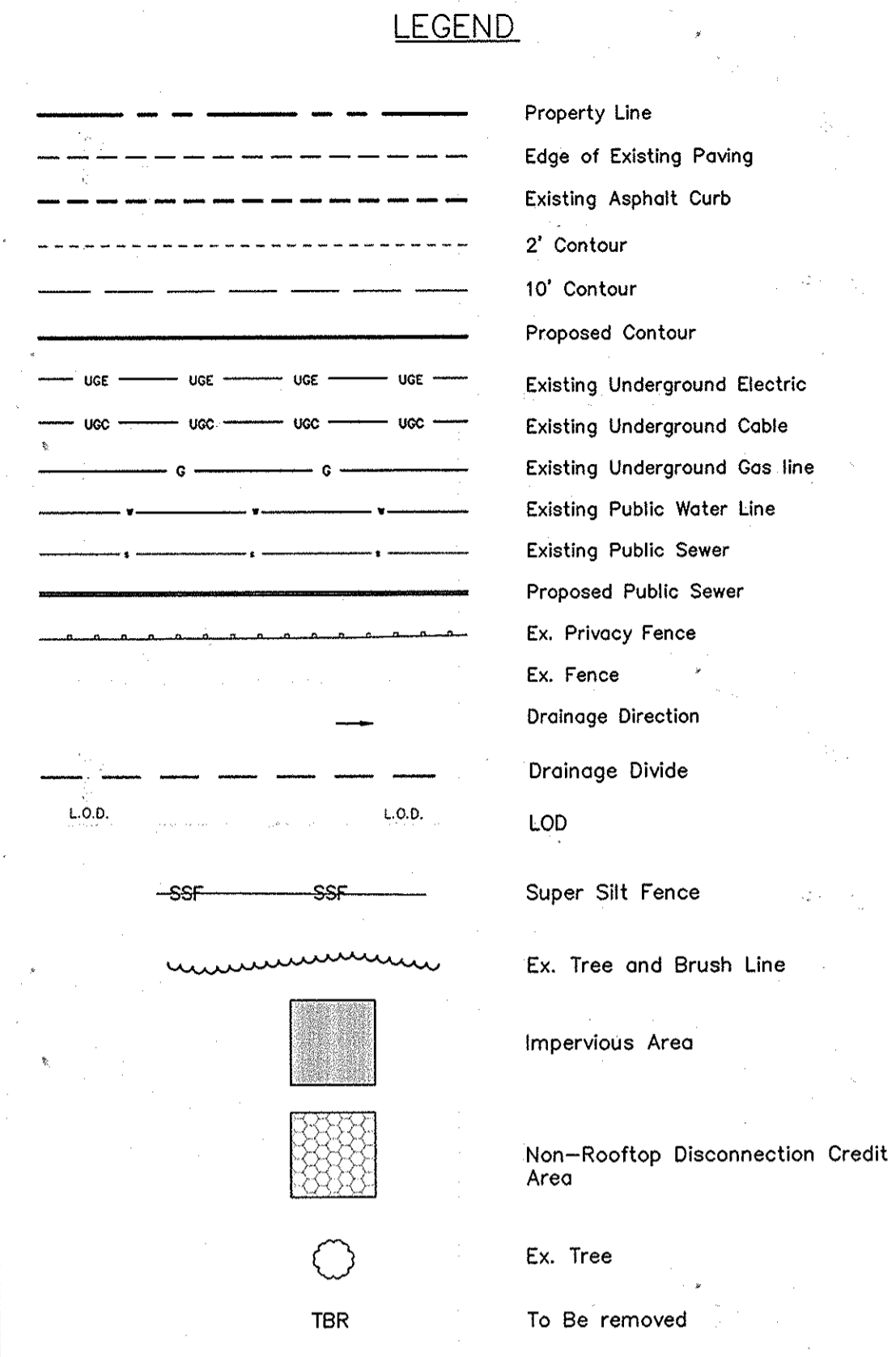


**OPERATION AND MAINTENANCE SCHEDULE FOR BIORETENTION FACILITIES**

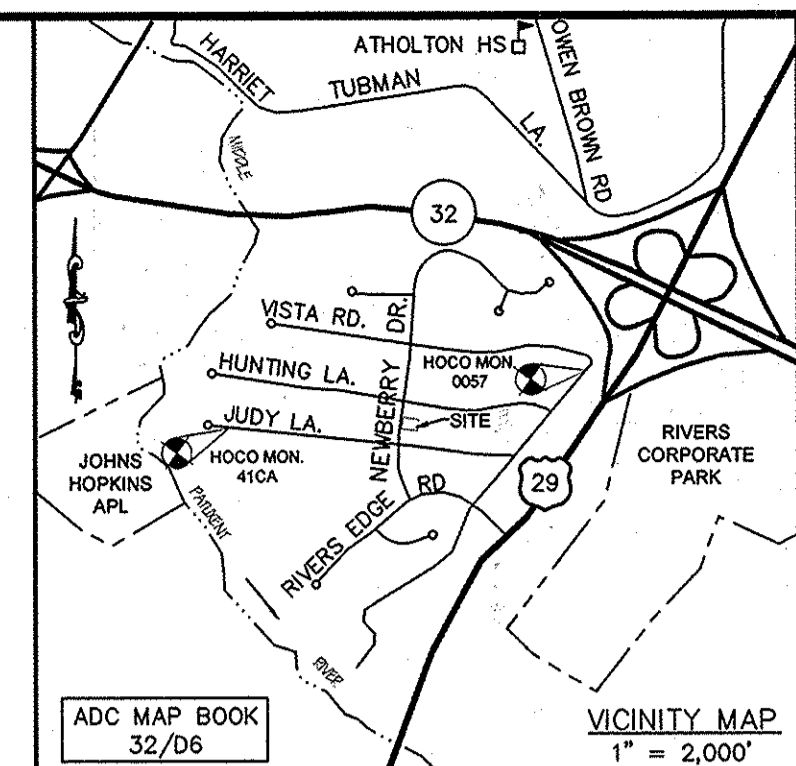
ALL MICRO-BIORETENTION FACILITIES SHALL BE INSPECTED AT LEAST TWICE PER YEAR, ONCE EACH IN THE SPRING AND FALL, AND AFTER LARGE STORMS. THE MICRO-BIORETENTION FACILITY COMPONENTS TO BE INSPECTED AND MAINTAINED INCLUDE THE ITEMS AS FOLLOWS:

1. PLANT MATERIAL: PLANTS SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION. REMOVE AND REPLACE DEAD OR DYING VEGETATION CONSIDERED BEYOND TREATMENT (SEE NOTE #1 BELOW). MAINTENANCE INCLUDES PRUNING, AND REPLACEMENT OF DEFICIENT STAKES AND WIRE.
2. MULCH LAYER: SHALL BE REPLACED EVERY 3 YEARS (IN THE SPRING) DUE TO THE ACCUMULATION OF HEAVY METALS. THE OWNER SHALL PROPERLY DISPOSE THE OLD MULCH SO AS NOT TO CAUSE STORMWATER CONTAMINATION ELSEWHERE. WASHED OUT AREAS SHALL BE REPAIRED.
3. SOIL LAYER: SHOULD STORMWATER POND FOR MORE THAN 48 HOURS, THE TOP 6 INCHES (MINIMUM) OF THE PLANTING SOIL LAYER SHALL BE REPLACED. THE OLD SOIL SHALL BE PROPERLY DISPOSED.
4. SPILLWAY OUTFALL, INTERIOR SLOPES: ERODED AREAS SHALL BE REPAIRED (FILLED IN AND SEEDED). BARE AREAS SHALL BE TREATED AND RE-SEEDED.
5. INLET: REPAIR CRACKS, DAMAGED CONCRETE, ETC. AS NECESSARY.
6. REMOVE AND PROPERLY DISPOSE ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.

NOTE: IF SPECIFIC PLANTS ARE NOT SURVIVING; THE PLANT TYPE SHALL BE CHANGED TO BETTER SUITED SPECIES. PLANT WATERING MAY BE NEEDED DURING PROLONGED DRY PERIODS.



- GENERAL NOTES**
1. STORMWATER MANAGEMENT HAS BEEN PROVIDED USING "ESD TO THE MEP". SPECIFICALLY, ONE (1) MICRO-BIORETENTION FACILITY AND NON-ROOFTOP SHEET FLOW CREDIT ARE PROPOSED TO ADDRESS THE STORMWATER MANAGEMENT FOR THIS SITE. PLEASE REFER TO THE SWM REPORT PREPARED BY CIVIL DESIGN SERVICES, LC DATED MARCH 18, 2014 FOR MORE INFORMATION.
  2. THE BOUNDARY AND TOPOGRAPHIC SURVEY WAS PERFORMED SURVEY WAS PERFORMED IN MARCH 2007 AND SEPTEMBER 2013, BY SHANBERGER & LANE (ELLCOTT CITY, MD). TOPOGRAPHY OUTSIDE THE BOUNDARY WAS TAKEN FROM HOWARD COUNTY G.I.S. MAPS.
  3. THERE ARE NO WETLANDS OR FORESTS LOCATED ON THIS PROPERTY BASED ON A SEPTEMBER 2013 SITE VISIT BY CIVIL DESIGN SERVICES, LC.
  4. THERE ARE NO FORESTED AREAS ON THESE LOTS. THE PROJECT IS REQUIRED TO PROVIDE 0.15 ACRES OF AFFORESTATION. THE AFFORESTATION OBLIGATION WILL BE MET BY A PAYMENT OF A FEE-IN-LIEU. THE REQUIRED FEE BASED ON 0.15 ACRE AFFORESTATION OBLIGATION (0.15 AC. = 6,534 sf x \$0.75) WOULD BE \$4,900.50 AND WOULD BE PAID CONCURRENTLY WITH THIS PLAT.
  5. STORMWATER MANAGEMENT HAS BEEN PROVIDED WITH ONE (1) MICRO-BIORETENTION (M-6) FACILITY AND NON-ROOFTOP DISCONNECTION CREDIT. PLEASE REFER TO THE SWM REPORT PREPARED BY CIVIL DESIGN SERVICES, LC DATED MARCH 18, 2014.
  6. ALL CONSTRUCTION SHALL MEET THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS, SMALL EARTHEN DAM SPECIFICATION MD-378, AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S CURRENT STORMWATER DESIGN MANUAL, OR AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONSULT THE ENGINEER SHOULD THERE BE ANY DISCREPANCIES. SEE MICRO-BIORETENTION FACILITY SPECIFICATIONS ON THIS SHEET.
  7. THE UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL TEST PIT ALL KNOWN EXISTING UTILITIES TO VERIFY, SIZE, SHAPE, LOCATION, AND TYPE PRIOR TO PERFORMING CONSTRUCTION. ANY UTILITY DAMAGED DUE TO CONSTRUCTION MUST BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE TO THE SPECIFICATIONS OF THE UTILITY OWNER.
  8. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. IF THE CONTRACTOR MAKES FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
  9. CONTRACTOR SHALL NOTIFY MISS UTILITY 1-800-257-7777 AND THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES & PERMITS THREE (3) WORKING DAYS BEFORE BEGINNING CONSTRUCTION.
  10. CIVIL DESIGN SERVICES, LC IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS PROJECT. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH CODE/SPECIFICATION REQUIREMENTS.
  11. THE BMP MAY BE GRADED, HOWEVER, THE PLANTING SOIL IN THE BMP SHALL NOT BE INSTALLED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (I.E., THICK GRASS COVER, OR PAVED).
  12. THE STORMWATER MANAGEMENT MICRO-BIORETENTION BMP FOR THIS PROJECT WILL BE PRIVATELY OWNED AND MAINTAINED.
  13. THIS PLAN IS SOLELY FOR THE PROPOSED IMPROVEMENTS AS SHOWN. THIS PLAN IS NOT VALID FOR SUBSEQUENT ALTERED HOUSE FOOTPRINTS/LOCATIONS, OR OTHER SITE REVISIONS/MODIFICATIONS.
  14. THE BMP LEVEL SURFACE SHALL BE 160 SF MINIMUM. THE BMP SIDE SLOPES SHALL NOT EXCEED 3:1.
  15. ON SEPTEMBER 24, 2015, THE PLANNING DIRECTOR GRANTED WP-16-028, A WAIVER OF THE FOLLOWING SECTIONS OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS IN CONNECTION WITH THIS SUBDIVISION:  
SECTION 16.132. (REQUIRING CONSTRUCTION OF ROADS FRONTING THE PROPOSED SUBDIVISION TO CURRENT STANDARDS)  
SECTION 16.134. (REQUIRING CONSTRUCTION OF SIDEWALKS ALONG ROAD FRONTAGE)  
SECTION 16.135. (REQUIRING CONSTRUCTION OF STREET LIGHTING IN ACCORDANCE WITH THE DESIGN MANUAL)  
SECTION 16.136. (REQUIRING PLANTING OF STREET TREES) APPROVAL OF THIS WAIVER IS SUBJECT TO THE FOLLOWING CONDITIONS:  
1. PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$24,470.00 FOR THE CONSTRUCTION OF SIDEWALKS, CURB & GUTTER AND STREET LIGHTS. THE FEE-IN-LIEU MUST BE PAID PRIOR TO RECORDATION OF F-15-097.  
2. PLACING A NOTE ON THIS PLAN AND ON ALL SUBSEQUENT SUBMISSIONS REFLECTING THE WAIVER APPROVAL AND PAYMENT OF A FEE-IN-LIEU OF CONSTRUCTION.



SHEET INDEX	
SHT #	SHEET TITLE
1	Stormwater Management Plan
2	Erosion & Sediment Control Plan
3	Landscape Plan
4	Forest Stand Delineation & Conservation Plan

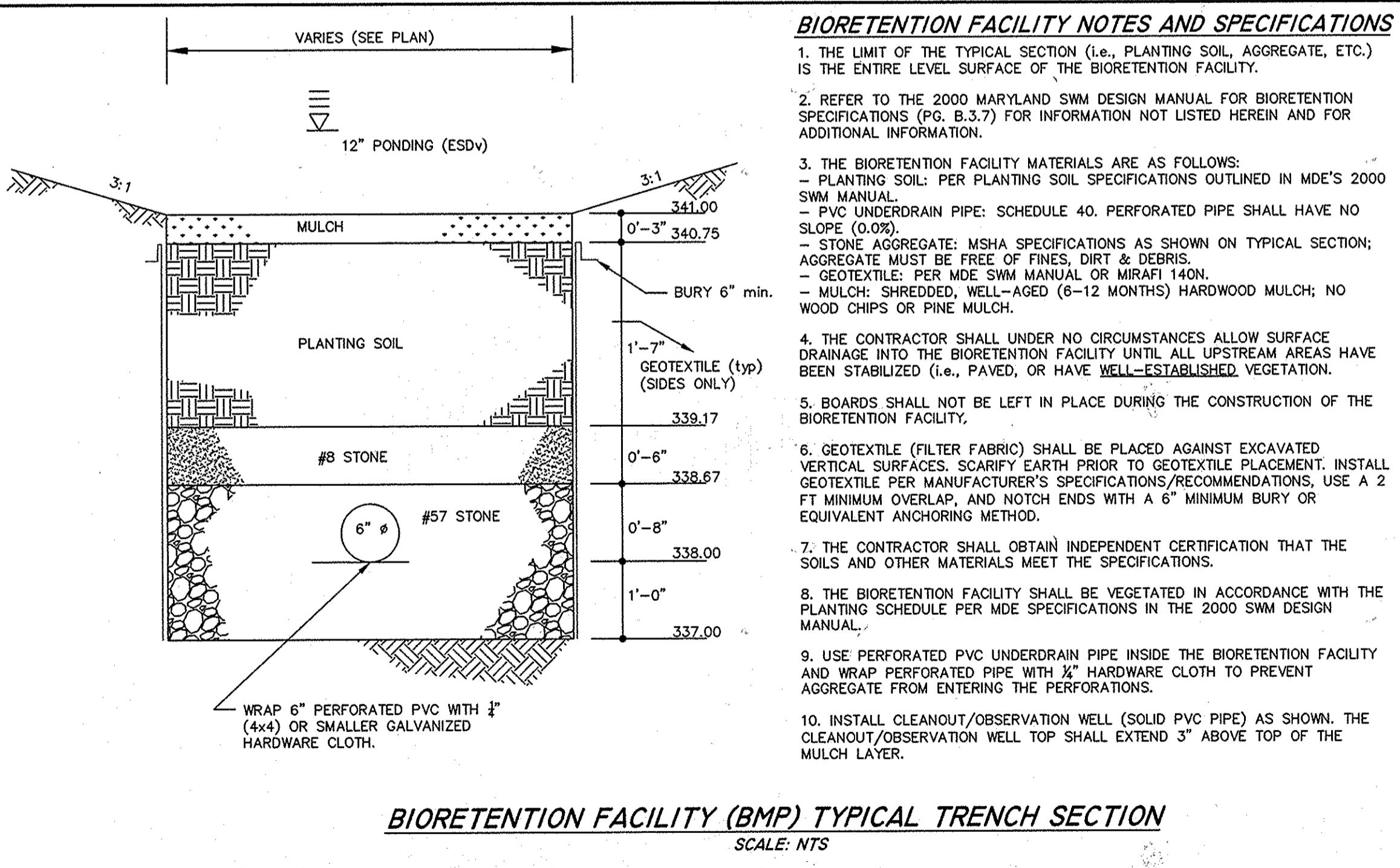
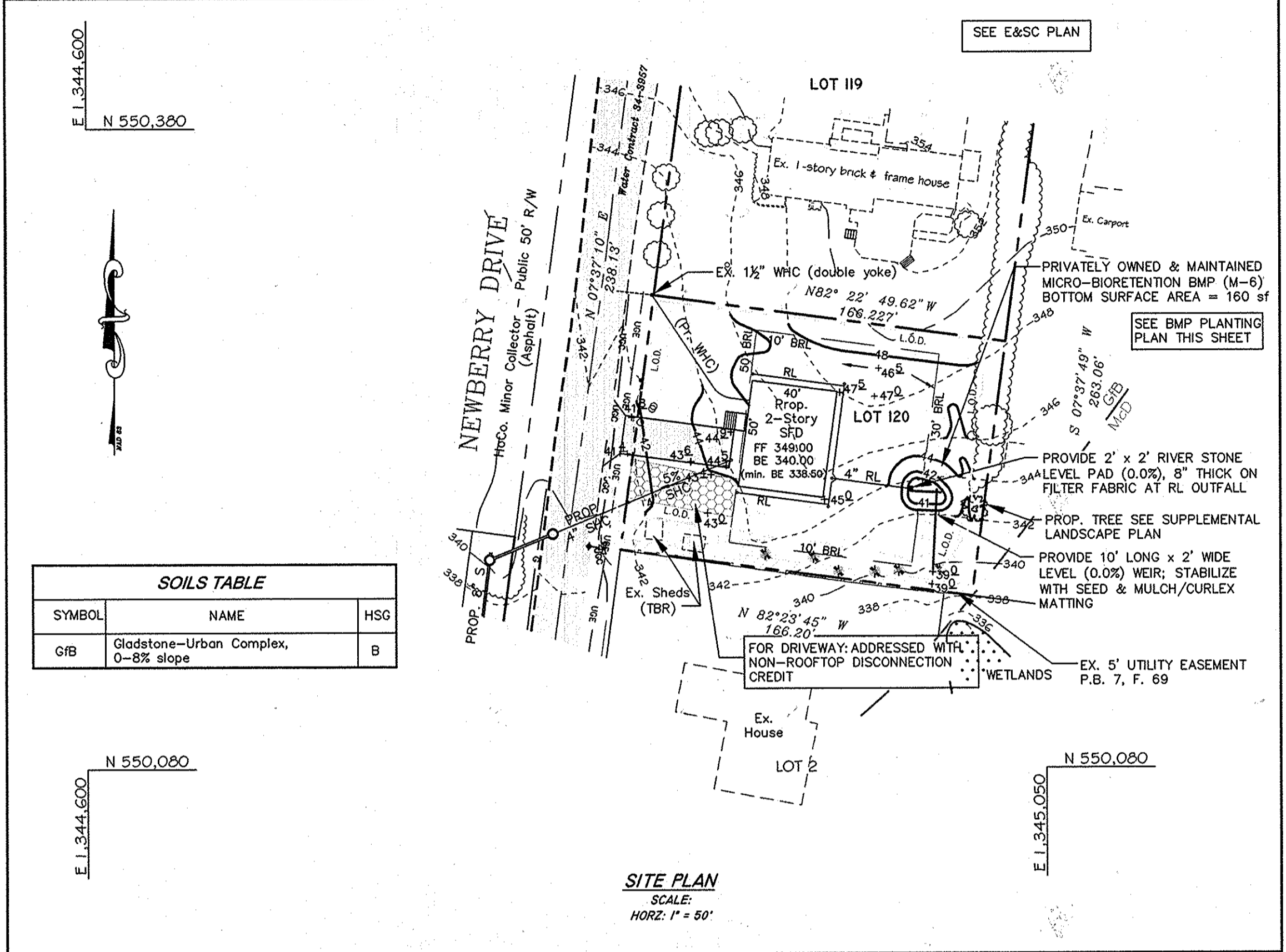
**HOLIDAY HILLS, SECTION 4, LOT 120 (LEE PROPERTY)**

**BMP STORMWATER MANAGEMENT SUMMARY TABLE**

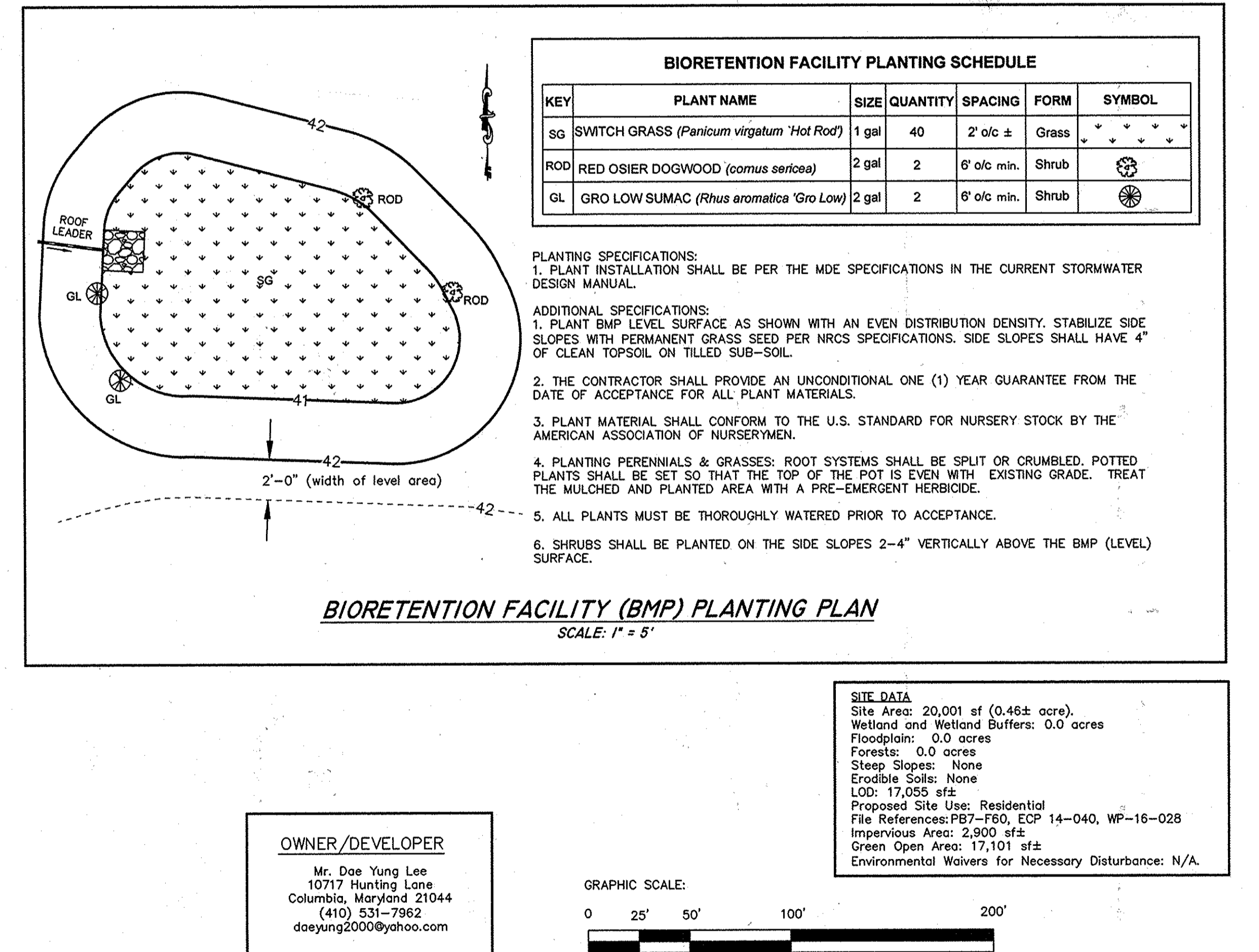
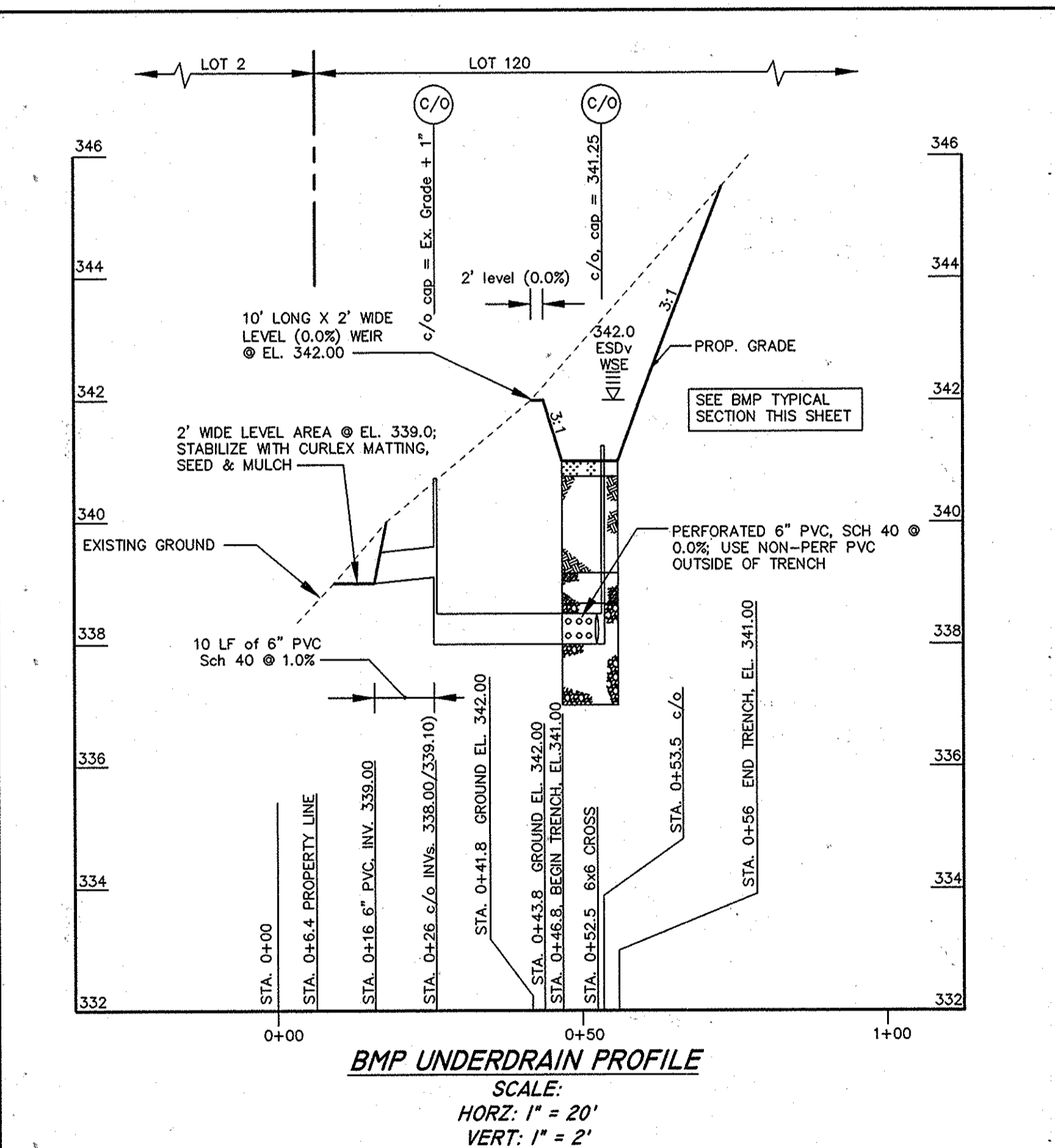
Required (cf)	Provided (cf)	Method/Notes
ESD, 229'	250'	Bioretention (M-6); P <sub>r</sub> = 1.8" All soils are HSG "B"
Re, 62'	64'	Storage in aggregate voids below the underdrain.
Cp,		Provided with the ESD.

**SUMMARY OF PEAK BMP DISCHARGES**  
Drainage Area = 3,940 sf (0.00141 sm)

Q <sub>10</sub>	0.4 cfs
Q <sub>100</sub>	0.7 cfs



- BIORETENTION FACILITY NOTES AND SPECIFICATIONS**
1. THE LIMIT OF THE TYPICAL SECTION (I.E., PLANTING SOIL, AGGREGATE, ETC.) IS THE ENTIRE LEVEL SURFACE OF THE BIORETENTION FACILITY.
  2. REFER TO THE 2000 MARYLAND SWM DESIGN MANUAL FOR BIORETENTION SPECIFICATIONS (PG. B.3.7) FOR INFORMATION NOT LISTED HEREIN AND FOR ADDITIONAL INFORMATION.
  3. THE BIORETENTION FACILITY MATERIALS ARE AS FOLLOWS:  
- PLANTING SOIL: PER PLANTING SOIL SPECIFICATIONS OUTLINED IN MDE'S 2000 SWM MANUAL.  
- PVC UNDERDRAIN PIPE: SCHEDULE 40. PERFORATED PIPE SHALL HAVE NO SLOPE (0.0%).  
- STONE AGGREGATE: MSHA SPECIFICATIONS AS SHOWN ON TYPICAL SECTION; AGGREGATE MUST BE FREE OF FINES, DIRT & DEBRIS.  
- GEOTEXTILE: PER MDE SWM MANUAL OR MIRAFI 140N.  
- MULCH: SHREDDED, WELL-AGED (6-12 MONTHS) HARDWOOD MULCH; NO WOOD CHIPS OR PINE MULCH.
  4. THE CONTRACTOR SHALL UNDER NO CIRCUMSTANCES ALLOW SURFACE DRAINAGE INTO THE BIORETENTION FACILITY UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (I.E., PAVED, OR HAVE WELL-ESTABLISHED VEGETATION).
  5. BOARDS SHALL NOT BE LEFT IN PLACE DURING THE CONSTRUCTION OF THE BIORETENTION FACILITY.
  6. GEOTEXTILE (FILTER FABRIC) SHALL BE PLACED AGAINST EXCAVATED VERTICAL SURFACES. SCARIFY EARTH PRIOR TO GEOTEXTILE PLACEMENT. INSTALL GEOTEXTILE PER MANUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS. USE A 2 FT MINIMUM OVERLAP, AND NOTCH ENDS WITH A 6" MINIMUM BURY OR EQUIVALENT ANCHORING METHOD.
  7. THE CONTRACTOR SHALL OBTAIN INDEPENDENT CERTIFICATION THAT THE SOILS AND OTHER MATERIALS MEET THE SPECIFICATIONS.
  8. THE BIORETENTION FACILITY SHALL BE VEGETATED IN ACCORDANCE WITH THE PLANTING SCHEDULE PER MDE SPECIFICATIONS IN THE 2000 SWM DESIGN MANUAL.
  9. USE PERFORATED PVC UNDERDRAIN PIPE INSIDE THE BIORETENTION FACILITY AND WRAP PERFORATED PIPE WITH 1/4" HARDWARE CLOTH TO PREVENT AGGREGATE FROM ENTERING THE PERFORATIONS.
  10. INSTALL CLEANOUT/OBSERVATION WELL (SOLID PVC PIPE) AS SHOWN. THE CLEANOUT/OBSERVATION WELL TOP SHALL EXTEND 3" ABOVE TOP OF THE MULCH LAYER.



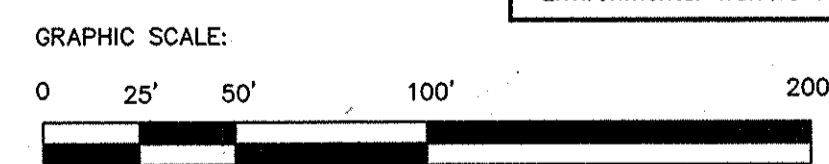
**BIORETENTION FACILITY PLANTING SCHEDULE**

KEY	PLANT NAME	SIZE	QUANTITY	SPACING	FORM	SYMBOL
SG	SWITCH GRASS ( <i>Panicum virgatum</i> 'Hot Rod')	1 gal	40	2' o/c ±	Grass	+
ROD	RED OSIER DOGWOOD ( <i>cornus sericea</i> )	2 gal	2	6' o/c min.	Shrub	⊗
GL	GRO LOW SUMAC ( <i>Rhus aromatica</i> 'Gro Low')	2 gal	2	6' o/c min.	Shrub	⊗

- PLANTING SPECIFICATIONS:**
1. PLANT INSTALLATION SHALL BE PER THE MDE SPECIFICATIONS IN THE CURRENT STORMWATER DESIGN MANUAL.
- ADDITIONAL SPECIFICATIONS:**
1. PLANT BMP LEVEL SURFACE AS SHOWN WITH AN EVEN DISTRIBUTION DENSITY. STABILIZE SIDE SLOPES WITH PERMANENT GRASS SEED PER NRCS SPECIFICATIONS. SIDE SLOPES SHALL HAVE 4" OF CLEAN TOPSOIL ON TILLED SUB-SOIL.
  2. THE CONTRACTOR SHALL PROVIDE AN UNCONDITIONAL ONE (1) YEAR GUARANTEE FROM THE DATE OF ACCEPTANCE FOR ALL PLANT MATERIALS.
  3. PLANT MATERIAL SHALL CONFORM TO THE U.S. STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
  4. PLANTING PERENNIALS & GRASSES: ROOT SYSTEMS SHALL BE SPLIT OR CRUMBLED. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH EXISTING GRADE. TREAT THE MULCHED AND PLANTED AREA WITH A PRE-EMERGENT HERBICIDE.
  5. ALL PLANTS MUST BE THOROUGHLY WATERED PRIOR TO ACCEPTANCE.
  6. SHRUBS SHALL BE PLANTED ON THE SIDE SLOPES 2-4" VERTICALLY ABOVE THE BMP (LEVEL) SURFACE.

**SITE DATA**  
Site Area: 20,001 sf (0.46± acre).  
Wetland and Wetland Buffers: 0.0 acres  
Floodplain: 0.0 acres  
Forests: 0.0 acres  
Steep Slopes: None  
Erodible Soils: None  
LOD: 17,055 sf±  
Proposed Site Use: Residential  
File References: PB7-F60, ECP 14-040, WP-16-028  
Impervious Area: 2,900 sf±  
Green Open Area: 17,101 sf±  
Environmental Waivers for Necessary Disturbance: N/A.

**OWNER/DEVELOPER**  
Mr. Doe Yung Lee  
10717 Hunting Lane  
Columbia, Maryland 21044  
(410) 531-7962  
doeyung2000@yahoo.com



**CIVIL DESIGN SERVICES, LC**  
6123 Holly Ridge Court, Columbia, Maryland 21044  
240.755.0380 phone/fax  
civildesign@comcast.net

I hereby certify that I prepared this plan and the seal signifies that I am a duly licensed professional engineer under the laws of the State of MD, License No. 15,838 w/expiration December 17, 2015.



Andrew A. Porter 12/5/2015  
ANDREW A. PORTER, P.E. DATE

NO.	REVISION	DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

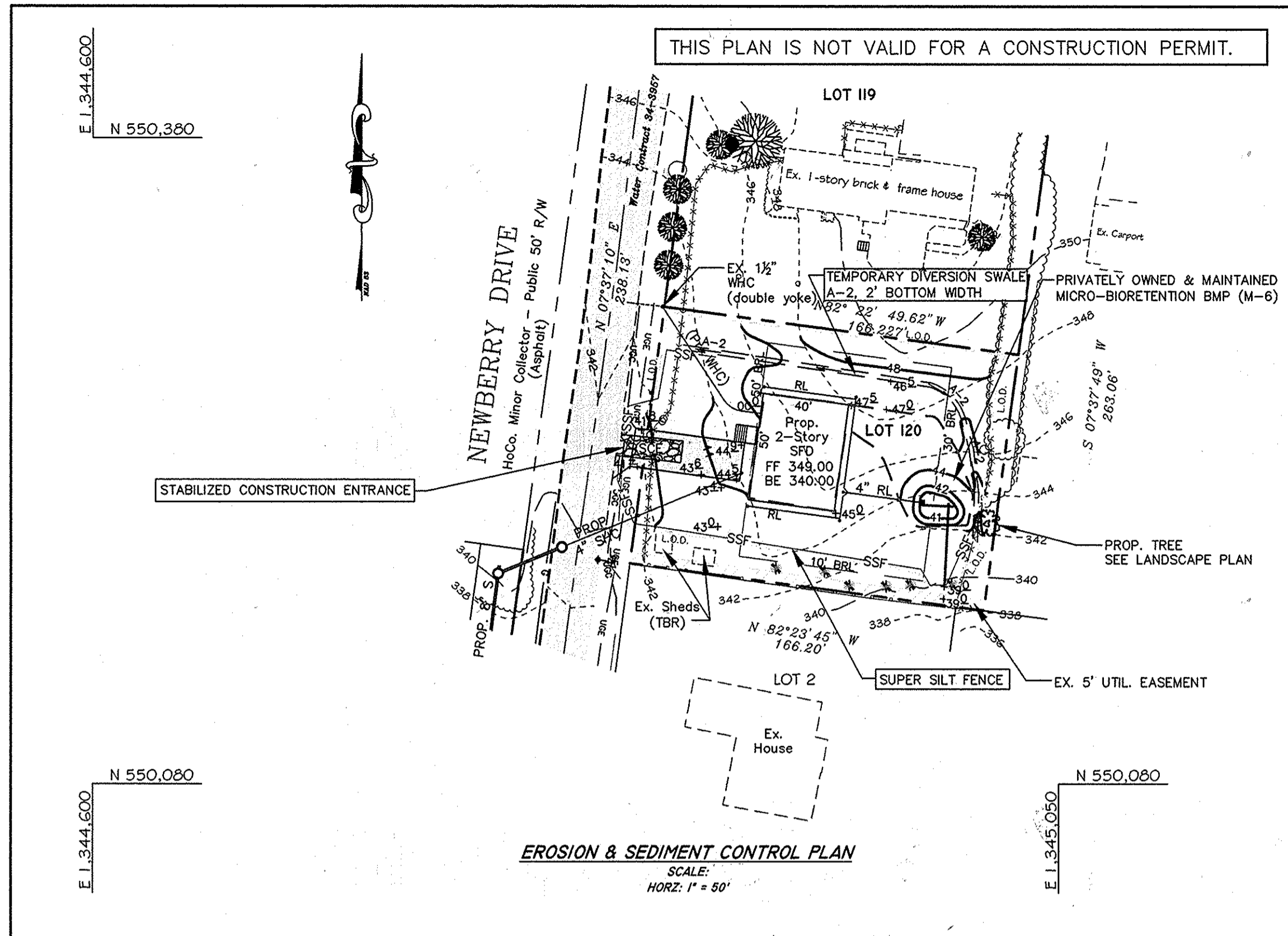
*John Edwards* 12-23-15  
Chief, Division of Land Development

*John Edwards* 12-23-15  
Chief, Development Engineering Division

PROJECT	SECTION	LOT NO.
Holiday Hills, Section 4, Lot 120	4	120

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
TBD	6	R-20	41	5 <sup>th</sup>	6051.02

**SUPPLEMENTAL STORMWATER MANAGEMENT PLAN**  
**HOLIDAY HILLS, SECTION 4, LOT 120 (LEE PROPERTY)**  
A Re-Subdivision of Holiday Hills, Section 4, Lot 48  
TAX MAP NO: 41 PARCEL NO: 252 GRID NO.: 6  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: DECEMBER 1, 2015



**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT. (1 DAY)
- NOTIFY MISS UTILITY (1-800-257-7777) 48 HOURS BEFORE STARTING WORK. NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1855) 24 HOURS BEFORE STARTING WORK. (2 DAYS)
- INSTALL PERIMETER CONTROLS INCLUDING SCE (w/ MOUNTABLE BERM), SUPER SILT FENCE, AND TEMPORARY DIVERSION SWALE. IMMEDIATELY STABILIZE DISTURBED AREA UPSTREAM OF DIVERSION SWALE. (2 DAYS)
- GRADE SITE, CONSTRUCT HOUSE AND DRIVEWAY. (7 MONTHS)
- STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING. (2 DAYS)
- WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AND WITH ALL UPSTREAM AREAS STABILIZED (i.e., WITH ESTABLISHED VEGETATION OR IMPERVIOUS COVER), CONSTRUCT THE MICRO-BIORETENTION FACILITY. (1 WEEK)
- INSTALL LANDSCAPING. (1 DAY)
- FOLLOWING SUCCESSFUL FULLY-ESTABLISHED VEGETATION OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT & EROSION CONTROL DEVICES AND THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING. (2 DAYS)

**TEMPORARY SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ.FT.)

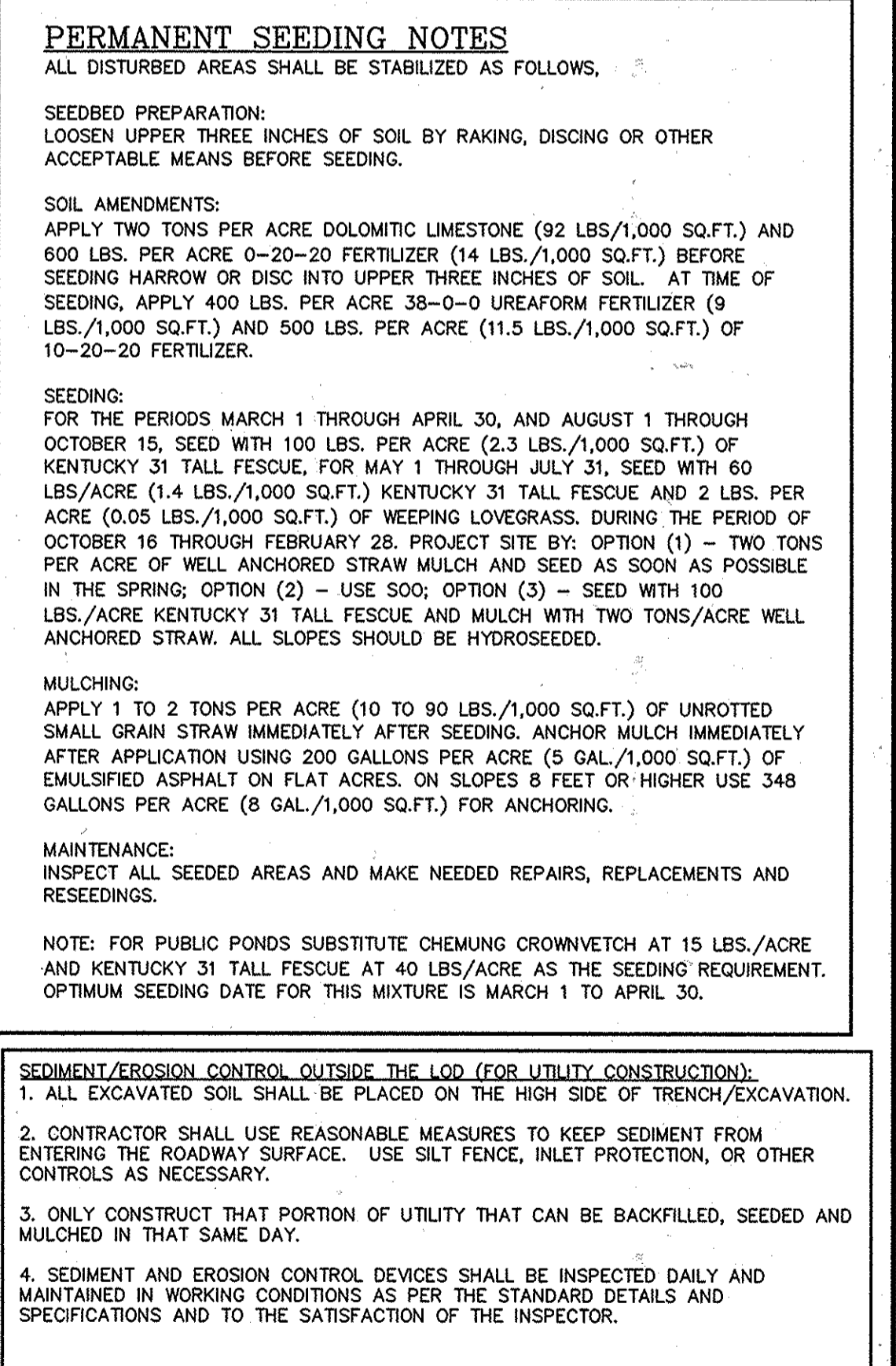
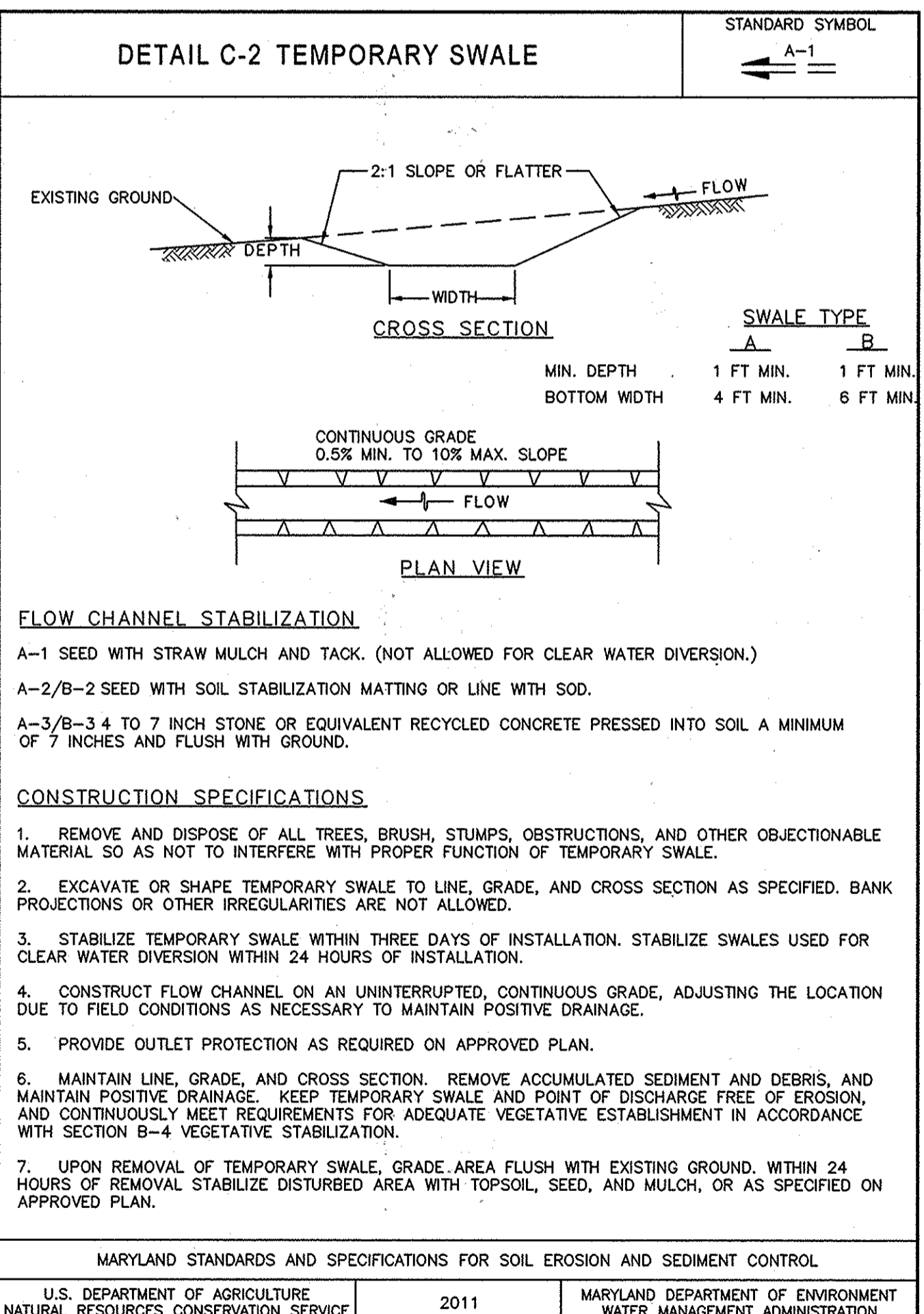
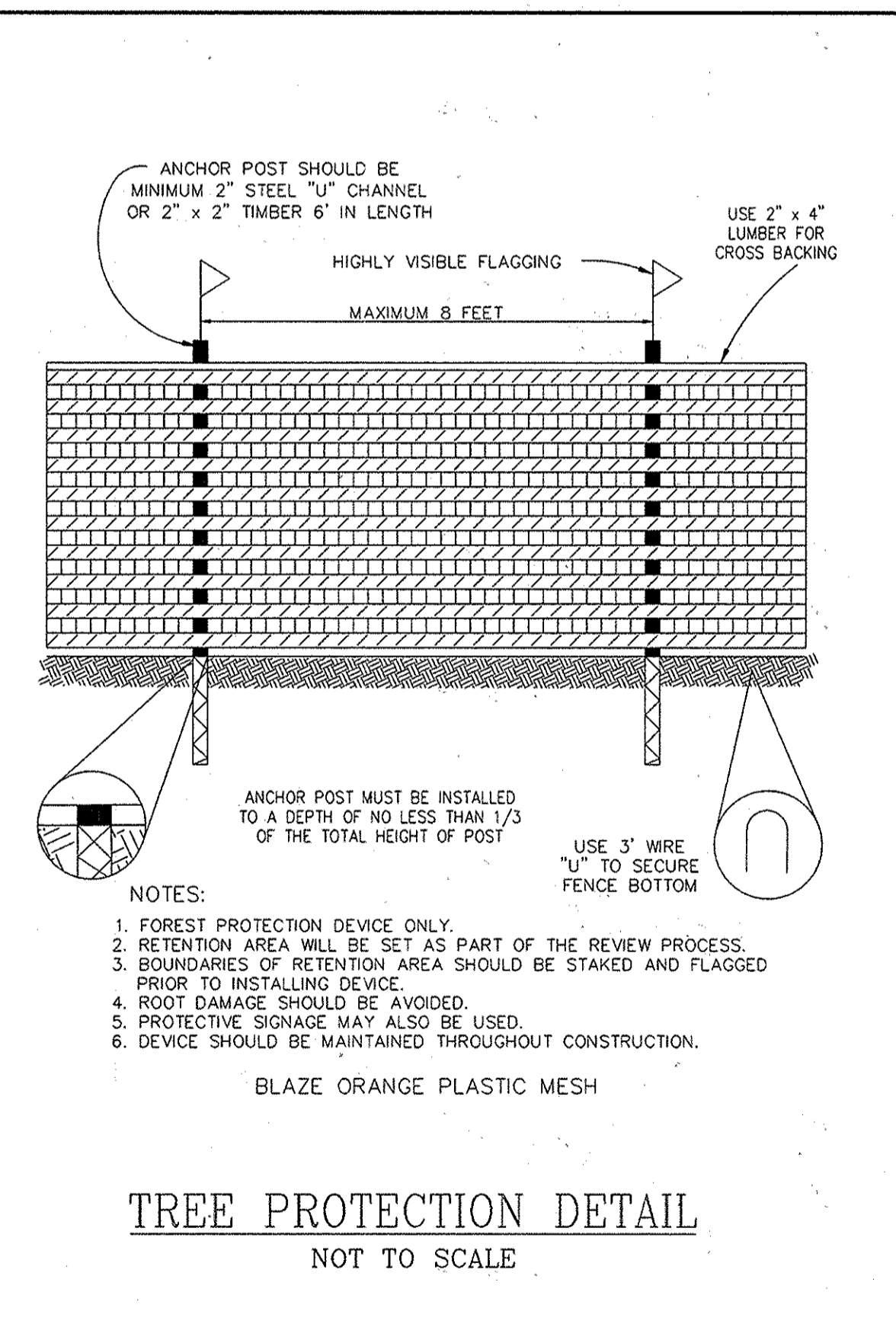
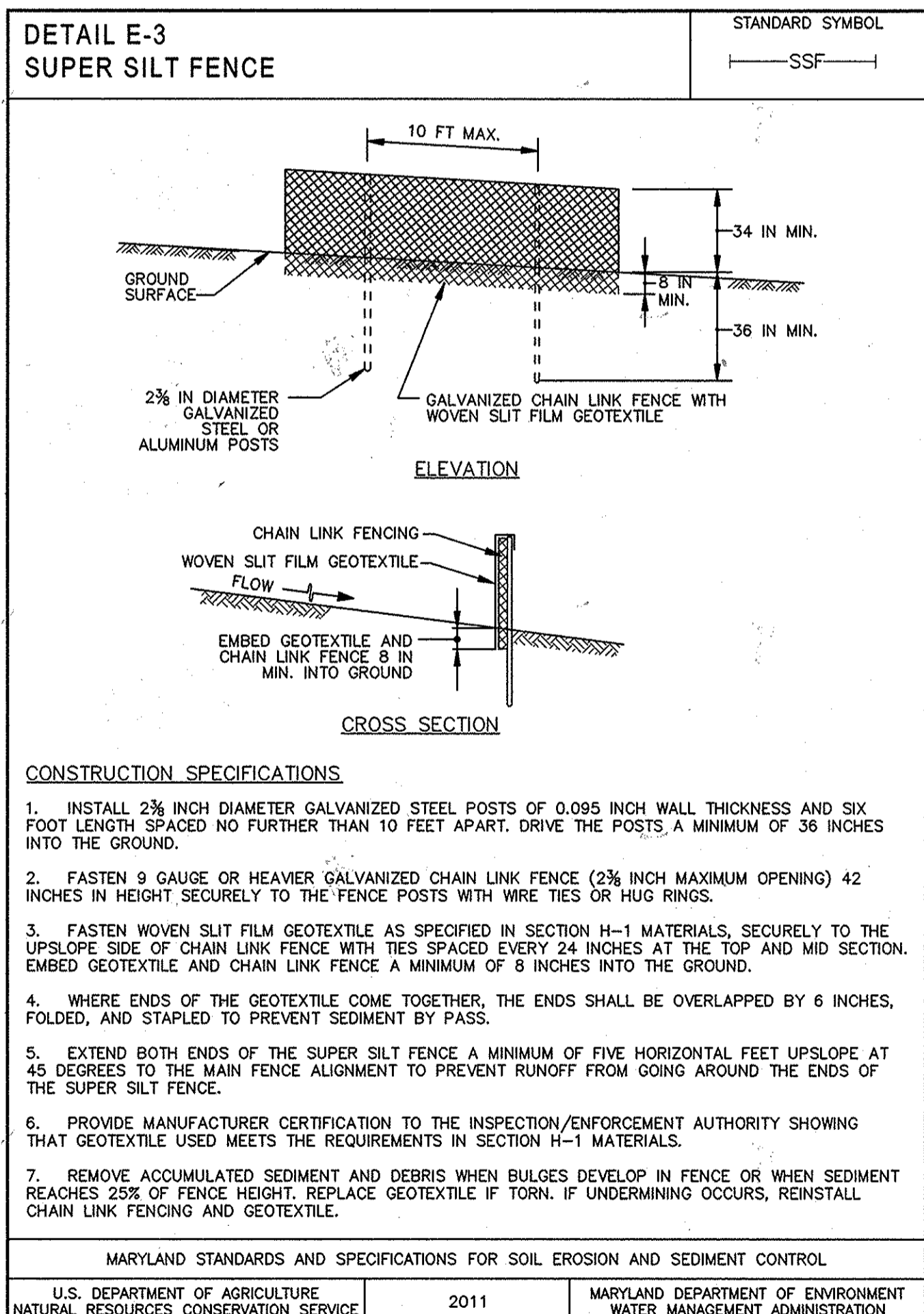
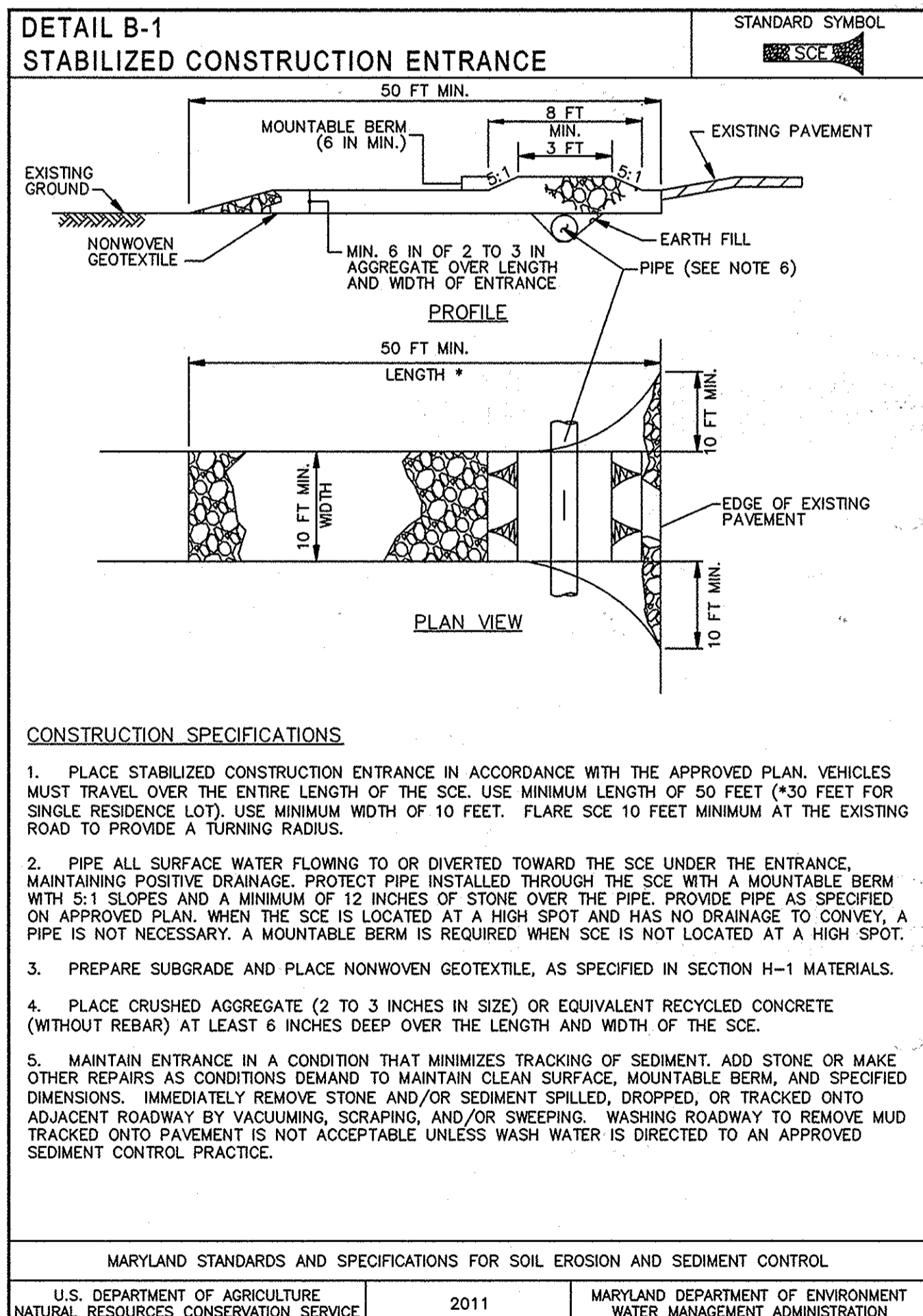
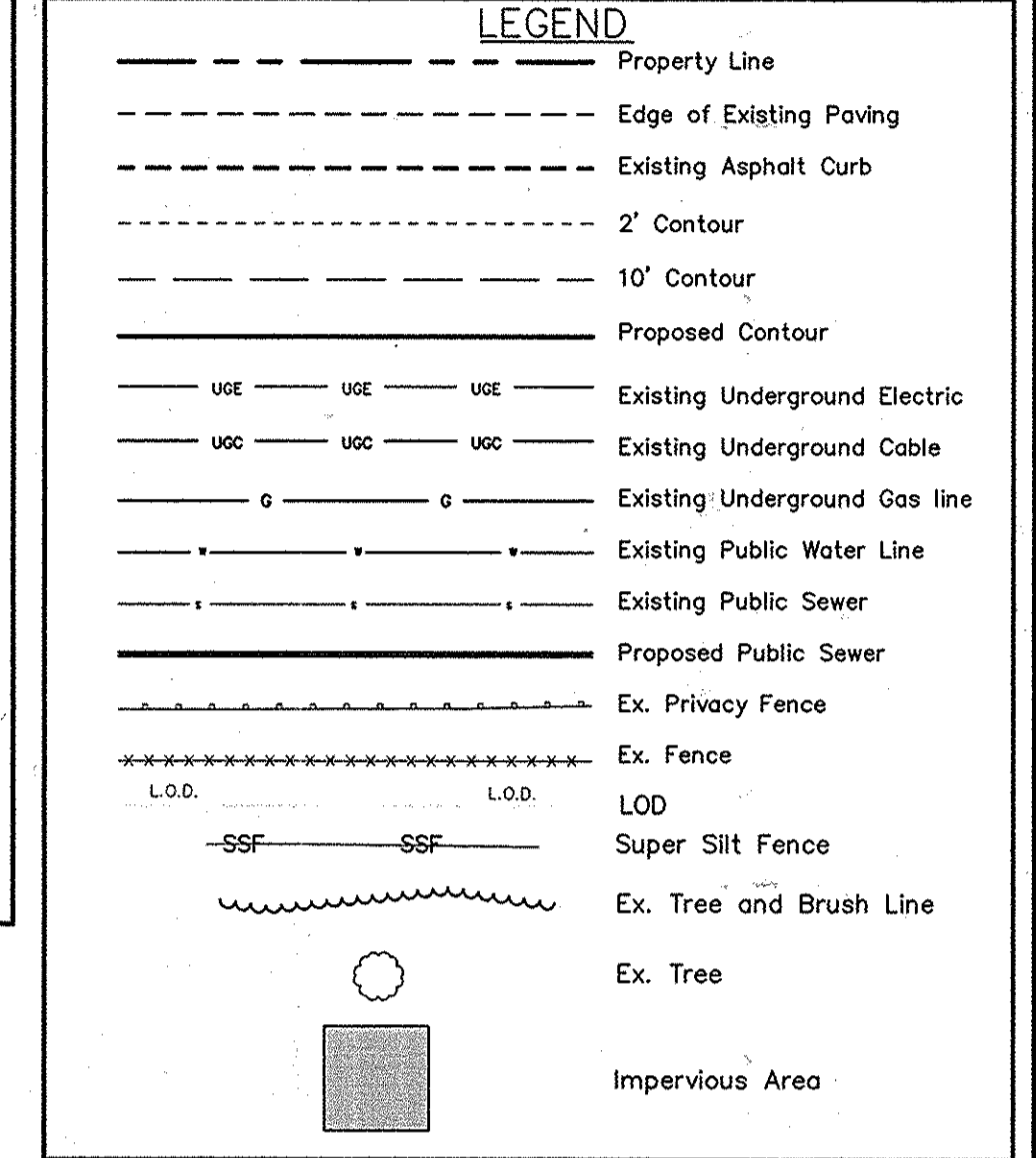
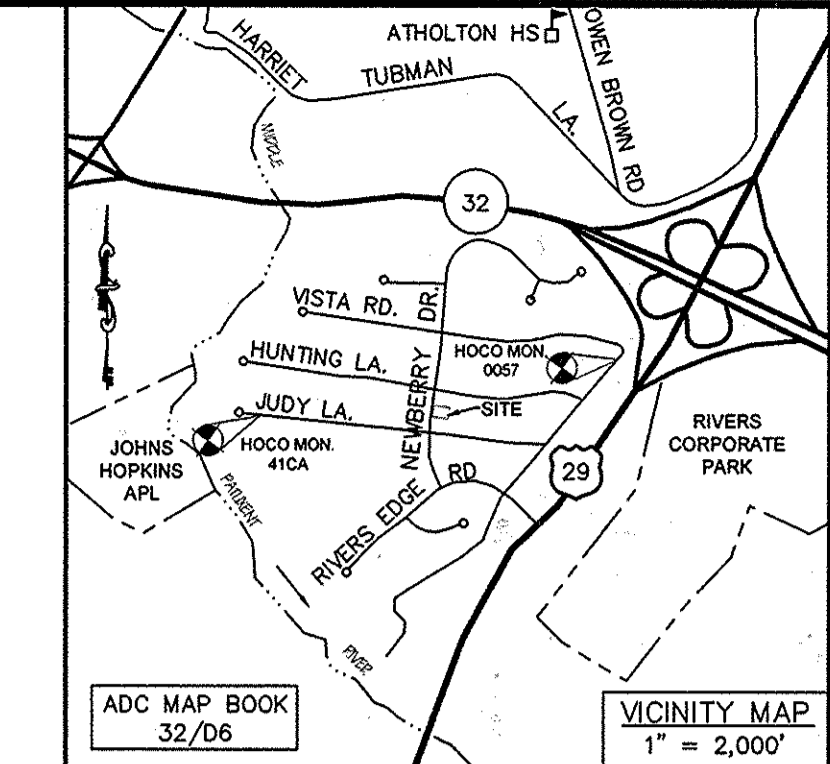
SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1c BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE OF WEEPING LOVEGRASS (07 LBS./1,000 SQ.FT. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED ABOVE.

**SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION (410.313.1855) PRIOR TO STARTING CONSTRUCTION/DISTURBANCE.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4), AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR ITS REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:  
TOTAL AREA OF SITE = 0.459 ACRES  
DISTURBED AREA = 0.392 ACRES  
AREA TO BE ROOFED OR PAVED = 0.046 ACRES  
AREA TO BE VEGETATIVELY STABILIZED = 0.346 ACRES  
TOTAL CUT = 650 CY±  
TOTAL FILL = 50 CY±  
(C/F VOLUMES ARE NOT FOR BIDDING USE)  
OFFSITE WASTE/BORROW AREA MUST BE FROM AN H.S.C.D.-APPROVED SITE.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.
- ANY CHANGES TO THE SEQUENCES OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HOWARD COUNTY CONSERVATION DISTRICT PRIOR TO PROCEEDING WITH THE REVISED SEQUENCE.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (20 ACRES MAXIMUM) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA OF THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY. NO MORE THAN 30 ACRES CUMULATIVE MAY BE DISTURBED AT ANY GIVEN TIME.



**CIVIL DESIGN SERVICES, LC**  
6123 Holly Ridge Court, Columbia, Maryland 21044  
410.531.0572 phone/fax  
civildesign@comcast.net

I hereby certify that I prepared this plan and the seal signifies that I am a duly licensed professional engineer under the laws of the State of MD, License No. 15,838 w/expiration December 17, 2015.

*Andrew A. Porter* 12/5/2015  
ANDREW A. PORTER, P.E. DATE

NO.	REVISION	DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Vest...* 12-29-15  
Chief, Division of Land Development EB Date

*Ch...* 12-23-15  
Chief, Development Engineering Division JP Date

PROJECT	SECTION	LOT NO.			
Holiday Hills, Section 4, Lot 120	N/A	120			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
TBD	6	R-20	41	5 <sup>th</sup>	005.02

**SUPPLEMENTAL EROSION & SEDIMENT CONTROL PLAN AND DETAILS**

**HOLIDAY HILLS, SECTION 4, LOT 120**  
(LEE PROPERTY)

A Re-Subdivision of Holiday Hills, Section 4, Lot 48

TAX MAP NO: 41 PARCEL NO.: 252 GRID NO.: 6  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: OCTOBER 13, 2015

SHT 2 OF 4  
F-15-097



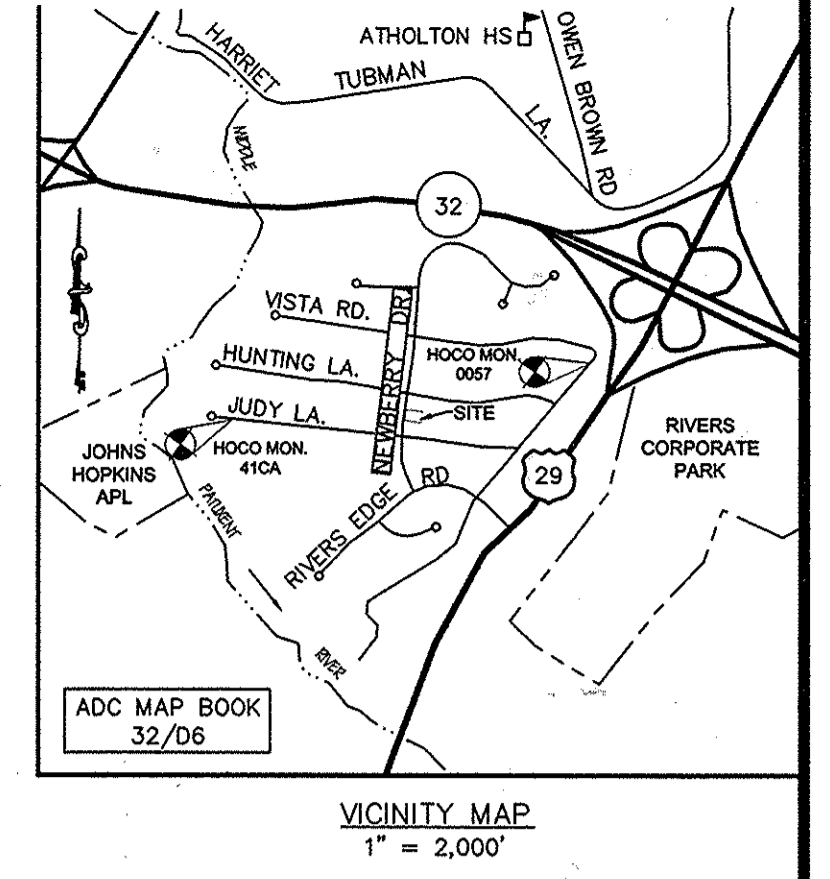
**PLAN**  
SCALE:  
HORIZ. 1" = 50'

**SCHEDULE A - LANDSCAPE PERIMETER**

PERIMETER	P-1	P-2	P-3
CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	N/A	A	A
LINEAR FEET OF PERIMETER	120 LF	166 LF	120 LF
CREDIT FOR EXISTING TREES	N/A	6 Evergreens (See Plan)	1 Shade (See Plan)
NUMBER OF PLANTS REQUIRED			
SHADE TREES	0	$(166'/60) - (6/2) = 0$	$(120'/60) - 1 = 1$
EVERGREEN TREES	0	0	0
NUMBER OF PLANTS PROVIDED:			
SHADE TREES	0	0	1
EVERGREEN TREES	0	0	0

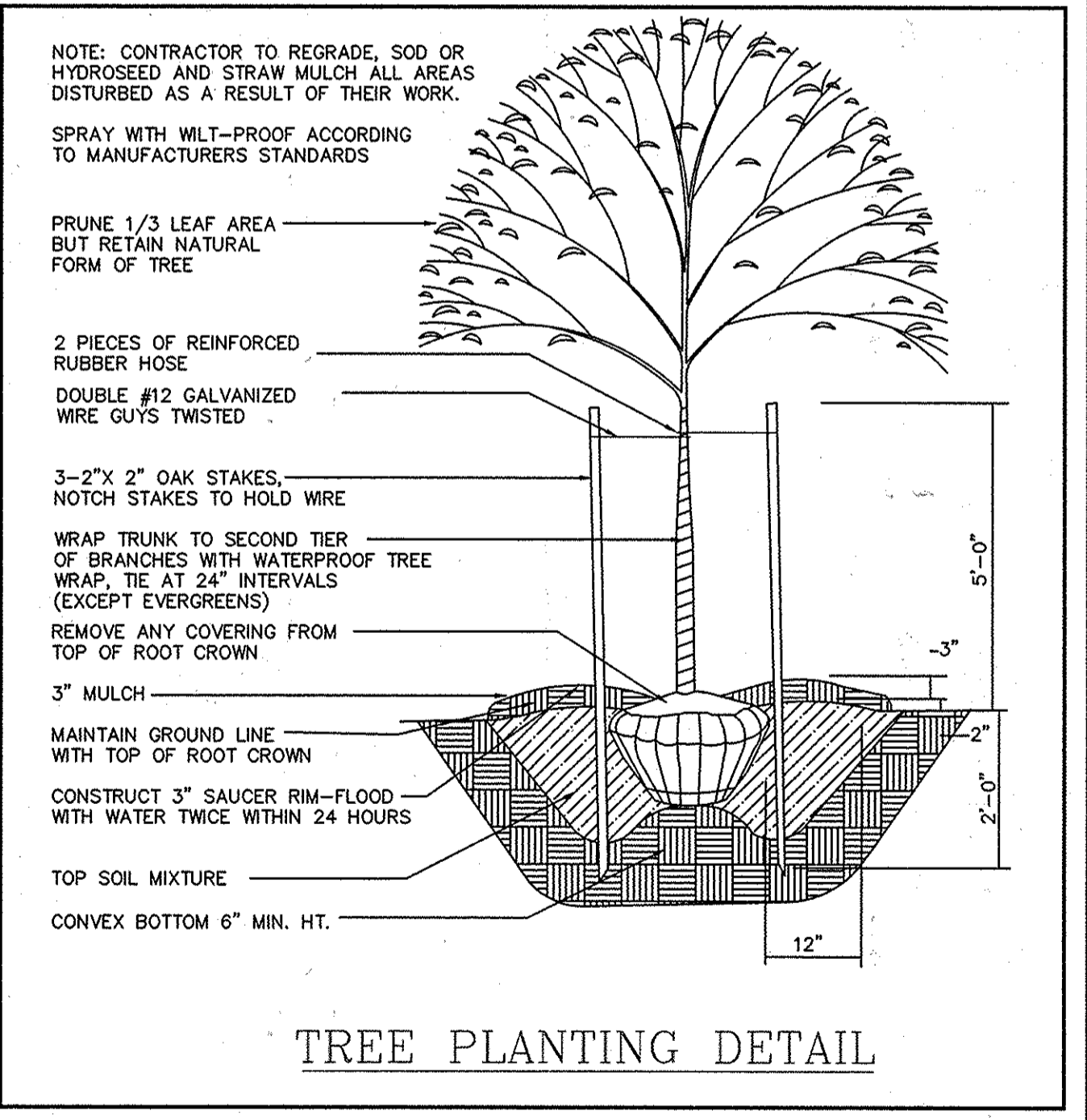
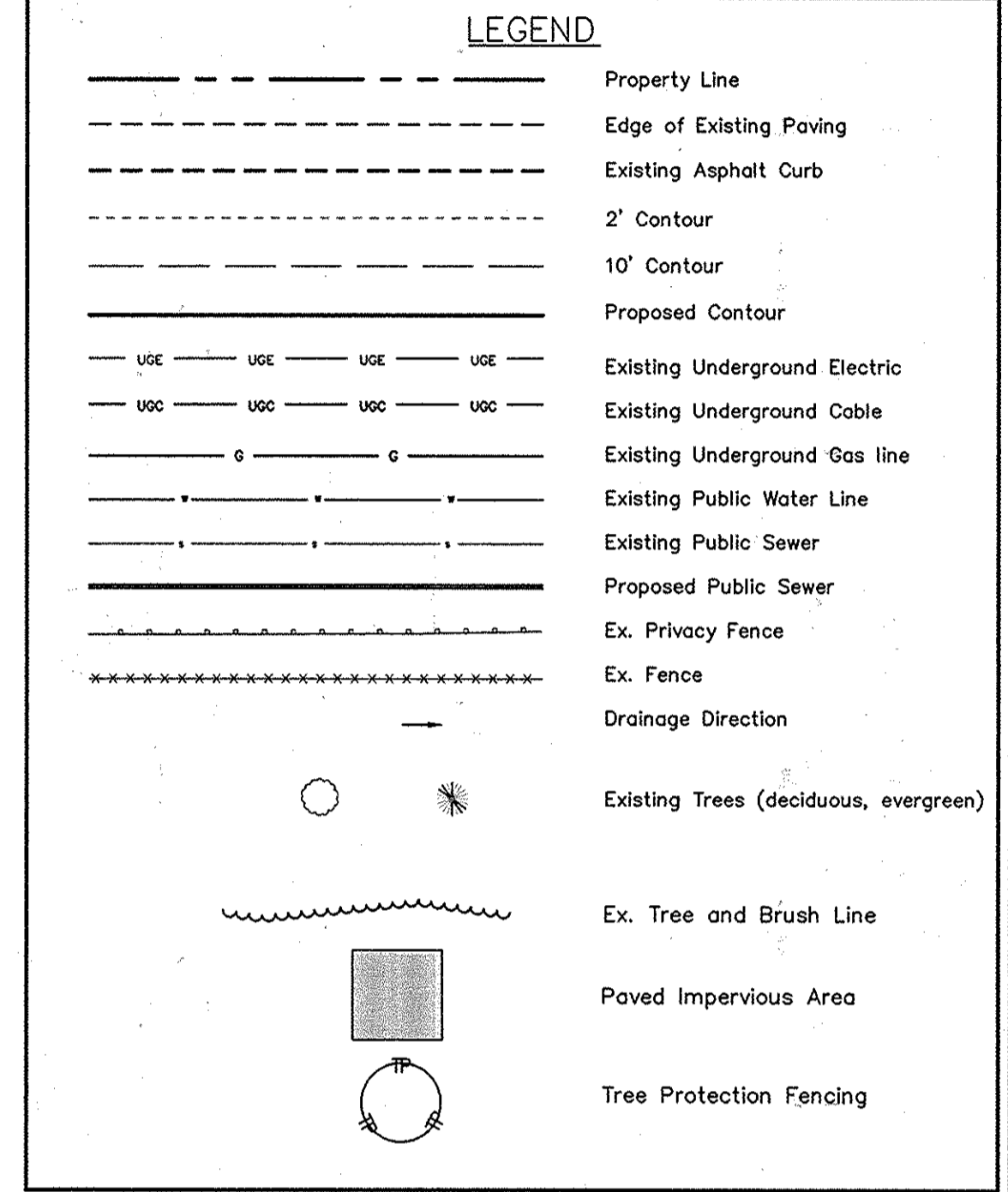
**LANDSCAPE NOTES**

- A landscape surety for 1 shade trees and 0 evergreen trees in the amount of \$300.00 (shade trees @ \$300 each, and evergreens @ \$150 each) shall be provided with the grading permit.
- At the time of plant installation, all shrubs and trees listed and approved on the landscape plan, shall comply with the proper height requirement in accordance with the Howard County landscape manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from the 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 revision are made to the applicable plans.
- The owner, tenants and/or their agents shall be responsible for maintenance of the required landscaping including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing conditions, 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.
- No trees or plant material shall be placed (or encroach) in public road right-of-ways such that sight distance is impeded.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape manual.



**LANDSCAPE PLANT LIST (ON LOT 120)**

QTY.	KEY	NAME	SIZE
1		ACER RUBRUM 'OCTOBER GLORY' (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&B



I hereby certify that I prepared these documents and that this seal signifies that I am a duly licensed professional engineer under State of MD laws. License No. 15838 w/expiration December 17, 2015.

Andrew A. Porter 12/5/2015  
ANDREW A. PORTER MD #15838

**THIS PLAN IS FOR SITE LANDSCAPING PURPOSES ONLY. SEE OTHER PLANS FOR NON-LANDSCAPE CONSTRUCTION.**

**BUILDER/DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING SHOWN ON THIS PLAN WILL BE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

12/10/15  
DAE YUNG LEE Date  
Signature of Owner/Developer

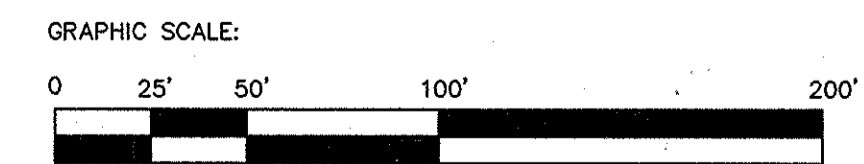
**OWNER/DEVELOPER**

Mr. Dae Yung Lee  
10717 Hunting Lane  
Columbia, Maryland 21044  
(410) 531-7962  
daeyung2000@yahoo.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

12-29-15  
Chief, Division of Land Development Date

12-23-15  
Chief, Development Engineering Division Date



**CIVIL DESIGN SERVICES, LC**

6123 Holly Ridge Court, Columbia, Maryland 21044  
240.255.0380  
civildesign@comcast.net

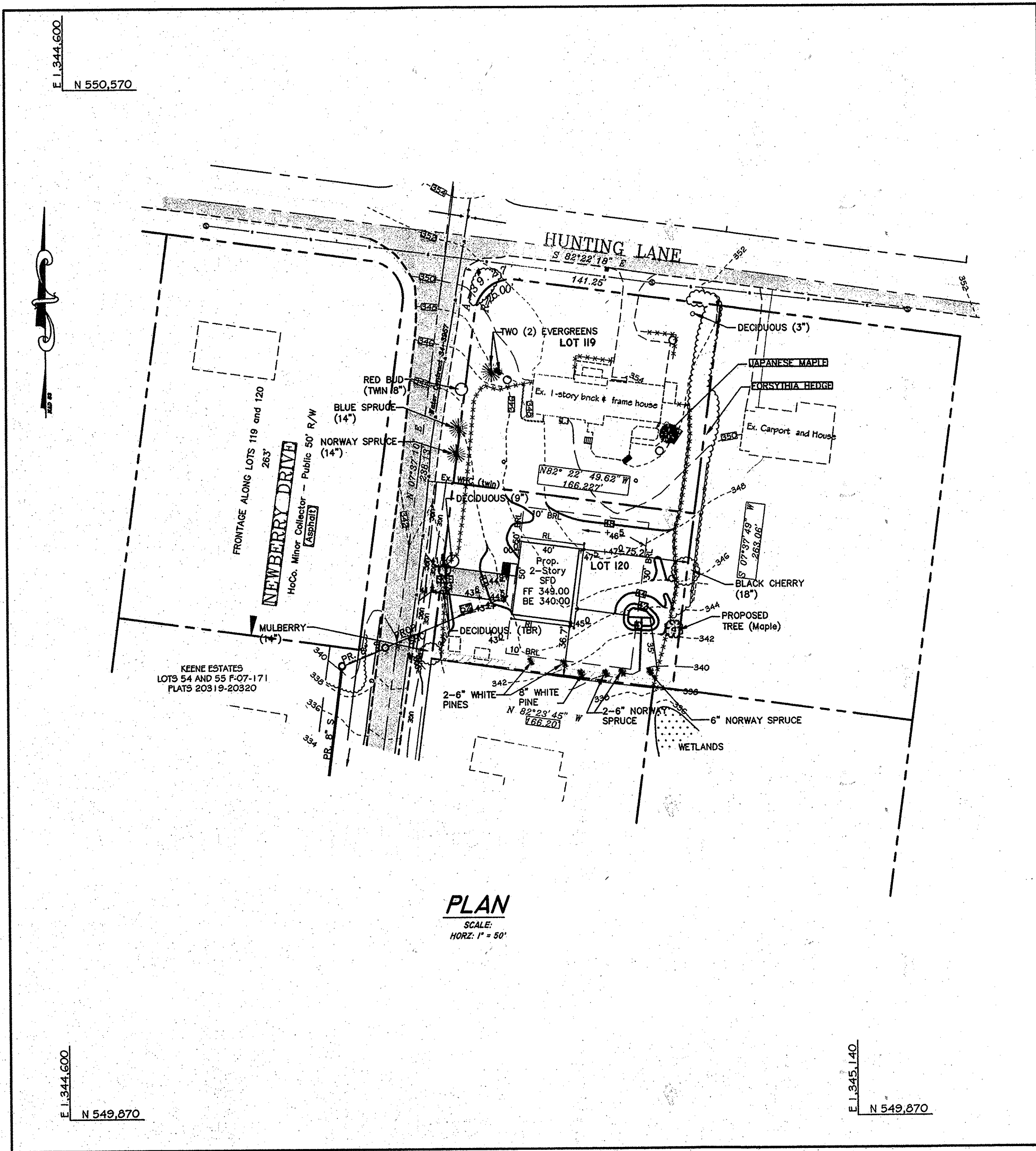
**SUPPLEMENTAL LANDSCAPE PLAN**

**HOLIDAY HILLS, SECTION 4, LOT 120 (LEE PROPERTY)**

A Re-Subdivision of Holiday Hills, Section 4, Lot 48

TAX MAP NO: 41 PARCEL NO: 252 GRID NO.: 6  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

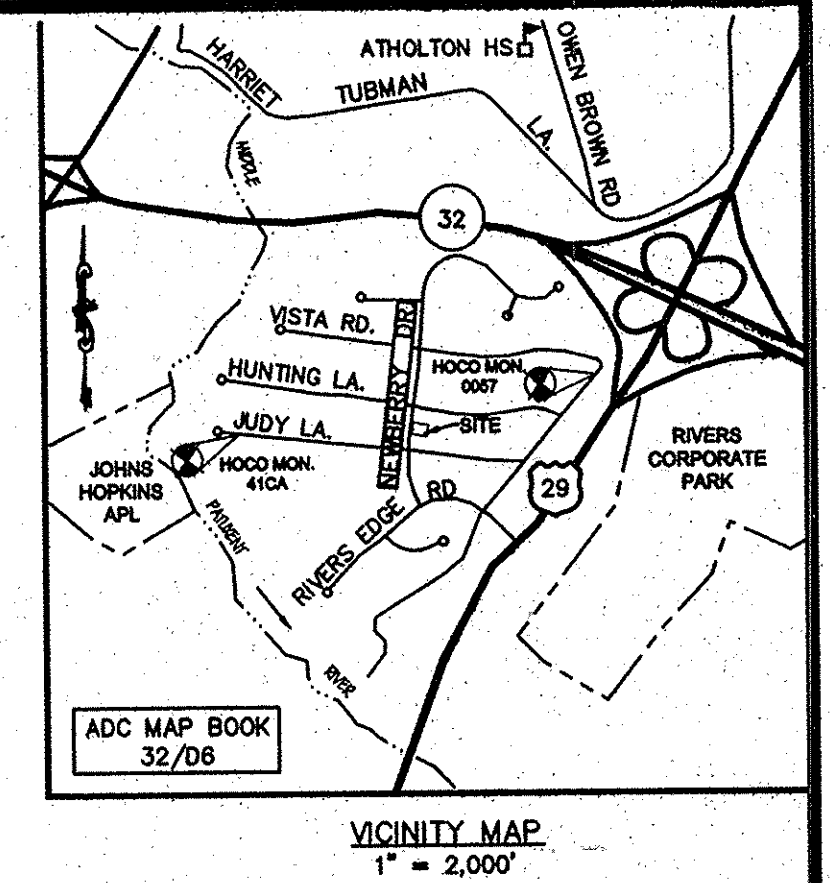
SCALE: AS SHOWN DATE: OCTOBER 13, 2015



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

**LEGEND**

---	Property Line
- - - -	Edge of Existing Paving
- - - -	Existing Asphalt Curb
- - - -	2' Contour
- - - -	10' Contour
- - - -	Proposed Contour
---	Existing Underground Electric
---	Existing Underground Cable
---	Existing Underground Gas line
---	Existing Public Water Line
---	Existing Public Sewer
---	Proposed Public Sewer
---	Ex. Privacy Fence
---	Ex. Fence
---	Drainage Direction
○	Existing Trees (deciduous, evergreen)
~	Ex. Tree and Brush Line
■	Paved Impervious Area
○	Tree Protection Fencing



**FOREST CONSERVATION WORKSHEET**  
Version 1.0

Project: Holiday Hills Lots 119 & 120 - Lee Property  
Date: August 19, 2015

NET TRACT AREA		Acres			
A. Total tract area		1.0			
B. Area within 100 Year Floodplain					
C. Area of existing impervious surface/unchanged use					
D. Net Tract Area		1.0			
LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)					
ARA	MDR	IDA	HDR	MPD	CIA
R-20					
E. Afforestation Threshold	(percentage)	15			0.15
F. Conservation Threshold	(percentage)	20			0.20
EXISTING FOREST COVER:					
G. Existing forest cover (excluding floodplain)					0
H. Area of forest above afforestation threshold					
I. Area of forest above conservation threshold					
BREAK EVEN POINT:					
J. Forest retention above threshold with no mitigation					Break-Even Point
K. Clearing permitted without mitigation					
PROPOSED FOREST CLEARING					
L. Total area of forest to be Cleared or Retained Outside FCE					
M. Total area of forest to be Retained in FCE					
PLANTING REQUIREMENTS					
N. Reforestation for clearing above Conservation Threshold					
P. Reforestation for clearing below Conservation Threshold					
Q. Credit for retention above conservation threshold					
R. Total reforestation required					
S. Total afforestation required					0.15
T. Total reforestation and afforestation required					0.15

**Simplified Forest Stand Delineation**

The subject property is an existing lot of record within a previously developed subdivision. The property is rectangular shaped and consistent with the adjacent properties. The adjacent property uses are dominated by high density residential development, generally 1 acre lots, though some have undergone re-subdivision. The original development of the community was performed in the 1950's and 1960's.

The site currently contains a single family residence with associated driveway and lawn areas. The home, which is located toward the northern end of the site does have some landscape plantings around its foundation and within the yard. Notable species flowering dogwood, azalea, Japanese maple, blue spruce, Norway spruce, redbud, and white pine. A forsythia hedge is present along the eastern property boundary.

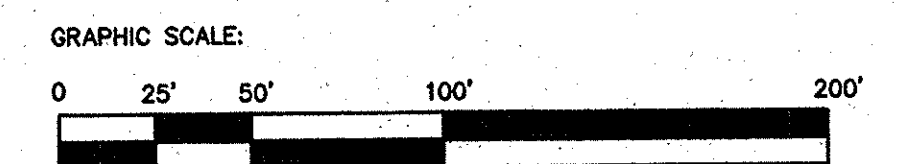
The majority of the site is maintained as lawn. A small vegetable garden is present in the back yard. White pine/Norway spruce screening has been planted along the southern property boundary.

No specimen trees are present on the site.

There are no streams or wetlands or 100 year floodplain resources present on the property. A small emergent wetland is present to the southeast of the subject property. The 25 foot wetland buffer does extend onto the site. The onsite buffer is currently maintained as lawn. Continued use as lawn is permitted under by the Maryland Department of the Environment (MDE). Grading or fill within the buffer would require a permit from MDE and approval from Howard County.

No historic elements or cemeteries were observed on the subject property.

The re-subdivision of the property is required to comply with the Forest Conservation Act. Since no forest and no suitable planting areas are present on the site the afforestation obligation will be addressed through payment of the County fee-in-lieu. The afforestation requirement for the project is 6,534 sq.ft. The fee-in-lieu cost for this obligation will be \$4,900.50.



**OWNER/DEVELOPER**  
Mr. Dae Yung Lee  
10717 Hunting Lane  
Columbia, Maryland 21044  
(410) 531-7882  
daeyung2000@yahoo.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Kest S. Calver*  
Chief, Division of Land Development  
Date: 12-29-15

*John P. ...*  
Chief, Development Engineering Division  
Date: 12-23-15

**SUPPLEMENTAL FOREST STAND DELINEATION AND FOREST CONSERVATION PLAN**

**HOLIDAY HILLS, SECTION 4, LOT 120**  
(LEE PROPERTY)

A Re-Subdivision of Holiday Hills, Section 4, Lot 48

TAX MAP NO: 41 PARCEL NO.: 252 GRID NO.: 6  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: AUGUST 19, 2015