GENERAL NOTES

- . ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- 2. 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 START OF WORK.
- . **THE CONTRACTOR SHALL NOTIFY "MISS UTILITY"** AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- 4. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

VERIZON TELEPHONE COMPANY HOWARD COUNTY BUREAU OF UTILITIES: AT&T CABLE LOCATION DIVISION: CONTRACTOR SERVICES

- 5. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST
- HOWARD COUNTY DESIGN MANUAL, VOLUME III(2006), SECTION 5.5A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY TOPOGRAPHY AND FIELD RUN TOPOGRAPHY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 2004.
- B. THE PROJECT BOUNDARY IS BASED ON THE RECORD PLAT FOR CANBURY WOODS, LOTS 137-170, SECTION 2, AREA 2, PLAT NO. 8086.
- 9. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 38 BA AND 38 BB WERE USED FOR THIS PROJECT.
- 1. STORMWATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT. WQv AND Cpv are to be provided by Micropool Clay Linear extended detention. The SWM facility will be located on open space lot 4 and will be privately owned and maintained by the hoa.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- 3. NO 100-YR FLOODPLAIN IS LOCATED ON-SITE.
- 14. NO WETLANDS OR STREAMS ARE LOCATED ON-SITE.
- 5. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP, DATED JUNE 2004 AND WAS APPROVED ON MAY 6, 2005.
- **5. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND** EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
- A) WIDTH 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
- B) SURFACE 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
- C) GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS D) STRUCTURES (CULVERTS/BRIDGES) - MUST SUPPORT 25 GROSS TON LOADING (H25 LOADING) E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
- F) STRUCTURE CLEARANCES MINIMUM 12 FEET G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- AUGUST 2004. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL SHALL BE COMPLIED WITH.
- 19. THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- 20. TO THE BEST OF THE OWNER'S KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATED ON-SITE
- 21. THERE ARE NO EXISTING STRUCTURES ON-SITE
- 22. STREET TREES ARE REQUIRED FOR THIS SUBDIVISION IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A MINIMUM OF 20' SHÀLL BE MAINTAINED BETWEEN STREET LIGHTS AND ANY TREE. A FINANCIAL SURETY IN THE AMOUNT OF \$8.100.00 TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR TOTAL REQUIRED 27 PUBLIC STREET TREES.
- 23. THE OPEN SPACE -LOT 4- SHOWN IS HEREON DEDICATED TO A PROPERTY OWNERS ASSOCIATION FOR THE RESIDENTS OF THIS SUBDIVISION AND RECORDING REFERENCES OF THE ARTICLES OF
- INCORPORATION AND RESTRICTIONS ARE SHOWN HEREON. 24. A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- 25. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND TO THE APRIL 13, 2004 ZONING REGULATIONS.
- 26. A DESIGN MANUAL WAIVER REQUEST, DATED DECEMBER 1, 2004, HAS BEEN SUBMITTED AND APPROVED WHICH WAIVES THE REQUIREMENT THAT A STANDARD CROSS SECTION FOR THE PROPOSED ROAD BE USED.
- 27. REFERENCE WP-05-75. APPROVED MARCH 2, 2005 TO WAIVE SECTION 16.155(a)(2), OF THE REGULATIONS DATED MARCH 2, 2005, REQUIRING A SITE DEVELOPMENT PLAN FOR MASS GRADING A SITE INTENDED FOR FUTURE RESIDENTIAL CONSTRUCTION. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - SUBMIT THE REQUIRED DOCUMENTATION TO SOIL CONSERVATION DISTRICT DISTRICT FOR GRADING AND SEDIMENT AND EROSION CONTROL REVIEW.
 - 2. SUBMIT A GRADING PERMIT APPLICATION ALONG WITH A FOREST CONSERVATION DECLARATION OF INTENT FOR CLEARING LESS THAN 40,000 S.F. OF FOREST ON A SINGLE LOT.
 - SECURE THE NECESSARY PERMITS FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - NO GRADING IS PERMITTED WITHIN THE FOREST ON STEEP SLOPES OR WITHIN THE STREAM BUFFER. MODIFY THE CONFIGURATION OF THE CELLS

 16 AND 22 IN ORDER TO EXCLUDE THE STREAM BUFFER FROM THOSE CELLS. SHOW CLEAR LIMIT OF DISTURBANCE ON ALL APPLICATIONS.
 - RESTORE THE SITE TO GRADE AND STABILIZE THE SITE IMMEDIATELY AFTER OF THE DEBRIS
 - FULFILL ALL OBLIGATIONS OF THE FOREST CONSERVATION PROGRAM WITH THE SUBDIVISION OF THE PECORARO PROPERTY. IF SOME LIMITED CLEARING FOREST IS REQUIRED WITH THE MASS GRADING, INCLUDE THAT IN THE DOI AND ACCOUNT FOR IT ON FUTURE FOREST CONSERVATION PLAN FOR SUBDIVISION
- 28. FUTURE LOTS 10, 11, 12, & 13 WILL UTILIZE USE-IN-COMMON DRIVEWAY. HOWARD COUNTY STANDARD DETAIL NO. R-6.06 WILL BE UTILIZED FOR THE ENTRANCE AT THE INTERSECTION OF THE PUBLIC ROAD AND EACH USE-IN-COMMON DRIVEWAY
- 29. REFUSE COLLECTION, SNOW REMOVAL, AND MAINTENANCE FOR FUTURE LOTS 10, 11, 12, & 13 SHALL BE PROVIDED AT THE JUNCTION OF PRIVATE USE-IN-COMMON ACCESS EASEMENT AND THE RIGHT-OF-WAY OF PROPOSED ROAD.
- 30. TREE PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO ENVIRONMENTAL AREAS AND RETENTION FOREST CONSERVATION AREAS.
- 31. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE :- 3' LONG). A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.

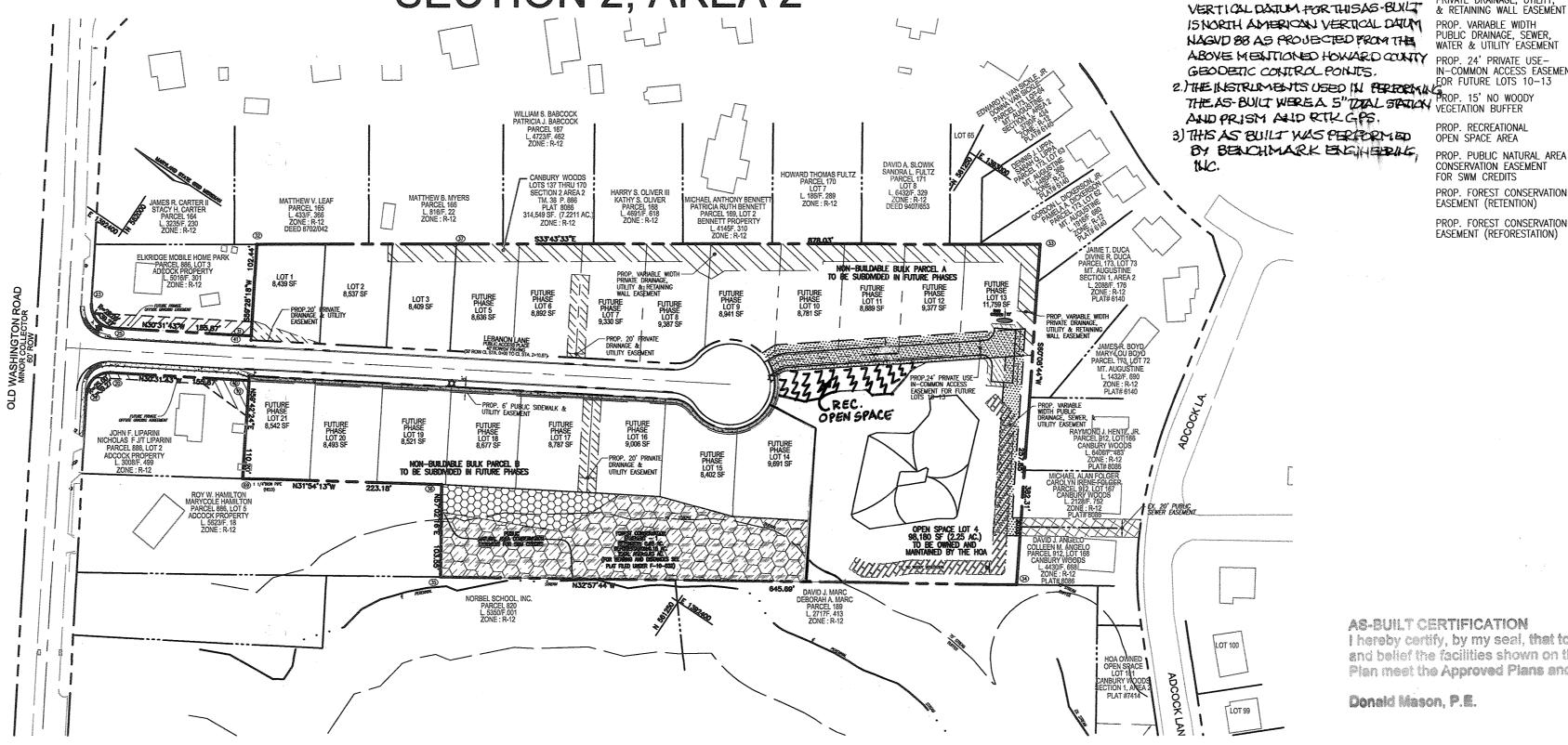
APPROVED: DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS APPROVED: DEPARTMENT OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT CHIEF CHIEF, DEVELOPMENT ENGINEERING DIVISION 3.7 DATE

FINAL ROAD CONSTRUCTION PLAN PECORARO PROPERTY

PHASE

LOTS 1-3, OPEN SPACE 4 AND NON-BUILDABLE BULK PARCELS A & B

A RESUBDIVISION OF LOT 169, CANBURY WOODS SECTION 2, AREA 2



- 32. THE DESIGN MANUAL WAIVER HAS BEEN APPROVED 12/01/04 FOR UTILIZING THE 20' ROAD SECTION ELIMINATING SIDEWALK ON ONE SIDE OF THE ROAD AND TO BE ADJACENT TO THE CURB, AND INCREASING THE SIDE SLOPES TO 1:1 UTILIZING GEOGRID. THE GEOGRID WOULD EXTEND FROM THE EDGE OF THE 1:1 SLOPE TO APPROXIMATELY 6' TO 8' WITHIN THE SLOPE. THE GUARDRAIL WILL BE LOCATED BEHIND THE SIDEWALK ON ONE SIDE AND BEHIND THE CURB THE WAIVER ALSO WAIVED STREET TREES ALONG THE 1:1 SLOPE AND THE SLOPE BE STABILIZED UTILIZING A GROUND COVER SUCH AS CROWN VETCH. THE ROAD RIGHT OF WAY THROUGH THIS NARROW SECTION OF THE PROPERTY BE 50' ENCOMPASS THE ENTIRE SLOPE
- 33. FOREST CONSERVATION EASEMENT HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL, 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. SEE THE FINAL RECORD PLAT FOR THE BEARING AND DISTANCES FOR THE EASEMENTS. TOTAL FOREST CONSERVATION OBLIGATION OF THE PROJECT, TO BE

FULFILLED BY ON SITE RETENTION OF 0.68 ACRES REFORESTATION OF 0.15 ACRES & REMAINING 1.92 ACRES BY AN OFF-SITE FOREST CONSERVATION EASEMENT LOCATED IN BRANTWOOD, SECTION 3 AREA 1, PRESERVATION PARCEL 'C', PLAT# 14874. FUTURE OFFSITE EASEMENT TO BE RECORDED CONCURRENTLY WITH THIS SUBDIVISION PLAT.

RETENTION - 0.68 AC. (29,620.80 X .20 = \$ 5,924.16) REFORESTATION ONSITE - 0.15 AC. (6,534 SF x .50 = \$3,267)

REFORESTATION OFFSITE -1.92 AC. (83,635.20 SF x .50 = \$41,817.60) FINANCIAL SURETY IN THE AMOUNT OF \$51,009.00 WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT

PER THIS PLAN.

- 34. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS.
- 35. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,510.00 FOR THE REQUIRED 36 SHADE TREES, 18 EVERGREEN TREES, 95 SHRUBS AND 158 LINEAR FEET OF WALL. (THE UNIT PRICES TO BE USED FOR ESTABLISHING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE ADOPTED COUNTY FEE SCHEDULE WHICH IS \$300.00 PER SHADE TREE, \$150.00 PER EVERGREEN/ORNAMENTAL TREE, \$30.00 PER SHRUBS, AND \$20.00 PER LINEAR FEET OF WALL.).
- 36. REFERENCE MANUAL WAIVER APPROVED 12-01-04 TO UTILIZE A 40' RIGHT-OF-WAY WITH A 20' PAVING AS APPROVED IN CONJUNCTION WITH S-05-005.
- 37. STORMWATER MANAGEMENT FACILITY TO BE CONSTRUCTED IN CONJUNCTION WITH PHASE I
- 38. THE SITE HAS BEEN APPROVED BY THE MAA PER LETTER DATED JUNE 21, 2010.
- 39. APPROVAL OF A SITE DEVELOPMENT PLAN IS REQUIRED FOR THE DEVELOPMENT OF ALL RESIDENTIAL LOTS WITHIN THIS SUBDIVISION PRIOR TO ISSUANCE OF ANY GRADING OR BUILDING PERMITS FOR NEW HOUSE CONSTRUCTION IN ACCORDANCE WITH SECTION 16.155 OF THE SUBDIVISION AND LAND
- 40. THIS PLAN IS SUBJECT TO WP-10-056 TO WAIVE SECTION 16.144(g)OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH STATES THAT IF THE SKETCH PLAN IS APPROVED, THE DEVELOPER SHALL SUBMIT TO THE DEPARTMENT OF PLANNING AND ZONING A PRELIMINARY PLAN IN ACCORDANCE WITH THE APPROVED SKETCH PLAN AND THE REQUIREMENTS OF SECTION 16.146 WITHIN THE SPECIFIC TIME PERIOD; AND SECTION 16.146, WHICH OUTLINES THE PRELIMINARY PLAN REQUIREMENTS SUBJECT TO THE FOLLOWING: 1. THE FINAL PLAN FOR PHASE II SUBMISSION SHALL OCCUR BETWEEN JANUARY 4, 2010 AND JUNE 30, 2010. 2. THE FINAL PLAN FOR PHASE III SHALL MEET THE SUBMISSION SCHEDULE OUTLINED UNDER S-05-005, WITH THE PHASE III FINAL PLAN SUBMISSION OCCURRING BETWEEN JULY 1, 2010 AND NOVEMBER 1, 2010.
- 41. OFF-SITE GRADING WILL BE ALLOWED ON PARCEL 886, LOTS 2 AND 3 ONLY. THE PRIVATE EASEMENTS WILL BE RECORDED CONCURRENTLY WITH THE RECORD PLAT.

NO.	NORTHING	EASTING
10	561788.9416	1392339.2768
20	561923.0320	1392260.2015
22	561931.8672	1392225.9678
23	561982.8293	1392311.9965
25	561948.5956	1392303.1612
31	561814.3329	1392382.3381
32	561866.3687	1392470.5777
33	561136.1074	1392958.0765
34	560945.7944	1392626.5017
35	561487.5476	1392275.1912
36	561543.8877	1392362.0728
37	561680.3605	1392594.7508
38	561619.4495	1392491.4899
39	561599.2808	1392456.9463
40	561791.4542	1392343.5881
41	561811.7926	1392378.0315
42	561364.4612	1392641.9010
43	561347.7528	1392666.0988
44	561314.8777	1392610.3666
45	561344.1385	1392607.4483
69	561733.3538	1392244.1241

ALLOCATIONS YEAR PRELIMINARY PLAN SUBMISSION MILESTONES BY DECEMBER 4, 2008
BETWEEN JAN. 4, 2010 AND JUNE 30, 2010 PHASE II BETWEEN JULY 1, 2010 AND NOV. 1, 2010 - REVISED PHASING IS BASED ON CONDITIONS UNDER WP-10-056. SITE ANALYSIS DATA

LOCATION: TAX MAP 38, BLOCK 9, P/O PARCEL 886 EXISTING ZONING: R-12 GROSS AREA OF PARCEL: 7.22 AC. AREA OF PROPOSED RIGHT-OF-WAY: 0.89 AC. AREA OF 100-YR FLOODPLAIN: N/A AREA OF STEEP SLOPES: 0.60 AC. (26,269 SF) NET AREA OF PROJECT: 6.62 AC. NUMBER OF PROPOSED RESIDENTIAL LOTS: 3 (PHASE 1) TOTAL NUMBER OF AVAILABLE RESIDENTIAL LOTS: 20

AREA OF PROPOSED RESIDENTIAL LOTS: 0.58 AC. (25,386 SF) AREA OF SMALLEST BUILDABLE LOT PROPOSED: 8409 SF (LOT 3) NUMBER OF PROPOSED OPEN SPACE LOTS: 1 (LOT 4) OWNED & MAINTAINED BY HOME OWNER ASSOCIATION OPEN SPACE REQUIRED 7.22 AC. \times .30 = 2.16 AC.

OPEN SPACE PROVIDED 2.19 AC. RECREATIONAL OPEN SPACE REQUIRED: 4000 SF (20 BUILDABLE LOTS x 200 SF) RECREATIONAL OPEN SPACE REQUIRED FOR PHASE 1: 600 SF (3 BUILDABLE LOTSx200 SF)

RECREATIONAL OPEN SPACE PROVIDED: 3,700 SF AREA PLUS Z BENCHES @ 200 SF/EACH = 4,100 SF TOTAL. **ELECTION DISTRICT: 1ST**

DEED REFERENCE: L. 9500/F. 668

APPLICABLE DPZ FILE REFERENCE: S-05-005, F-88-99, F-84-141, WP-05-75 AND GP-05-66, PLAT # 8083-8086, P-09-001, WP-10-056, GP-11-41. PROPOSED USE OF SITE: SINGLE FAMILY DETACHED

PROPOSED WATER SYSTEM: PUBLIC PROPOSED SEWER SYSTEM: PUBLIC

LOT TABULATION: (PHASE 1)

TOTAL NO. OF PROPOSED LOTS: 3 TOTAL NUMBER OF NON-BUILDABLE PARCELS: 3 TOTAL NO. OF OPEN SPACE LOTS: 1

OWNER EMILYS DELIGHT LLC 7310 ESQUIRE COURT, SUITE 10 ELKRIDGE, MARYLAND 21075 (410) 379- 8681

DEVELOPER EMILYS DELIGHT LLC 7310 ESQUIRE COURT, SUITE 10

ELKRIDGE, MARYLAND 21075 (410) 379- 8681

COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC N 562553.353' E 1,390967.866' ELEV. 166.124 N 564007.678' E 1,393649.835' ELEV. 63.607'

LEGEND

EX. 20' PUBLIC SEWER EASEMENT

FUTURE OFFSITE

FUTURE OFFSITE

OPEN SPACE AREA

1) HORIZONTAL DATUM FORTHIS AS-BUILT DRAINAGE & UTILITY

15 BASEDON THE MARYLAND STATE REPERENCE SYSTEM NAD 83/ADJ91

AS PROJECTED FROM HO. CO. GEODETIC

GRADING EASEMENT

GRADING AGREEMENT

VICINITY MAP

CONTROL STATIONS 38BA AND 38BB PROP. VARIABLE WIDTH PRIVATE DRAINAGE, UTI ADC MAP COORDINATE= 4937, E7 & F7

 $\nabla T T T T T$

PROP. PUBLIC NATURAL AREA CONSERVATION EASEMENT FOR SWM CREDITS PROP. FOREST CONSERVATION PROP. FOREST CONSERVATION

SHEET INDEX SHEET NO. DESCRIPTION COVER SHEET ROAD PLAN AND DETAILS ROAD PROFILE, DETAILS AND M.O.T. DETAILS SEDIMENT AND EROSION CONTROL. AND SWM DETAILS 5 STORM DRAIN DRAINAGE AREA MAP STORM DRAIN PROFILES STORMWATER MANAGEMENT NOTES AND DETAILS LANDSCAPE AND FOREST CONSERVATION PLAN AND DETAILS LANDSCAPE AND FOREST CONSERVATION DETAILS 10 AASCD/MAA NOTES & DETAILS 11 12 OFFSITE PLANTING PLAN RETAINING WALL PLAN AND DETAILS

AS-BUILT CERTIFICATION I hereby cartify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications

Donald Mason, P.B.

Date: 8-26-19



FOR REVISIONS BY BEI DATED 7-22-15 ONLY

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. 21443 Expiration Date: 12-21-16

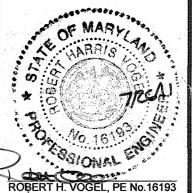
ADD SHEET 14 TO SET RELOCATE RECREATIONAL OPEN SPACE AREA, ADD Z BENCHES; 7/22/15 RELOCATE SWMACCESS REVISE PLANS DUE TO CHANGES IN LAYOUT AND GRADING. REVISION DATE

FINAL ROAD CONSTRUCTION PLAN PECORARO PROPERTY **COVER SHEET**

LOTS 1-3, OPEN SPACE LOT 4 & NON BUILDABLE BULK PARCELS A & B - PHASE I A RESUBDIVISION OF LOT 169, CANBURY WOODS

TAX MAP 38 BLOCK 9 SECTION 2, AREA 2 1ST ELECTION DISTRICT REF.: WP-05-75 (APP. 3/1/05)

> ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS · SURVEYORS · PLANNERS 8407 MAIN STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



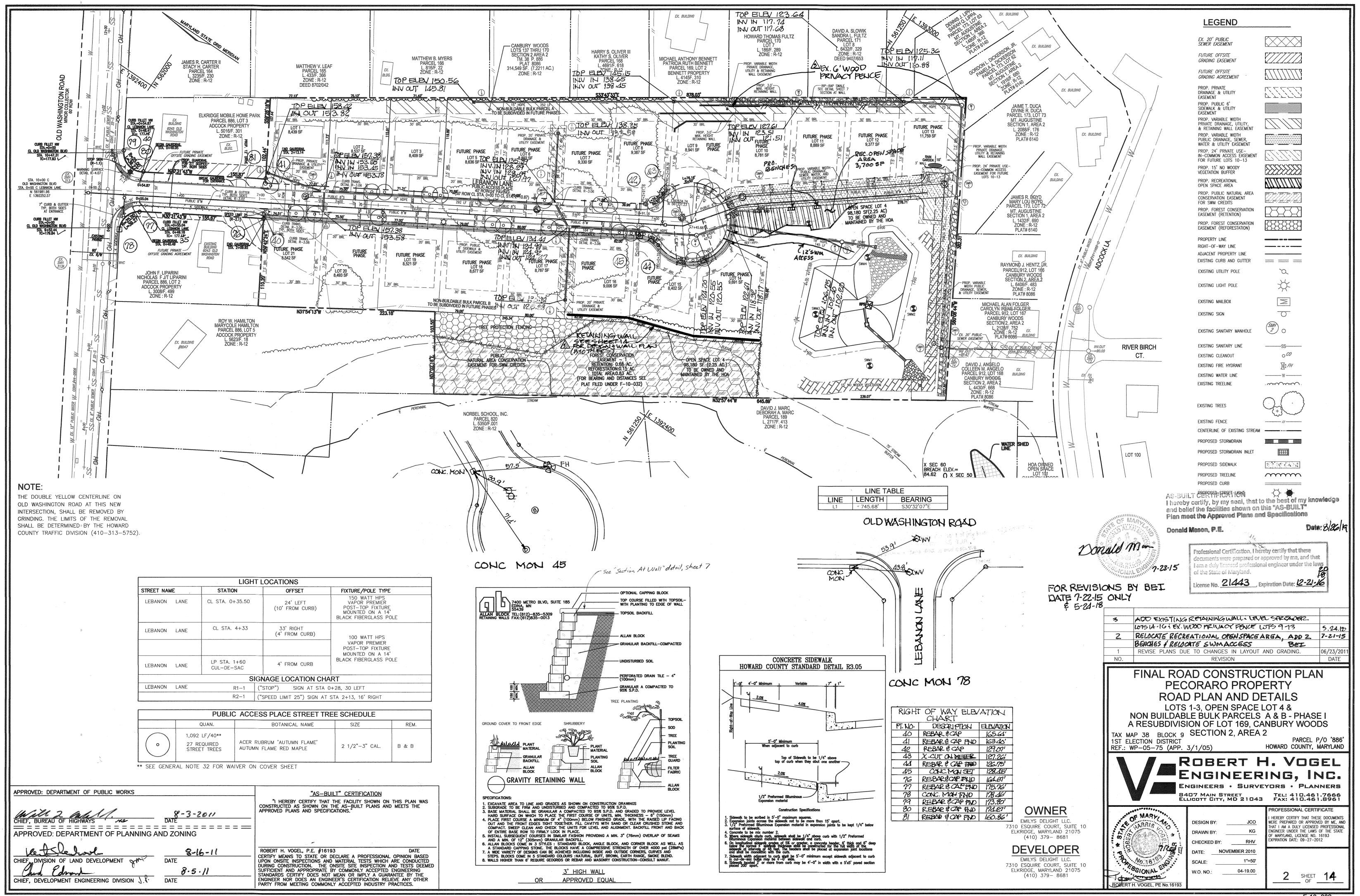
CHECKED BY **NOVEMBER 2010**

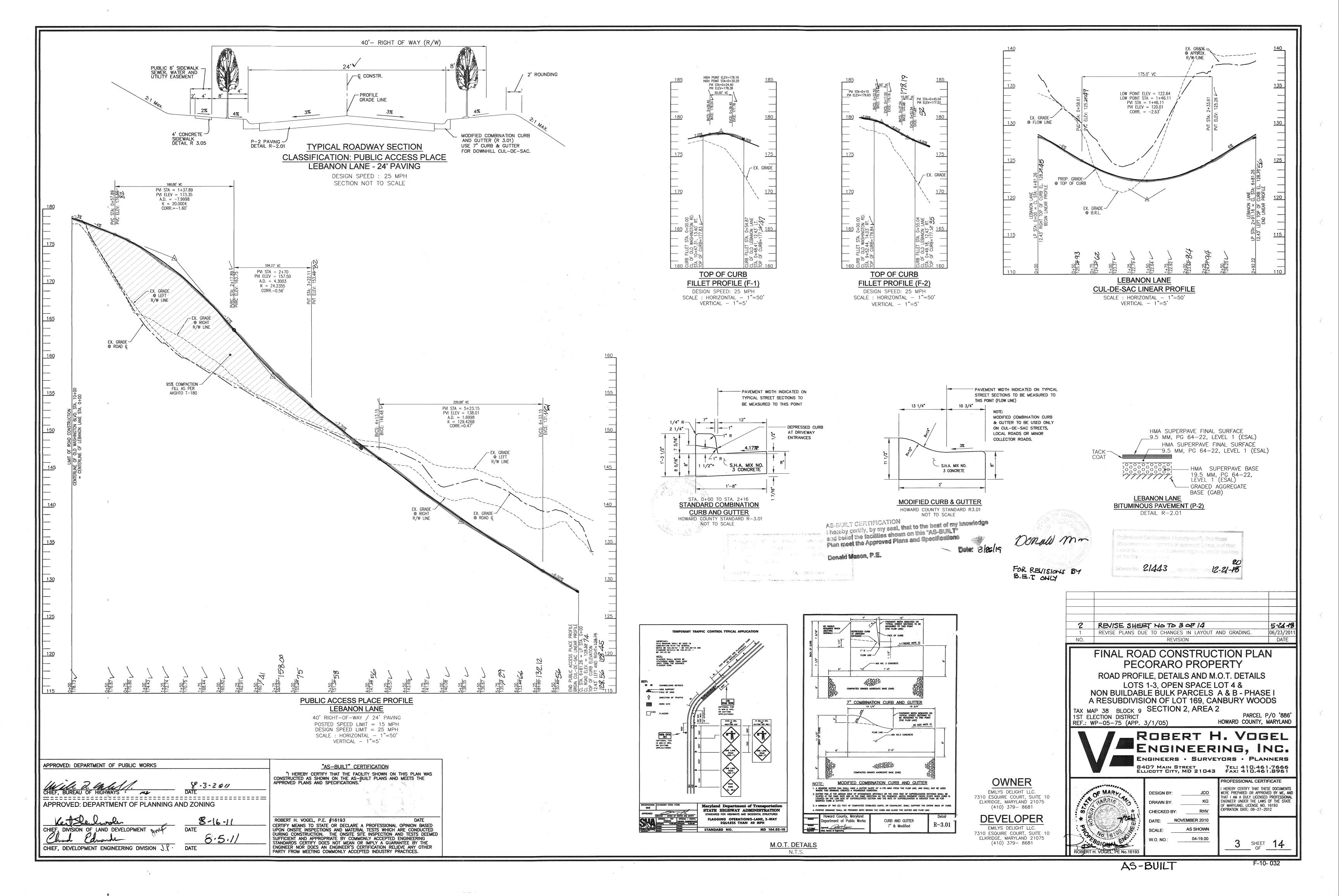
HEREBY CERTIFY THAT THESE DOCUMENTS VERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE F MARYLAND, LICENSE NO. 16193

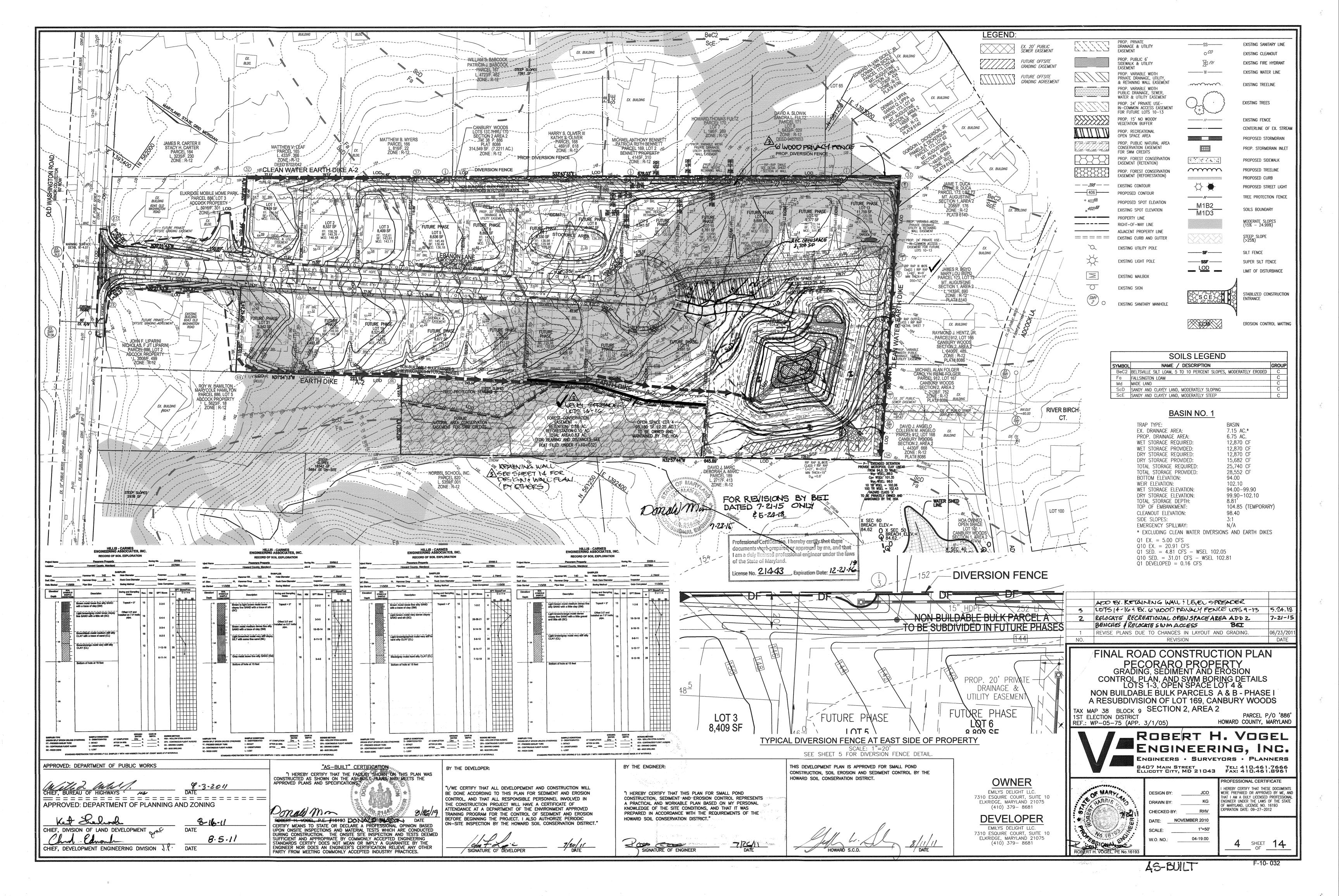
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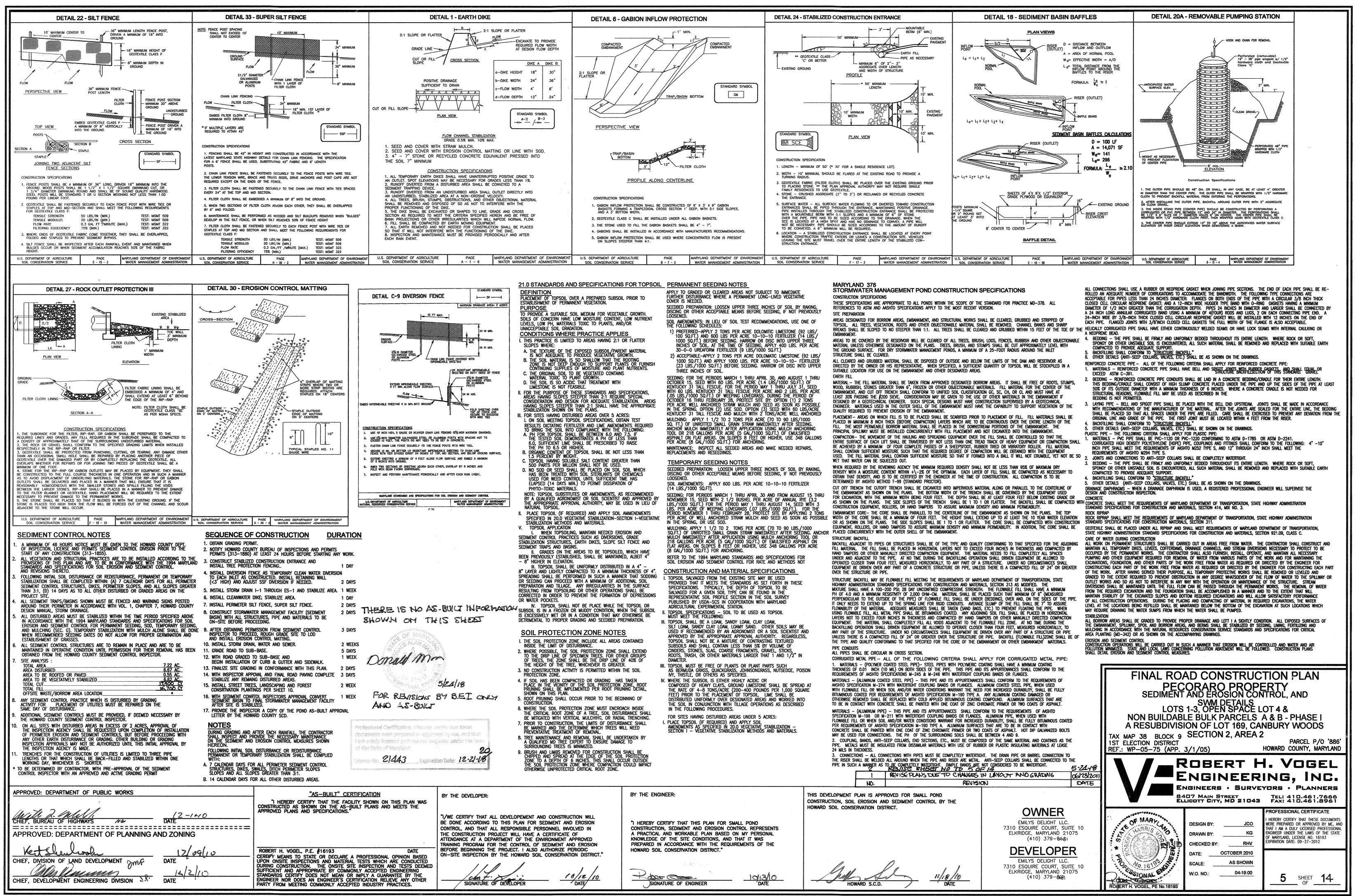
PARCEL P/O '886'

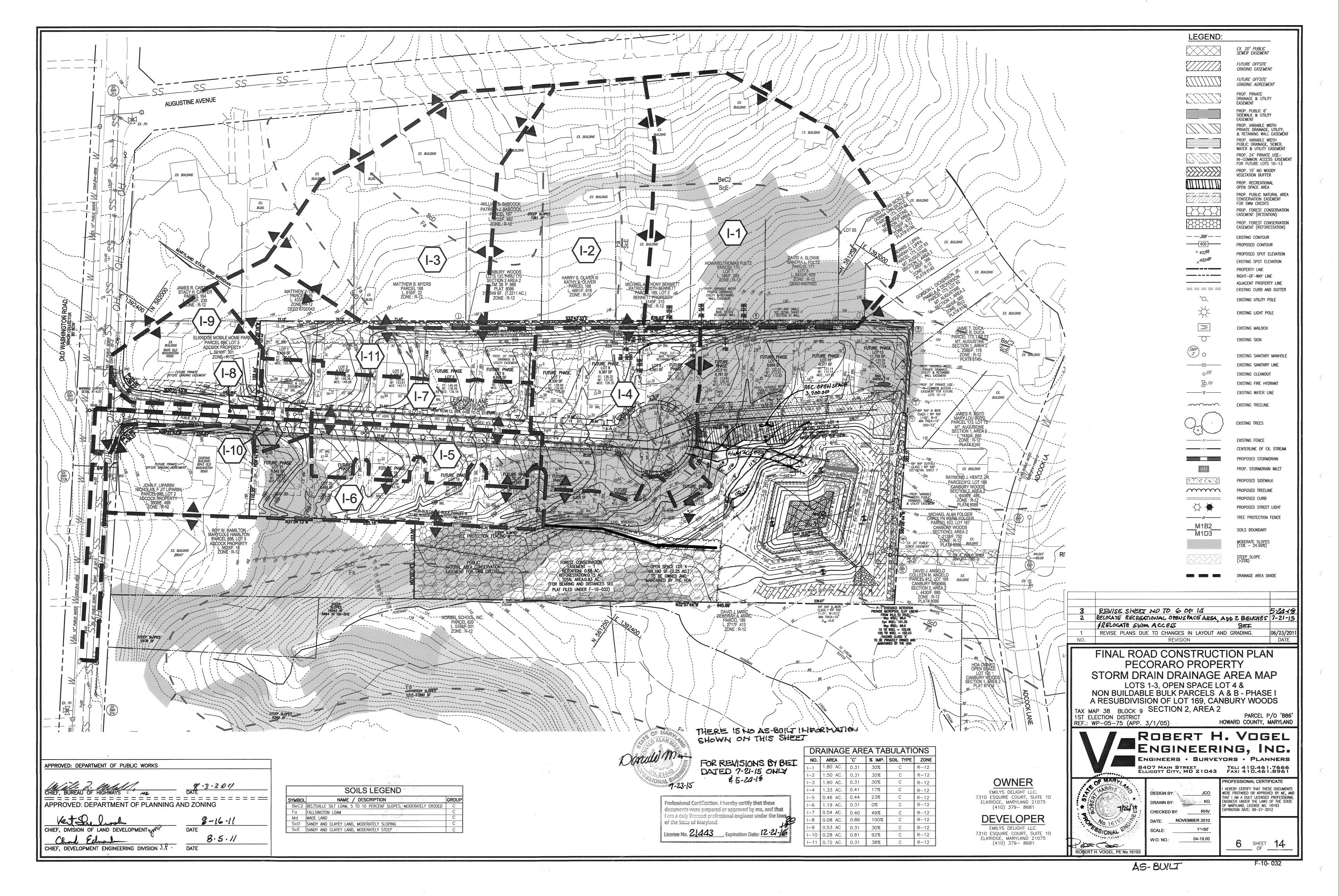
HOWARD COUNTY, MARYLAND

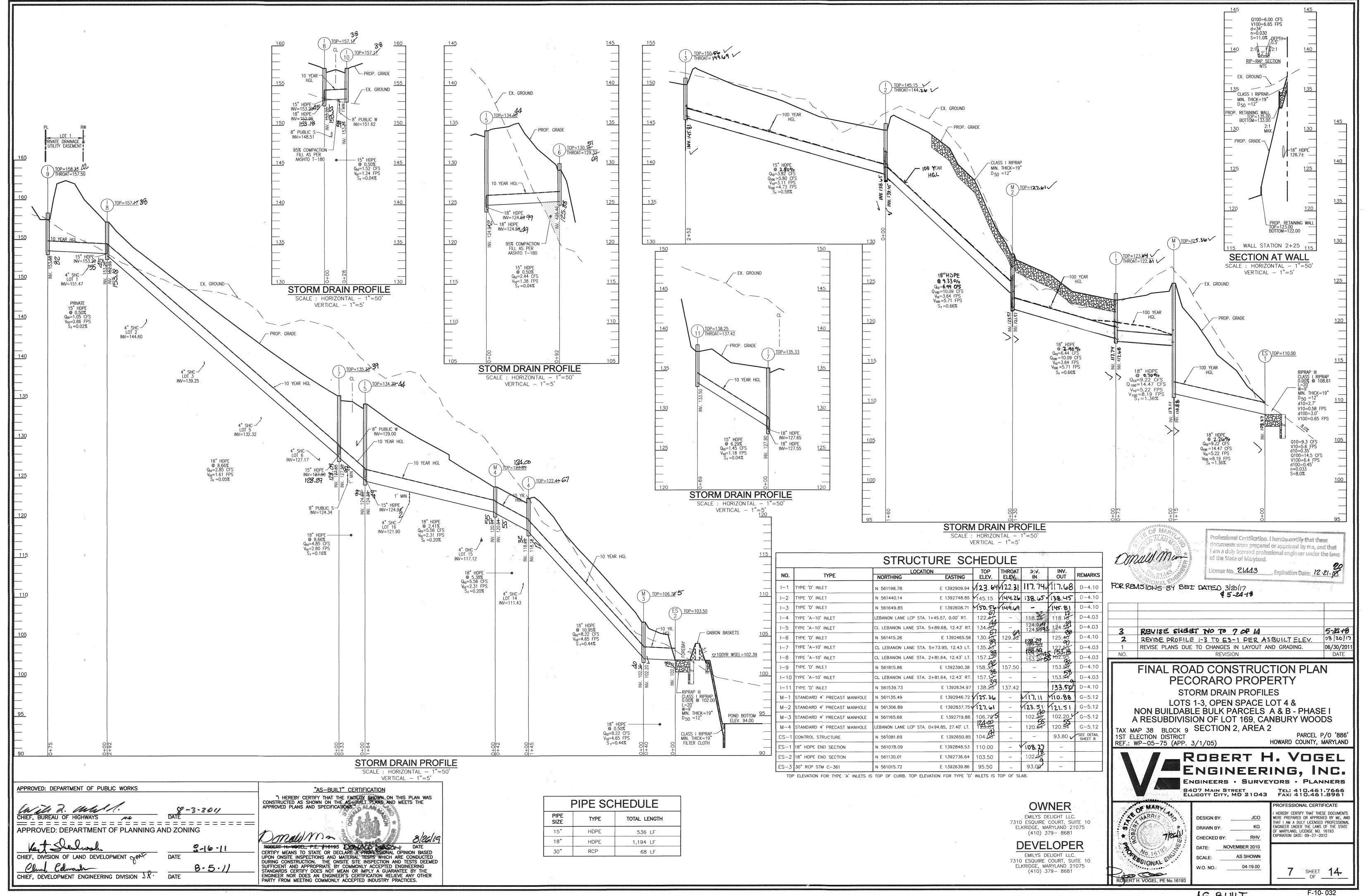


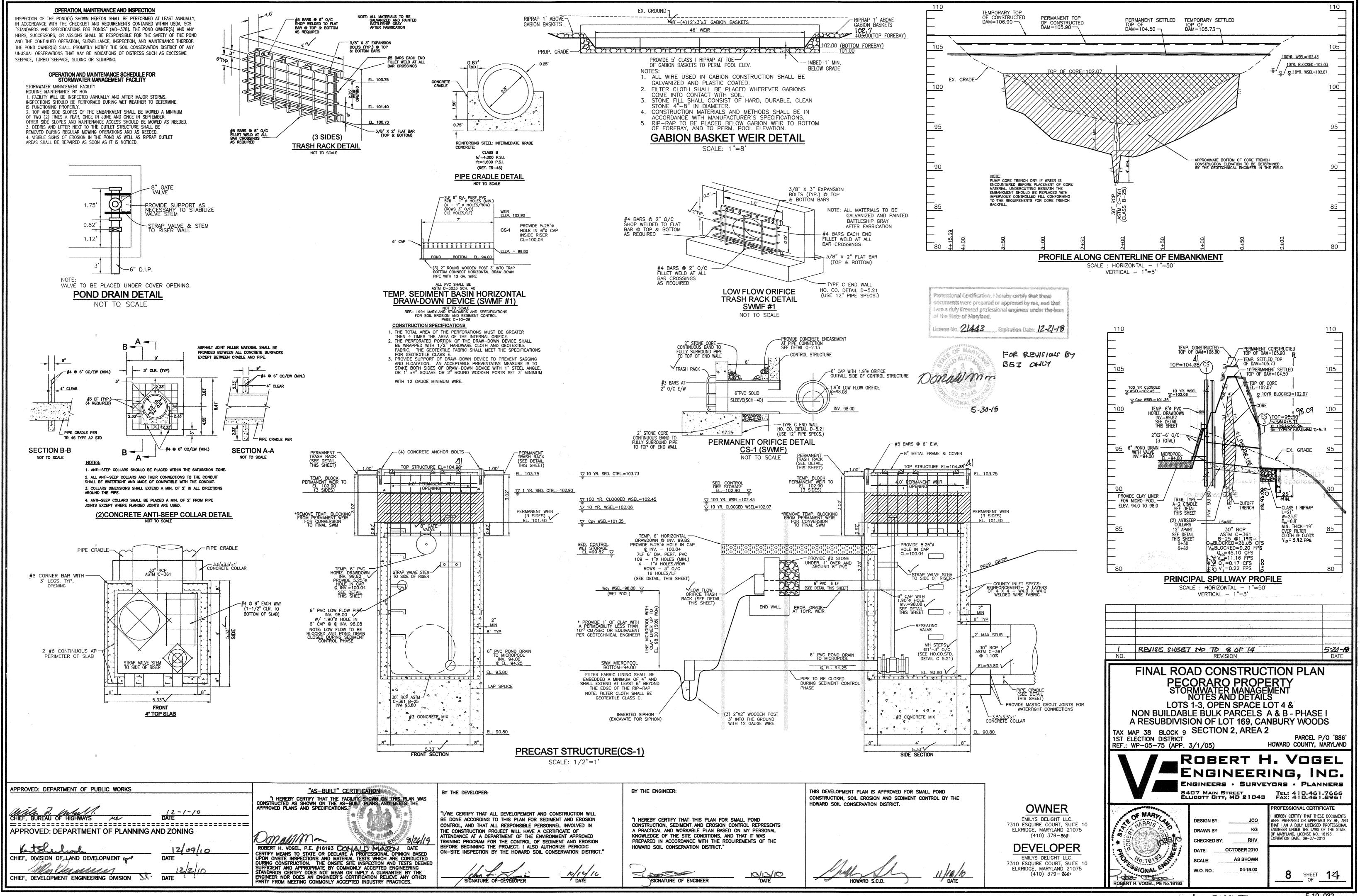


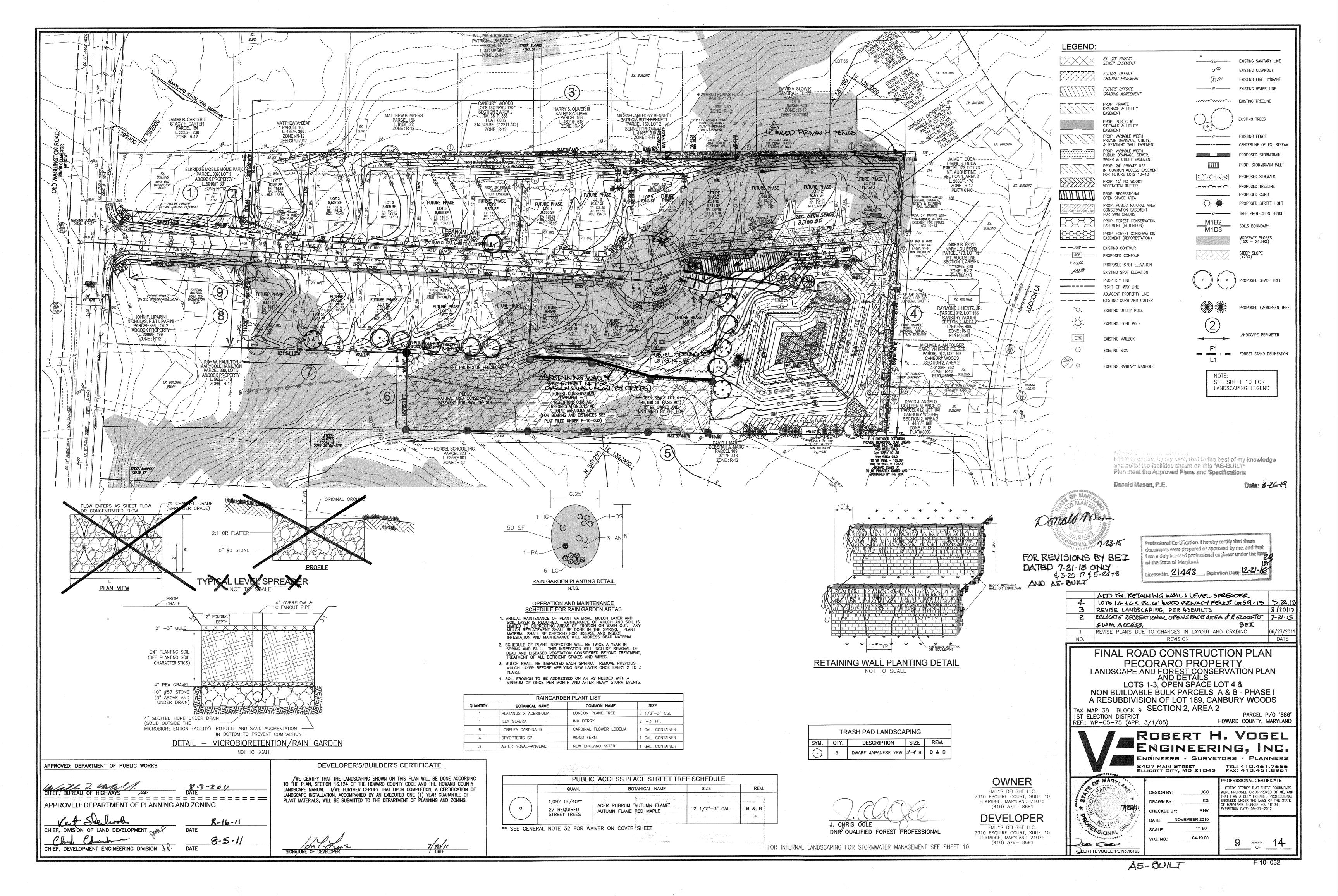












CATEGORY	ADJACENT TO PERIMETER PROPERTIES									
PERIMETER/FRONTAGE DESIGNATION LANDSCAPE TYPE	1 A	2 A	3 A	4 A	5 A	6 A	7 A	8 A	9 A	TOTAL
LINEAR FEET OF ROADWAY, PERIMETER/FRONTAGE	N/A*	102'	878'	382'	646'	104'	223'	110'	N/A*	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	N/A*		_	_	YES 407'	YES 73'	_	_	N/A*	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	N/A*	_	158'	_		-	_	_	-	
IUMBER OF PLANTS REQUIRED (LF REMAINING) SHADE TREES EVERGREEN TREES SHRUBS	N/A*	102' 1:60 02 - -	720' 1:60 12 —	382' 1:60 06 - -	239' 1:60 04 - -	31' 1:60 01	223' 1:60 04	110' 1:60 02 —	N/A*	31
IUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	N/A*	02 - - -	12 _ _	01** - - 40***	04 - - -	01 _ _	04 _ _	02 _ _	N/A*	26

* SEE NOTE FOR WAIVER ON COVER SHEET. ** 5 OF THE REQUIRED SHADE TREES FOR PERIMETER 4 HAVE BEEN RELOCATED WITHIN THE SWM AREA LANDSCAPING. *** 4 OF THE REQUIRED EVERGREEN TREES HAVE BEEN RELOCATED FROM THE SWM AREA TO PERIMETER 4 AND SUBSTITUTED FOR 40 SHRUBS (10:1). NOTE: PERIMETERS 1 & 9 AND STREET TREES OBLIGATION WAS WAIVED ON 12/01/04 UNDER THE APPROVED WAIVER (SEE NOTE FOR

WAIVER ON COVER SHEET)

SUPPLEMENTAL INFORMATION

R-12

GROSS SITE AREA

PROPOSED USE

TYPE OF

COMMUNITY

MAINTAINED LAWN AND

OPEN FIELD

TREE GROUP

ntainer Grown and B&B Planting Techniques

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION \mathcal{J} ! \cdot

APPROVED: DEPARTMENT OF PLANNING AND ZONING

EXISTING USE

ZONED

7.22 ACRES

RESIDENTIAL

AREA

3.32 Ac

0.29 Ac

RESIDENTIAL DEVELOPMENT

TYPES

LANDSCAPE SCHEDULE							
SYMBOL.	QUAN.	BOTANICAL NAME	SIZE	REM.			
(x)	16	ACER RUBRUM RED MAPLE (SHADE TREE)	2"-3" Cal.	В & В			
(°)	16	GLENDITSIA TRIACANTHOS VAR. INERMIS YOUNG THORNLESS HONEY LOCUST (SHADE TREE)	2-1/2"-3" CAL.	B & B			
*	9	PINUS STROBUS EASTERN WHITE PINE (EVERGREEN TREES) SWM PERIMETER	6'-8' Ht.	B & B			
	9	PICEA ABIES NORWAY SPRUCE (EVERGREEN TREES) SWM PERIMETER	6'-8' Ht.	В & В			
THE STATE OF THE S	16	WISTERIA FRUTESCENS (L.) POIR AMERICAN WISTERIA (VINE) WALL (INCLUDED IN WALL SURETY)	50' Ht.	В & В			
•	40	THUJA OCCIDENTALIS 'SMARAGD' EMERALD GREEN ARBORVITAE	6'-8' Ht.	В & В			

SOILS INFORMATION

COVER FOR INDEX

TYPICAL

FOREST

SOILS TYPE

BIRCH, HOLLY,

WETLAND OAKS,

BIRCH, HOLLY

WETLAND OAKS,

	SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING-TYPE 'B' BUFFER				
CATEGORY	SWMF 1				
LINEAR FEET OF PERIMETER	948'				
CREDIT FOR EXISTING VEGETATION (YES, NO, AND LINEAR FEET)	YES 68'				
CREDIT FOR OTHER LANDSCAPING (YES, NO, AND %)	(SCH A) 8* SHADE TREES FROM PERIMETER 4 & 5 LANDSCAPING				
NUMBER OF TREES REQUIRED SHADE TREES 1:50 EVERGREEN TREES 1:40	880' 18–8* 22				
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES SHRUBS	10*** 18** 50****				

* EXISTING WOODS TO REMAIN ** 4 EVERGREEN TREES HAVE BEEN RELOCATED TO PERIMETER 4 AND SUBSTITUTED @ 10:1 SHRUBS. *** 5 SHADE TREES RELOCATED FROM PERIMETER 4.

**** 50 SHRUBS HAVE BEEN SUBSTITUTED FOR 5 SHADE TREES @ 10:1.

STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$8,100.00 TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR TOTAL REQUIRED 27 PUBLIC STREET TREES. SEE STREET TREE SCHEDULE FOR STREET ON PUBLIC ACCESS PLACE, SEE SHEET 2.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,510.00 FOR THE REQUIRED 36 SHADE TREES, 18 EVERGREEN TREES, 95 SHRUBS AND 158 LF OF WALL. (THE UNIT PRICES TO BE USED FOR ESTABLISHING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE ADOPTED COUNTY FEE SCHEDULE WHICH IS \$300.00 PER SHADE TREE, \$150.00 PER EVERGREEN/ORNAMENTAL TREE, \$30.00 PER SHRUBS AND \$20.00 PER LINEAR FOOT OF WALL).

	PLANT SCHEDULE FOR ONSITE REFORESTATION							
	QUAN.	BOTANICAL NAME	CONTAINER GROWN SIZE	APPROXIMATE SPACE SPACING(FEET ON LENTER)				
	08	Acer rubrum Red Maple	1" caliper B & B	15 x 15				
-	08	Platanus occidentalis Sycamore	1" caliper B & B	15 x 15				
	07	Quercus coccinea Scarlet Oak	1" caliper, B & B	15 x 15				
	07	American sweetgum Liquidambar straciflua	1" caliper B & B	15 x 15				

REFORESTATION PROVIDED - FCE1

0.15 ACRES OR 6534 SF

1" CALIPER TREES

30 TREES @ 200 TREES PER ACRE

PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS

1. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER 2. UISE A KNIFE TO CUIT THROUGH BOTTOM HALF OF THE ROOT BALL. 5. PLANT SHRUBS 4* ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONTINUES EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
4. PLANTAINE HOLE TO BE THREE TIMES THE DIAMETER OF THE

REFORESTATION PLANTING DETAIL

N.T.S.

HIGHLY VISABLE FLAGGING

MAXIMUM 8 FEET

RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.

BLAZE ORANGE PLASTIC MESH TYPICAL TREE PROTECTION FENCE DETAIL

3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED

SOILS LEGEND

NAME / DESCRIPTION

BeC2 BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED

1. FOREST PROTECTION DEVICE ONLY.

PRIOR TO INSTALLING DEVICE.

4. ROOF DAMAGE SHOULD BE AVOIDED

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 REVISIONS ARE MADE TO THE APPLICABLE PLANS.

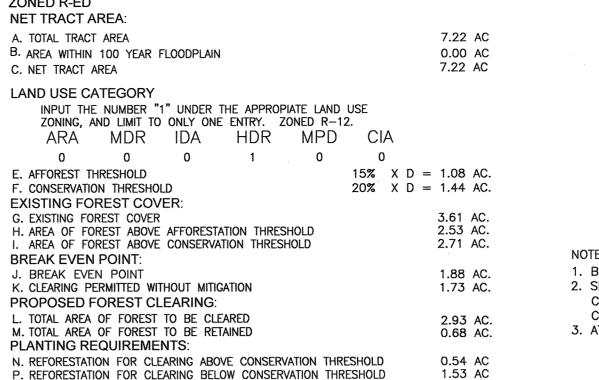
LANDSCAPE NOTES

USE 2" X 4" LUMBER FOR

- ANCHOR POSTS MUST BE

CROSS BEARING

ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. NO LANDSCAPING TO BE INSTALLED WITHIN ANY PUBLIC EASEMENT FOR WATER, SEWER OR STORM DRAIN.



0.00 AC

2.07 AC

0.00 AC

FOREST CONSERVATION EASEMENT HAVE BEEN ESTABLISHED TO FULLFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL, 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

Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD

T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED

R. TOTAL REFORESTATION REQUIRED (N+P-Q)

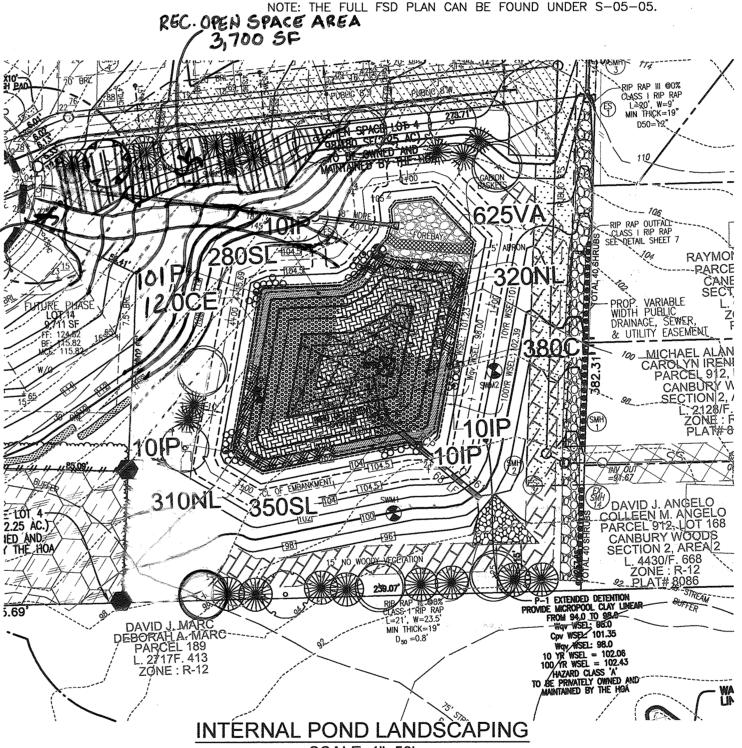
S. TOTAL AFFORESTATION REQUIRED

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

C. NET TRACT AREA

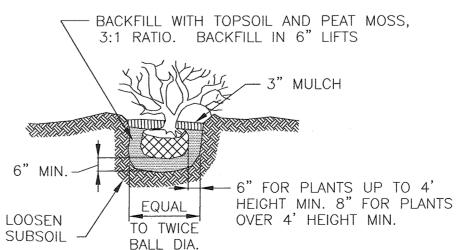
TOTAL FOREST CONSERVATION OBLIGATION OF THE PROJECT, TO BE FULLFILLED BY ON SITE RETENTION OF 0.68 ACRES, REFORESTATION OF 0.15 ACRES & REMAINING 1.92 ACRES BY OFFSITE FOREST CONSERVATION EASEMENT IN BRANTWOOD, SECTION 3, AREA 1, PRESERVATION PARCEL 'C', PLAT# 14874. FUTURE OFFSITE EASEMENT TO BE RECORDED CONCURRENTLY WITH THIS

RETENTION -0.68 AC. (29,620.80 X .20 = \$5,924.16) REFORESTATION ONSITE - 0.15 AC. (6534 SF \times .50 = \$3,267) REFORESTATION OFFSITE- 1.92 AC. (83,635.20 SF x .50 = \$41,817.60) FINANCIAL SURETY FOR ON SITE FOREST OBLIGATION IN THE AMOUNT OF \$51,009.00 WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT



-	SCALE: 1"=50"					
		00/ LE. 1 -00				
SWMF 1 - POCKET POND HAZARD CLASS 'A' HERBACEOUS LANDSCAPE SCHEDULE						
KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS		
ΙP	50	IRIS PSEUDACORIS YELLOW WATER IRIS	PLUG	1.5' OC		
NL	630	NUPHAR LUTEUM SPATTERDOCK	PLUG	1.5' OC		
SL	630	SAGITTARIA LATIFOLIA DUCK POTATO (DO NOT PLANT TUBERS)	PLUG	4' OC		
VA	625	VALLISNERIA AMERICANA WILD CELERY	PLUG	2' OC		
CE	420	CYPERUS ESCULENTUS YELOW NUT SEDGE	PLUG	2' OC		

*SURETY FOR INTERNAL PLANTING PROVIDED IN THE DED COST ESTIMATE

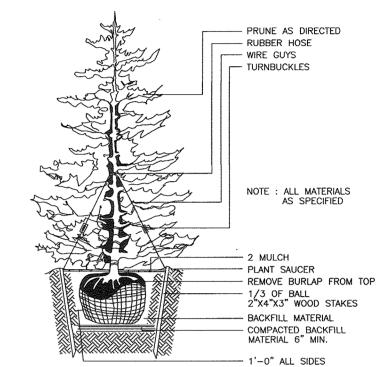


BALL DIA.

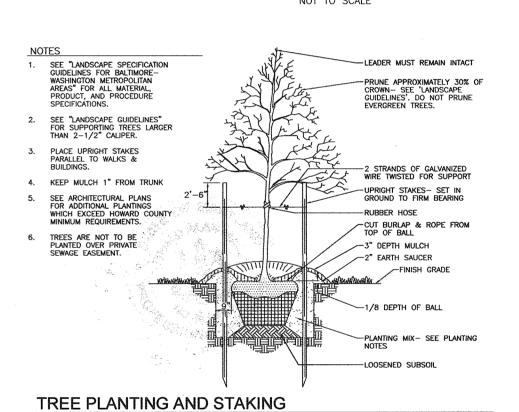
SHRUB PLANTING DETAIL

CONSERVATION CONSERVATION DO NOT DISTURB MACHINERY, DUMPING OR STORAGE OF REFORESTATION PROJECT PROHIBITED TREES FOR YOUR

 BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE. 2. SIGNS TO BE PLACED AT A MAXIMUM SPACING OF 50-100 FEET. CONDITIONS ON-SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART. 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.



TYPICAL EVERGREEN TREE PLANTING DETAIL



1.01		
J. CHRIS OGLE DNR QUALIFIED FORES	T PROFESSIONA	L
ি পৰা পুন্ন কৰি আৰক্ষিত কৰিবলৈ স্থানিক বিশ্ব কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰিবলৈ কৰি বিশ্ব কৰিবলৈ		
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	REVISE SHEET NO TO 10 OF 14	5-24-19
	RELOCATE RECREATIONAL OPEN SPACE AREA, ADD Z	
	BENCHES & RELOCATE SWM ACCESS BEI	7-21-15
	REVISE PLANS DUE TO CHANGES IN LAYOUT AND GRADING.	06/23/2011
	REVISION	DATE
and area	FINIAL DOAD CONCEDUCTION DUAR	•

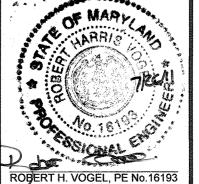
FINAL ROAD CONSTRUCTION PLAN PECORARO PROPERTY LANDSCAPE AND FOREST CONSERVATION DETAILS

LOTS 1-3, OPEN SPACE LOT 4 & NON BUILDABLE BULK PARCELS A & B - PHASE A RESUBDIVISION OF LOT 169, CANBURY WOODS

TAX MAP 38 BLOCK 9 SECTION 2, AREA 2 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND REF.: WP-05-75 (APP. 3/1/05)



Engineering, Inc. Engineers • Surveyors • Planners 8407 Main Street Tel: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



OWNER

EMILYS DELIGHT LLC.

7310 ESQUIRE COURT, SUITE 10

ELKRIDGE, MARYLAND 21075

(410) 379- 8681

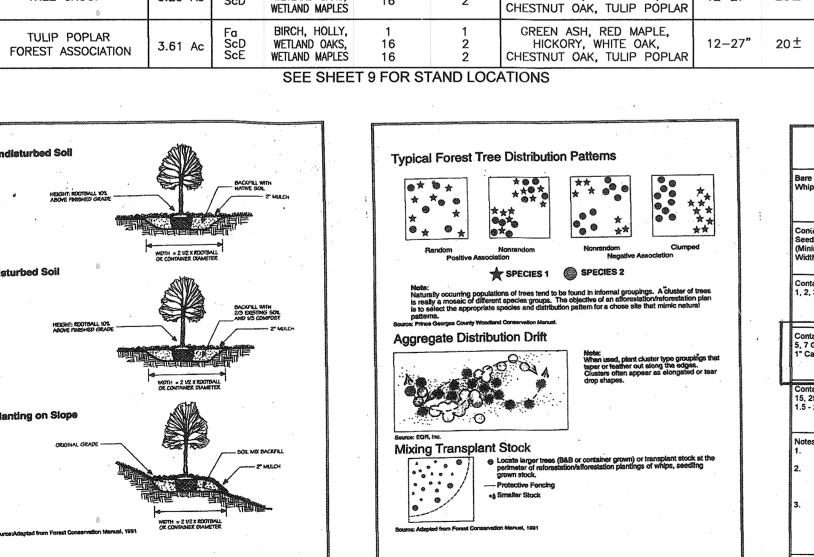
(410) 379- 8681

DRAWN BY CHECKED BY: **NOVEMBER 2010** DATE: SCALE: 04-19.00 W.O. NO.:

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. 16193 EXPIRATION DATE: 09-27-2012 1"=100"

10 SHEET 14

AS-BUILT



nting Distribution Patterns

8-3-5011

8-16-11

8.5.11

REFORESTATION PLÂNTING DETAILS

FOREST STAND ANALYSIS TABLE

WOODLAND HABITAT

SUITABILITY

Bare Root Seedlings or 8 x 8 Container Grown 5, 7 Gallon or 1" Caliper B & B 15, 25 Gallon or 1.5 - 2" Caliper B & B These stocking and survival requirements are the minimum numbers esumated to meet the definition of forest from bare land. In certain circumstances, any combination of the above mentioned stocking options, dry seeding, tree shelters, transplants, and/or natural regeneration may be appropriate strategies to fulfill the requirements of an approved FCD. They will be evaluated on a case-by-case basis by the approving authority. Spacing does not imply that trees or shrubs must be planted in a grid pattern. Figure A:18

PAGE 26 OF THE HOWARD COUNTY SOIL SURVEY DEVELOPER'S/BUILDER'S CERTIFICATE I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY

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.

FOREST STAND TOTALS

(DIA)

STAND T-1

STAND F-1

EXISTING VEGETATION

MAINTAINED LAWN

GREEN ASH, RED MAPLE,

HICKORY, WHITE OAK,

3.32 ACRES

0.29 ACRES

3.61 ACRES

7.22 ACRES

GENERAL

CONDITION

FOREST

AREA IN

SEN. ENV

0.00 Ac

0.57 Ac

STEEP SLOPES

STAND CHARACTERISTICS

AGE

(YRS)

N/A N/A

12-27" 20±

FOR REVISIONS BY BEI DATED 7-21-15 ONLY

FALLSINGTON LOAM

ScD SANDY AND CLAYEY LAND, MODERATELY SLOPING

SCE SANDY AND CLAYEY LAND, MODERATELY STEEP

MADE LAND

ANCHOR POSTS SHOULD BE

USE 8' WIRE "U" TO

Survivability Requirement t the end of the secon

SECURE FENCE BOTTOM.

MINIMUM 2" STEEL "U" CHANNEL

OR 2" X 2" TIMBER, 6' IN LENGTH.

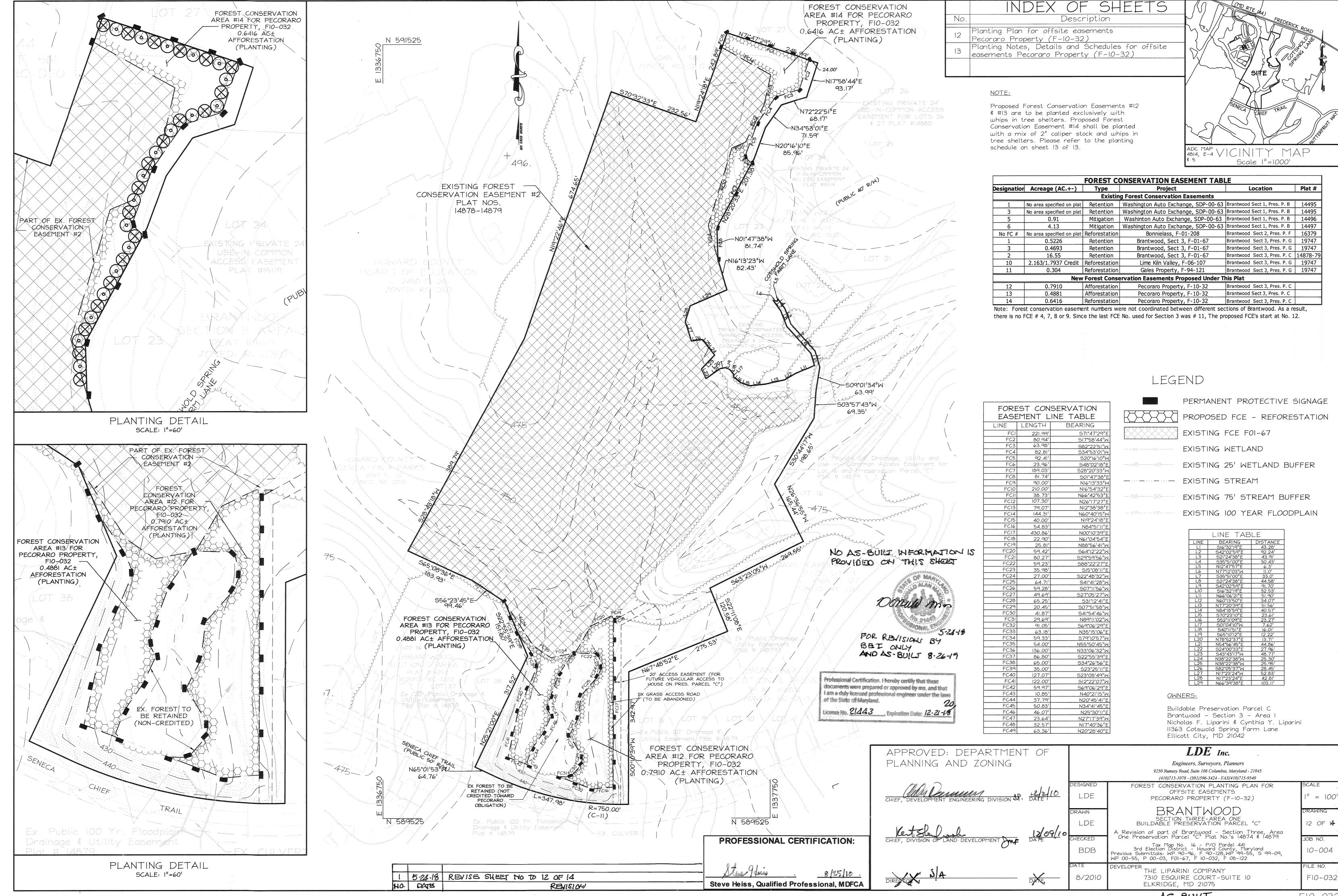
NO AS-BUILT INFORMATION IS PROVIDED ON THIS SHEET

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 law of the State of Maryland. License No. 21443 Expiration Date: 12-21-16

DEVELOPER EMILYS DELIGHT LLC. 7310 ESQUIRE COURT, SUITE 10 ELKRIDGE, MARYLAND 21075 NOT TO SCALE

PARCEL P/O '886'

AASCD/MAA VEGETATIVE ESTABLISHMENT DETAILS AND SPECIFICATIONS FOR THE PROJECT WITHIN 4 MILES OF BWI AIRPORT Seed Mixture No. 2: Sloped areas not subject to regular mowing (Application rate = 11: lbs PLS/acre) Seed shall be furnished in standard containers with the seed name, lot number, no noxious weeds: balloonvine (Cardiospermum halicacabum), quackgrass (Elytrigia repens), sicklepod (Senna obtusifolia), sorghum (Sorghum spp.), Canada thistle (Cirstum arvense), plumeless thistle (Carduus spp.-includes musk thistle and curled thistle), and weight, percentages of purity, germination rate and hard seed, and percentage of maximum weed seed content clearly marked. All seed containers shall be tagged with a March I to April 20 and August 1 to October 20 inchesius MDA supervised mix program seed tag. TTEM 903 SEEDING emporary Cover of Annual Rye/Rediop | March 1 to April 30 and August 1 to November 30, inclusive Application AASCD / MAA YEGETATIVE ESTABLISHMENT DETAILS AND SPECIFICATIONS FOR PROJECTS WITHIN 983-2.1.3 MIXTURES AND APPLICATION RATES. Only seed mixtures and 903-2.1.1 APPROVED SPECIES. The following table contains species that are application rates described in this item may be used unless otherwise approved by the approved by MAA for use in seed mixtures. Purity requirements and germination May 1 to July 31, inclusive. Rate of application should be 13.6 lbs. PLS per acre. ary Cover of Warm-Season MAA Engineer. Seed mixtures shall meet criteria detailed in Paragraph 903-2.1.2. Seed MILES OF THE BWI AIRPORT 903-1.1 GENERAL. This item provides specifications for seeding of areas as designated on plans or as directed by the MAA Engineer. The species, mixtures, and methods of application provided in this item have been designed to reduce the requirements are also provided mixtures have been formulated to minimize the attractiveness of areas to wildlife of common landscape scenarios. The appropriate seed mixture for application will be designated based on environmental conditions and may vary from site to site. All PPROVED PLANT SPECIES MAA SEED MIXTURE References to ITEM #s noted below are found in Maryland Aviation Seeding seasons are based on typical years and can be subject to variation, which may be modified by the MAA Engineer based on seasonal trends. attractiveness of airport grounds to wildlife. Only MAA-approved species, mixtures, and planting rates listed are in pounds of Pure Live Seed (PLS) per acre. rates of application provided in this item may be used to establish vegetation. All Seed mixtures, application scenarios, and rates for permanent cool-season grasses are as If the time required to complete any of the operations necessary under this item, within SOIL TESTS the specified planting season or any authorized extensions thereof, extends beyond the Contract period, then such time will be charged against the Contract time, and liquidated a. Seed Mixture No. 1 - relatively flat areas (grade less than 4:1) subject to Seed Mixture No. 3 - Wetland areas and their associated buffer zones (Application rate = 131 lbs PLS/acre) 1. Following initial soil disturbances or re-disturbance, permanent or temporary 903-2.1 SEED. All seed shall comply with the Maryland Seed Law (Agricultural Article of the Annotated Code of Maryland). Only MAA-approved species, mixtures, stabilization shall be completed within seven calendar days for the surface of a conditions and regular mowing (Application rate = 234 lbs PLS/acre); b. Seed Mixture No. 2 - sloped areas (grade greater than 4:1) not subject to Rate of Application perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater 983-2.2 LIME. Lime shall consist of ground limestone and contain at least 85 percent total carbonates. Lime shall be ground to a fineness so that at least 90 percent will pass through a No. 20 mesh sieve and 50 percent will pass through a No. 100 mesh sieve. and rates of application provided in this item may be used to establish vegetation. See graded areas on the project site. 2. Occurrence of acid sulfate soils (grayish black color) will require covering with a will be sampled and tested by an inspector from the Turf and Seed Section, Maryland Department of Agriculture (MDA), Annapolis, Maryland. All lawn and turf seed and mixtures shall be free from the following state-listed restricted noxious weeds: mowing (Application rate = 115 lbs PLS/acre); and Seed Mixture No. 3 - wetlands and their associated buffer zones (Application (lbs of PLS/acre) Dolomitic lime or a high magnesium lime shall contain at least 10 percent magnesium oxide. Lime shall be applied by approved methods detailed in Section 903-3.3 of this minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before 60% Fowl Meadow Gras item. The rate of application will be based on results of soil test 31 lbs PLS/acre). 903-2.3 FERTILIZER. Fertilizer shall be standard commercial fertilizer (supplied bentgrass (Agrostis spp.)1, redtop (Agrostis gigantea) wild onion (Alltum canade separately or in mixtures) and meet the requirements of applicable state and federal laws (O-F-241) as well as standards of the Association of Official Agricultural Chemists. 3. The minimum soil conditions required for permanent vegetative Seed Mixture No. 1: Relatively flat areas regularly mowed and exposed to normal Nitrogen-Phosphorus-Potassium (N-P-K) concentrations shall be determined from analysis of soil samples. (Approved fertilizer rate: 21 pounds of 10-10-10 per 1.000 square feet.) Methods of fertilizer application shall conform to standards described in Section 903-3.3 of this item. Fertilizer shall be furnished in standard containers that are a. Soil pH shall be between 6.0 and 7.0. .cir appearance. The percentage of germination shall be actual sprouts and shall not include hard seeds unless specifically permitted by the MA . Soluble salts shall be less than 500 parts per million (ppm). . The soil shall contain less than 40% clay but enough fine lodder (Cuscuta spp.), Application (lbs of LS/acre) 903-2.1.4 SEEDING SEASONS. Application of seed and seed mixtures shall occur rmuda grass (Cynodon dacty grained material (> 30% silt plus clay) to provide the capaci clearly labeled with name, weight, and guaranteed analysis of the contents (percentage of total nitrogen, available phosphoric acid, and water-soluble potash). Mixed fartilizers shall not contain any hydrated lime or cyanamide compounds. Fertilizers failing to meet the specified analysis may be approved by the MAA Engineer, providing sufficient orchardgrass (Dactylis glome tall fescue (Festuca arundina to hold a moderate amount of moisture. d. Soil shall contain 1.5% minimum organic matter by weight. 903-2.1.2 PURITY. All seed shall be free of all state-designated noxious weeds listed in seed or seed mixtures are to be applied on frozen ground or when the temperature is at or 85% Certified Turf-Type Tall Fescus Paragraph 2.1.1 and conform to MAA specifications. To ensure compliance, MAA below 35 degrees Farenheit (7.2 degrees Centigrade). Under these conditions, a layer of mulch should be applied in accordance with Item 905, Mulching, to stabilize the site, and e. Soil must contain sufficient pore space to permit adequate re requires sampling and testing of seed by the Turf and Seed Section, Maryland 10% Certified Kentucky Bluegrass Department of Agriculture (MDA). The Contractor shall furnish the MAA Engineer wit peneuramen. If these conditions cannot be met by soils on site, adding tousoil is permanent seeding should occur in the subsequent seeding season. Seed application may occur during the seeding season dates listed below. Seeding performed after October 20 5% Perennial Ryegrass materials are applied to conform with the specified nutrients per unit of measure withou duplicate signed copies of a statement by the Turf and Seed Section certifying that each required in accordance ITEM 901 or amendments made as lot of seed has been laboratory tested within six months of date of delivery. Thi should be a temporary cover of annual ryegrass and followed by overseeding of the recommended by a certified agronomist. The fertilizers may be supplied in the following forms: name and address of laboratory, Restricted noxious-weed seed may not exceed 0.5 percent by weight of any seed mixtu a. A dry, free-flowing fertilizer suitable for application by a common fertilizer In addition, all seeds sold in Maryland shall be free from the foll the results of tests as to name, percentages of purity and of germination, percentage of weed content for the seed furnished, b. A finely ground fertilizer soluble in water, suitable for application by power and, in the case of a mixture, the proportions of each kind of seed. pressure pump assemblage shall be configured to allow the mixture to flow through the tank when not being sprayed from the nozzle. All pump passages shall be applied using a high-pressure spray which shall always be directed upward into the air so that the mixtures will fall to the ground in a uniform (Paragraphs 903-3.3.1 and 903-3.3.2) approved by MAA. The seeding mixture shall be applied within 48 hours after application of lime and fertilizer. To firm the seeded areas, cultipacking shall occur immediately after seeding. c. A granular or pellet form suitable for application by blower equipment TEMPORARY SEEDING MINING OPERATIONS spray. Nozzles or sprays shall never be directed toward the ground in such a and pipelines shall be capable of providing clearance for 5/8-inch solids. The power unit for the pump and agitator shall have controls mounted so as to be iment control plans for mining operations must include the following seeding dates The rate of application will be based on results of soil tests performed by the University manner that might produce erosion or runoff. Particular care shall be exercise of Maryland Soil Testing Laboratory. By law, persons applying fertilizer to State-owned land shall follow the recommendations of the University of Maryland as set forth in the "Plant Nutrient Recommendations Based on Soil Tests for Turf Maintenance" and the accessible to the nozzle operator. A pressure gauge shall be connected to and mounted immediately behind the nozzle. 903-3.3 METHODS OF APPLICATION. Lime, fertilizer, and seed mixes shall be to ensure that the application is made uniformly, at the prescribed rate, and to 100 pounds of dolomitic limestone per 1,000 square feet. guard against misses and overlapped areas. Predetermined quantities of the mixture shall be used in accordance with specifications to cover specified For seeding dates of: February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and red top at the applied by either the dry or wet application methods that have been approved by MAA 15 pounds of 10-10-10 per 1,000 square feet "Plant Nutrient Recommendations Based on Soil Tests for Sod Production" (see Appendix B). Application of the fertilizer shall be in a manner that is consistent with the sections of known areas. To checks the rate and uniformity of application, the The nozzle pipe shall be mounted on an elevated supporting stand in such a applicator will observe the degree of wetting of the ground or distribute test manner that it can be rotated through 360 degrees horizontally and inclined 903-3.3.1 DRY APPLICATION METHOD NOTE: Use of this information does not preclude meeting all of the requirements of the current Maryland Standards and Specifications for Soil Erosion and Sediment Control. sheets of paper or pans over the area at intervals and observe the quantity of vertically from at least 20 degrees below to at least 60 degrees above the a. Liming. If soil test results indicate that lime is needed, the following procedures will be used: following advance preparation of the seedbed, lime shall be applied prior to the application of any fertilizer or seed and only on horizontal. There shall be a quick-acting, three-way control valve connecting CONSTRUCTION METHODS AND EQUIPMENT the recirculating line to the nozzle pipe and mounted so that the nozzle operation Mulch shall be applied as per ITEM 905. can control and regulate the amount of flow of mixture to be supplied so that On surfaces that are to be mulched as indicated by the plans or designated by the seedbeds that have been prepared as described in paragraph 903-3.2. The lime shall be uniformly spread and worked into the top 2 inches of soil, after which 903-3.1 GENERAL. This section provides approved methods for the application of and mixtures may be properly sprayed over a distance varying from 20 feet to 100 MAA Engineer, seed and fertilizer applied by the spray method need not be includes standards for seedbed preparation, methods of application, and equipment to be used during the process. Lime and fertilizer shall be applied to seeded areas before the raked into the soil or rolled. However, on surfaces on which mulch is not to be feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon the seedhed shall be properly graded again. nozzle, and one a long-range jet nozzle. For ease of removal and cleaning, all used, the raking and rolling operations will be required after the soil has dried seed is spread. The mixture of seed will be determined for sites based on environment nozzles shall be connected to the nozzle pipe by means of quick-release 903-3.4 MAINTENANCE OF SEEDED AREAS. The contractor shall protect seeded b. Fertilizing. Following advance preparations (and liming if necessary), fertilizer shall be spread uniformly at the specified rate to provide no less than the minimum quantity stated in Paragraph 903-2.3. No fills may be placed on frozen ground. All fill to be placed in approxima couplings. In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzles horizontal layers, each layer having a loose thickness of not more than 8 inches. All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by 903-3.2 ADVANCE PREPARATION. Areas designated for seeding shall be properly County Code – Article 21, Section 2-308, and compacted to 90% density; compaction to be determined by ASTM D-1557-661 (Modified Proctor). Any fill within the prepared in advance of seed application. The area shall be tilled and graded prior to regrading and reseeding as directed. The Contractor shall mow, water as directed, and c. Seeding. Seed mixtures shall be sown immediately after fertilization of the c. Mixtures. Lime shall be applied separately in the quantity specified, prior to the fertilizing and seeding operations. Lime should be added to and mixed with water at a concentration not to exceed 220 pounds of lime for every 100 gallons cation of lime and fertilizer, and the surface area shall be cleared of any stones larger otherwise maintain seeded areas in a satisfactory condition until final inspection and seedbed. The fertilizer and seed shall be lightly raked to a depth of 1 inch for building area is to be compacted to a minimum of 95% density as determined t than 1 inch in diameter, sticks, stumps, and other debris that might interfere with sowing acceptance of the work. nethods previously mentioned. Fills for pond embankments shall be compacted as per of seed, growth of grasses, or subsequent maintenance of grass-covered areas. Damage caused by erosion or other forces that occur after the completion of grading shall be repaired prior to the application of fertilizer and lime. The Contractor will repair such newly graded and disturbed areas. MD-378 Construction Specifications. All other fills shall be compacted sufficiently so When either the dry or wet application method outlined above is used for work performed of water. After lime has been applied, the tank should be emptied and rinsec out of season, the Contractor will be required to establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. If at the time when the as to be stable and prevent erosion and slippage. d. Rolling. After the seed has been properly covered, the seedbed shall be damage, which may include filling gullies, smoothing irregularities, and repairing other incidental damage before beginning the application of fertilizer and ground limestone. proportions specified, but the resulting concentration should not exceed 22 immediately compacted using a cultipacker or an approved lawsroller. contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for unds of mixture per 100 gallons of water and should be applied within 3 903-3.3.2 WET APPLICATION METHOD/HYDROSEEDING the unaccepted portions of the areas seeded out of season will be withheld until such time as these requirements have been met. If an area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, all grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the All water used shall be obtained from fresh water sources and shall be free from a. General. The Contractor may elect to apply seed and fertilizer as ner soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Paragraphs c and d of this section in the form of an aqueous mixture by spraying injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify all sources of Installation of sod should follow permanent seeding dates. Seedbed preparation for Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a over the previously prepared seedbed using methods and equipment approved by NO AS-BUILT INFORMATION satisfactory condition by discing or by use of cultipackers, rollers, drags, harrows, or MAA. The rates of application shall be as specified in Paragraphs 903-2. sod shall be as noted above. Lime and fertilizer per permanent seeding specifications and water to the MAA Engineer at least two weeks prior to use. The Engineer ma take samples of the water at the source or from the tank at any time and have a lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends IS PROVIDED ON THIS SHEET tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to laboratory test the samples for chemical and saline content. The Contractor shall An area to be seeded shall be considered a satisfactory seedbed (without requiring additional treatment) if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches; the top 3 inches of soil is loose, friable, and is reasonably free from b. Spraying Equipment. The spraying equipment shall have a container or not use any water from any source that is disapproved by the Engineer following be permanently sodded or protected with an approved erosion control netting. Additional 50 gallons or less over the entire range of the tank capacity. The liquid level vatering for establishment may be required. Sod is not to be installed on frozen ground. All mixtures shall be constantly agitated from the time they are mixed until they gauge shall be mounted so as to be visible to the nozzle operator at all times. large clods, rocks, large roots, or other undesirable matter; appropriate amounts of Mulch shall be applied to all seeded areas immediately after seeding. During the time Sod shall not be transplanted when moisture content (dry or wet) and/or extrems ertilizer and lime have been added; and, if it has been shaped to the required grade The container or tank shall also be equipped with a mechanical power-driven are finally applied to the seedbed. All such mixtures shall be used within 30 emperature may adversely affect its survival. In the absence of adequate rainfall at a location acceptable to the Enginee Install sod as per ITEM 904 Mulch shall be applied as per ITEM 905 d. Spraying. Lime shall be sprayed upon previously prepared seedbeds or After completion of tilling and grading, lime and fertilizer shall be applied within 48 bours according to the specified rate (Paragraphs 903-2.2 and 2.3) and methods The spraying equipment shall also include a pressure pump capable of delivering 00 gallons per minute at a pressure of 100 pounds per square inch. The which the lime, if required, shall have been worked in already. The mixt FOR REVISIONS BY B.E.I ONLY AND AG-BUILT 8/26/19 July 1, 2004 **AASCD/MAA NOTES** Professional Centification (Province Centify Monthless) WATERFOWL DETERRENT SYSTEM THE PROPOSED PROJECT IS LOCATED IN HOWARD COUNTY, MARYLAND ON TAX discussed years propaged or approved by the 200 first There is a need to discourage ducks and other waterfowl from being attracted to stormwater in sediment traps. The system proposed for BWI will interfere with the MAP 38, BLOCK 9, PARCEL 886. THE PROPOSED PROJECT IS LOCATED NEAR THE WATERFOWL DETERRENT SYSTEM i am a duty licensed professional engineer under the laws BALTIMORE /WASHINTON INTERNATIONAL THURGOOD MARSHALL AIRPORT (BWI), ducks' landing pattern by installing a grid using lightweight wire above the surface of the trap. As they approach a water-filled trap, ducks, geese and other waterfowl will see the grid wires and not attempt to land. A perimeter fence consisting of two wire of the State of Maniand. APPROXIMATELY 14,000 FEET NORTH OF RUNWAY 15R-33L. Number of Posts Licens No. 2/4/3 Emission Date: 12:21:19 strands strung around the posts will keep birds from walking onto the traps SEDIMENT BASINS AND TRAPS ARE PROPOSED FOR SEDIMENT AND EROSION Gridwires Gridwire, ft. ft. initial grid spacing will be five feet for short spans and ten feet for long spans. See CONTROL DURING CONSTRUCTION. the attached detail for a typical layout. After monitoring the effectiveness of this 1,224' SEDIMENT TRAPS AND BASINS MUST BE DRAINED COMPLETELY THROUGH A system, MAA may require installation of additional long spans to decrease spacing Trap TOTAL: 1,789' to five feet. The ends of the grid wires will be strung from hooks placed on posts FILTERING DEVICE TO A CLEAR WATER OUTFALL WITHIN 24 HOURS FOLLOWING three feet above the ground. It is expected that the wires will sag two feet and will ANY RAINFALL EVENT. 332' 1,020' 15 -9' long x 3-1/15' (NIN.) wide Galvangzed steel U-changel skin pos Grid wire will be high-strength, lightweight synthetic material made from aramid fiber as manufactured by Phillystran, Inc., Part No. PS29 1x7x.045J, or approved equal. LANDSCAPING & STORM WATER POND LANDSCAPING ON SITE: 1,510' 1.100' Posts will be nine-foot long galvantzed steet U-channel signposts, driven five and one half feet into the ground. The height above ground shall be no more than three and one half feet. Three holes will be attached to each post to fasten one 2-1/2 inch ANY DEVIATION TO PLANT SPECIES AND VEGETATION USED ON THESE PLANS NEED Trap TOTAL: 1,600' APPROVAL FROM AASCD/MAA. THE PLANT SPECIES USED ON THIS SITE ARE TO 700' AVOID ITS POTENTIAL TO ATTRACT WILDLIFE THAT COULD POSE STRIKE HAZARD hook and two 1-1/2 inch eye bolts. 450' Trap TOTAL: TO AIRCRAFT. 2,300' An access gate will be installed on the short end opposite the outlet to facilitate trap RBAISE SHEET NO TO 11 DE 14 5-24-18 cleanout. Each gate consists of a twenty feet long, 1-1/2" diameter horizontal pip-BWI AIRPORT NOISE ZONE: placed three feet above ground and spanning two posts spaced twenty feet apart. When sediment is to be cleaned out from the trap, the long pipe is removed. An 440' 30' x 155' 1,550 Trap TOTAL: 550, 1944 THE SITE FOR THIS PROJECT IS LOCATED OUTSIDE THE BOUNDARIES OF THE identical horizontal pipe will also span the stone outlet weir at the opposite end of the FINAL ROAD CONSTRUCTION PLAN GRAND TOTAL: 11,029' 2,284' 320 AIRPORT NOISE ZONE. ROCEDURE FOR INSTALLING AND REMOVING GRID WIRE SYSTEM PECORARO PROPERTY 5. THE ALLOWABLE HEIGHT FOR ANY PERMANENT OR TOTAL LENGTH OF GRIDWIRE 11,029 + 2 x 2,284 = 15,597 feet After each sediment trap is constructed, posts are placed five feet outside of the too edge of the traps, spaced five feet on center on the long side of the trap and ten feet TEMPORARY STRUCTURES TALLER THAN 277 FEET ABOVE MEAN AASCD/MAA NOTES & DETAILS on center on the short sides, leaving one twenty foot gap for the gate. After SEA LEVEL NEED OBSTRUCTION ANALYSIS REVIEW AND PERMIT FOR monitoring for effectiveness, installation of additional long spans may be ordered by MAA. Attach hooks to posts. Attach beams to posts straddling outlet weir and LOTS 1-3, OPEN SPACE LOT 4 & THE AIRPORT ZONE. access gate. Grid wires will then be sized and loops assembled according to nanufacturer's directions. Grid wires are then attached to posts starting with the NON BUILDABLE BULK PARCELS A & B - PHASE I long dimension first so that the longer wires will sag below the shorter strands. Wire lengths should be sized to allow them to be pulled tight with two feet sag in the POST DETAIL 6. THE STORM WATER MANAGEMENT FACILITIES WITHIN 10,000 FEET A RESUBDIVISION OF LOT 169, CANBURY WOODS OF ACTIVE RUNWAYS OR WITHIN 5 MILES OF AN middle of the spans. After the grid is in place, the two-strand perimeter fence can be TAX MAP 38 BLOCK 9 SECTION 2, AREA 2 APPROACH SURFACE MUST DRAIN WITHIN 24 HOURS MARYLAND DEPARTMENT OF TRANSPORTATION PARCEL P/O '886' When sediment needs to be cleaned out, disconnect and store the grid wires. This 1ST ELECTION DISTRICT STAKE THROUGH CONSTRUCTION -MARYLAND AVIATION ADMINISTRATION OFFICE OF PLANNING AND ENGINEERING FOLLOWING . THE 1 OR 2 YEAR STORM EVENTS AND WITHIN 48 MARYLAND AVIATION ADMINISTRATION OFFICE OF PLANNING AND ENGINEERING can be done with a two-man crew, one on either end of the wire. Each person shall HOWARD COUNTY, MARYLAND FENCE TO RESTRAIN IF SLOPE REF.: WP-05-75 (APP. 3/1/05) disconnect the wire from the hook at the same time, walk beyond the trap, holding HOURS FOLLOWING. THE 10 OR 100 YEAR STORM AIRFIELD PAVEMENT REHABILITATION 2000 IS GREATER THAN 5% the wire taut, and place the wire on the ground. The crew then moves to the next WATER FOWL DETERRENT SYSTEM FOR SECUMENT TRAPS wire and repeals the procedure until all the wires have been removed. Next, the ROBERT H. VOGEL WATER FOWL DETERMENT SYSTEM FOR SEDIMENT TRAPS crew shall remove the perimeter fence strands at the access gates as well as the twenty-one foot long horizontal beam. Contractor's equipment can then enter the trap to remove sediment. After sediment removal, the crew shall re-install grid assembly as described above. ENGINEERING, INC. ENGINEERS . SURVEYORS . PLANNERS PPROVED: DEPARTMENT OF PUBLIC WORKS 8407 Main Street Tel: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961 CONSTRUCTION FENCE FOR RESTRAINT AND AID IN LIFTING USED BAG **OWNER** TO HOLD ON SLOPES 12-1-10 OF MARY HEREBY CERTIFY THAT THESE DOCUMENTS CHIEF, BUREAU OF HIGHWAYS EMILYS DELIGHT LLC CUT OPEN CORNER OF WERE PREPARED OR APPROVED BY ME. AND 7310 ESQUIRE COURT, SUITE 10 HAT I AM A DULY LICENSED PROFESSIONAL BAG AND CLAMP ON NGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 ELKRIDGE, MARYLAND 21075 APPROVED: DEPARTMENT OF PLANNING AND ZONING DEWATERING HOSE (410) 379-8681 (PIRATION DATE: 09-27-2012 WATER AND CHECKED BY: SEDIMENT **DEVELOPER** FILTER FABRIC 12/09/10 (GEOTEXTILE F) CHIEF, DIVISION OF LAND DEVELOPMENT EMILYS DELIGHT LLC. AS SHOWN SCALE: FILTER BAG DETAIL 7310 ESQUIRE COURT, SUITE 10 ELKRIDGE, MARYLAND 21075 04-19.00 11 SHEET 14 (410) 379-8681 CHIEF. DEVELOPMENT ENGINEERING DIVISION (NOT TO SCALE)



Construction Period Supervision

As part of the construction period management and planting program, the developer shall designate an individual or firm to be fully responsible for implementing the requirements of the approved forest conservation plan or requesting modifications of previously approved requirements concerning planting techniques, species or maintenance needs. Those responsible for implementation of the approved forest conservation plan during the construction period shall conform to the professional qualifications cited in Chapter Vlofthis

Protecting and Managing Forest Retention Areas

Forest retention stands are extremely vulnerable to damage, long term decline, and death stemming from improper design and construction practices. Saving forests and specimen trees during the construction process requires site planning, engineering practices and construction methods that respect the biological needs of trees. A few fundamental horticultural principals are the basis of the protection guidelines and requirements cited in this manual:

- A tree's root system can be large, extending well beyond the dripline of the crown. Typically, root systems are very shallow, in most cases being only 12"
- Trees generally do not have tap roots. · There are about as many roots as there are twigs and branches. If roots die,
- branches will die to keep the tree in balance • Tree roots need a balance of water and air in the soil. Air only penetrates 12" - 18" into the soil. Stress and decline in tree health results when soil is piled on top of existing roots or roots are suddenly forced to sit in waterlogged soil or overly dry soils due to topography changes during construction.
- Soil compacted to bulk densities of 1.7 gram/cubic centimeters or greater cannot support root growth. Existing roots in heavily compacted soils usually die. Trees growing in disturbed or tilled soils usually die back in proportion to the
- zone for lawn installation will cause harm. Trees, especially large trees, may take a long time to show the effects of construction damage. Trees may die 5 or even 10 years after being

root area disturbed. Even minor disturbances such as tilling within the root

weakened by construction activity. Secondary stresses such as insects, disease, or drought may kill weakened trees while the same stress would not have affected a healthy tree.

Soil Protection Zone

The soil protection zone must be protected from construction activity and other stresses (e.g. flooding) to protect the forest stand from damage. The forest retention practices for a development must address the specific needs and stresses the proposal may cause. Nevertheless, the need to define the soil protection zone (critical root area) for forest areas is the one factor common to all retention efforts.

The extent of the root system is quite large. The ratio of root expansion to crown spread can be 2:1 or larger on open grown specimen trees and can be significantly larger (up to 5:1) for trees growing in the interior of forest stands. Furthermore, the minimum requirement for root protection varies from species to species and from soil type to soil type. For open grown trees, it is generally accepted that protecting the soil within the dripline of the tree is adequate to save the tree in most cases. For trees that have been part of forest communities, however, the soil protection zone may have to be modified to reflect a more complex relationship between crown spread and root growth. Techniques for management of the soil protection zone are described in detail in Appendix G.

Best Management Practices During Construction

Many of the construction period measures cited in the manual are for areas that should not be disturbed. The desire to protect areas within the limit of disturbance can be easily nullified by poor construction site management. The required construction period management program must therefore specify how construction activities will be managed to protect forest retention areas. The following should be depicted on site construction documents and/or forest conservation plans; they shall also be itemized in the developers

- storage of equipment and materials disposal of construction debris
- washing of equipment, disposal ofwastewater from concrete operations, etc.
- employee parking • temporary structures such as trailers, sanitary facilities, etc.

Unless specifically exempted by the approved forest conservation plan, any use of forest retention areas for these activities or other intrusions shall be a violation of the approved forest conservation plan

Because reforestation and afforestation typically may involve disturbances greater than 5,000 square feet, proper sediment and erosion controls may be required. Developers hould refer to the Howard County Soil Conservation District for current standards specifications and requirements. It may be necessary to protect forest retention areas from erosion and sedimentation caused by implementation of reforestation or afforestation plantings.

Construction Period Planting Procedures

The measures to protect forest retention areas emphasize isolating them from development impacts. Reforestation or afforestation, in contrast, will often occur on land already disturbed by development activities or may be located on land which will require substantial preparation to enable forest plantings to survive and thrive. Reforestation and afforestation plantings may also require a great deal of management once they are installed. Appendix H provides guideline specifications for proper planting, including techniques for site preparation and management. The following issues are of particular concern. Permenent forest conservation signage shall be installed prior to beginning any work. Temporary fencing must then be installed along the existing forest retention areas (In vicinity of the new planting areas only)

• General site preparation for planting: For undisturbed sites, disturbance of soils should be limited to the planting field for each plant. For disturbed areas, soils should be treated by incorporating natural mulch within the top 12 inches, or with needed amendments as determined by a soils analysis. Natural amendments such as organic mulch or leaf mold compost are preferred.

• Stream buffer planting: Borders of streams and other waterways may have been damaged before reforestation and afforestation and therefore may need more extensive restoration work before reforestation or afforestation can be successful. The following are guidelines for any work within a riparian zone.

-Correct any erosion problems Minimize or eliminate any chemical use -Maintain an undisturbed leaf layer and understory

• Construction staging areas shall be outside of all 100 year floodplain, streams wetlands & their buffers and existing forest conservation easements.

• Steep slope planting: In areas of steep slopes or erodible soils, the preferred method of reforestation or afforestation is the use of seedlings to minimize disturbance. Planting on open or disturbed steep slopes eventually will stabilize them. Until the roots become established, however, there may still be erosion problems. Monitoring the stability of the soil will be important to the survival of the trees.

• Post-planting Considerations: For areas of large-scale disturbance, soils must be stabilized using a non-turf-building ground cover or engineering fabric. To protect against intrusion and to prevent damage of planted areas, all reforestation and afforestation sites must be posted with appropriate signs

APPROVED: DEPARTMENT OF PLANNING AND ZONING







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Certification of Completion

At the end of the construction period, the designated qualified professional shall convey to the Department of Planning And Zoning certification that all forest retention areas have been preserved, all reforestation and afforestation plantings have been installed as required by the forest conservation plan, and that all protection measures required for the postconstruction period have been put in place. Appendix J contains a sample format for such certification. Planting must occur before June 30th to be credited toward the current

Upon review of the certification document for completeness and accuracy, the Department will notify the developer of the beginning of the post-construction management period.

POST-CONSTRUCTION MANAGEMENT PRACTICES

Remove any remaining temporary forest conservation fencing.

Many of the protection and management practices for the construction period must be continued for at least 2 growing seasons following official notification of completion of the development (ora specific phase of the overall development if phasing has been approved). The responsibility to meet the survival standards requires adequate watering, replanting, thinning or other appropriate measures. Also, inappropriate uses or intrusions must not occur, a responsibility that requires the knowledge and cooperation of the new occupants of the development.

Minimum Two Growing Season Post-Construction Management Program

A post-construction management program must be approved as part of the original forest conservation plan and remain in effect for a minimum of two growing seasons. A longer period may be required for specific strategies (e.g. natural regeneration near high use areas whose long-term viability may take longer to confirm.)

Implementation of the post-construction management program must be supervised by a qualified professional who should inspect the status of all forest retention, reforestation and afforestation areas at specified times during the life of the post construction agreement and who must certify that the required survival rates have been achieved in accordance with the agreement prior to release of bonds.

There are five primary components of the post-construction program: inspection, management of retained or new plantings, replacement ofdead or damaged material when necessary, education ofnew occupants of the development and final inspection and release of developer from additional responsibilities.

Inspection

Inspections should be carried out at the beginning and end of the growing season to pinpoint any problems, monitor survival rates, and specify remedial actions needed to correct existing problems. Appendix J has an example of an inspection report checklist

Management of Forest Conservation Areas

Post construction management includes; maintenance of all fences, signs or other devices delineating forest conservation areas and other measures. Such other measures include: needed watering; removal of dead or damaged material and control of undesirable competing species; thinning or pruning to encourage proper growth; fertilizing, if necessary and control of pests. Specific practices will depend on the weather prevailing during the post construction period, the types of plant material and planting methods used, and specific site conditions such as proximity to high use areas. It is the responsibility of the post-construction plan supervisor to take appropriate actions as needed. This manual, therefore, does not cite required measures. Survival success, not fulfillment of a given series of tasks, will be the measure of conformance to the needs of the post-construction

Newly planted trees, whether they are seedlings or 4" caliper transplants, have basic needs. Some of these needs can be met by nature alone; others may require human intervention. (The three most likely causes of death for newly planted trees are drought, competing vegetation and deer.) The basic maintenance regime should be determined by on-site environmental conditions, structure and nutrient content of soil, and rainfall. Understanding these factors and the specific needs of the species and size of plants used will result in a healthy forested area at the end of the maintenance period. AppendixH contains guideline specifications for maintenance of forest conservation areas and focuses on the following critical needs:

fertilizina

control of competing vegetation protection from pests, diseases and mechanical injury.

Replacement of Plant Material

An inspection shall take place at the end of year one or before the second growing season to evaluate survival rates with reference to the survival required at the end of the two year period. This is an opportunity to avoid the penalty for violating survival rate standards. This

inspection should estimate survival potential based on the following: vigor and threat of competing vegetation (i.e. if seedlings are free to grow structure

growth rate crown development trunk health

If, after one year, the possibility exists that the original planting will not meet survival standards, the applicant may choose to establish reinforcement plantings. If plant mortality of reforestation or afforestation exceeds 10% of planted material at the end of the first growing season, such material should be replaced to bring the total number of trees to 90% ofthe original total. Such material shall be installed by the beginning ofthe second growing season. If at the end of the second growing season, survival rate drops below 75%, such material as needed to guarantee an 75% survival rate by the end of the third growing season shall be installed.

Education of New Occupants

The occupants of a new development, whether owners or tenants, must avoid activities that destroy or degrade protected forest resources. The post-construction management program must therefore include steps to educate the new occupants about the proper use of forest conservation areas, about the need for the developer to carry out the postconstruction management program, and the eventual transfer of long-term responsibilities to the owners or occupants. Such educational material should include a plan locating all protected areas on the site and a description of permitted and prohibited activities within or affecting such areas. The format and method of conveying such information is left to the discretion of the developer.

Final Inspection and Release of Obligations

At the end of the post-construction management and protection period, the designated responsible professional shall convey to the Department of Planning and Zoning certification that all forest conservation areas have remained intact or have been restored to the appropriate condition, that the stipulated survival rates have been achieved, and that any permanent protection measures required by the plan are in place. Appendix J contains a sample format for such certification.

Upon review of the final certification document for completeness and accuracy, the County will notify the developer of release of surety and all future obligations. The developer's last official responsibility will be to transmit a copy of this notification to the owner(s) of the property(ies). Such transmittal will serve as official notice to owners of their assumption of full responsibility for all future forest conservation obligations.

LONG-TERM MANAGEMENT RESPONSIBILITIES

To maintain the integrity of forest conservation areas, the owners must refrain from any activities that would diminish the viability and environmental integrity of forest retention areas or hinder the growth and maturing of new forest plantings. When the site is occupied by tenants, the owner must insure that the tenants do not, willfully or out of ignorance, use the site in ways that violate forest conservation restrictions or damage protected forest resources. Depending on the location, as well as the size and type of plant material, some maintenance is very beneficial, particularly in the early years. In all instances, State law requires that noxious weeds be controlled

In many developments a homeowners association, tenants association or other management organization will maintain the site. Such a group is well suited to assume explicit responsibility for protecting the integrity offorest conservation areas and performing any desired maintenance after the initial developer guarantees and obligations have expired. Responsibility for ensuring that all provisions of the conservation easement are adhered to, however, ultimately belong to the property owner(s).

NO AS BUILT INFORMATION IS PROVIDED ON THIS SHEET

tofessional Certification, I hereby certify that these documents were prepared or approved by me, and first I am a duly licensed professional engineer under the least

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PLANTING AND MAINTENANCE GUIDELINES

SITE PREPARATION FOR PLANTING

Undisturbed Sites Soils disturbance should be limited to the planting field for each plant. Planting field is a new term that reflects a change in recommended planting specifications. Research has shown that root systems of trees planted in the traditional holes with amended soils are likely to remain confined to the amended soil area. Such trees have lower survival rates A planting field of radius = 5 x diameter of the root ball is recommended On steep slopes or erodible soils, soil disturbance should be limited to the planting field whose radius is equal to 2.5 diameter of the root ball.

Disturbed Areas

Soils should be treated by incorporating natural mulch within the top 12 inches or by amendments as determined by a soils analysis. Soil amendments, by definition, include modifications of soils to improve such structural characteristics as bulk density or porosity. On development sites, the common use of fill materials may increase the need for such amendments. Natural amendments such as organic mulch or leaf mold compost are

When fill material is used at the planting site, it should be clean fill topped with 12 inches of native soil. Stockpiling of native top soils must be done in such away that the height of the pile does not damage the seed bank.

Planting period

Planting windows are the time during the year when, depending on the size stock being used, planting windows differ. Recommended planting windows are shown in Exhibit H-1.

Planting should occur within 24 hours of delivery to the site. Plant materials left unplanted for more than 24 hours should be protected from direct sun and weather and kept moist. Bare root stock unplanted for more than 24 hours should be heeled in as shown in Exhibit H-2 Nursery stock should be planted within 2 weeks. On-site or local transplanted materials should be stored in tree banks if unplanted for more than 24 hours, following the example in Exhibit H-3.

On Site Inspection

Planting stock should be inspected prior to planting. Plants not conforming to standard nurseryman specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced.

PLANT MATERIAL SIZE AND DENSITY

Nursery grown plant materials greater than 1" caliper should meet or exceed the requirements of American Association of Nurserymen specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well furnished root systems, and be free of disease, insect pests and mechanical injuries.

Planting stock less than 1" caliper should meet the following standards:

Seedlings/whips: hardwoods: 1/4" to 1/2" caliper with roots no less than 8" long 1/8" to 1/4" caliper with roots not less than 8" long and top height of 6" or more

1/8" or larger caliper with 8" root system

Plant Density

The following densities are required for reforestation and afforestation plant materials:

- 100 2" caliper trees/acre (20' x 20' spacing) 200 1" caliper trees/acre (15' x 15' spacing)
- 350 hardwood seedlings or whips/acre with tree shelters (11' x 11' spacing) 700 seedlings/acre (8' x 8' spacing)

The spacings identified above are not meant to imply that trees must be planted in a grid

pattern. A more natural appearance is desired. PLANT INSTALLATION

SeedlingslWhips

Small stock, such as seedlings and whips, and ball and burlap stock up to 2" caliper, can be planted by manual methods of planting using shovels, planting or dibble bars, and mattocks (See Exhibit H-4). For large areas, planting machines are occasionally used but have the drawback of creating linear, plantation-type forests.

Extreme care should be taken to insure retained moisture of the roots. When planting seedlings and whips, a moist carrying container should be used to prevent desiccation (See Exhibit H-S). For greater protection, seedlings may be planted with tree shelters. Areas planted with seedlings or whips should be mulched after planting as shown in

Container Grown Stock

Successful planting of container grQwn stock requires careful site preparation and inspection of the plant material rOQt system. Caution when using plants grQwn in a soil medium differing from the soil on the planting site. The plant should be removed from the container and the roots gently loosened frQm the soil. If the roQts encircle the root ball, substitution is strQngly recommended. J-shaped Qr kinked root systems shQuld alsQ be noted, and the plants replaced if necessary. Roots may not be trimmed on-site, due tQ the increased chances of soil borne diseases. (See Exhibit H-7.)

Balled and Burlapped Trees

Balled and bUrlapped trees greater than 2" caliper) and usually planted using tree spades. This technique is particularly when suited for transplanting Qn-site Qr with IQcal plant materials. For trees larger than 6" caliper, specialized equipment is recommended. Balled and burlapped trees must be handled with care while planting. Trees should not be picked up by the truck Qr dropped; both these practices may separate the trunk from the roQt ball. PriortQ planting, rOQt balls should be kept moist. (See Exhibit H-7.)

Planting fields

The planting field should be prepared and native stockpiled soils should be used tQ backfill the planting field. Rake SQils evenly Qver the planting field and cover with 2 to 4 inches Qf mulch. Use watering to settle soil backfilled arQund trees. Amendments are nQt recQmmended in the planting field; studies have shQwn that roots will be encouraged to stay within the amended SQils.

Staking of larger trees is not recommended except in areas of high winds. Staking may be used for trees larger than 8 feet in height. Movement is necessary to strengthen the trunk of the planted tree. When stakes are used, the post-construction period management plan should specify their removal after the first growing season (See Exhibit

GENERAL GUIDANCE FOR MAINTENANCE OF PLANTED AREAS

A watering plan should only be implemented to compensate for deficient rainfall patterns. Trees can die from too much water as well as too little. Newly planted trees may need water as much as once a week for the entire first growing season. The next two years, in contrast, may require watering only a few times a year (one a month during July and August). After that, trees should only need water in severe droughts. Bare root transplants, if sufficiently watered during planting, may not need water for almost 2-4 weeks after growth begins. Balled and burlap material may require more frequent

Soil and Watering: Soil texture influences the downward flow of water. Soils with more clay tend to retain more water and can be watered less often; soils with more sand drain more quickly and need to be watered more often. For examples of on-site evaluation recommendations. If the soil was well prepared before planting, there should be few drainage problems. Restricted downward penetration indicates the soil may have been compacted during construction and not aerated before planting, or there may be a clay

How to Water. The best way to water is deeply and slowly using a regular hose, a soaker hose, or drip irrigation. For larger trees, start by watering the root ball thoroughly. The watered area shall be enlarged to include the whole root zone as the tree becomes more established. Mulching around the base of newly transplanted trees prevents roots from drying too quickly while still providing air movement to the roots.

Fertilizing is the chemical modification of soils to correct for a specific nutrient deficiency These deficiencies are most effectively identified in a laboratory soils analysis. Nothing should be added to the soil without first testing to determine any nutrient needs.

What Nutrients to Apply: Trees depend on three major nutrients, nitrogen, phosphorus, and potassium and a host of other minor ones (or micronutrients) such as calcium, magnesium and iron. In most soils, most of the micronutrients are available in abundance. Of the major nutrients, nitrogen is usually the limiting one.

When to Fertilize: Even when soils are deficient in nitrogen, fertilizing within the first growing season after planting is not recommended. Too much nitrogen may cause a spurt of canopy growth which the roots cannot support. It is, therefore, best to wait until after the end of the first growing season, either in the late fall or early spring.

What Type of Fertilizer: Organic fertilizers are preferred to synthetic fertilizers. Bone meal or seaweed based products are available commercially. Organic fertilizers have a slowrelease effect that can supply nutrients to the plant as needed while minimizing the risk of excess nutrients entering the forest system and the water supply. Some synthetic fertilizers can mimic this slow-release action and may be appropriate for use.

Control of Competing Vegetation

Unfortunately, good sites for reforestation and afforestation are generally good sites for unwanted vegetation as well. Unwanted vegetation growing near newly planted trees can take over the site. The need to control this problem depends on the ability of the planted material to withstand the intrusion. Smaller trees may need more care, although some seedlings survive with the overgrowth and will shade it out as the trees grow. As a preventative measure, consider the potential for growth of invasive species while choosing a reforestation or afforestation area.

Mulch is one of the best weed deterrents. Spread a 2" to 4" layer of mulch over the root area of the newly planted trees avoiding direct contact with the trunk, a prime spot for fungal growth. (Mulch also helps maintain the soil moisture level and may provide a buffer for any equipment such as mowers that may be used to maintain the area.) Mulching and manual control of competing vegetation is more compatible with the long term forest health than the use of herbicides.

Protection: Pests, Diseases and Mechanical Injury,

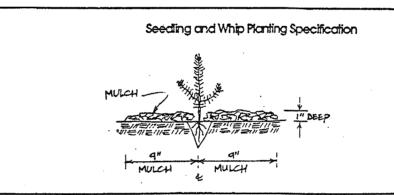
establishment or spreading of disease.

Integrated Pest Management (IPM) is one of the most effective and safest approaches for maintaining a healthy forest. IPM basics include proper species selection for the site. good pruning, mulching and fertilizing practices, regular monitoring, and proper timing of necessary sprays. Good cultural practices will minimize the amount of spraying. ProfessionalIPM programs have reduced pesticide use by 90%. Some aspects of a full IPM program inClude:

1) Elimination of some low vegetation before planting to help control the rodent population which thrives in brushy environments. 2) Use of tree shelters to protect the trunks of seedlings or whips from animal damage. The shelters act as mini-greenhouses to speed growth. (These trees need more water than those planted without tree shelters, however.) 3) Mulching around the trees to minimize trunk damage from mowers. Wounds provide an entry way for pests. 4) Pruning dead and diseased branches with a clean cut to prevent

Sunscald is a problem for thin barked young trees. Tree wrap was commonly used to protect trees from sunscald but is no longer recommended due to the increased opportunities for insect infestation and disease. An alternative to wrapping is to allow small non-competitive branches, commonly pruned during or before planting, to grow on the sunny side of the trunk to help shade the trunk.

EXHIBIT H - 6



Mulahing newly planted seedlings is suggested as it helps the soil retain mosture and it protects the seedling

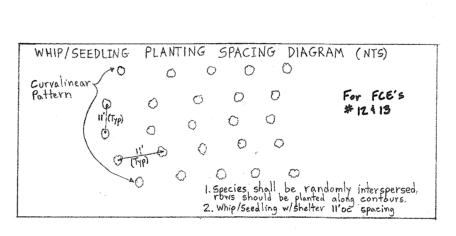


EXHIBIT H - 4

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Seedings and whips need special care when planted. Figure 3.6.5 details the recommended manual planting procedures which include correct planting depths (b) as well as methods for two different planting

a. Dibble Planting

1 Frank dibbs of chops shown 2 Remove dibbs and place dispose and plas forward to seading of corect usingst position dispose.

7 Pull-loward then pull 8 FB in tall note by stamping backward filtra note with heat

c. Mattock Planting

5-24-16 REVISE SHEET NO TO 13 OF 14

SECTION AND

5 Push narrate of classes forward from planter firming solids top of to

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Seedling Planting Methods

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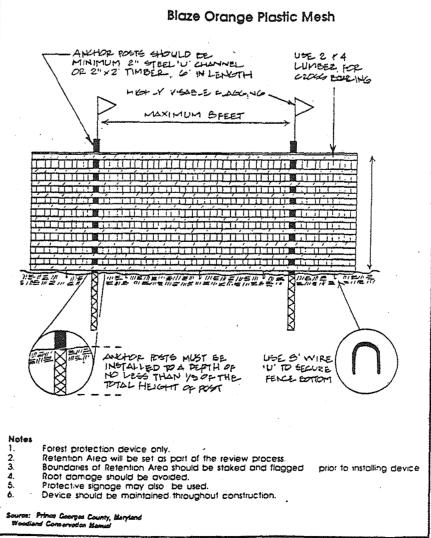
Planting Depths

Cornect
At some paper or 1/2 despefrom meding grow in run

Incorrect Too been and soon pers

General Guidelines J F M A M J J A S O N D NOT RECOMMENDED Inspection Fertilizer * (if needed) N. R. NOT RECOMMENDED Water *

The planting and care of trees is most successful when coordinated with the local climatic conditions. This calendar summarizes some of the recommended time frames for basic refores-



KEY NO. BOTANICAL NO. Trees AREA (Ac) COMMON NAM per Easement Larger Caliper Stock for Perimeter Planting (FCE # 14 Only) 0.18365 Acer rubrum 2" Caliper #14- 20, 2" Caliper Red Maple 0.1745 Quercus palustris 2" Caliper #14 - 19, 2" Caliper Pin Oak Whips with Shelters (FCE #12, #13, & #14) 92 N/A Acer rubrum 18" - 24" Ht. |#12 = 46 whips 0.1314 0.0826 Red Maple #13 = 29 whips0.0486 #14 = 17 whips 18" - 24" Ht. |#12 = 46 whips 92 0.1314 N/A Quercus palustris 0.0826 Pin Oak #13 = 29 whips0.0486 #14 = 17 whips 18" - 24" Ht. |#12 = 46 whips 0.1314 92 American sycamore 0.0826 #13 = 29 whipsPlantanus occidentalis 0.0486 #14 = 17 whips 18" - 24" Ht. | #12 = 46 whips 92 0.1314 N/A Fagus grandifolia American Beech #13 = 29 Whips0.0826 0.0486 #14 = 17 whips 18" - 24" Ht. #12 = 46 whips 0.1314 N/A 92 Black Gum 0.0826 #13 = 29 whipsNyssa sylvatica 0.0486 #14 = 17 whips87 Cornus florida 'rubra' 18" - 24" Ht. |#12 = 47 whips 0.1343 0.0743 #13 = 26 whips0.0400 #14 = 14 whipsTotal 2" Caliper Stock= 39 Trees Total Planting Area: 1.92 Ac.

PLANTING SCHEDULE

Total whips w/ Shelters = 547 Trees Total Number of Trees to Be Planted = 586 Trees

1 Total Planting Requirement: 1.92 Ac+-2" Caliper Stock: 100 trees / Ac. x 0.3582 Ac. (perimeter of FCE # 14) = 39

> and a 0.2835 Ac. portion of FCE #14). Total Number of Trees Required: 586 Trees **Total Number of Trees Provided: 586 Trees**

2 Spacing: 2" Caliper stock: 20' x 20'

whips w/ shelters: 11' x 11' 3 Planting Distribution: FCE #12 = 277 whips w/ shelters

FCE #13 = 171 whips w/ shelters

Whips w/ shelters: 350 trees / Ac. x 1.562 Ac. = 547 (All of FCE #12, #13

FCE #14 = 39, 2" Caliper Trees (perimeter / edge)

FCE #14 = 99 whips w/ shelters 4 All trees shall be planted in a random curvilinear pattern

5 All stock shall originate a minimum of 100 miles from the subject site.

Planting Notes:

- Planting density based spacing requirements: 2" caliper trees @ 20' on center, 1" caliper trees @ 15' on center, whips with shelter @ 11' on center.
- ** These species should not be planted within the wetland limits.
- 1" caliper trees should be staggered along the outer perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing.
- Planting shall be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance
- Multiflora rose/heavy brush removal/control may be required prior to installation of planting.
- All whips are required to be installed with tree shelters per Howard County FCA Planting units defined by the spacing requirements established in the FCA Manual. One plant unit is defined as 1 seedling or whip without shelter. The Manual states that 700 seedlings/whips without shelters are required per acre, or 350 whips w/shelters, or 200 1" caliper trees, or 100 2" caliper trees. By conversion it has been
- simplifies the plant density calculations when mixing stock size. • The Forest Conservation afforestation easement is being proposed to satisfy a portion of the
- The forest conservation easement has been established to fufill the requirements of Section 16.1209 of the Howard County Code and the Forest Conservation Manual. 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

OWNERS:

Brantwood – Section 3 – Area I Nicholas F. Liparini & Cynthia Y. Liparini 11363 Cotswold Spring Farm Lane Ellicott City, MD 21012

Engineers, Surveyors, Planners 9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045 (410)715-1070 - (301)596-3424 - FAX(410)715-9540 OFFSITE AFFORESTATION PLANTING NOTES, DETAILS AND SCHEDULES FOREST CONSERVATION PLANTING PLAN PECORARO PROPERTY (E-10-32) BRANTWOOD SECTION THREE-AREA ONE BUILDABLE PRESERVATION PARCEL "C"

DRAWN 13 OF 14 A Revision of part of Brantwood – Section Three, Area One Preservation Parcel "C" Plat No.'s 14874 \$ 14879 HECKED PROFESSIONAL CERTIFICATION: Tax Map No. 16 - P/O Parcel 441 3rd Election District - Howard County, Maryland Previous Submittals: WP 90-96, F 90-128,WP 99-55, S 99-09, WP 00-55, P 00-03, F01-67, F 10-032, F 08-122 10-004 FILE NO. THE LIPARINI COMPANY F10-032 8/2010 7310 ESQUIRE COURT-SUITE 10

 Drive stake into ground approximately 1-1/2" from the base of the seedling or whip, to a depth of 12 inches. NOTE: in open flelds drive the stake on windward side of the seedling or whip. In shaded conditions, drive the stake on the north side of the seedling or whip.

WIND

4. Slip the tree shelter over the plant. Do not damage the terminal bud or root collar of the plant.

5. With the flared end of the shelter on top and before tightening the ties, use a block of wood and hammer to seat the base of the

shelter into the ground. The shelter must be seated at least one Inch below ground surface. 6. Tighten the ties to secure the shelter to the stake.

1. When using tree shelters the number of plants per acre is

2. If necessary, trim seedlings or whips to a single leader.

7. Install poly netting over the top opening of the shelter to Note: Contractor to follow manufacturer installation procedures

THE NETTING SHOULD EXTEND 7-8 INCHES DOWN THE TUBE PREVENT ACCIDENTAL REMOVAL

Min 11"-Forest **Conservation Area** REFORESTATION Min 15" **PROJECT**

EXHIBIT H - 1

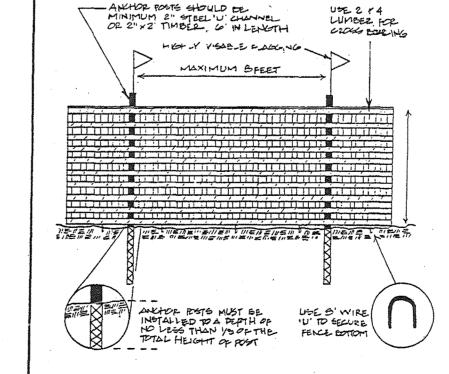
Trees for Your

Future

Tree Planting and Maintenance Calendar recommended with additional care - dependant upon site conditions

lote: Activities during November through February are dependant upon ground condition

EXHIBIT G - 12



Steve Heiss, Qualified Professional, MDFCA

ELKRIDGE, MD 21075 AS-BUILT

AS SHOWN

determined that a seeding or whip without shelter = 1 unit, whip with shelter = 2

obligation for the Pecoraro Propoerty, F-10-032

units, 1"caliper tree = 3.5 units and 2" caliper tree =7 units. The use of plant units

Buildable Preservation : El C

LDE Inc.

F10-032

