

MICRO-BIORETENTION										
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I	J
1	248.00	248.00	247.00	246.75	244.75	244.50	244.17	243.61	244.00	1.0%
2	255.20	255.20	254.40	254.15	252.15	251.57	251.36	251.36	251.36	0.5%
3	251.20	251.20	250.20	249.95	247.70	247.37	245.80	247.16	247.16	3.7%
4	245.50	245.50	244.50	244.25	242.25	242.00	241.67	240.60	241.50	2.3%

MICRO-BIORETENTION PLANT MATERIAL					
MICRO-BIO 1 QUANTITY	MICRO-BIO 2 QUANTITY	MICRO-BIO 3 QUANTITY	MICRO-BIO 4 QUANTITY	NAME	MAXIMUM SPACING (FT.)
30	15	10	12	MIXED PERENNIALS	1.5 TO 3.0 FT.
1	1	1	1	SILKY DOGWOOD	PLANT ANY FROM BELOW LOCATION

- NOTE:**
- THIS DRAWING MAY NOT BE USED TO OBTAIN PERMIT FOR CONSTRUCTION OF THE HOUSE OR DRIVEWAY.
 - THE STANDARD SEDIMENT AND EROSION CONTROL PLAN MAY NOT BE USED FOR THE HOUSE CONSTRUCTION.
 - SEEDING AND STABILIZATION IS TO BE PERFORMED AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE TIME FRAME REQUIRED BY THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION & SEDIMENT CONTROL, WHICHEVER IS MORE RESTRICTIVE.

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS ROAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/we further certify that upon completion a letter of notice of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Richard Scott Sabatelli
 9300 Old Scaggsville Road
 Laurel, Maryland 20723
 Phe 301-864-4043
 Date: 11/20/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

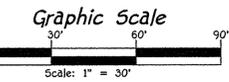
Kate Schell
 Chief, Division of Land Development
 Date: 2-11-15

Old Ghil
 Chief, Development Engineering Division
 Date: 2-9-15

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: 01/12/2016.

Alphonse J. Jurek 11/25/14
 Signature of Professional Engineer DATE



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SERVICE OFFICE: 10722 BALDORNE NATIONAL PIKE
 GAITHERSBURG, MARYLAND 20878
 (410) 461-2995

SUPPLEMENTAL, FOREST CONSERVATION LANDSCAPE, AND SOILS PLAN

Sabatelli Property
 Lots 1 Thru 4 And Open Space Lot 5

TAX MAP #50 GRID #2 PARCEL #451
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 ZONED: R-5C
 SCALE: 1"=30' DATE: NOVEMBER, 2014
 SHEET 2 OF 3

F-14-098

PLANTING / SOIL SPECIFICATIONS

- Planting of Nursery Stock Shall Take Place Between March 15th And April 30th Or September 15th And November 15th.
- A Twelve (12) Inch Layer Of Topsoil Shall Be Spread Over All Reforestation Areas Impacted By Site Grading To Assure A Suitable Planting Area, If Applicable. Substrate In The Planting Pits Shall Be Stabilized In Accordance With The Sediment & Erosion Control Plan For This Project. Planting Area Not Impacted By Site Grading Shall Have No Additional Topsoil Installed.
- All Bare Root Planting Stock Shall Have Their Root System Dipped Into An Anti-Desiccant Gel Prior To Planting.
- Plants Shall Be Installed So That The Top Of The Root Mass Is Level With The Top Of Existing Grade. Substrate In The Planting Pits Shall Consist Of 3 Parts Existing Soil To 1 Part Pine Fines Or Equivalent.
- Fertilizer Shall Consist Of Agriform 22-0-2, Or Equivalent, Applied As Per Manufacturer's Specifications.
- A Two (2) Inch Layer Of Hardwood Mulch Shall Be Placed Over The Root Area Of All Plantings. See Planting Detail.
- Plant Material Shall Be Transported To The Site In A Tarped Or Covered Truck. Plants Shall Be Kept Moist Prior To Planting.
- All Non-Organic Debris Associated With The Planting Operation Shall Be Removed From The Site By The Contractor.

SEQUENCE OF CONSTRUCTION

- Sediment Controls And Tree Protective 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.
- Proposed Reforestation Areas Impacted By The Site Grading Shall Be Topsoiled And Stabilized As Per Note 2 Of The "Planting / Soil Specifications".
- Plants Shall Be Installed And Maintained As Per Notes And Specifications For This Project.
- Upon Completion Of The Plantings, Signage Shall Be Installed As Per The Signage Detail.
- Plantings Shall Be Maintained And Monitored In Accordance With The "Qualitative Requirements" And "Maintenance Of Plantings" Associated With This Project.

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.

**FOREST CONSERVATION WORKSHEET
VERSION 1.0**

BASIC SITE DATA:

A. TOTAL TRACT AREA.....	1.65 AC
B. AREA OF LOT 1 CONTAINING THE EXISTING STRUCTURE.....	0.62
C. NET TRACT AREA.....	1.03 AC

LAND USE CATEGORY: (from Table 3.2.1, page 40, Manual)

ARA MDR IDA HDR MPD CIA

INFORMATION FOR CALCULATIONS:

D. AFFORESTATION THRESHOLD.....	0.20% x D =	0.19
E. FOREST CONSERVATION THRESHOLD.....	0.25% x D =	0.21

EXISTING FOREST COVER:

F. EXISTING FOREST COVER WITHIN NET TRACT AREA.....	0.24
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD.....	0.03

BREAK EVEN POINT:

H. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION.....	0.21
I. CLEARING PERMITTED WITHOUT MITIGATION.....	0.03

PROPOSED FOREST CLEARING:

J. TOTAL AREA OF FOREST TO BE CLEARED.....	0.00
K. TOTAL AREA OF FOREST TO BE RETAINED.....	0.24

PLANTING REQUIREMENTS:

L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD.....	0.00
M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD.....	0.00
N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD.....	0.03
P. TOTAL REFORESTATION REQUIRED.....	0.00
Q. TOTAL AFFORESTATION REQUIRED.....	0.00
R. TOTAL REFORESTATION AND AFFORESTATION REQUIRED.....	0.00
S. EXCESS FOREST CREDIT.....	0.03

SCHEDULE A - PERIMETER LANDSCAPE EDGE

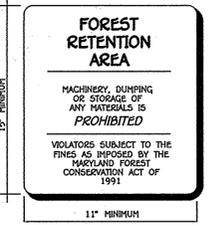
PERIMETER CATEGORY	P-1 ADJACENT TO PERIMETER PROPERTIES	P-2 ADJACENT TO PERIMETER PROPERTIES	P-3 ADJACENT TO PERIMETER PROPERTIES	SPECIMEN TREE REPLACEMENT	TOTAL
LANDSCAPE TYPE	A	A	A		
LINEAR FEET OF PERIMETER	271 LF	193 LF	415 LF		
CREDIT FOR EXISTING VEGETATION					
LINEAR FEET (LF) OF CREDIT REMAINING PERIMETER (LF)	55 LF OF EX. TREES 216 LF REMAINING	193 LF OF EX. TREES 0 LF REMAINING	107 LF OF EX. TREES 308 LF REMAINING	0	0
NUMBER OF PLANTS REQUIRED	(216/60' = 3.6 OR 4)	0	(308/60' = 5.1 OR 5)	0	0
CREDIT FOR EXISTING VEGETATION					
SHADE TREES	1	0	0	0	0
EVERGREENS/SUBSTITUTION TREES(2:1)	0	0	0	0	0
SHRUBS	0	0	0	0	0
NUMBER OF PLANTS PROVIDED					
SHADE TREES	3	0	2	4	9
EVERGREENS/SUBSTITUTION TREES(2:1)	0	0	0	0	0
SHRUBS	0	0	30	0	30

* CREDIT FOR EXISTING TREES: PERIMETER 1 - CREDIT IS TAKEN FOR AN EXISTING 48.5' RED OAK.

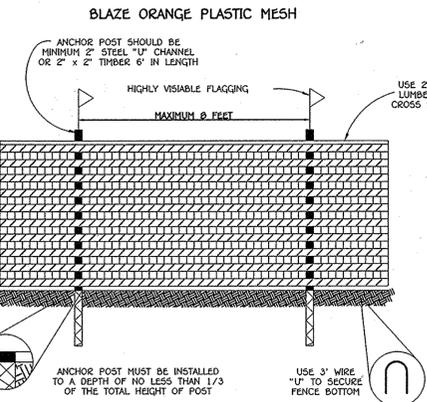
LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
4	○	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5'-3' CAL. FULL CROWN, 8-9.9
5	○	TILIA CORDATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2.5'-3' CAL. FULL CROWN, 8-9.9
10	○	ABELIA X GRANDIFLORA (GLOSSY ABELIA)	2.5'-3' HT. CONT.
12	○	ILEX X CRENATA 'COMPACTA' (COMPACT JAPANESE HOLLY)	2.5'-3' HT. CONT.

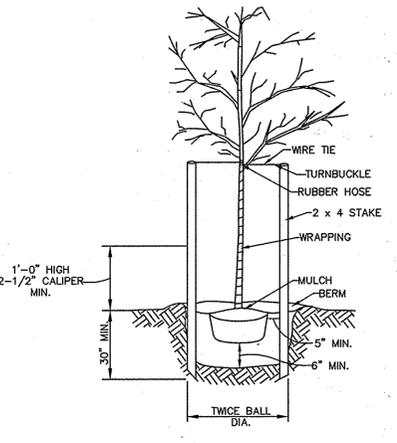
TOTAL: 9 SHADE TREES & 30 SHRUBS (INCLUDES 4 SHADE TREES THAT ARE REPLACING TWO SPECIMEN TREES PER WP-15-041)



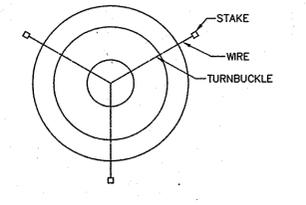
**FOREST CONSERVATION SIGN DETAIL
NOT TO SCALE**



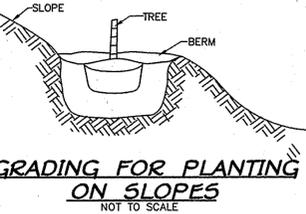
**TREE PROTECTION DETAIL
NOT TO SCALE**



**TREE PLANTING
NOT TO SCALE**



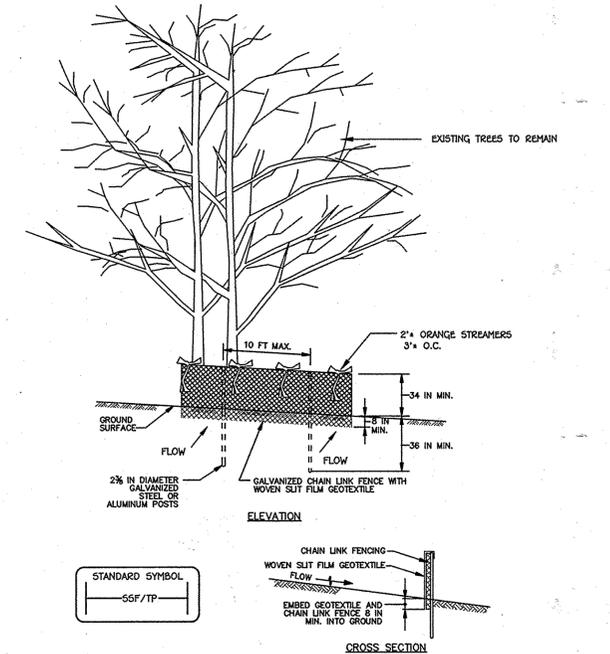
**STAKING DETAIL
NOT TO SCALE**



**GRADING FOR PLANTING ON SLOPES
NOT TO SCALE**

NOTES

- THE FOREST CONSERVATION EASEMENT AREAS WITHIN THIS SUBDIVISION HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE 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 ARE ALLOWED. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY ON-SITE RETENTION OF 0.24 ACRES OF FOREST. THERE IS NO FOREST SURETY FOR RETENTION OF RESOURCES.
- THE PERIMETER LANDSCAPE OBLIGATION FOR LOTS 2 THRU 4 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY IN THE AMOUNT OF \$3,600.00 BASED ON (9) SHADE TREES @ \$400/SHADE TREE AND (30) SHRUBS @ \$120/SHRUB SHALL BE BONDED AS PART OF THE DPW DEVELOPERS AGREEMENT.
- 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.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERRMS, 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.
- SHOULD DISTURBANCE OCCUR IN THE FOREST CONSERVATION EASEMENT AREAS DURING OR AFTER CONSTRUCTION, CIVIL PENALTIES OR MITIGATION MAY BE IMPOSED.
- SEE THE RECORD PLAN FOR THE BEARING AND DISTANCE DESCRIPTIONS OF THE FOREST CONSERVATION EASEMENTS.
- TWO SPECIMEN TREES SHALL BE REMOVED FROM THIS SUBDIVISION; A TOTAL OF 4 TREES HAVE BEEN SHOWN ON LOT 3, 4, AND OPEN SPACE LOT 5 TO REPLACE THESE TWO SPECIMEN TREES, PER WP-15-041.



- CONSTRUCTION SPECIFICATIONS**
- INSTALL 2 1/2 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.
 - FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE OR HUG RINGS.
 - FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TESS SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. ENDS OF GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
 - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
 - EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT AS DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - 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.

**SUPER SILT FENCE, TREE PROTECTION FENCE
NOT TO SCALE**

**SUPPLEMENTAL, FOREST CONSERVATION
LANDSCAPE, AND SOILS PLAN NOTES & DETAILS**

Sabatelli Property

Lots 1 Thru 4 And Open Space Lot 5

TAX MAP #50 GRID #2 PARCEL #451
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN ZONED: R-5C
DATE: NOVEMBER, 2014
SHEET 3 OF 3

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of notice of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Richard Scott Sabatelli
9300 Old Scaggsville Road
Laurel, Maryland 20723
Ph# 301-864-4043

Richard S. Sabatelli 11/20/14
Developer/Builder Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Robert S. D... 2-11-15
Chief, Division of Land Development Date

John P. ... 2-9-15
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. 38386, EXPIRATION DATE: 01/12/2016.

Anthony J. ... 1/25/14
Signature of Professional Engineer DATE

Owner

Richard Scott Sabatelli
9300 Old Scaggsville Road
Laurel, Maryland 20723
Ph# 301-864-4043

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
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