OCCUR IN THE FOREST CONSERVATION EASEMENT AREAS DURING OR AFTER CONSTRUCTION, CIVIL PENALTIES OR MITIGATION MAY BE IMPOSED.
8. THE FOREST CONSERVATION REFORESTATION PLANTINGS ARE NOT TO BE CONSIDERED LANDSCAPING, AS IT IS USUALLY PRACTICED. THE REFORESTATION PLANTINGS ARE TO CREATE NEW FOREST COMMUNITIES THAT WILL REPLACE TO SOME DEGREE THE FOREST RESOURCES THAT HAVE BEEN LOST DURING RECENT DECADES OF FARMING AND LAND DEVELOPMENT. THEIR PRIMARY PURPOSE IS ENVIRONMENTAL AND NOT AESTHETIC. THESE REFORESTATION STANDS WILL REQUIRE SPECIAL MANAGEMENT AND INITIALLY MAY NOT LOOK ATTRACTIVE.



OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED, DISCONNECTION OF ROOFTOP RUNOFF (N-1) DISCONNECTION OF NONROOFTOP RUNOFF (N-2)

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

FOREST CONSERVATION & LANDSCAPE DETAILS

FIVE HILLS FARM LOTS 1 THRU 4

ZONED RC-DEO
TAX MAP No. 9 GRID No. 7 PARCEL No. 117
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2016
SHEET 4 OF 5

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
12-5-16 Date
12-2-16 Date

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 NO. 36366, EXPIRATION DATE: 01/12/2018.
Signature: Stephen Lutz 11/18/16
DATE: 11-21-16

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 CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
OWNER / DEVELOPER
Joe & Jennifer Hill
P.O. Box 189
Woodbine, MD 21797
410-339-7583

