SCHEDULE A - PERIMETER LANDSCAPE EDGE

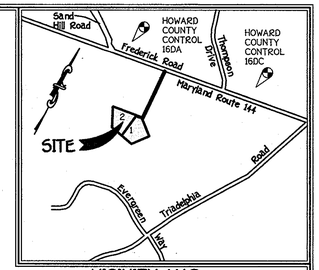
PERIMETER	P-1	P-2	P-3	P-4	P-5	TOTAL
CATEGORY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO ROADWAY	—
LANDSCAPE TYPE	A	A	A	A	N/A	—
LINEAR FEET OF PERIMETER	281.86 L.F.	25.91 + 342.50' = 368.41 L.F.	508.49' L.F.	847.36 L.F.	12.52 L.F.	—
NUMBER OF PLANTS REQUIRED SHADE TREES	5 (281.86'/60' = 4.7 OR 5)	6 (368.41'/60' = 6.1 OR 6)	6 (508.49-150'= 358.49') (358.49'/60' = 6)	1 (847.36'/60' = 14.1 OR 14)	N/A	—
CREDIT FOR EXISTING VEGETATION SHADE TREES SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	YES 281.86 L.F.	YES 368.41 L.F.	YES 6 150 L.F.	NO	0	0
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREENS	0 0	0 0	0 0	0 0	0 0	0 0

* See Revision Note #1/Credit given for existing trees.

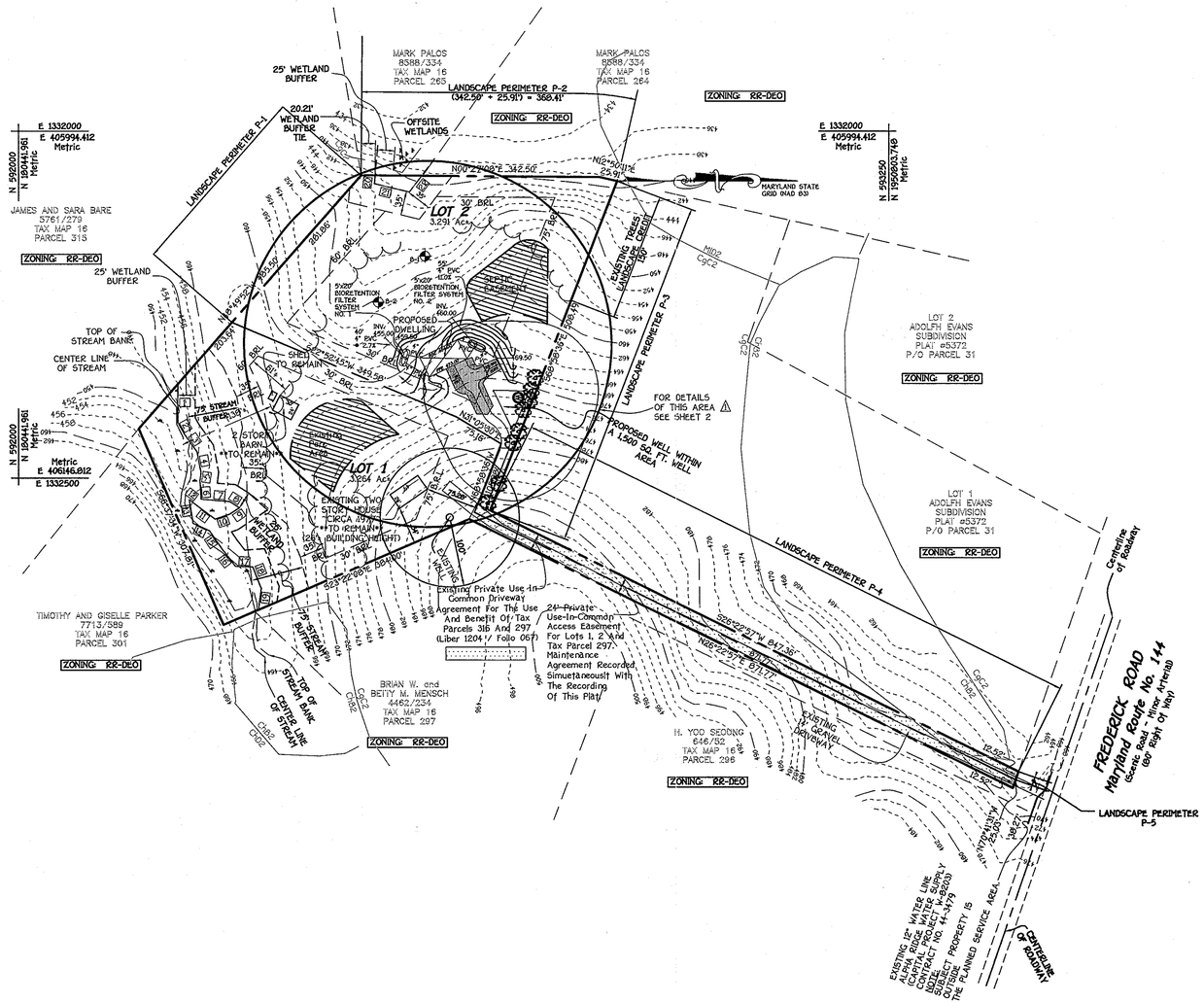
SOILS LEGEND

SOIL	NAME	CLASS
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
CgC2	Chester gravelly silt loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester silt loam, 15 to 25 percent slopes, moderately eroded	B
MlD2	Manor loam, 15 to 25 percent slopes, moderately eroded	B

NOTES:
* Hydric soils and/or contains hydric inclusions
** May contain hydric inclusions
† Generally only within 100-year floodplain areas



VICINITY MAP
SCALE : 1" = 1200'



General Notes:

1. ▨ This Area Designates A Private Sewerage Easement Of 10,000 Square Feet As Required By The Maryland State Department Of The Environment For Individual Sewage 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 Adjustments To The Private Sewerage Easements. Recordation Of A Modified Easement Shall Not Be Necessary.
2. The Lots Shown Hereon Comply With The Minimum Ownership Width And Lot Area As Required By The Maryland State Department Of The Environment.
3. Subject Property Zoned RR-DEO Per 02/02/04 Comprehensive Zoning Plan.
4. Coordinates Based On NAD 83 Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 16DA And No. 16DC.
   Station No. 16DA (North 593,712.917 East 1,332,332.040)
   Station No. 16DC (North 593,095.513 East 1,333,961.177)
5. This Plat Is Based On Field Run Monumented Boundary Survey Performed On Or About November 5, 1999 By Fisher, Collins And Carter, Inc.
6. B.R.L. Denotes Building Restriction Line.
7. ● Denotes Iron Pin Set Capped "F.C.C. 106".
8. ◤ Denotes Iron Pipe Or Iron Bar Found.
9. ○ Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.
10. ◤ Denotes Concrete Monument Set With Cap "F.C.C. 106".
11. ■ Denotes Concrete Monument Or Stone Found.
12. For Flag Or Pipestem Lots, Refuse Collection, Snow Removal And Road Maintenance Are Provided To The Junction Of The Flag/Pipestem And The Road Right Of Way Line And Not Onto The Pipestem Lot Driveway.
13. Driveway(s) Shall Be Provided Prior To Residential Occupancy Permit For Any New Dwellings To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:
    a) Width - 12 Feet (14 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);
    c) Geometry - Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius;
    d) Structures (Culverts/Bridges)-Capable Of Supporting 25 Gross Tons;
    e) Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Driveway Surface;
    f) Maintenance - Sufficient To Ensure All Weather Use.
14. No Grading, Removal Of Vegetative Cover Or Trees, Or Placement Of New Structures Is Permitted Within The Limits Of Wetlands, Stream(s), Or Their Buffers And Forest Conservation Areas.
15. All Lot Areas Are More Or Less (±).
16. Distances Shown Are Based On Surface Measurement And Not Reduced To NAD 83 Grid Measurement.
17. Speed Study For This Site Was Prepared By The Mars Group On October, 2005.
18. No Cemeteries Exist Within The Limits Of This Subdivision By Visual Observation And An Examination Of The Howard County Cemetery Inventory Map.
19. Wetland Delineation Was Prepared By Eco-Science Professionals, Inc. On May 18, 2005.
20. This Plat Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations.
21. Previous Department Of Planning And Zoning File Numbers WP-05-92, WP-04-04, & F-04-05.
22. There Is An Existing Dwelling/Structure(s) Located On Lot 1 Which Is To Remain. No New Buildings, Extensions Or Additions To The Existing Dwelling(s) Or Accessory Structures Are To Be Constructed At A Distance Less Than The Zoning Regulations Require.
23. This Project Is Exempt From The Forest Conservation Requirements In Accordance With Section 16.1202(b)(1)(v)(viii) Of The Howard County Code. This Is A Minor Subdivision That Creates One Additional Lot Which Has No Further Subdivision Potential.
⚠ 24. Quantity And Quality Stormwater Management Requirements Are Proposed To Be Met By Applying The Non-rooftop Disconnection Credits In Accordance With Chapter 5 Of The 2000 Maryland Stormwater Design Manual (the Manual) And With Two Bioretention Facilities On Lot 2 Designed In Accordance With Chapter 3 Of The Manual.
25. This Plat Is Subject To WP-05-92 Which The Planning Director On June 14, 2005 Approved A Request To Waive Sections 16.147(a) Requiring A Final Plan For Subdivision Of Property And To 16.1200(a)(3)(iii) Requiring Environmental Features Be Located On Lots 10 Acres Or Greater, Subject To The Following Conditions:
26. The Applicant Must Record The New Deeds Of Conveyance In The Land Records Office Of Howard County, MD.
27. The Conveyance Of Land Shall Not Reduce The Minimum Lot Size Requirements Of 3 Acres (Minus The Pipestem) For Parcel 301. The Future Subdivision Of Parcel 316 Into Two Building Lots Shall Require The Submission Of A Final Plat To The Department Of Planning And Zoning.
28. A 35' Environmental Setback Around All Existing Environmental Features As Applicable Shall Be Required To Be Shown On The Final Plat For The Subdivision Of Parcel 316.

Purpose Note:
The Purpose Of This Revision Is To Replace The Single Large Raingarden With Two (2) Smaller Raingarden And Revise Grades Accordingly On Lot 2. Add Stormwater Management Details On Sheet 2 And Remove The Planting Plan On Sheet 3.

LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- SOIL LINES AND TYPES
- DENOTES PROPOSED HOUSE
- DENOTES 15%-24.9% SLOPES
- DENOTES 25% AND GREATER SLOPE
- EXISTING TREES TO REMAIN FOR LANDSCAPE CREDIT.

NO.	REVISION	DATE
1	Eliminated the large Bioretention Filter System at the rear of Lot 2 and replaced it with two (2) smaller Bioretention Filter Systems located at the rear of the proposed house. Also, resited the proposed house approximately 10 feet to the Southeast and re-graded the area to accomodate the Bioretention Filter Systems. Revised General Note No. 24 as required by by these changes. Added existing trees along landscape perimeter P-3 for landscaping credit, eliminated planting details, chart and notes.	03/6/09

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/5/09

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5-4-9

STATE OF MARYLAND — NEIL A. FISHER — No. 9787 — REGISTERED PROFESSIONAL ENGINEER

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER
Mr. and Mrs. Francis Mullin
*11975 Frederick Road
Ellicott City, Maryland 21042

REVISED
SUPPLEMENTAL PLAN
LANDSCAPE, TOPOGRAPHIC AND SOILS

MULLIN PROPERTY
LOTS 1 AND 2
TAX MAP #16 PARCEL #316
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ZONED: RR-DEO
SCALE: 1"= 100' DATE: APRIL 27, 2009
SHEET 1 OF 3

F-06-113

K:\Drawings\30700 Mullin\30700 Redline Support Plan.dwg, 4/27/2009 2:16:37 PM, lsamp, 1:100

SPECIFICATIONS

SOIL TEXTURE AND STRUCTURE
Soil shall have a sandy loam, loamy sand, or loam texture per USDA textural triangle. Maximum clay content shall be <5%. Soil mixture shall be 50-60% sand: 20-30% leaf compost: and 20-30% topsoil. The soil shall be a uniform mix, free of stones, stumps, roots, or other similar objects larger than two inches. No other materials or substances should be mixed or dumped within the bioretention soil that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil must be free of plant or seed material of non-native, invasive species, or noxious weeds.

SOIL TESTING
Planting soil for bioretention areas must be tested prior to installation for PH and organic matter. The soil should meet the following criteria (Landscape Contractors Association, 1986).
PH Range: 5.5 - 6.5
Organic Matter: 1.5 - 4.0%
Sieve analysis, PH, and organic matter tests shall be performed for each bioretention area.

SOIL PREPARATION
Soil preparation can be performed onsite or offsite and transported to the facility location when ready for installation. Prior to transport, the soil mix should be certified as meeting the criteria established for the soil medium and approved by the site inspector.

Soil preparation can be accomplished by thoroughly mixing soil components, amendments and additives, as needed utilizing a backhoe or front-end loader.

SOIL PLACEMENT
Placement of the planting soil in the bioretention area should be after scarifying the invert area of the proposed facility and installing the underdrain and/or recharge area (if applicable), in lifts of 12 to 18 inches and lightly compacted. Minimal compaction effort can be applied to the soil by tamping with a bucket from a dozer or backhoe. Lifts are not to be compacted but are performed in order to reduce the possibility of excessive settlement. Installation of soils must be done in a manner that will ensure adequate filtration.

SOIL COMPACTION
Avoid over compaction by allowing time for natural compaction and settlement. No additional manual compaction of soil is necessary. Rake soil material as needed to level out. Overfill above the proposed surface invert to accommodate natural settlement to proper grade. Depending upon the soil material, up to 20% natural compaction may occur. For facilities designed with a liner, no scarification of the invert area is required.

It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoes to remove original soil. If bioretention areas are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf-type tires.

SOIL COMPACTION (cont)
Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reducing infiltration rates and storage volumes and is not acceptable. Compaction will significantly contribute to design failure. Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a Chisel Plow, Ripper, or Subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before back filling the facility and placement of underdrain. Pump any ponded water before preparing (rototilling) base.

When back filling the bioretention facility, do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

SOIL PRESOAK
In order to speed up the natural compaction process, presoaking the placed soil may be performed. Significant settlement can occur after the first presoak, and additional settlement may occur subsequent to the initial wetting. If time and construction scheduling permits, it is preferable to allow natural settlement to occur with the help of rain events to presoak the soil medium.

MULCH
Areas should be mulched once trees and shrubs have been planted. Any ground cover specified as plugs may be installed once mulch has been applied.

The mulch layer shall consist of either a standard landscape fine shredded hardwood mulch (preferred) or hardwood chips. The mulch may be either aged or fresh to maximize nitrogen and metal uptake by the facility. Mulch shall be free of weed seeds, soil, roots, or any other substance not consisting of either bole or branch wood and bark. The mulch should be uniformly applied approximately 2 to 3 inches in depth. Mulch applied any deeper than three inches reduces proper oxygen and carbon dioxide cycling between the soil and the atmosphere, and keeps plant roots from making good contact with the soil.

SAND
Sand shall be clean and free of deleterious materials, meeting AASHTO M-6 or ASTM C-33 with grain size of 0.02"- 0.04". MDSHA C-33 sand is acceptable.

GEOTEXTILE
Geotextile fabric should meet ASTM D-751 (puncture strength - 125 LB), ASTM D-1117 (Mullen burst strength - 400 PSI), and ASTM D-1682 (Tensile strength - 300 LB). Fabric should have 0.08" thick E.O.S. of #80 sieve, and maintain 125 GPM per SQ. FT. flow rate.

Structure Backfill

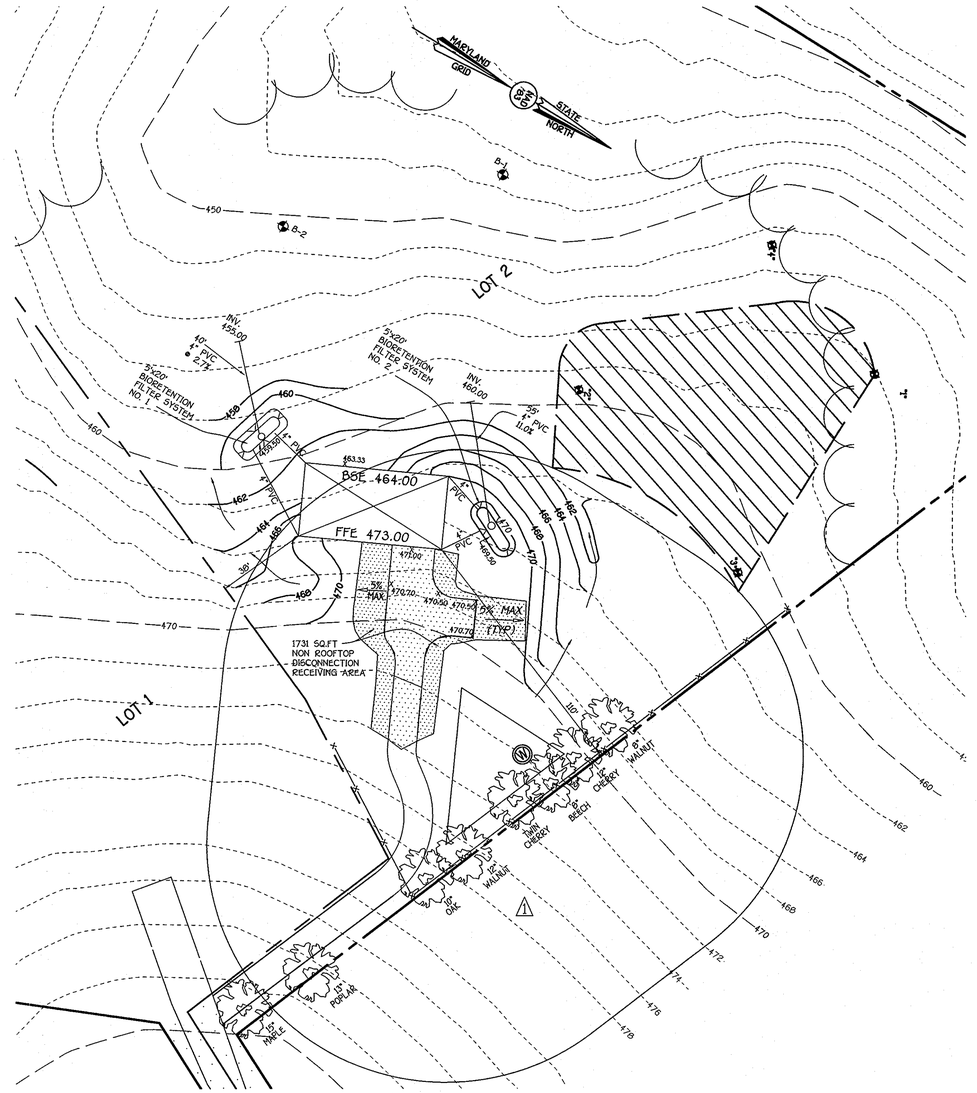
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to the specified for the core of the embankment or other embankment materials.

Plastic Pipe

The following criteria shall apply for plastic pipe:

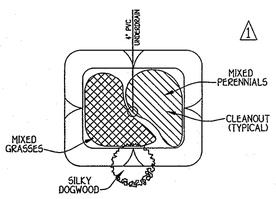
1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirement of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirement of AASHTO M294 Type S.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to "Structure Backfill".



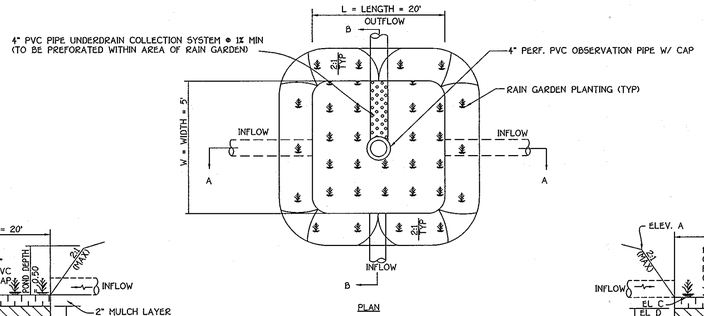
PLAN
SCALE 1" = 30'

BIORETENTION FILTER PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	MIXED PERENNIALS	1 FT.
45	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

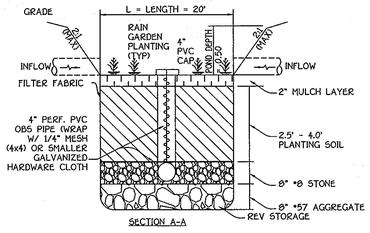
BIORETENTION FILTER DATA								
BIORETENTION FILTER	A	B	C	D	E	F	G	H
1	460.00	460.00	459.50	459.25	456.75	456.08	455.00	455.18
2	470.00	470.00	469.50	469.25	466.75	466.08	460.00	465.41



BIORETENTION FILTER PLANTING DETAIL
NOT TO SCALE

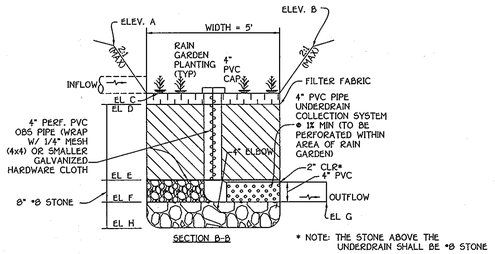


PLAN



SECTION A-A

BIORETENTION FILTER SYSTEM



SECTION B-B

* NOTE: THE STONE ABOVE THE UNDERDRAIN SHALL BE #8 STONE

PRIVATE BIORETENTION FILTER OPERATION & MAINTENANCE SCHEDULE

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS. WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/6/09

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5.4.09

NO.	REVISION	DATE
1	Updated the plan view in accordance with the elimination of the large Bioretention Filter System in the rear of Lot 2 and eliminated all details for that system. Added plan view and details for the two (2) new Bioretention Filter Systems. Added existing trees for landscaping credit.	03/6/09

STATE OF MARYLAND — RUSSELL A. FISHER — No. REGISTERED PROFESSIONAL ENGINEER

REVISED
STORMWATER MANAGEMENT
BIORETENTION PLAN, PROFILE, & DETAILS

MULLIN PROPERTY

LOTS 1 AND 2

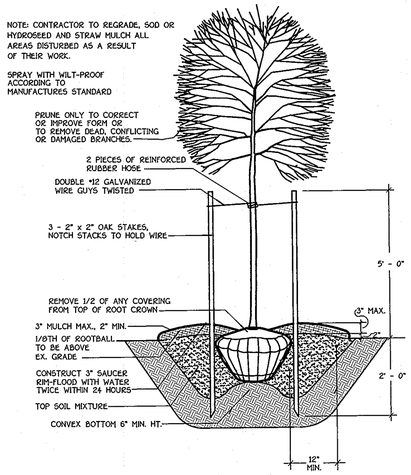
TAX MAP NO: 16 ZONED: RR-DEO PARCEL NO.: 316
3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN APRIL 27, 2009

SHEET 2 OF 3

F-06-113

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

T. E. SCOTT & ASSOCIATES, INC.
120 COCKEYSVILLE ROAD, SUITE 300
HUNT VALLEY, MARYLAND 21030
Phone: 410.666.2651
Fax: 443.269.0216
tes@tescott.com



TREE PLANTING DETAIL

NOT TO SCALE

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

Project Name: Mullin Property SWM — Boring No.: B-1
Location: Howard County, MD — Job #: 06151A

SAMPLER

Datum: — Hammer Wt.: 140 lbs. — Hole Diameter: 6" — Foreman: S. McManus
Surf. Elev.: — Ft. — Hammer Drop: 30 in. — Rock Core Diameter: — Inspector:
Date Started: 3/03/06 — Pipe Size: 2 in. — Boring Method: HSA — Date Completed: 3/03/06

Elevation/ Depth	SOIL SYMBOLS/ SAMPLE CONDITIONS	Description	Boring and Sampling Notes	Rec.	NM	SPT Blows	SPT Blows/Foot N	SPT Blows/Foot Curve
0								
2.5	D	Light brown, moist, very loose, micaceous sandy silt, with organics (ML)	Topsoil-2"	14"		2-2-2	4	
				16"		1-2-2	4	
5	D	Light brown, moist, very loose to loose, micaceous silty fine sand (SM)		17"		2-1-2	3	
7.5			Groundwater encountered @ 6.0' while drilling					
10		Bottom of boring @ 10.0'		10"		2-2-3	5	
12.5								
15								

10 20 50

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE; PT - PRESSED SHELBY TUBE; CA - CONTINUOUS FLIGHT AUGER; RC - ROCK CORE

SAMPLE CONDITIONS: D - DISINTEGRATED; I - INTACT; U - UNDISTURBED; L - LOST

GROUND WATER		CAVE IN DEPTH	
AT COMPLETION	4.5 ft.	5.0 ft.	
AFTER 24 HRS.	4.0 ft.	4.5 ft.	
AFTER ___ HRS.	___ ft.	___ ft.	

BORING METHOD: HSA - HOLLOW STEM AUGERS; CFA - CONTINUOUS FLIGHT AUGERS; DC - DRIVING CASING; MD - MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

RECORD OF SOIL EXPLORATION

Project Name: Mullin Property SWM — Boring No.: B-2
Location: Howard County, MD — Job #: 06151A

SAMPLER

Datum: — Hammer Wt.: 140 lbs. — Hole Diameter: 6" — Foreman: S. McManus
Surf. Elev.: — Ft. — Hammer Drop: 30 in. — Rock Core Diameter: — Inspector:
Date Started: 3/03/06 — Pipe Size: 2 in. — Boring Method: HSA — Date Completed: 3/03/06

Elevation/ Depth	SOIL SYMBOLS/ SAMPLE CONDITIONS	Description	Boring and Sampling Notes	Rec.	NM	SPT Blows	SPT Blows/Foot N	SPT Blows/Foot Curve
0								
2.5	D	Light brown, moist, very loose to loose, micaceous sandy silt, with organics, no to trace rock fragments (ML)	Topsoil-2"	13"		2-2-3	5	
			No groundwater encountered while drilling	11"		3-3-4	7	
5	D			6"		3-2-3	5	
7.5		Greenish brown, moist, very loose, micaceous silty fine sand (SM)						
10		Bottom of boring @ 10.0'		17"		1-2-2	4	
12.5								
15								

10 20 50

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE; PT - PRESSED SHELBY TUBE; CA - CONTINUOUS FLIGHT AUGER; RC - ROCK CORE

SAMPLE CONDITIONS: D - DISINTEGRATED; I - INTACT; U - UNDISTURBED; L - LOST

GROUND WATER		CAVE IN DEPTH	
AT COMPLETION	4.5 ft.	5.0 ft.	
AFTER 24 HRS.	5.3 ft.	5.8 ft.	
AFTER ___ HRS.	___ ft.	___ ft.	

BORING METHOD: HSA - HOLLOW STEM AUGERS; CFA - CONTINUOUS FLIGHT AUGERS; DC - DRIVING CASING; MD - MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1' W TH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/5/09

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5.4.9

NO.	REVISION	DATE
1	Eliminated the Planting Plan for the large Bioretention Filter System. Those details can be found on Sheet 2. Also Eliminated All Landscaping Chart And Shrub Detail.	03/6/09

STATE OF MARYLAND — TERRELL A. FISHER — NO. 9781 — REGISTERED PROFESSIONAL ENGINEER

REVISED

STORMWATER MANAGEMENT
BIORETENTION PLANTING PLAN & DETAILS

MULLIN PROPERTY

LOTS 1 AND 2

TAX MAP NO: 16 ZONED: RR-DEO PARCEL NO.: 316
3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN APRIL 27, 2009

SHEET 3 OF 3

F-06-113

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

T. E. SCOTT & ASSOCIATES, INC.
128 COCKEYSVILLE ROAD, SUITE 300
HUNT VALLEY, MARYLAND 21030
tes@MdSWM.com
Phone: 410.453.2551
Fax: 443.289.0016