

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUPPLEMENTAL PLAN

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
GgB	Glenely loam, 3 to 8 percent slopes	B	0.20
GgC	Glenely loam, 8 to 15 percent slopes	B	0.20
GmB	Glenville silt loam, 3 to 8 percent slopes	C+	0.37

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESDV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS
SITE	1,150	1,187	ROOFTOP DISCONNECTIONS (N-1), NON-ROOFTOP DISCONNECTIONS (N-2), DRY WELLS (M-5) & MICRO-BIORETENTION (M-6)
TOTAL	1,150	1,187	

STORMWATER MANAGEMENT PRACTICES					
LOT NO.	ADDRESS	DISCONNECTION OF ROOFTOP RUNOFF (N-1) Y/N, NUMBER	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) Y/N, NUMBER	DRY WELLS (M-5) NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER
1	2511 DANCY ROAD	NO	YES	NO	YES, ONE (1)
2	2515 DANCY ROAD	YES, THREE (3)	YES	YES, TWO (2)	NO

GROSS AREA = 6.06 ACRES  
 LOD = 1.8 ACRES  
 RCN = 55.6  
 TARGET P<sub>e</sub> = 1.6"

# SUPPLEMENTAL PLAN

## ROBERT LEWIS, JR. PROPERTY

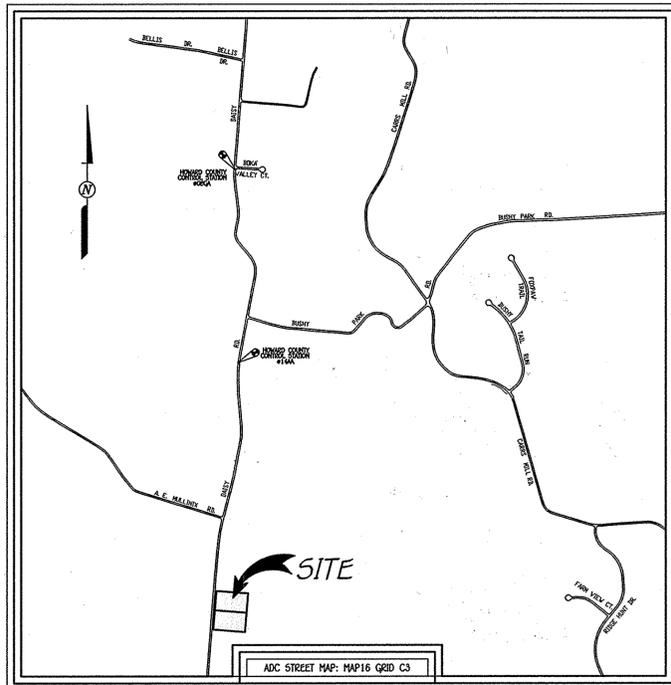
### LOTS 1 AND 2

TAX MAP No. 13 GRID No. 23 PARCEL NO. 332 &  
 TAX MAP No. 14 GRID No. 7 PARCEL NO. 238  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---492---	EXISTING 2' CONTOURS	---	PROPOSED CONTOUR
---490---	EXISTING 10' CONTOURS	+	SPOT ELEVATION
GgB	SOILS LINES AND TYPE	---	LIMITS OF DISTURBANCE
---	EXISTING TREE LINE	---	PROPOSED TREE LINE
---	INDIVIDUAL LARGE TREES	---	SILT FENCE
---	EXISTING FENCE LINE	---	EROSION CONTROL MATTING
---	EXISTING & PROPOSED PAVING	---	SUPER SILT FENCE
---	DRAINAGE AREA DIVIDE	---	STABILIZES CONSTRUCTION ENTRANCE
		---	TREE PROTECTIVE FENCE

**General Notes:**

- This Area Designates A Private Sewerage Easement Of A Minimum Of 10,000 Square Feet As Required By The Maryland State Department Of The Environment For Individual Sewerage Disposal. Improvements Of Any Nature In This Area Are Restricted Until Public Sewerage Is Available. These Easements Shall Become Null And Void Upon Connection To A Public Sewerage System. The County Health Officer Shall Have The Authority To Grant Variances For Encroachments Into The Private Sewerage Easement. Recordation Of A Modified Easement Shall Not Be Necessary.
- Subject Property Zoned RC-DEO Per 10/06/13 Comprehensive Zoning Plan.
- Coordinates Based On NAD 83, Maryland Coordinate System As Projected By Howard County Geodetic Control Station No. 1444 And No. 0824.  
 Sta. 1444 N 599,438.275, E 1,294,825.920  
 Sta. 0824 N 602,165.193, E 1,294,794.871
- This Plan Is Based On Field Run Monument Boundary Survey Performed On Or About February, 2014, By Fisher, Collins And Carter, Inc. The Existing Topography Is Taken From A Field Run Survey With Maximum Two Foot Contour Intervals Prepared By Fisher, Collins & Carter, Inc. Dated February, 2014.
- All Areas Are More Or Less (±).
- Denotes Iron Pin Set Capped "F.C.C. 106".
- Denotes Iron Pipe Or Iron Bar Found.
- Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.
- Denotes Concrete Monument Set With Aluminum Plate "F.C.C. 106".
- Denotes Concrete Monument Or Stone Found.
- All Areas Are More Or Less (±).
- Distances Shown Are Based On Surface Measurement And Not Reduced To Nad 83 Grid Measurement. Distances Shall Be Provided Prior To Issuance Of A Use And Occupancy Permit For Any New Dwellings To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:  
 a) Width - 12 Feet (16 Feet Serving More Than One Residence).  
 b) Surface - Six (6") Inches Of Compacted Crusher Run Base With Tar And Chip Coating. (1 - 1/2" Minimum).
- Geometry - Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius.  
 c) Structure (Culverts/Roads) - Capable Of Supporting 25 Gross Tons (HES-Loading).  
 d) Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface.
- Structure Clearances - Minimum 12 Feet.
- Maintenance - Sufficient To Ensure All Weather Use.
- Property Subject To Prior Department Of Planning And Zoning File No's: ECP-14-063.
- No Historic Structures Or Contributes Exist On The Subject Property.
- This Plan Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations.
- There Are No Wetlands, Streams, 100 Year Floodplain Or Steep Slopes With A Contiguous Area Greater Than 20,000 Square Feet Located On This Plot.
- The Lots Shown Hereon Comply With The Minimum Ownership Width And Lot Area As Required By The Maryland State Department Of The Environment.
- Private Well And Septic Shall Be Utilized Within This Development.
- There Are No Existing Dwellings/Structures Located On This Site.
- Stormwater Management For Lots 1 And 2 Is Provided By Rooftop Disconnection (N-1), Non-Rooftop Disconnection (N-2), Dry Wells (M-5) And Micro-Bioretenion (M-6).
- No Noise Study Is Required For This Final Plan.
- This Plan Establishes A Private Use-In-Common Shared Driveway Access Easement And Maintenance Easement That Will Be Recorded Simultaneously With The Recordation Of The Final Plan.
- A Community Meeting Was Conducted On January 28, 2014 At The Glenwood Library, 2350 Route 97, Cockeville, Maryland, 21723 For The Purpose Of The Developer To Provide Information To The Community Regarding The Proposed Residential Development And To Allow The Community To Ask Questions And To Make Comments. Per Section 16.128(d), Of The Subdivision Regulations.
- This Property Is Adjacent To A Scenic Road (Daisy Road).
- The Housing Opportunities Program, Howard County Housing Division Chief Has Determined That These Lots Are Not Subject To M.H.U. Obligations.
- 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 Survey For 22 Shade Trees In The Total Amount Of (\$6,600.00) Shall Be Posted As Part Of The Builders Grading Permit.  
 Lot 1 Survey: 9 Shade Trees @ \$300 Per Shade Tree = \$2,700.00  
 Lot 2 Survey: 13 Shade Trees @ \$300 Per Shade Tree = \$3,900.00
- Speed Study Dated February, 2014 Was Prepared By HMB Group.
- This Subdivision Is Exempt From The Forest Conservation Requirement Per Section 16.1202(b)(1)(vi) Of The Howard County Code And Forest Conservation Manual. Since This Is A Minor Subdivision Creating One Additional Lot And Has No Further Subdivision Potential.
- Wetland And Forest Stand Delineation Report Prepared By Eco-Science Professionals, Inc. In A Letter Report Dated February 18, 2014.
- Trash And Recyclables Collection Will Be At Daisy Road Within 5' Of The County Roadway.
- Sign Posts: All Sign Posts Used For Traffic Control Signs Installed In The County Right-Of-Way Shall Be Mounted On A 2" Galvanized Steel, Perforated ("Quick Punch" Type), Square Tube Post (14 Gauge) Inserted Into A 2-1/2" Galvanized Steel, Perforated, Square Tube Sleeve (12 Gauge) - 3' Long. The Anchor Shall Not Extend More Than Two ("Quick Punch") Holes Above Ground Level. A Galvanized Steel Pole Cap Shall Be Mounted On Top Of Each Post.
- Driveways For Lots 1 & 2 Shall Be Provided In Accordance With Howard County Standard Detail R-6.06 In The Vol. IV Design Manual.
- Soils Information Based On NRCS Web Soil Survey For Howard County, Maryland.
- All Construction Shall Be In Accordance With The Latest Standards And Specifications Of Howard County Plus MSMA Standards And Specifications If Applicable.
- The Contractor Shall Notify The Department Of Public Works/Bureau Of Engineering/Construction Inspection Division At (410) 313-1080 At Least Five (5) Working Days Prior To The Start Of Work.
- The Contractor Shall Notify "Mas Utility" At 1-800-257-7777 At Least 48 Hours Prior To Any Excavation Work Being Done.
- Traffic Control Devices, Markings, And Signaling Shall Be In Accordance With The Latest Edition Of The Manual Of Uniform Traffic Control Devices (MUTCD). All Street And Regulatory Signs Shall Be In Place Prior To The Placement Of Any Asphalt.
- No Traffic Study Is Required For This Project, Since It Is A Minor Subdivision.
- A Sequence Of Construction Shall Be Provided At The Time Of Submission Of The Grading Plan For Each Lot.
- SWH Is Not To Be Constructed Under This Plan.
- Section 16.120(b)(2)(ii) Of The Howard County Subdivision And Land Development Regulations Allow Land Dedicated For Road Street Widening In A Minor Subdivision To Be Counted Up To 10% Of The Minimum Lot Size Requirements Of 2.7 Acres.  
 Lot 1:  
 Area Including Road Widening Along Frontage = 3.023 Ac.  
 Area Of Road Widening Along Frontage = 0.191 Ac.  
 Area Of Lot 1 = 2.839 Ac. (Greater Than 2.7 Ac. Minimum)  
 Lot 2:  
 Area Including Road Widening Along Frontage = 3.030 Ac.  
 Area Of Road Widening Along Frontage = 0.189 Ac.  
 Area Of Lot 2 = 2.841 Ac. (Greater Than 2.7 Ac. Minimum)

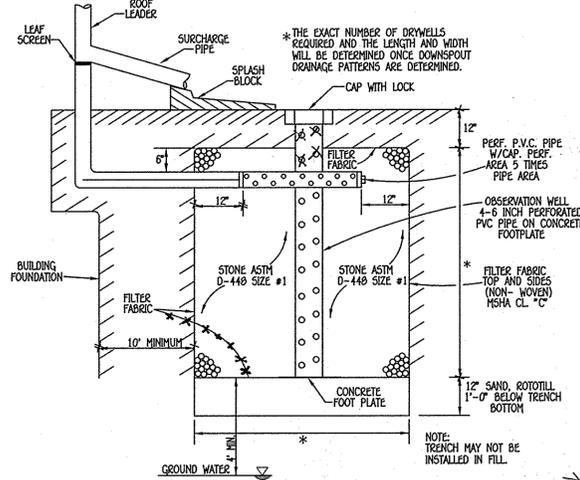


**VICINITY MAP**  
 SCALE: 1" = 1200'

BENCHMARK INFORMATION	
B.M.#1 - HOWARD COUNTY CONTROL STATION #144A - HORIZONTAL - NAD '83 (LOCATED 77.4' SOUTH OF B&E POLE #377382 & 83.3' SW OF B&E POLE #272942) N 599,438.275 E 1,294,825.920 ELEVATION = 254.90 - VERTICAL - (NAVD '86)	
B.M.#2 - HOWARD COUNTY CONTROL STATION #0824 - HORIZONTAL - NAD '83 (LOCATED 42.1' NE OF C&P POLE #25 AND 16.5' NW OF B&E POLE #542475) N 602,165.193 E 1,294,794.871 ELEVATION = 550.64 - VERTICAL - (NAVD '86)	

**SITE ANALYSIS DATA CHART**

- TOTAL AREA OF THIS SUBMISSION = 6.06 AC.±
- LIMIT OF DISTURBED AREA = 1.80 AC.±
- PRESENT ZONING DESIGNATION = RC-DEO  
 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: N/A
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC.±
- TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC.±
- TOTAL AREA OF WETLANDS (INCLUDING BUFFERS) = 0.00 AC.±
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.±
- TOTAL AREA OF EXISTING FOREST = 0.00 AC.±
- TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC.±
- TOTAL AREA OF LOT 1 / BUILDABLE PARCELS = 5.68 AC.±
- TOTAL GREEN OPEN AREA = 5.41 AC.±
- TOTAL IMPERVIOUS AREA = 0.27 AC.±
- TOTAL AREA OF ECODIBLE SOILS = 0.85 AC.±
- TOTAL AREA OF ROAD DEDICATION = 0.38 AC.±

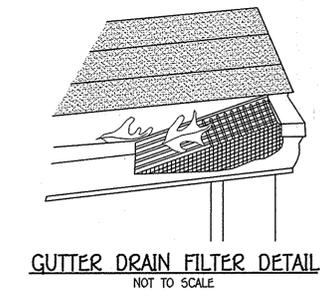
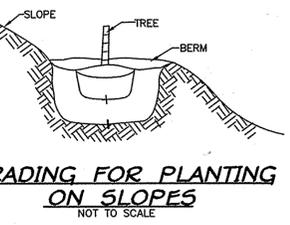
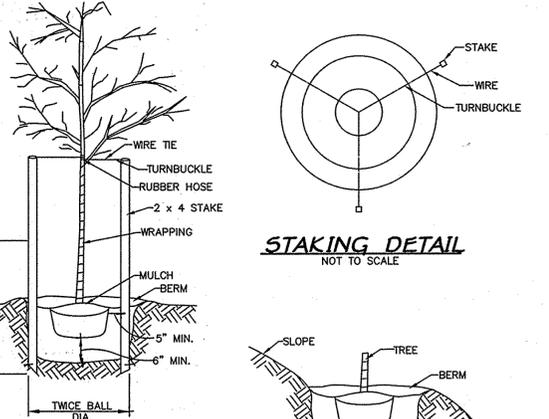


**OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)**

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

DRY WELL CHART					
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L D W
2 (1)	750 SQ. FT.	60 C.F.	72 C.F.	100%*	6' x 6' x 5'
2 (2)	750 SQ. FT.	60 C.F.	72 C.F.	100%*	6' x 6' x 5'
2 (3)	500 SQ. FT.	40 C.F.	50 C.F.	100%*	5' x 5' x 5'

\* AREA OF TREATMENT EXCEEDS THAT REQUIRED.



**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.

*Supraman Saha*  
 Signature of Professional Engineer DATE: 10/14/14



**OWNERS / DEVELOPER**

ROBERT & LISA LEWIS  
 2425 DANCY ROAD  
 WOODBINE, MARYLAND 21797-8129  
 443-295-9314

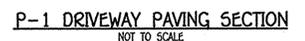
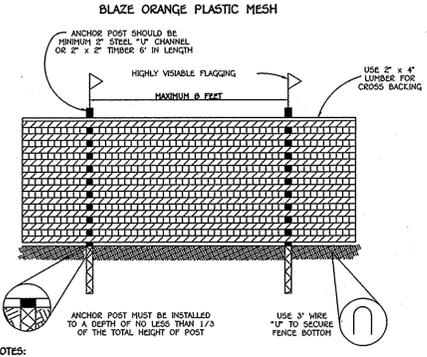


Table B.4. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Planting soil	see Appendix A, Table A.4 loamy sand 60-75% compost 25-40% or sandy loam 30% coarse sand 30% compost 40%	n/a	plantings are site-specific USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/2" to 3/4")	
Curb-in drain	ornamental stone: washed cobbles	stone: 2" to 2"	
Geotextile	n/a	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	ASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 750, Type P5 20 or ASHTO N-278	4" to 6" rigid schedule 40 PVC or SDR35	slotted or perforated pipe; 3/8" pert. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3, f = 3500 psi at 28 days, normal weight; air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings include and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308.5R9; vertical loading H=10 or H=20; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	ASHTO-M-6 or ASTM-C-33	0.075" to 0.04"	Sand substitutions such as Diabase and Gneiss (ASHTO #10 are not acceptable. No calcium carbide or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



- NOTES:**
- FOREST PROTECTION DEVICE ONLY.
  - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
  - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
  - ROOT DAMAGE SHOULD BE AVOIDED.
  - PROTECTIVE SIGNAGE MAY ALSO BE USED.
  - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

**TREE PROTECTION DETAIL**

NOT TO SCALE

**STORMWATER MANAGEMENT NOTES**

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5% SLOPE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

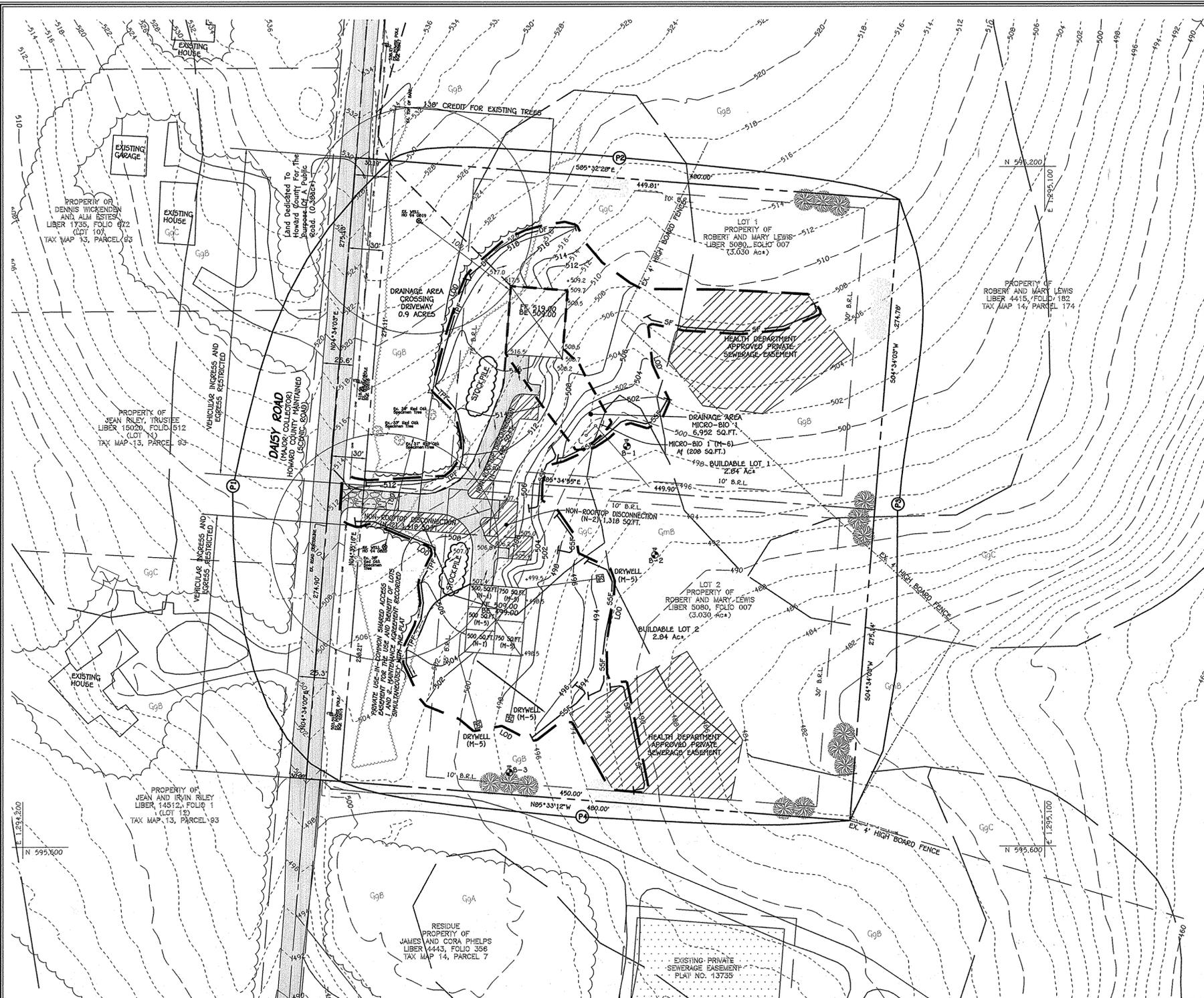
**SUPPLEMENTAL PLAN**

## ROBERT LEWIS, JR. PROPERTY

### LOTS 1 AND 2

TAX MAP No. 13 GRID No. 23 PARCEL No. 332 &  
 TAX MAP No. 14 GRID No. 7 PARCEL Nos. 238  
 FOURTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: SEPTEMBER, 2014 SCALE: AS SHOWN  
 SHEET 1 OF 2

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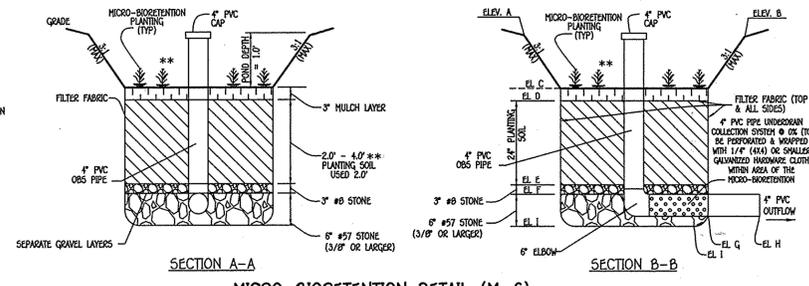
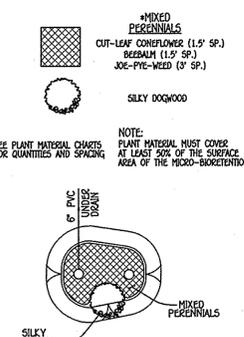
LANDSCAPING PLANT LIST				
QTY.	KEY	NAME	SIZE	
8		ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5'-3' CAL. FULL CROWN, B&B	
14		TILIA CODATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2.5'-3' CAL. FULL CROWN, B&B	
TOTAL: 22 SHADE TREES				

**NOTES**

- THIS SUBDIVISION IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENT PER SECTION 16.1202(1)(iv) OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL, SINCE THIS IS A MINOR SUBDIVISION CREATING ONE ADDITIONAL LOT AND HAS NO FURTHER SUBDIVISION POTENTIAL.
- 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 22 SHADE TREES IN THE TOTAL AMOUNT OF (\$6,500.00) SHALL POSTED AS PART OF THE BUILDERS GRADING PERMIT.  
LOT 1 SURETY: 9 SHADE TREES @ \$300 PER SHADE TREE = \$2,700.00.  
LOT 2 SURETY: 13 SHADE TREES @ \$300 PER SHADE TREE = \$3,900.00.
- 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 LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR 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 BERRIES, 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.

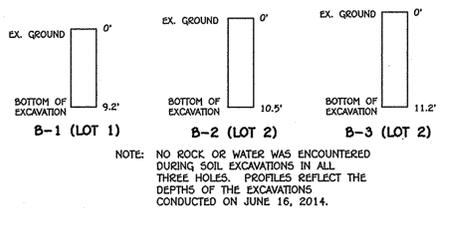
**PLAN VIEW**  
SCALE: 1" = 50'

SCHEDULE A - PERIMETER LANDSCAPE EDGE					
PERIMETER CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	TOTAL
LANDSCAPE TYPE	N/A	A	A	A	
LINEAR FEET OF PERIMETER	550 L.F.	450 L.F.	550 L.F.	450 L.F.	
CREDIT FOR EXISTING VEGETATION	N/A	138 LF OF EX. TREES 312 LF REMAINING	N/A	N/A	
NUMBER OF PLANTS REQUIRED	0	5 (312/60 = 5.2 OR 5)	9 (550/60 = 9.2 OR 9)	8 (450/60 = 7.5 OR 8)	22 0
CREDIT FOR EXISTING VEGETATION	0	0	0	0	0
SHADE TREES	0	0	0	0	0
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	0	0	0	0	0
NUMBER OF PLANTS PROVIDED	0	5	9	8	22
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	0	0	0	0	0



**MICRO-BIORETENTION PLANTING DETAIL**  
NOT TO SCALE

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



**SWM SEQUENCE OF CONSTRUCTION**

**NOTE:** THIS SEQUENCE OF CONSTRUCTION IS TO BE USED IN COMBINATION WITH THE GRADING PLAN THAT WILL BE PREPARED AT TIME OF GRADING PERMIT. THE FACILITIES ARE TO BE CONSTRUCTED AT TIME OF GRADING PERMIT AND NOT WITH THIS PLAN.

- OBTAIN BUILDING AND GRADING PERMITS ASSOCIATED WITH HOUSE CONSTRUCTION. (30 DAYS)
- UPON ESTABLISHING FINAL GRADES ON-SITE AND CONTRIBUTING AREAS TO THE PROPOSED FACILITIES STABILIZED, STORMWATER MANAGEMENT DEVICES MAY BE INSTALLED. (4 MONTHS PER LOT)
- AS NECESSARY DURING CONSTRUCTION OF MICRO-BIORETENTION FACILITY, ELEVATIONS / DEPTHS OF REQUIRED MATERIALS SHALL BE CHECKED FOR COMPLIANCE WITH THE ELEVATIONS / DEPTHS SHOWN HEREON. (2 DAYS)
- UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR AT TIME OF PERMIT, ALL SEDIMENT CONTROLS CAN BE REMOVED ASSOCIATED WITH THE STORMWATER MANAGEMENT FACILITIES. (1 WEEK)

**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 DEAD 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 PRUNING 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.

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

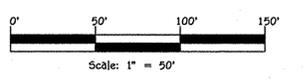
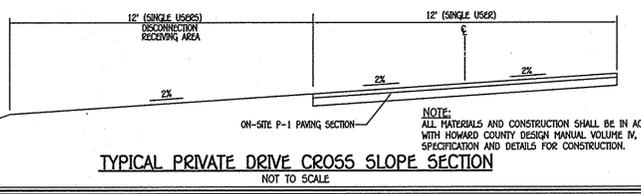
1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

LEGEND			
	EXISTING 2' CONTOURS		PROPOSED CONTOUR
	EXISTING 10' CONTOURS		SPOT ELEVATION
	SOILS LINES AND TYPE		LIMITS OF DISTURBANCE
	EXISTING TREELINE		PROPOSED TREELINE
	INDIVIDUAL LARGE TREES		SILT FENCE
	EXISTING FENCE LINE		EROSION CONTROL MATTING
	EXISTING & PROPOSED PAVING		SUPER SILT FENCE
	DRAINAGE AREA DIVIDE		STABILIZES CONSTRUCTION ENTRANCE
			TREE PROTECTIVE FENCE

MICRO-BIORETENTION PLANT MATERIAL			
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	

MICRO-BIORETENTION									
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
1	500.00	500.00	499.00	498.75	498.50	498.25	498.00	497.75	497.50

**16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION**  
NOT TO SCALE



**SUPPLEMENTAL PLAN**  
**ROBERT LEWIS, JR. PROPERTY**  
LOTS 1 AND 2

TAX MAP No. 13 GRID No. 23 PARCEL No. 332 & TAX MAP No. 14 GRID No. 7 PARCEL Nos. 238  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: SEPTEMBER, 2014 SCALE: 1" = 50'  
SHEET 2 OF 2

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**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CONTINENTAL SQUARE OFFICE PARK - 10278 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21142  
(410) 461-2855

**OWNERS / DEVELOPER**  
ROBERT & LISA LEWIS  
2425 DAISY ROAD  
WOODBINE, MARYLAND 21797-8129  
443-255-9314

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Robert Lewis* 10-3-14 Date  
Chief, Division of Land Development

*Chad Edler* 10-31-14 Date  
Chief, Development Engineering Division

**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.

*Robert Lewis* 10/14/14 Date  
Developer/Builder

**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: 01/18/2016.

*Stephanie Inte* 10/14/14 Date  
Signature of Professional Engineer