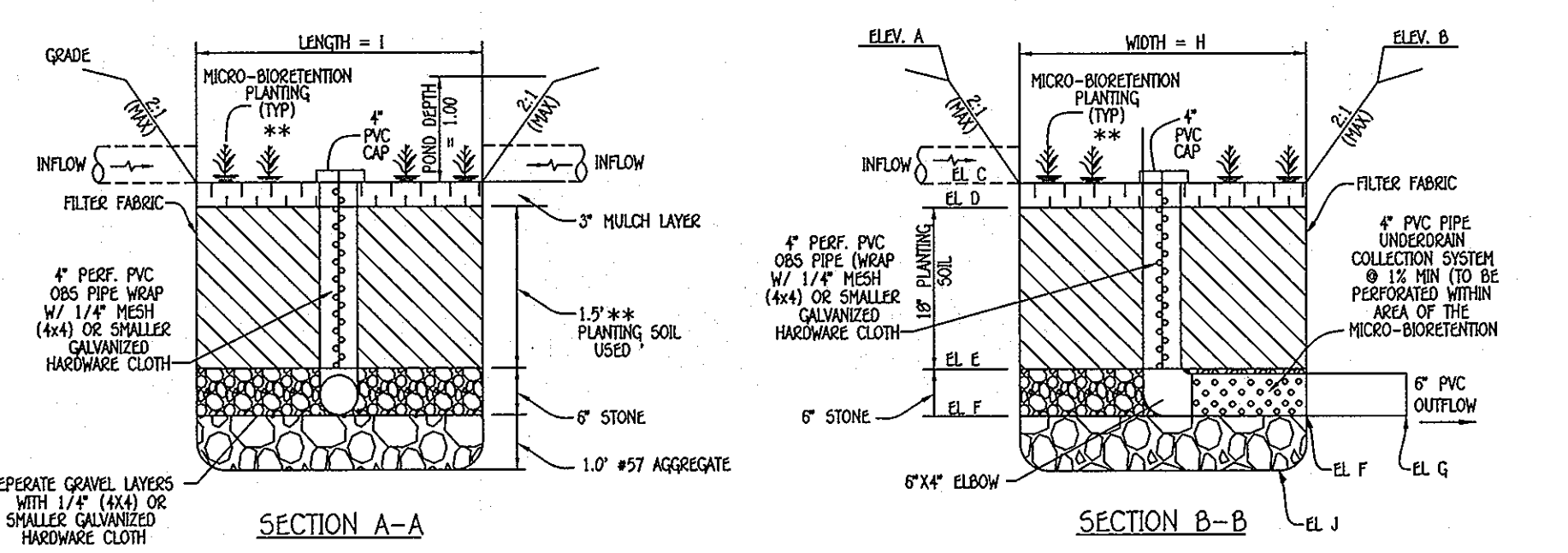
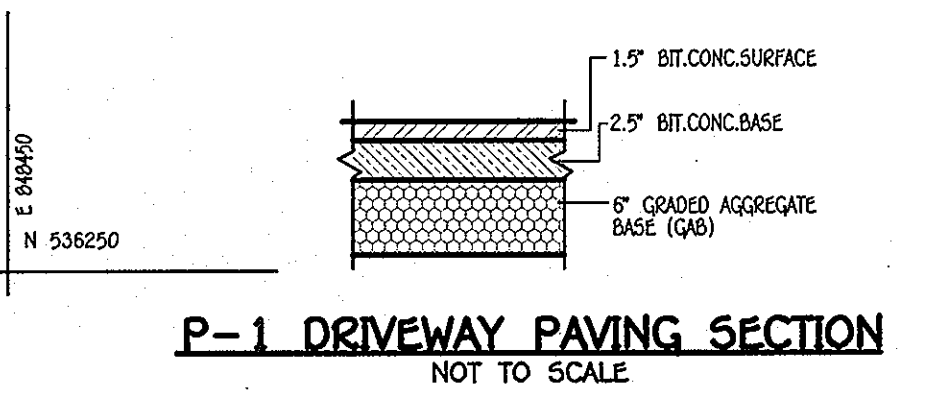
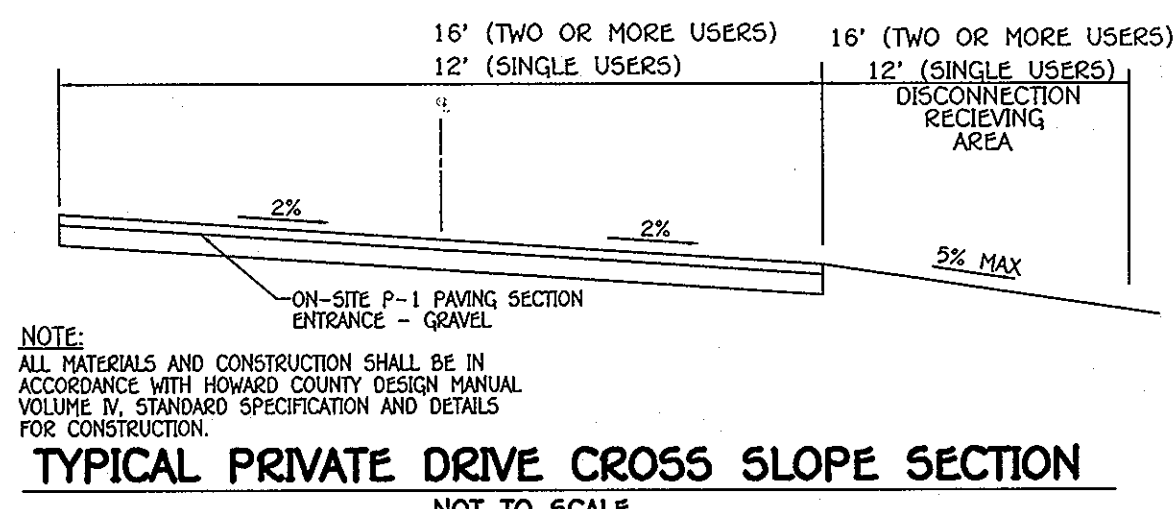


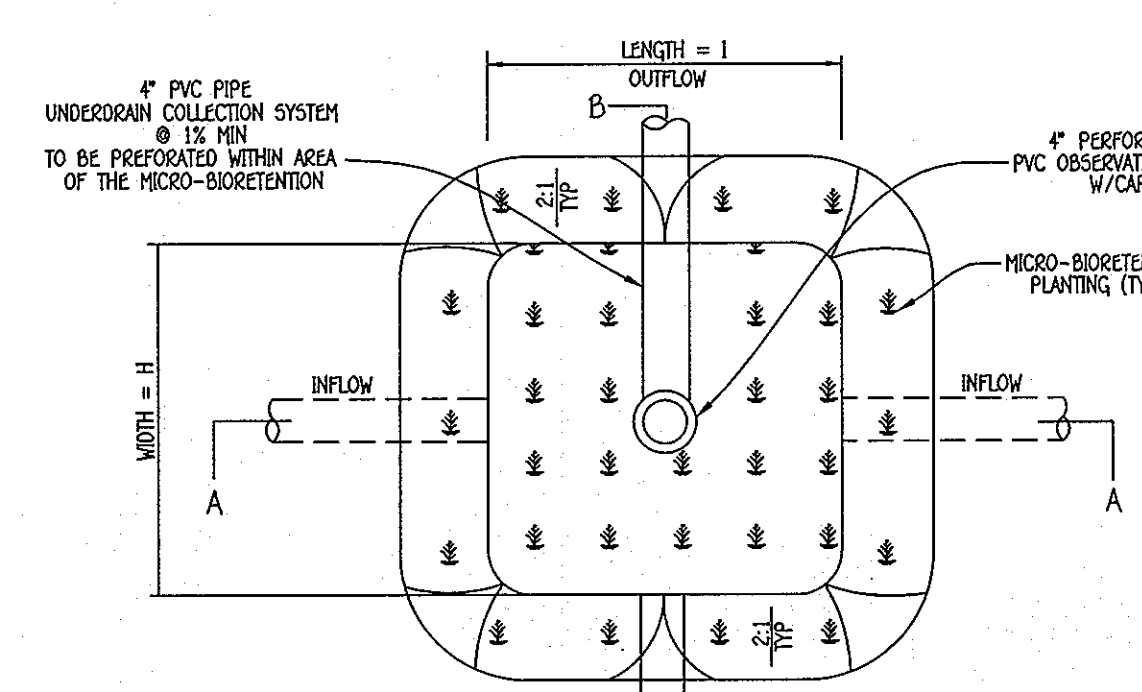
LEGEND

SYMBOL	DESCRIPTION
---	EXISTING 2' CONTOURS
- - -	EXISTING 10' CONTOURS
---	PROPOSED CONTOUR
+	SPOT ELEVATION
LOD	LIMITS OF DISTURBANCE
---	PROPOSED PAVING
---	NON-ROOFTOP DISCONNECTION
---	SOILS LINES AND TYPE
---	MISC.
---	SSP
---	STABILIZES CONSTRUCTION ENTRANCE
---	SILT FENCE
---	SOIL BORING
---	PROPOSED TREE LINE
---	EXISTING TREE LINE



MICRO-BIORETENTION

BIORETENTION FILTER	A	B	C	D	E	F	G	H	I	J
97	458.00	458.00	457.00	456.75	455.25	454.75	453.20	10'	32'	453.87



MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
16	MIXED PERENNIALS	1 FT.
16	MIXED GRASSES	1 FT.

- * MIXED PERENNIALS: CUT-LEAF CONEFLOWER, CARDINAL FLOWER, TRANSPARENT ASTER
 - * MIXED GRASSES: TUFTED FOXTAIL, BROOK SEDGE, SWITCH GRASS
- NOTE: PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

STORMWATER MANAGEMENT PRACTICES

LOT No.	STREET NAME	DISCONNECTION OF NON-ROOFTOP RUNOFF	MICRO-BIORETENTION FACILITY (M-6) (NUMBER)
97	Mount Hebron Dr.	N-2 (Y/N)	1

AREA = 0.11 ACRES
 RDN = 97
 TARGET PE = 1.2*

PE PROVIDED = $ESD \times 12 = 458 \times 12 = 5502$
 $Rv \times A = 0.95 \times 0.11 \text{ acres} = 0.1045$
 43560

AS SUCH, 100% (1.20/1.2) OF THE REQUIRED ESD VOLUME HAS BEEN PROVIDED.

SHEET INDEX CHART

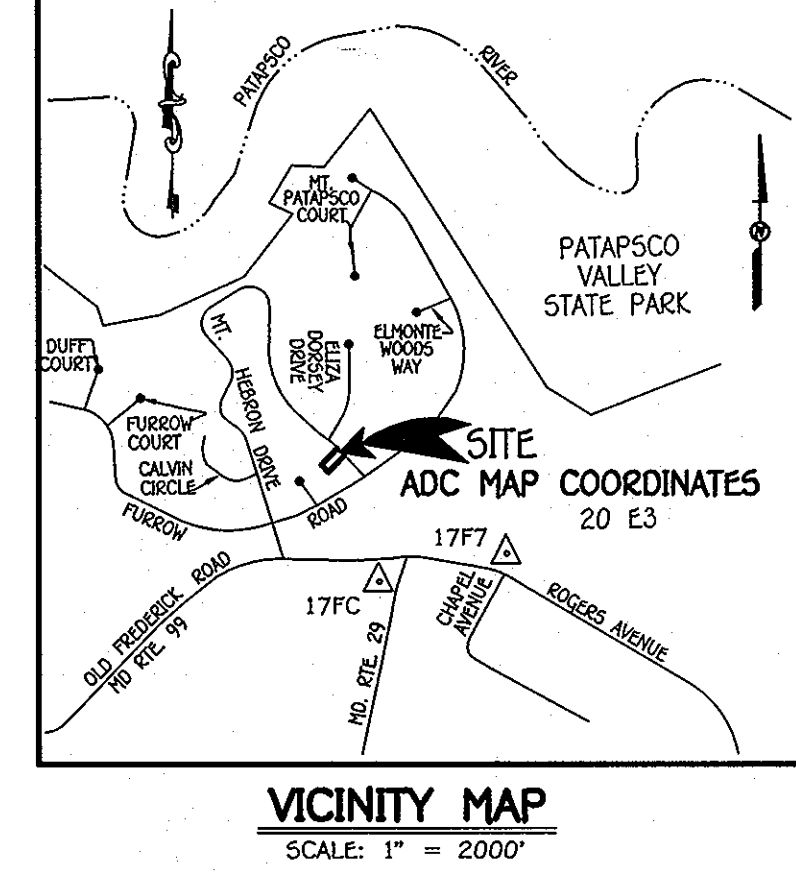
SHEET NO.	DESCRIPTION
SHEET 1	ENVIRONMENTAL CONCEPT, SEDIMENT AND EROSION CONTROL PLAN, STORMWATER MANAGEMENT NOTES
SHEET 2	SWM, SEDIMENT AND EROSION CONTROL NOTES & DETAILS
SHEET 3	SEDIMENT AND EROSION CONTROL NOTES & DETAILS

SOILS LEGEND

SOIL	NAME	CLASS
GhB	Glennelq-Urbn lnd complex, 0 to 8 percent slopes	B
GnB	Glennville-Balle silt loams, 0 to 8 percent slopes	C

- SITE ANALYSIS DATA**
- TOTAL AREA OF SUBJECT PROPERTY = 25,300 sq. ft. or 0.58 ACRES
 - DEVELOPABLE AREA: 25,300 sq. ft. or 0.58 ACRES
 - WETLAND AREA: NONE
 - FLOODPLAIN: NONE
 - FOREST: NONE
 - STEEP SLOPES: NONE
 - ERODABLE SOILS: NONE
 - LIMIT OF DISTURBANCE: 0.4435 ACRES
 - PROPOSED SITE USE: RESIDENTIAL SFD
 - IMPERVIOUS AREA: 0.11 AC.
 - GREEN OPEN AREA: 0.47 AC.

- HOWARD COUNTY CONTROL STATIONS**
- 17 FC: NORTHING 181619.8487 mts 595864.454 fts EASTING 415102.2658 mts 1361881.350 fts
 - 17 F7: NORTHING 181609.2516 mts 595829.6863 fts EASTING 415470.1548 mts 1363088.3327 fts



- General Notes:**
- Previous Department of Planning and Zoning File Number: Contr. No. 14-3153-0, WP-90-90, S0P-02-112, F-91-167, GP-88-66, and P-89-22.
 - The SWM Measures Illustrated on This Plan Are Conceptual As Specific House Configurations Have Not Yet Been Established. Specific SWM Measures Will Be Provided With The Associated Plot Plan When Final Design Details Can Be Provided.
 - The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at 410-313-1800 at least five (5) working days prior to the start of work.
 - The contractor shall notify H&S UTILITY 410-207-7777 at least 48 hours prior to any excavation work being done.
 - The coordinates shown herein are based upon the Howard County Control Stations.
 - This property is located within the "Metropolitan District".
 - Any damage to the County Owned Right-of-Way shall be corrected at the Developer's expense.
 - The subject property is zoned R-20 per the 8-25-85 Comprehensive Zoning Plan and the Comp-Lite Zoning Amendments dated 7-28-06.
 - Landscape for this project will be provided for at the Site Development Stage.
 - Review of this project for compliance with the Howard County Subdivision and Land Development Regulations and the Howard County Zoning Regulations occur at the Site Development Stage. Therefore, the applicant and consultant should expect additional and more detailed comments (including those that may alter overall site design) as this project progresses.
 - Approval of the ESD does not constitute an approval of any subsequent and associated subdivision and/or Site Development Plan.
 - Stormwater Management requirements for this site will be met using Environmental Site Design to the Maximum Extent Possible in accordance with the Maryland Stormwater Design Manual Volumes I & II, effective May, 2010.
- Proposed practices will be located on Lot 97 as follows:
- Stormwater requirements will be met by using Micro-Bioretention (M-6) for Rooftop runoff. The Driveway runoff will be treated by using Non-Rooftop Disconnection (N-2). These facilities will provide the required ESD volumes for the proposed house and Driveway. These practices shall be privately owned and maintained in accordance with individual Declarations of Covenants.

- ESD NARRATIVE:**
- There are no forest retention areas, floodplains, steep slopes, wetlands, streams and/or their buffers located on-site as shown in Table 5.1 of the Maryland Stormwater Management Design Manual. As certified by Eco-Science Professionals, Inc. on April 26, 2013.
 - The existing drainage patterns will be maintained as closely as possible during and after the development of the site. Efforts have been made to reduce the impervious areas; once the final house type has been selected, it may be possible to reduce the site imperviousness through better site design.
 - The required Sediment and Erosion control measures consisting of super silt fence and stabilized construction entrance have been designed in accordance with the Howard County Soil Conservation District and Maryland Department of the Environment regulations. Based on the type and location of the ESD practices, there was no need to incorporate these measures into the SWM strategy.
 - The proposed Environmental Site Design measures have been implemented to the Maximum Extent Possible and meet the targeted PE for this site. As such, no major structural practices as described in Chapter 3 of the above cited Manual will be required.

SWM Narrative Introduction:
 This report will demonstrate how the criteria set forth in the Maryland Stormwater Management Design Manual, Volumes I and II, effective October 2000 and revised in May of 2010, will be utilized for this project. The goal of creating hydrology similar to that of "Woods in Good Condition" will be accomplished through the use of the practices set forth in the revised Chapter 5 of the above referenced Manual. The achievement of this goal will preclude the need to provide Channel Protection Volume for this project.

General Site Conditions:
 Lot 97 of Patapsco Park Estates is zoned R-20 and is located on Tax Map 0017, Grid 0005, Parcel 0330 of the Howard County Tax Map Database System. The lot consists of 25,300 sq. ft. or 0.58 acres and is located on SW Mt. Hebron Drive in the Elliott City area of Howard County. At this time, there are no existing structures or other impervious areas located on the site. There are no forested areas on-site; however there is an existing grove of 6' to 12' trees located from the middle to the rear of the lot along with some ornamental landscaping along the east property line. The soils on the site are classified as hydrologic soil group Type "B" GhB, Glennelq loam (85%) with 0 to 8% slopes moderately eroded and Type "C" GnB, Glennville silt loam (15%) with 0 to 8% slopes moderately eroded. The proposed dwelling will be served with public water and sewer.

Natural Resource Protection:
 There are no Natural Resources as shown in Table 5.1 of the above cited manual located on this site; therefore protections are not required.

Maintenance of Natural Flow Patterns:
 It is the intent of the proposed design to mimic runoff discharge patterns and directions as closely as possible to those existing prior to development.

Reduction of Impervious Area Through better Site Design, Alternative Surfaces and Non-Structural Practices:
 The proposed house and driveway are at the minimum size necessary to fit within the small building envelope on the site. Non-Structural practices as permitted in Chapter 5, i.e., Non-Rooftop Disconnection (N-2) and Micro-Bioretention (M-6) will be used to address ESD to the MEP requirements. Alternative Surfaces were not incorporated into the design.

Integration of Erosion and Sediment Controls into the Stormwater Strategy:
 There was no need to incorporate the Sediment and Erosion Control devices into the Stormwater Management design for this site.

Implementation of ESD Planning Techniques and Practices to the Maximum Extent Possible:
 Environmental Site Design was implemented to the Maximum Extent Possible for this site.

Request for Design Manual Waivers: There is no need to request a Design Manual waiver petition for environmental for stormwater management purposes.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-1899

REVISION BLOCK	DATE	DESCRIPTION

STATE OF MARYLAND
EARL D. COLLINS
PROFESSIONAL ENGINEER
 No. 9753

Reviewed for HOWARD SCD and meets Technical Requirements.

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

Howard SCD _____ Date _____

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer _____ Date 5.14.13

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. 9757, EXPIRATION DATE: 3/03/14.

Earl D. Collins _____ Date 5.14.13

OWNER/DEVELOPER

CARL UTT and MELINDA MCAY
 2012 FOUR QUARTER 2040
 ELLICOTT CITY, MD. 21043
 MELINDAMCAY@GMAIL.COM
 410-465-8535

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development _____ Date 5/20/13

Chief, Development Engineering Division _____ Date 5/22/13

PROJECT	SECTION	LOT NO.
PATAPSCO PARK ESTATES	4	97

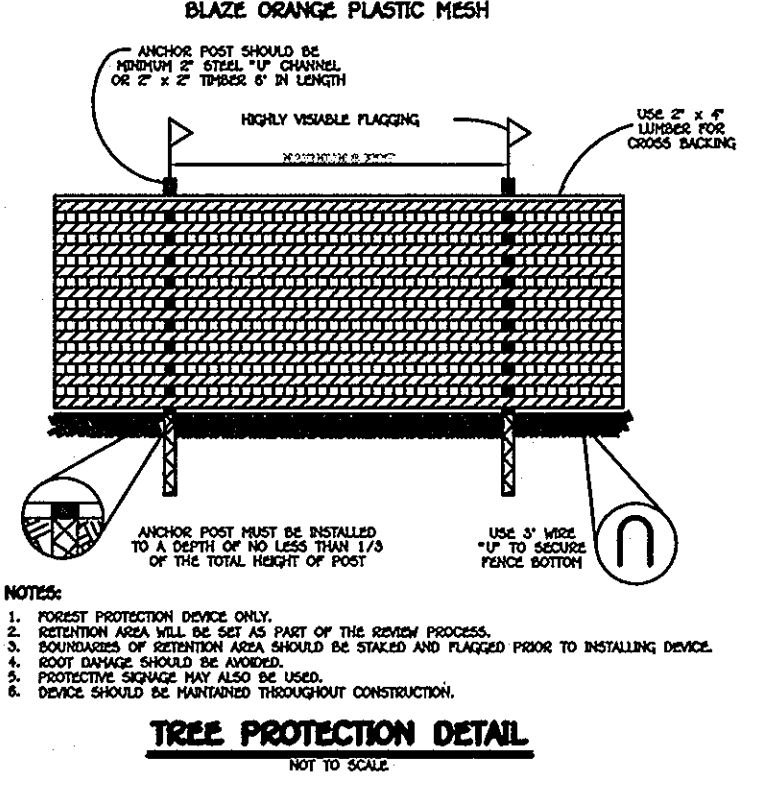
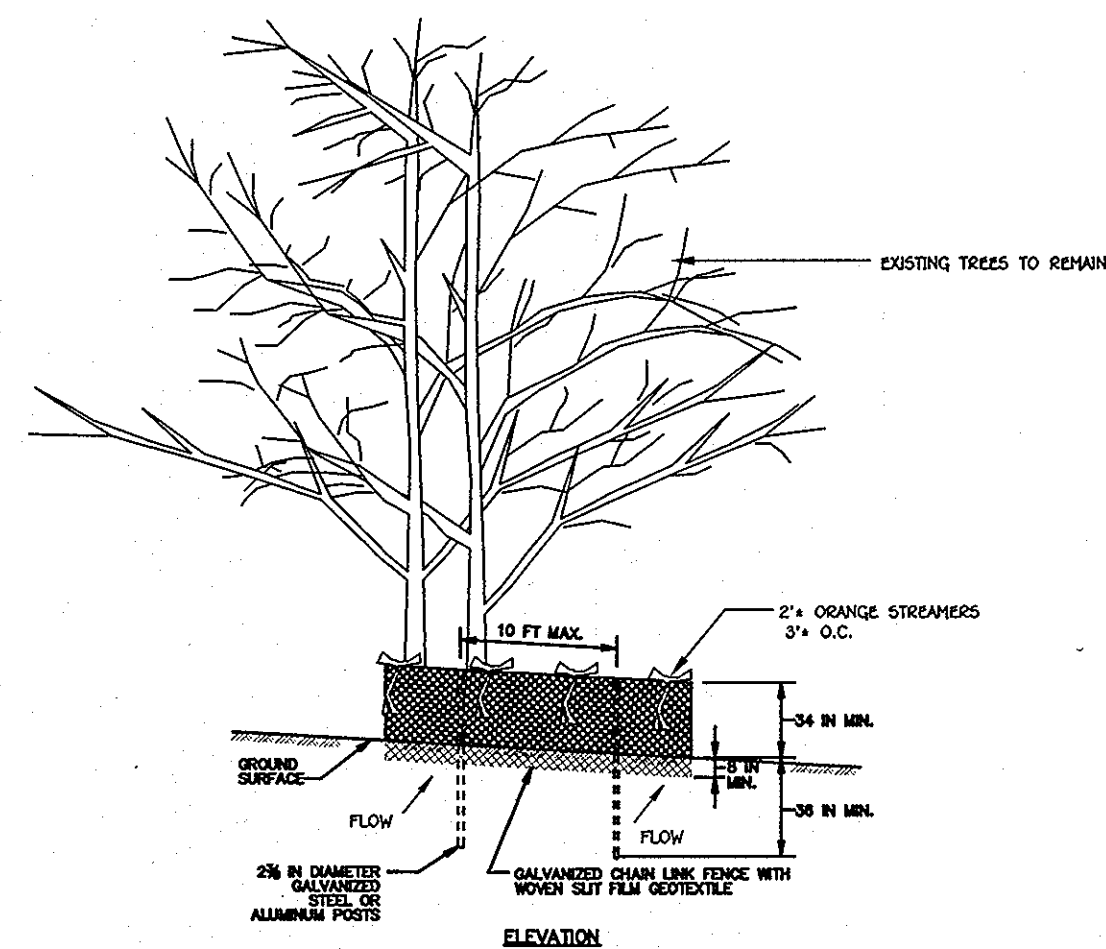
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.
10719	11.	R-20	17	SECOND

ENVIRONMENTAL CONCEPT PLAN

SINGLE FAMILY DETACHED
PATAPSCO PARK ESTATES
 SECTION FOUR
 LOT 97
 ZONED: R-20

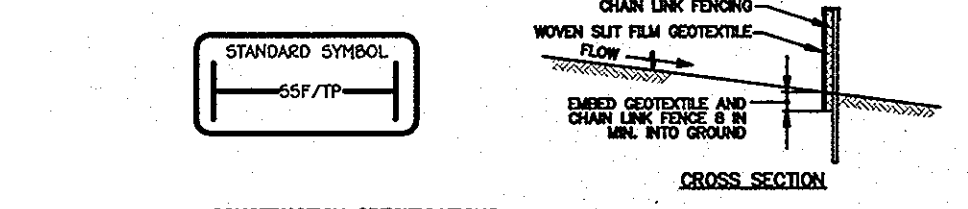
TAX MAP NO.: 0017 PARCEL NO.: 0036 GRID NO.: 0011
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: MARCH, 2013

SHEET 1 OF 3 **ECP-13-049**



NOTES:
 1. FENCE PROTECTION DEVICES ONLY.
 2. PROTECTION AREA SHALL BE SET AS PART OF THE DESIGN PROCESS.
 3. CONTAINMENT OF SEDIMENT AREA SHOULD BE STABLE AND PLACED PRIOR TO INSTALLING DEVICES.
 4. ONLY WHITE SHOULD BE USED.
 5. PROTECTIVE BAGGING MAY ALSO BE USED.
 6. DEVICES SHOULD BE INSTALLED THROUGHOUT CONSTRUCTION.

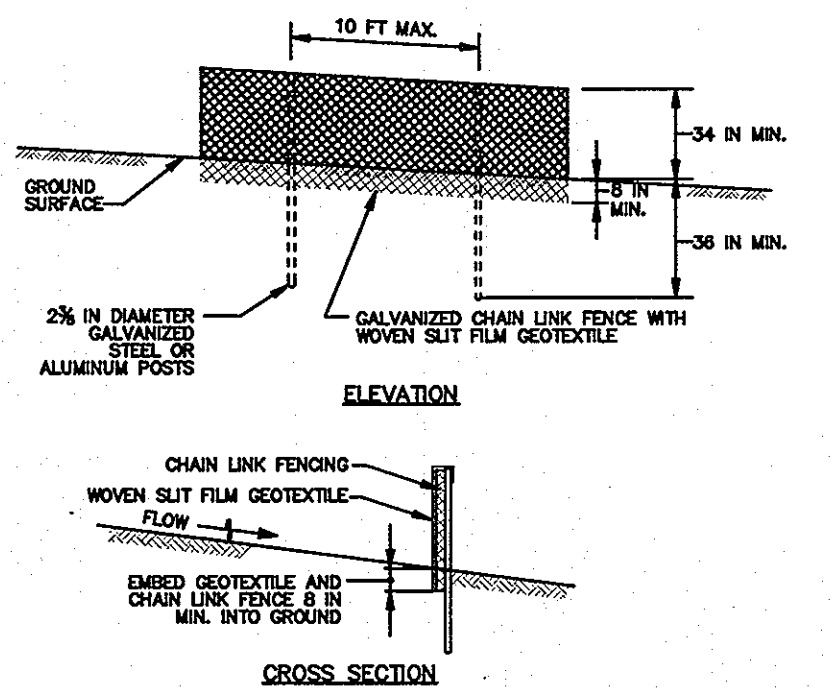
TREE PROTECTION DETAIL
 NOT TO SCALE



CONSTRUCTION SPECIFICATIONS
 1. INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 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.
 2. 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 TIES OR RING BOLTS.
 3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
 4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 8 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN IF UNDERMINING OCCURS. REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

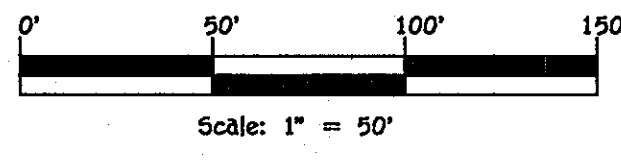
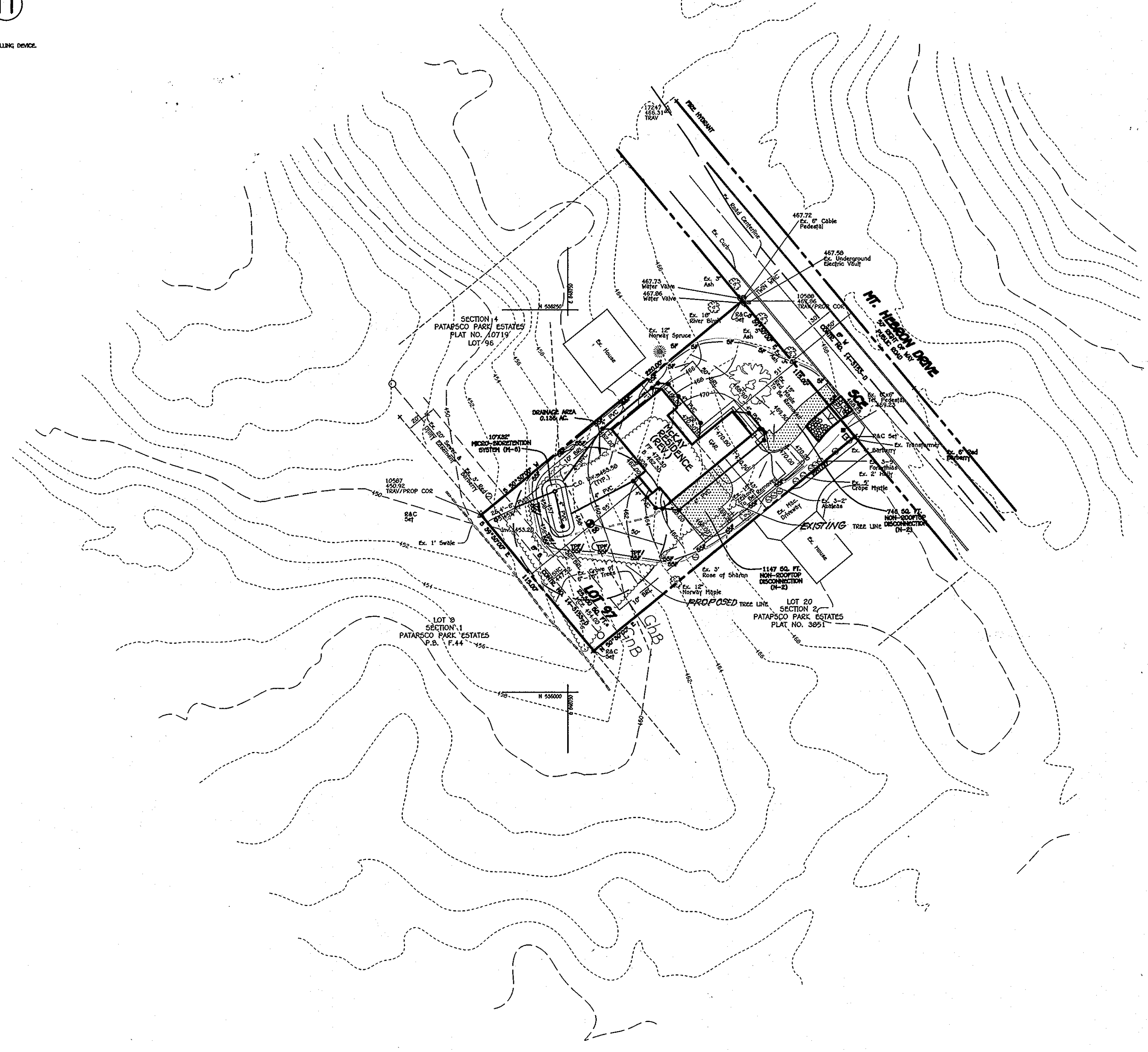
SUPER SILT FENCE, TREE PROTECTION FENCE
 NOT TO SCALE

DETAIL E-3 SUPER SILT FENCE
 STANDARD SYMBOL: SSF



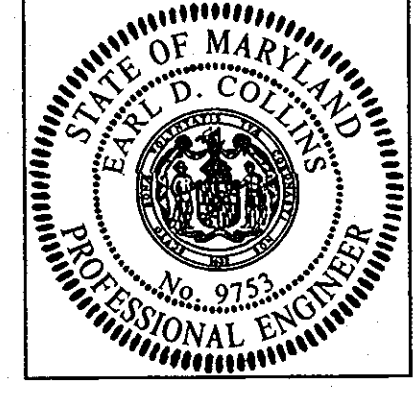
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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



DATE	REVISION BLOCK DESCRIPTION

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDORCK NATIONAL FILE
 ELICOTT CITY, MARYLAND 21042
 (410) 961-2200



Reviewed for HOWARD SCD and meets Technical Requirements.
 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
 Signature of Engineer: *Earl D. Collins* Date: 5-14-13
ENGINEER'S CERTIFICATE
 "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

OWNER/DEVELOPER
 CARL UTT and MELINDA McLAY
 50 WEST EDMONDSTON DRIVE SUITE 405
 ROCKVILLE, MD. 20852

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development: *K. D. [Signature]* Date: 5/20/13
 Chief, Development Engineering Division: *[Signature]* Date: 5/22/13

ENVIRONMENTAL CONCEPT PLAN
SEDIMENT & EROSION CONTROL NOTES
 SINGLE FAMILY DETACHED
PATAPSCO PARK ESTATES
 SECTION FOUR
 LOT 97
 ZONED: R-20
 TAX MAP NO.: 0017 PARCEL NO.: 00392 GRID NO.: 0011
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: MARCH, 2013
 SHEET 3 OF 3 **ECP-13-049**