

**SCHEDULE A - PERIMETER LANDSCAPE EDGE**

PERIMETER CATEGORY	P-1	P-2	P-3	P-4	P-5	P-6	P-7	TOTAL
LANDSCAPE TYPE	A	A	A	N/A	A	A	A	
LINEAR FEET OF PERIMETER	282.45 L.F.	382.65 L.F.	848.90 L.F.	2.54 L.F.	618.74 L.F.	233.59 L.F.	265.65 L.F.	
NUMBER OF PLANTS REQUIRED	(282.45/60' = 4.71) = 5	(382.65/60' = 6.38) = 7	(848.90/60' = 14.15) = 15	N/A	(618.74/60' = 10.31) = 11	(233.59/60' = 3.89) = 4	(265.65/60' = 4.42) = 5	
SHADE TREES	0	0	0	0	0	0	0	
EVERGREEN TREES	0	0	0	0	0	0	0	
CREDIT FOR WALL, FENCE OR BERM	0	0	0	N/A	0	0	0	
CREDIT FOR EXISTING VEGETATION	EXISTING FOREST 113' / 60' = 1.88 = 2	EXISTING FOREST 382.65' / 60' = 6.38 = 7	0	N/A	0	0	0	
SHADE TREES	0	0	0	0	0	0	0	
EVERGREEN TREES	0	0	0	0	0	0	0	
NUMBER OF PLANTS PROVIDED	(5 REQUIRED - 2 CREDIT) = 3	(7 REQUIRED - 7 CREDIT) = 0	(15 (SEE NOTE NO. 3))	N/A	11 (SEE NOTE NO. 3)	4 (SEE NOTE NO. 2)	5 (SEE NOTE NO. 1)	30
SHADE TREES	0	0	0	0	0	0	0	
EVERGREEN TREES	0	0	0	0	0	0	0	

NOTE NO. 1 THE FIVE (5) SHADE TREES HAVE BEEN LOCATED ALONG LANDSCAPE PERIMETER P-7 OUTSIDE THE EXISTING 150' BGE TRANSMISSION RIGHT OF WAY AT THE CORNER OF LOTS 3 AND LOT 4.  
 NOTE NO. 2 THE FOUR (4) SHADE TREES HAVE BEEN LOCATED PARALLEL TO LANDSCAPE PERIMETER P-6 OUTSIDE THE EXISTING 150' BGE TRANSMISSION RIGHT OF WAY AT THE SIDE OF LOTS 1 AND 2.  
 NOTE NO. 3 THE TWENTY-SIX (26) TOTAL SHADE TREES IN THE LANDSCAPE PERIMETER P-3 AND P-5 HAVE BEEN LOCATED OUTSIDE THE EXISTING 150' BGE TRANSMISSION RIGHT OF WAY AS ENHANCED LANDSCAPING IN LOTS 1, 2, 3 AND 4.

**General Notes Continued:**

- Landscaping For Lots 1, 3 And 4 Associated With This Plot Is Deferred And Will Be Provided At The Site Development Plan Stage. In Accordance With Section 16.124 Of The Howard County Code And Landscape Manual, Lot 2 Is Exempt From Landscape Perimeter Requirements Because Lot 2 Contains An Existing Quailbill Control Structure.
- Plan Subject To WP-10-166 Which The Planning Director On July 22, 2010 Approved A Waiver To Section 16.120(c)(2)(i) Which States That Lots Which Share Access Shall Have Sufficient Frontage Collectively To Meet The Driveway Easement Requirements In The Design Manual Subject To The Following Ten (10) Conditions:
  - All SDC Agency Comments (That Will Be Associated With The Subdivision Plat For F-06-078) Must Be Satisfied Upon The Review Of The Redesigned Subdivision And Final Plat Approval Must Be Granted.
  - Approval Of The Design Manual Waiver By DED To Allow A Total Of 13 Users On A Use-In-Common Driveway.
  - The Proposed 22-Foot Wide Driveway Which Shall Provide Ingress/Egress For 13 Users, Including The 10 Existing Users, Must Be Located Within A Use-In-Common Access Easement. All Affected Property Owners Must Agree To The Maintenance Of This Driveway And A Driveway Maintenance Agreement Must Be Recorded In The Land Records Office Specifying The Users Of This Driveway And Their Maintenance Obligations. The Use-In-Common Driveway Must Be Improved To Meet The Minimum Design Manual Standards For A Residential Public Street As Preferred In The Petitioner's Justification Letter.
  - All Existing And Proposed Users (A Total Of 13 Properties) Of The Proposed 22-Foot Wide Driveway Must Be Listed On The Plat As A General Note. The Note Must Include The Parcels And/Or Lot Numbers Of The Affected Properties.
  - A Letter Of Agreement Signed By All Affected Property Owners Must Be Submitted To This Department Prior To The Submission Of The Redesigned Plat (F-06-078).
  - No More Than The 13 Properties That Are Associated With This Shared Driveway May Be Included As Part Of The Driveway Access Easement.
  - An Enlarged Detail Of The 2.54 Feet Road Frontage (Where The Four Pipelines Meet Talbots Landing) Must Be Provided On Sheet 1 Of The Plat. The Four Lots Of The Matucha Property Must Equally Divide The 2.54 Feet Of Fee Simple Frontage.
  - The Department Of Fire And Rescue Services Reserves The Right To Designate The Fire Lane Restrictions If Deemed Necessary In The Future. Furthermore, The Proposed Private Driveway Must Be Designed In Order To Meet The Fire Department Needs For Maneuvering Emergency Vehicles.
  - A Private Street Name Must Be Approved For The Proposed Private Driveway. There Are No Available Address Numbers For This Block Of Talbots Landing And New Addresses Will Have To Be Assigned To All Affected Properties.
  - On The Plat, As Well As All Other OPZ Plans For This Site, Provide A Brief Description Of The Waiver Petition (WP-10-166), As A General Note To Include Request(s), Section(s) Of The Regulations, Action And Date.
- Plan Subject To Waiver Reconsideration To WP-10-166 Which The Planning Director On November 14, 2011 Approved A Request For A Waiver Reconsideration Of Section 16.120(c)(2)(i) Of The Amended Fifth Addition Previously Approved In General Note No. 30 Subject To The Following Four (4) Conditions:
  - The Developer Must Submit A Revised Final Plat That Outlays The Revised Driveway Access Design Of The Proposed Subdivision For The Matucha Property (Ilchester Oaks II).
  - The Following Condition Shall Replace Condition No. 3 That Was Originally Provided On The Approved Waiver Petition For WP-10-166, Dated July 22, 2010. "Ellicott City Land Holding, Inc., Shall Execute The Private/Shared Driveway Maintenance Agreement For The Subject Lots And Submit Same To The Department Of Planning And Zoning For Recordation Among The Land Records Of Howard County, Along With The Appropriate Recording Fees As Part Of The F-06-078 Final Plat Recordation."
  - The Following Condition Shall Replace Condition No. 5 That Was Originally Provided On The Approved Waiver Petition For WP-10-166, Dated July 22, 2010. "Ellicott City Land Holding, Inc. Shall Obtain A Legally Sufficient And Executed Easement Instrument Which Will Allow The Widening Of The Private Shared Driveway Area And Shall Submit Same To The Department Of Planning And Zoning For Recordation Among The Land Records Of Howard County, Along With The Appropriate Recording Fees With The F-06-078 Final Plat Recordation. In Addition, Ellicott City Land Holding, Inc. Must Notify All Affected Users Of The Driveway Of The Improvement Plans."
  - All Of The Remaining Eight (8) Conditions Provided In The Previous Waiver Petition Approval Letter Dated July 22, 2010 Must Be Complied With (Condition Numbers 1, 2, 4, 6, 7, 8, 9 And 10).
- The Lots Created By This Subdivision Plat Are Subject To A Fee Or Assessment To Cover Or Defray All Or Part Of The Developer's Cost Of The Installation Of The Water And Sewer Facilities, Pursuant To The Howard County Code Section 18.112. This Fee Or Assessment, Which Runs With The Land, Is A Contractual Obligation Between The Developer And Each Lot Owner And Is Not In Any Way A Fee Or Assessment Of Howard County.
- Open Space Tabulation:
  - Open Space Required = 0.256 Acres
  - (2.989 Acres Minus Area Of Transmission R/W (0.424 Ac.) x 10% = 0.256 Acres)
  - Open Space Provided (Lot 5) = 0.645 Acres.

**General Notes Continued Sheet 3**

**STORMWATER MANAGEMENT SUMMARY TABLE**

Drainage Designation	Drainage Area Sq.Ft.	Target RCN	Target Pe Runoff (In.)	ESD Volume Req. Cu.Ft.	ESD Volume Provided	Remarks
M-6 (1)	3,440	45	1.0'	170	240	LOT 1
M-6 (2)	2,521	45	1.0'	150	217	LOT 3
M-6 (3)	2,647	45	1.0'	150	206	LOT 4
M-6 (4)	20,884	45	1.0'	383	557	LOT 5
N-2 (1)	2,456	45	1.0'	194	194	LOT 4

**Public 100 Year Floodplain Drainage And Utility Easement**

LINE	BEARING	LENGTH
PP1	N 12°34'37" W	38.99'
PP2	N 41°09'24" E	30.33'
PP3	N 02°43'11" E	8.84'
PP4	N 20°19'02" W	53.22'
PP5	N 28°11'02" E	41.95'
PP6	N 30°37'32" W	42.73'
PP7	N 38°12'22" W	44.99'
PP8	N 49°42'22" W	108.92'
PP9	N 21°42'22" W	36.37'
PP10	N 65°42'22" E	113.90'
PP11	S 21°42'22" E	372.43'
PP12	S 38°29'30" E	102.92'
PP13	N 65°42'22" E	44.99'
PP14	N 60°16'42" E	8.19'
PP15	N 09°43'12" W	10.00'
PP16	N 02°18'42" E	11.17'
PP17	N 28°11'02" W	3.48'

**STORMWATER MANAGEMENT PRACTICE CHART**

LOT NO.	ADDRESS	DISCONNECTION OF NON-ROOFTOP RUNOFF (Y/N)	MICRO BIO-RETENTION (NUMBER)
1	5279 Talbots Landing	Y	1
2	5277 Talbots Landing	N	0
3	5275 Talbots Landing	N	0
4	5271 Talbots Landing	N	1
	LUC DRIVE	N	1

**PLAN**

SCALE: 1" = 30'



**Owner/Developer**

Ellicott City Land Holding, Inc.  
 c/o Mr. Donald R. Reuser, Jr.  
 5300 Dorsey Hall Dr. - Suite 102  
 Ellicott City, Maryland 21042  
 443-367-0422

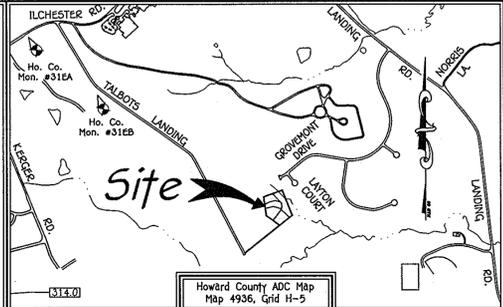
**Site Analysis:**

- Total Tract Area = 2.984 Acres
- Total Proposed Buildable Lot Area = 2.337 Acres
- Total Proposed Open Space Lot Area = 0.647 Acres
- Total Number Of Proposed Lots = 5
- Total Number Of Proposed Buildable Lots = 4
- Total Number Of Proposed Open Space Lots = 1

**SOILS LEGEND**

SOIL	NAME	CLASS
CnB2	Chillum-Fairfax loams, 1 to 5 percent slopes, moderately eroded	C
CnD3	Chillum-Fairfax loams, 5 to 15 percent slopes, severely eroded	C
luB	Iuka loam, local alluvium, 0 to 5 percent slopes	C
MpC2	Montalto silt loam, 8 to 15 percent slopes, moderately eroded	B
Mre	Montalto and Relay soils, 15 to 45 percent slopes	B
NeB2	Neshaminy silt loam, 3 to 8 percent slopes, moderately eroded	B
NeC2	Neshaminy silt loam, 8 to 15 percent slopes, moderately eroded	B

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



**General Notes:**

- Subject Property Zoned R-20 Per The 02/02/04 Comprehensive Zoning Plan And The Comp-Lite Zoning Amendments Dated 07/28/06.
- Coordinates Based On NAD '83, Maryland Coordinate System As Projected By Howard County Geographic Control Station No. 31E And 31E5.
- Station No. 31E North 539,641.124 East 1,374,845.936
- Station No. 31E5 North 568,730,984 East 1,376,273.491
- This Plat Is Based On Field Run Monumented Boundary Survey Performed On Or About June, 2011, By Fisher, Collins And Carter, Inc.
- B.L. Denotes Building Restriction Line.
- Denotes Iron Pin Set With Cap "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 Cap "F.C.C. 106".
- Denotes Concrete Monument Or Stone Found.
- For Flag Or Pipestem Lots, Refuse Collection, Snow Removal And Road Maintenance Are Provided To The Junction Of The Flag Or Pipestem And Road Right-Of-Way Line And Not Onto The Pipestem Lot Driveway.
- Driveways Shall Be Provided Prior To Residential Occupancy To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:
  - Width - 12 Feet (16 Feet Serving More Than One Residence);
  - Surface - six (6) inches Of Compacted Crusher Run Base With Tar And Chip Coatings, (1 - 1/2" Minimum);
  - Geometry - Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius;
  - Structures (Culverts/Bridges) - Capable Of Supporting 25 Gross Tons (H25-Loading);
  - 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.
- No Grading, Removal Of Vegetative Cover Or Trees, Or Placement Of New Structures Is Permitted Within The Limits Of Wetlands, Or Their Buffers And Forest Conservation Easement Areas.
- All Lot Areas Are More Or Less (±).
- Distances Shown Are Based On Surface Measurement And Not Reduced To NAD '83 Grid Measurement.
- No Cemeteries Exist On This Site Based On A Visual Site Visit And Based On An Examination Of The Howard County Cemetery Inventory Map.
- No Wetlands Are Shown Hereon Based On A Field Investigation By Eco-Science Professionals, Inc. On Or About August, 2005.
- Previous Department Of Planning And Zoning File Numbers: F-06-078.
- 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.
- This Property Is Located Within The Metropolitan District.
- There Is An Existing Dwelling/Structure Located On Lot 2 To Remain. No New Buildings, Extensions Or Additions To The Existing Dwelling/Structure Are To Be Constructed At A Distance Less Than The Zoning Regulations Require.
- This Plat Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations Per Council Bill 45-2003 And The Zoning Regulations As Amended By Council Bill 75-2003. Development Or Construction On These Lots Must Comply With Setback And Buffer Regulations In Effect At The Time Of Submission Of The Site Development Plan, Waiver Petition Application, Or Building/Grading Permit.
- A Traffic Study Is Not Required Because This Is A Minor Subdivision.
- A Noise Study Is Not Required.
- No Historic Structures Are Located On This Site And The Site Is Not Adjacent To A Designated Scenic Road.
- Open Space Lot 5 Is Owned By Howard County, Maryland.
- The Forest Conservation Easement Is Provided By 0.55 Acres Forest Retention And A Fee-In-Lieu Payment For The Remaining 0.22 Acres In The Amount Of \$7,187.40 (9,583 Acres x \$4.75/Sq.Ft.).

**General Notes Continued This Sheet**

**Legend**

- Existing Private 150' Susquehanna Transmission Right-Of-Way (L. 140, F. 449)
- Existing 20' Private Use-In-Common R/W (L. 1806, F. 493)
- Existing 20' Private Use-In-Common R/W (L. 1806, F. 10)
- Existing Private Sewerage Easement To Be Abandoned By This Plat
- 24' Private Use-In-Common Access Driveway Easement For The Use And Benefit Of Lots 1 Thru 4
- Public Sewer, Water & Utility Easement
- Public Forest Conservation Easement (Retention)
- 1/2" Structure Setback From Public Sewer, Water And Utility Easement
- Existing Private Variable Width Ingress, Egress, Maintenance And Utility Easement (L. 1394, F. 083)
- TP Denotes Tree Protection

**SHEET INDEX**

SHEET NO.	DESCRIPTION
1	TOPOGRAPHY, SOILS, LANDSCAPE AND FOREST CONSERVATION
2	TOPOGRAPHY, SOILS, LANDSCAPE AND FOREST CONSERVATION
3	NOTES AND DETAILS

**SUPPLEMENTAL PLAN (TOPOGRAPHY, SOILS, LANDSCAPE AND FOREST CONSERVATION)**

**ILCHESTER OAKS II LOTS 1 THRU 4 AND OPEN SPACE LOT 5**

Zoned: R-20  
 Tax Map: 31 Parcel: 702 Grid: 22  
 First Election District - Howard County, Maryland  
 Scale: 1"=30' Date: July 2, 2012

F-06-078

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**B.4.C Specifications for Micro-Bioretenion, Rain Gardens, Landscape Infiltration & Infiltration Berms**

**1. Material Specifications**  
The allowable materials to be used in these practices are detailed in Table B.4.1.

**2. Filtering Media or Planting Soil**  
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 shall be mixed or dumped within the micro-bioretenion practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:  
Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)  
Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40% or sandy loam (30%), coarse sand (30%), and compost (40%).  
Clay Content - Media shall have a clay content of less than 5%.  
pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

**3. Compaction**  
It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoses to remove original soil. If practices

B.4.5 Supp. 1 excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates 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 filling operation such as a chisel plow, ripper, or subsolver. These filling operations are to restructure the soil profile through the 12 inch compaction zone. Subsoil 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 backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". 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.

**4. Plant Material**  
Recommended plant material for micro-bioretenion practices can be found in Appendix A, Section A.2.3.

**5. Plant Installation**  
Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.  
Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.  
The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

**6. Underdrains**  
Underdrains should meet the following criteria:

Pipe - should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM 750, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).

Perforations - If perforated pipe is used, perforations should be 1/2" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/2" (No. 4 or 4x4) galvanized hardware cloth.

Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.

The main collector pipe shall be at a minimum 0.5% slope.  
A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.  
A 4" layer of pea gravel (1/2" to 3/4" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

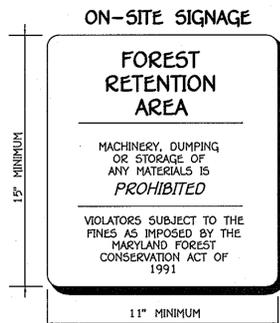
**7. Miscellaneous**  
These practices may not be constructed until all contributing drainage area has been stabilized

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%), & compost (40%)	n/a	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; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1.8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 3" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6	AGGREGATE (3/8" to 3/4")
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center. 4 holes per row; minimum of 3" of gravel over pipe; not necessary undercatch pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3, f'c = 2500 psi @ 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 sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308.3R/89; vertical loading (1)-10 or (1)-20; allowable horizontal loading (based on soil pressure); and analysis of potential cracking.
Sand	AASHTO-M 6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

**FCP NOTES:**

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
- Permanent signage shall be placed 50'-100' apart along the boundaries of all areas included in Forest Conservation Easements.
- The Forest Conservation Act requirements for this project is 0.55 acres of forest retention and the remaining 0.22 acres forest obligation will be satisfied by a Fee-In-Lieu payment of \$7,187.40. The forest retention obligation will be met by providing a total retention area of 0.55 acres on-site. No forest survey is required for the 0.55 acres retention provided.
- The wetland delineation for this project was prepared by Eco-Science Professionals, Inc. dated August, 2009 and approved under F-06-078.
- No wetlands or historic sites are located on this property.
- This project is within the (Potomac) Watershed No. (02130906).
- No wetlands are located on this property.
- There Are No Steep Slopes Of 25% Or Greater On-site With A Contiguous Area Of 20,000 Sq.ft. Or More.



NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

▲ DENOTES LOCATION OF FOREST CONSERVATION RETENTION SIGNS (SEE SHEET 1 OF 3)

MD DNR Qualified Professional  
USACOE Wetland Delineator  
Certification # WDCP93MD06100448  
*John P. Canoles*  
JOHN P. CANOLES

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS

**Construction Period Protection Program**

**A. Forest Protection Techniques**

**1. Soil Protection Area (Critical Root Zone)**  
The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface.

The limit of disturbance (LOD) line depicted on the plan shows the proposed extent of construction activities. Eco-Science Professionals, or another qualified professional designated by the developer, will assist in the field flagging of the LOD to ensure that the Critical Root Zone for the Forest Retention Area is determined in accordance with the In-Field Edge Determination Guidelines in Appendix A. Eco-Science Professionals, or another qualified professional, will also assess the condition of the new forest edge to determine if selective thinning or pruning is needed to improve the condition of the edge.

**2. Fencing and Signage**

All forest retention areas will be protected from unauthorized intrusion by appropriate signage and fencing. Signage and fencing will be installed prior to any construction activity. Installation of these devices will be supervised by Eco-Science Professionals or another qualified professional. Fencing will be placed along the LOD line that occur within 35 feet of existing tree lines. Signage will be placed along the edge of the FCE every 100 feet. Fencing will consist of blaze orange mesh fence or super all fence. See Forest Conservation Plan for standard specifications.

**B. Pre-Construction Meeting**

Upon staking of limits of disturbance and installation of all signage, a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all forest protection measures outlined in the FCP are in place, that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

**C. Storage Facilities/Equipment Cleaning**

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas shown within the limit of disturbance. Washing of equipment will be prohibited for all forest retention areas. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into wetlands, streams and other environmentally sensitive areas.

**D. Sequence of Construction**

The following timetable represents the proposed timetable for construction of the proposed project. The construction start date for this project has not been formalized. The actual project start date is predicated on the issuance of all necessary permits and approvals for the project. The items outlined in the Forest Conservation Plan will be completed upon commencement of the project.

Below find a sequence of construction.

- Install all tree protection signage, fencing, and sediment control devices.
- Hold pre-construction meeting between developer, contractor and County inspector.
- Grade site and construct improvements. Stabilize all disturbed areas in accordance with grading plan.
- Remove sediment control. Replace any forest retention signage in poor condition.
- Hold post-construction meeting with County inspectors to assure compliance with FCP.

**E. Construction Monitoring**

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan. This will include inspections to ensure that signage is properly maintained and that no unauthorized intrusions have been made into forest retention areas.

**F. Activities Permitted During Construction**

The forest conservation plan will allow the following activities within forest resources during the construction phase of the project:

- Passive recreation (birdwatching, hiking, etc.)
- Activities will not damage or negatively impact the forest resources on the property.

**G. Post-Construction Meeting**

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that all Forest Conservation Easement areas have been properly retained and that all post construction protection measures (permanent signage) have been installed.

**Post-Construction Management Plan**

Howard County requires a two year post construction management plan be prepared as part of the forest conservation plan. The plan goes into effect upon acceptance of the construction certification of completion by the County Eco-Science Professionals or another qualified professional designated by the developer will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan:

**A. Fencing and Signage**

Permanent signage indicating the limits of the retention/forestation area shall be maintained.

**B. General Site Inspections/Maintenance of Plantings**

Site inspections will be performed a minimum of three times during the growing season. The purpose of the inspections will be to assess the health of the afforestation plantings. Appropriate measures will be taken to rectify any problems which may arise.

In addition, maintenance of the afforestation plantings will involve the following steps:

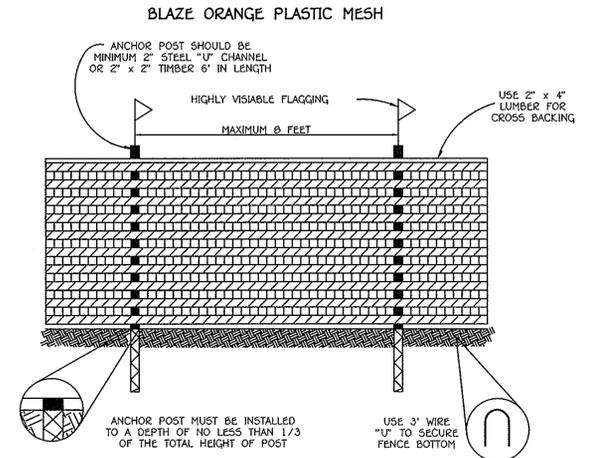
- Watering All plant material shall be watered twice a month during the 1st growing season, more or less frequently depending on weather conditions. During the second growing season, once a month during May-September, if needed.
- Removal of invasive exotics and noxious weeds Old field successional species will be retained.
- Identification of serious plant pests and diseases treatment with appropriate agent.
- Pruning of dead branches.
- After 12 and 24 months, replacement of plants, if required, in accordance with the Guidelines Requirements shown on the FCP.

**C. Education**

The developer will provide appropriate materials to property owners informing them of the location and purpose of the afforestation area. Materials may include site plans and information explaining the intent of the forest conservation law.

**D. Final Inspection**

At the end of the two year post-construction management period Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention /afforestation requirements have been met. Upon acceptance of this certification the County will release the developer from all future obligations and release the developer's bond.



- 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

**General Notes Continued:**

- A 30-Foot Setback From The Susquehanna Transmission Co. Right Of Way Has Been Established On Lots 1 And 2, In Accordance With Section 16.120(b)(5)(1)(i).
- The Existing Well And Septic System For The House On Lot 2 Will Be Properly Abandoned And The House On Lot 2 Will Be Connected To Public Water And Sewer No Later Than 90 Days After Acceptance And Placed In Use By Howard County, Maryland.
- A Site Development Plan Will Be Required For Lots 1, 3 And 4.
- In Accordance With Section 16.121(e)(2)(vii) Of The Subdivision Regulations, Open Space Lot 5 May Be Created Without Public Road Frontage, Provided That The Open Space Is County Owned And All Of The Residential Lots In The Subdivision Will Directly Adjoin The Open Space.
- On July 26, 2010 The Development Engineering Division Of The Howard County Department Planning And Zoning Approved A Waiver To Design Manual, Volume III Appendix A To Allow A Maximum Of Thirteen (13) Users To Access The Proposed Use-In-Common Driveway / Private Road.
- Landscaping For Lots 1, 3 And 4 Is Being Deferred To The Site Development Plan And Lot 2 Exempt Because It Contains An Existing Dwelling.
- All Construction Shall Be In Accordance With The Latest Standards And Specifications Of Howard County.
- The Contractor Shall Notify The Department Of Public Works/Bureau Of Engineering/Construction Inspection Division At (410) 313-1880 At Least Five (5) Working Days Prior To The Start Of Work.
- The Contractor Shall Notify "Miss 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 Traffic Control Devices (MUTCD). All Street And Regulatory Signs Shall Be In Place Prior To The Placement Of Any Asphalt.
- The Existing Topography Is Taken From Field Run Survey With Contour Intervals Prepared By Fisher, Collins And Carter, Inc. Dated June, 2011 And Supplemented With Howard County GIS Information.
- Storm Water Management Is In Accordance With The M.D.E. Storm Water Design Manual, Volumes I & II, Revised 2009. Storm Water Management Has Been Provided By The Use Of Four (4) M-6 Micro Bio-Retention Facilities And One (1) N-2 Non-Rooftop Disconnection To Be Privately Owned And Maintained.
- Existing Utilities Shown Are Based On Available Construction Drawings.
- A Non-Critical Floodplain Study By Mildenberg Boender & Assoc. Inc Was Approved In February, 2006 All Potential Building Sites Are At Least 15 Feet Above The Approximate 100 Year Floodplain And All Required Minimum Lot Areas Are At Least 5 Feet Above The Approximate 100 Year Floodplain.
- A Private Use-In-Common Driveway Access And Maintenance Agreement For Shared Driveway Is Recorded Simultaneously With This Plan.
- Ilchester Oaks II Homeowners Association, Inc. Shall Have The Responsibility To Maintain On Lot 1 The Micro-Bioretenion Facility Which Provides Stormwater Management For The Use-In-Common Driveway.
- Articles Of Incorporation For Ilchester Oaks II Homeowners Association, Inc. Have Been Filed With The Maryland State Department Of Taxation And Assessments With Receipt No. D



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE, SUITE 1002 - 10022 BALTIMORE NATIONAL PLE  
ELICOTT CITY, MARYLAND 21042  
(410) 461 - 2255

**Owner/Developer**  
Ellicott City Land Holding, Inc.  
c/o Mr. Donald R. Reuwer, Jr.  
5300 Dorsey Hall Dr. - Suite 102  
Ellicott City, Maryland 21042  
443-367-0422

**SUPPLEMENTAL PLAN NOTES AND DETAILS**  
**ILCHESTER OAKS II**  
LOTS 1 THRU 4 AND OPEN SPACE LOT 5  
Zoned: R-20  
Tax Map: 31 Parcel: 702 Grid: 22  
First Election District - Howard County, Maryland  
Scale: 1"=30' Date: July 2, 2012

F-06-078

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Kurt Schneider*  
Chief, Division of Land Development  
7/16/12  
Date

*John P. Canoles*  
Chief, Development Engineering Division  
7/13/12  
Date