

GENERAL NOTES

- PROJECT BACKGROUND:
 - LOCATION: TAX MAP 34 GRID 3
 - PARCELS: 414
 - ZONING: R-20
 - SUBDIVISION: JACK'S LANDING
 - GROSS AREA: 25.81 AC.
 - DISTURBED AREA: 2.59 AC.
 - AREA OF PLAN SUBMISSION: 25.81 AC.
 - MINIMUM LOT SIZE: 40,000 SF
 - PROPOSED USE FOR SITE: RESIDENTIAL
 - TOTAL NUMBER OF UNITS: 9
 - TYPE OF PROPOSED UNIT: SFD
 - DEED REFERENCES: L-3172/F.336
 - DPZ REFERENCES: F-08-101, SP-06-14, BA-89-45E, WP-13-184, WP-10-25, WP-11-093, WP-12-096, WP-13-112
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE UNLESS WAIVERS HAVE BEEN APPROVED. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 - MISS UTILITIES: 1-800-257-7777
 - VERIZON TELEPHONE COMPANY: 1-410-954-6281
 - HOWARD COUNTY BUREAU OF UTILITIES: 410-313-2366
 - AT&T CABLE LOCATION DIVISION: 1-800-593-3553
 - B.G.&E. CO. CONTRACTOR SERVICES: 410-850-4620
 - B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 410-787-4620
 - STATE HIGHWAY ADMINISTRATION: 410-531-5533
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- 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.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED NOVEMBER 2013.
- 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 NO. 348B AND 348C WERE USED FOR THIS PROJECT.
- THE SUBJECT PROPERTY IS ZONED RR-DEO IN ACCORDANCE WITH THE 2-02-04 COMPREHENSIVE ZONING COMP LITE ZONING REGULATIONS EFFECTIVE ON 7/26/2006.
- TOPOGRAPHY SHOWN HEREON IS OBTAINED FROM CURRENT HOWARD COUNTY GIS DATA.
- EXISTING UTILITIES LOCATED AND SHOWN ON THESE DRAWINGS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS, 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. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEB SOIL SURVEY, HOWARD COUNTY MARYLAND.
- THE EXISTING DWELLING AND ACCESSORY STRUCTURES ON THE SITE WILL BE ABANDONED AND REMOVED PRIOR TO RECORDATION OF THE FINAL PLAT.
- THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETERIES LOCATED ON THE SUBJECT PROPERTY.
- A FLOODPLAIN REPORT FOR THIS PROJECT WAS PREPARED BY CAPITOL DEVELOPMENT DESIGN, INC. JULY 3, 2006.
- NO STEEP SLOPES OVER 20.00% OF CONTIGUOUS ARE LOCATED ON SITE.
- A TRAFFIC STUDY HAS BEEN PREPARED BY THE TRAFFIC GROUP, 2005.
- NEITHER TRIADELPHIA MILL ROAD OR HIGHLAND ROAD IS A SCENIC ROAD.
- TRIADELPHIA MILL ROAD IS CLASSIFIED AS A MINOR COLLECTOR. HIGHLAND ROAD IS CLASSIFIED AS A MAJOR COLLECTOR.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SUBDIVISION.
- STREET LIGHTS ARE NOT REQUIRED FOR THIS DEVELOPMENT.
- ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.06
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE) (18' FOR USE-IN-COMMON ASSOCIATED WITH THIS PROJECT. SEE GENERAL NOTE NUMBER 38)
 - 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 ENSURE ALL WEATHER USE
- THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER AND SEWER FOR THIS PROJECT WILL BE PRIVATE WELLS & SEPTIC SYSTEMS.
- A REVISED PERCOLATION CERTIFICATION PLAN WAS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED AUGUST 2013, AND APPROVED BY THE HOWARD COUNTY HEALTH DEPARTMENT ON 08/29/2013.
- THE PROPOSED DWELLINGS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- WETLANDS AND STREAMS SHOWN HEREON ARE BASED ON A FIELD INVESTIGATION PREPARED BY BRAY HILL, LLC. DATED JANUARY 2006. THERE ARE NO PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.
- THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL NOT AFFECT ENVIRONMENTAL FEATURES OR BUFFERS.
- FOREST STAND DELINEATION AND SPECIEN TREES ARE SHOWN HEREON PER PLAN BY CAPITOL DEVELOPMENT DESIGN, INC. DATED OCTOBER 6, 2006.
- FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT WILL BE FULFILLED BY ON-SITE AFForestation OF 5.03 ACRES WHICH IS SUFFICIENT TO MEET THE BREAK-EVEN POINT OF \$109,504 (\$19,008 x 0.50) WILL BE POSTED AS PART OF DEPARTMENT OF PUBLIC WORKS DEVELOPER'S AGREEMENT TO THIS PLAN.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY FOR THE PERIMETER LANDSCAPING IN THE AMOUNT OF \$21,750.00 FOR THE REQUIRED 52 SHADE TREES (\$15,600), 40 EVERGREENS (\$6,000) AND 5 SHRUBS (\$150 - TRASH PAD) SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS PLAN.
- IN ACCORDANCE WITH SECTION 16.124(E) STREET TREES ARE NOT REQUIRED ALONG TRIADELPHIA MILL ROAD OR HIGHLAND ROAD AS NO IMPROVEMENTS ARE PROPOSED. NO INTERNAL STREETS ARE PROPOSED. A PRIVATE RANGE OF ADDRESS SIGNS SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPER'S/OWNER'S EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-343-2430 FOR DETAILS AND COST ESTIMATES.
- TRASH AND RECYCLING COLLECTION WILL BE AT TRIADELPHIA MILL ROAD WITHIN 5' OF THE EDGE OF THE COUNTY ROADWAY.
- STORMWATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING: ROOFTOP & NON-ROOFTOP DISCONNECTIONS, A BIO-SWALE, RAIN GARDENS, GRASS SWALES AND DETENTIONS AND A MICRO-BIORETENTION.
- ALL PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED.
- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER OF DESIGN MANUAL VOLUME III, SECTION 2.6.A TO ALLOW MORE THAN 6 USERS TO SHARE A SINGLE USE-IN-COMMON DRIVEWAY. ON OCTOBER 10, 2013, THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION APPROVED THE REQUEST BASED UPON JUSTIFICATION PROVIDED IN THE WAIVER REQUEST LETTER AND THE FACT THAT THE GRANTING OF SAID REQUEST WILL NOT IMPACT THE COUNTY'S EXISTING AND FUTURE INFRA-STRUCTURE SYSTEMS. SUBJECT TO AN 18' PAVING WIDTH WITH FLUSH CONCRETE CURB IN A 40 FOOT USE-IN-COMMON ACCESS EASEMENT.
- THIS PLAN IS SUBJECT TO WAIVER PETITION #WP-13-184 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.144(R)(3), REQUIRING THE SUBMISSION OF REVISED PLANS WITHIN 45 DAYS OF REQUEST OR THE FINAL PLAN FOR F-08-101/DUNFARMIN ESTATES SHALL BECOME VOID SUBJECT TO THE FOLLOWING CONDITIONS:
 - THIS DEPARTMENT WILL GRANT A 6 MONTH EXTENSION FROM THE JUNE 30, 2013, DEADLINE BY WHICH TO SUBMIT REVISED PLANS FOR F-08-101. THE NEW DEADLINE DATE BY WHICH TO SUBMIT REVISED PLANS IS ON OR BEFORE JANUARY 6, 2014.
 - COMPLIANCE WITH THE ATTACHED COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION DATED JULY 9, 2013. THIS SUBDIVISION MUST BE REDESIGNED TO MEET NEW STORMWATER MANAGEMENT REQUIREMENTS.
- BUILDABLE PRESERVATION PARCEL 'A' IS INTENDED TO PROTECT THE EXISTING POND, STREAM AND WETLANDS AND ASSOCIATED BUFFERS AND ESTABLISH FOREST PRESERVATION.
- THE USE-IN-COMMON MAINTENANCE AGREEMENT FOR LOTS 1 TO 8, LOTS 1 TO 3 AND LOTS 4 AND 5 SHALL BE RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MD SIMULTANEOUSLY WITH THE PLAT.
- EG&E HAS REVIEWED AND APPROVED THE PROPOSED TRASH PAD SCREENING AND PERIMETER TREE PLANTINGS. ALL EXISTING WELLS AND ON-SITE SEWAGE DISPOSAL SYSTEM COMPONENTS MUST BE PROPERLY ABANDONED AND NOTIFICATION OF SUCH SUBMITTED TO THE HEALTH DEPARTMENT PRIOR TO HEALTH SIGNATURE OF THE FINAL RECORD PLAT.
- ALL WELLS MUST BE DRILLED PRIOR TO HEALTH SIGNATURE OF THE FINAL RECORD PLAT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Robert H. Vogel 7-8-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION J.R. DATE

Robert H. Vogel 7-9-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

LOT TABULATION

TOTAL NO. OF PROPOSED LOTS/PARCELS: 10

- LOTS 1-8
- BUILDABLE PRESERVATION PARCEL A
- NON-BUILDABLE PRESERVATION PARCEL C

TOTAL NO. OF DWELLING UNITS: 9

TOTAL NO. OF SINGLE FAMILY DETACHED: 9

8	REVISED HOUSE TYPE, LOT-B	7/10/12
No.	REVISIONS CONTINUED	DATE

SUPPLEMENTAL INFORMATION PLAN

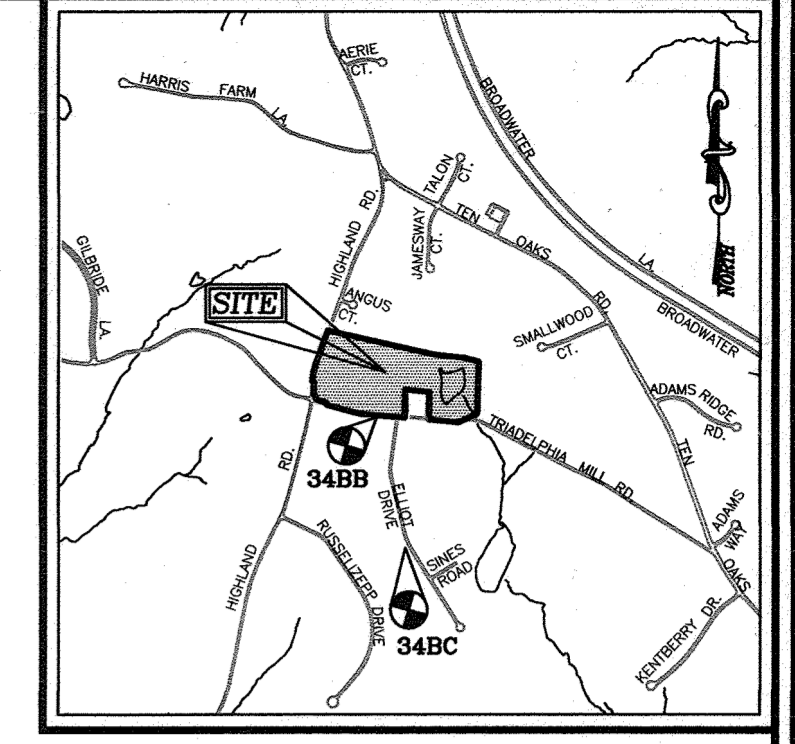
JACK'S LANDING

LOTS 1-8, BUILDABLE PRESERVATION PARCEL A, AND NON-BUILDABLE PRESERVATION PARCEL C

A SUBDIVISION OF TAX MAP 34 PARCEL 414 (L. 3172 / F. 336)

COORDINATE TABLE

NO.	NORTH	EAST
100	564164.76	1320101.32
104	563933.93	1320596.78
106	564514.92	1320465.39
107	564474.86	1320511.96
125	564185.63	1319851.83
201	563848.91	1320405.75
202	563874.46	1320098.68
203	563895.24	1319849.10
204	563933.66	1319387.50
205	564025.22	1319033.64
206	564046.72	1319038.79
207	564085.41	1318930.29
208	564110.06	1318920.52
209	564130.33	1318903.66
210	564152.96	1318900.84
211	564266.49	1318905.25
212	564269.29	1318887.35
213	564357.15	1318898.21
214	564438.77	1318924.35
215	564799.19	1319043.76
216	564551.85	1320136.43

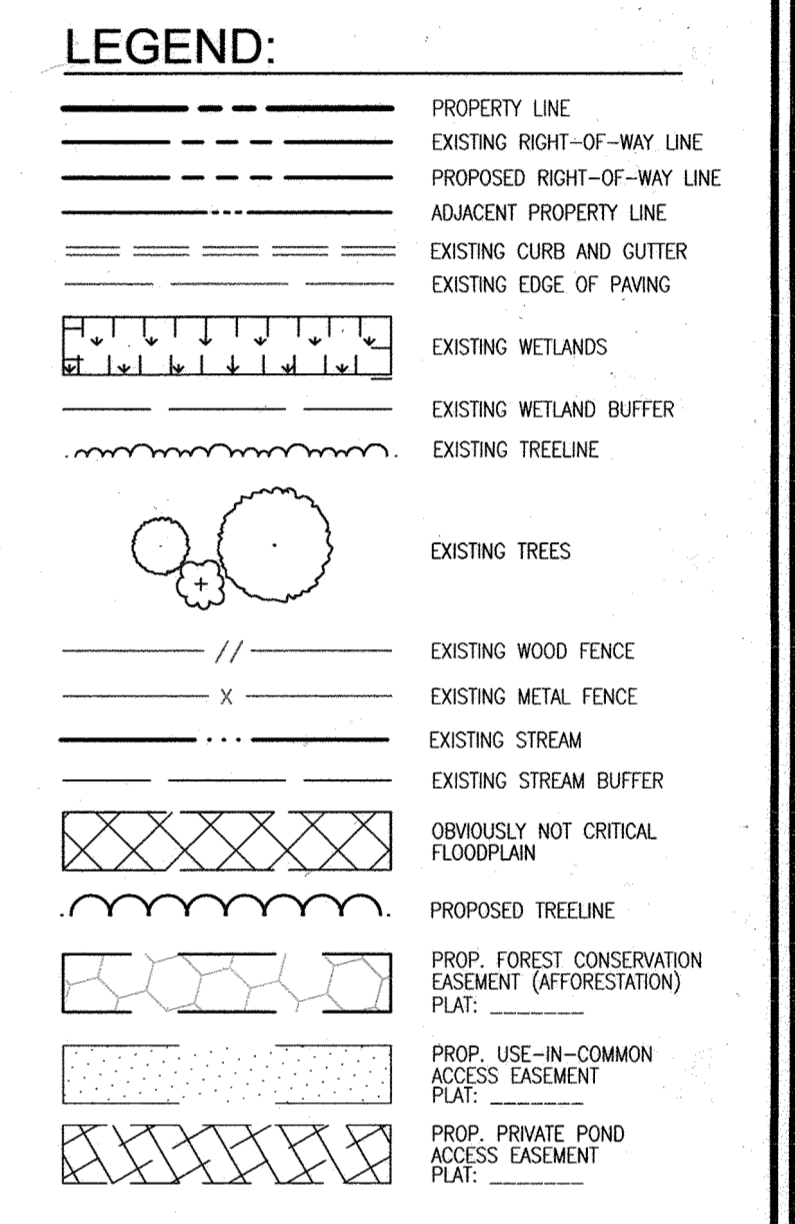


VICINITY MAP
 SCALE: 1"=2,000'
 ADC MAP COORDINATE: 4933, D6 & E6

BENCHMARKS

HOWARD COUNTY BENCHMARK 348B (CONC. MON.)
 N 563,899.932' E 131,950.973' ELEV. 555.29'
 SOUTH SIDE TRIADELPHIA MILL ROAD, APPROX. 13' EAST OF CENTERLINE OF DRIVEWAY FOR HOUSE # 13295.

HOWARD COUNTY BENCHMARK 348C (CONC. MON.)
 N 562,546.500' E 1,319,851.319' ELEV. 529.572'
 SOUTH SIDE OF ELLIOTT DRIVE, EAST OF CENTERLINE FOR THE DRIVEWAY FOR HOUSE NUMBER 13318.



OWNER
 MARTY A. HOWARD
 P.O. BOX 740
 CLARKSVILLE, MD 21029

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MD 21042
 ATTN: MR. DONALD R. REUWER (443) 367-0422

NO.	REVISION	DATE
7	REVISE SWM AND HOUSE TYPE FOR LOT-B	7/15/12
6	REVISE SWM AND HOUSE TYPE FOR LOTS 6 AND 7	2/15/12
5	REVISE SWM AND HOUSE TYPE FOR LOT-5	10/15/11
4	REVISE SWM AND SEWAGE DISPOSAL AREA FOR LOT-4	8-14-11
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-3 AND NON-BUILDABLE PRESERVATION PARCEL-B	11-15-11
2	REVISE PLANS TO REVISE LOT 4	9/20/11

Revised SUPPLEMENTAL INFORMATION PLAN

COVER SHEET

JACK'S LANDING
 LOTS 1-8, BUILDABLE PRESERVATION PARCEL A AND NON-BUILDABLE PRESERVATION PARCEL C
 A SUBDIVISION OF TAX MAP 34 PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03
 5TH ELECTION DISTRICT

PARCELS: 414
 ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS

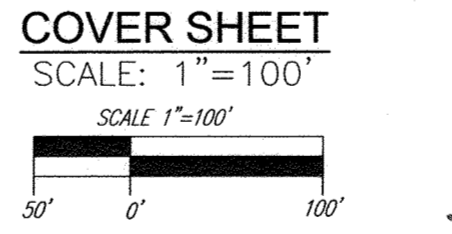
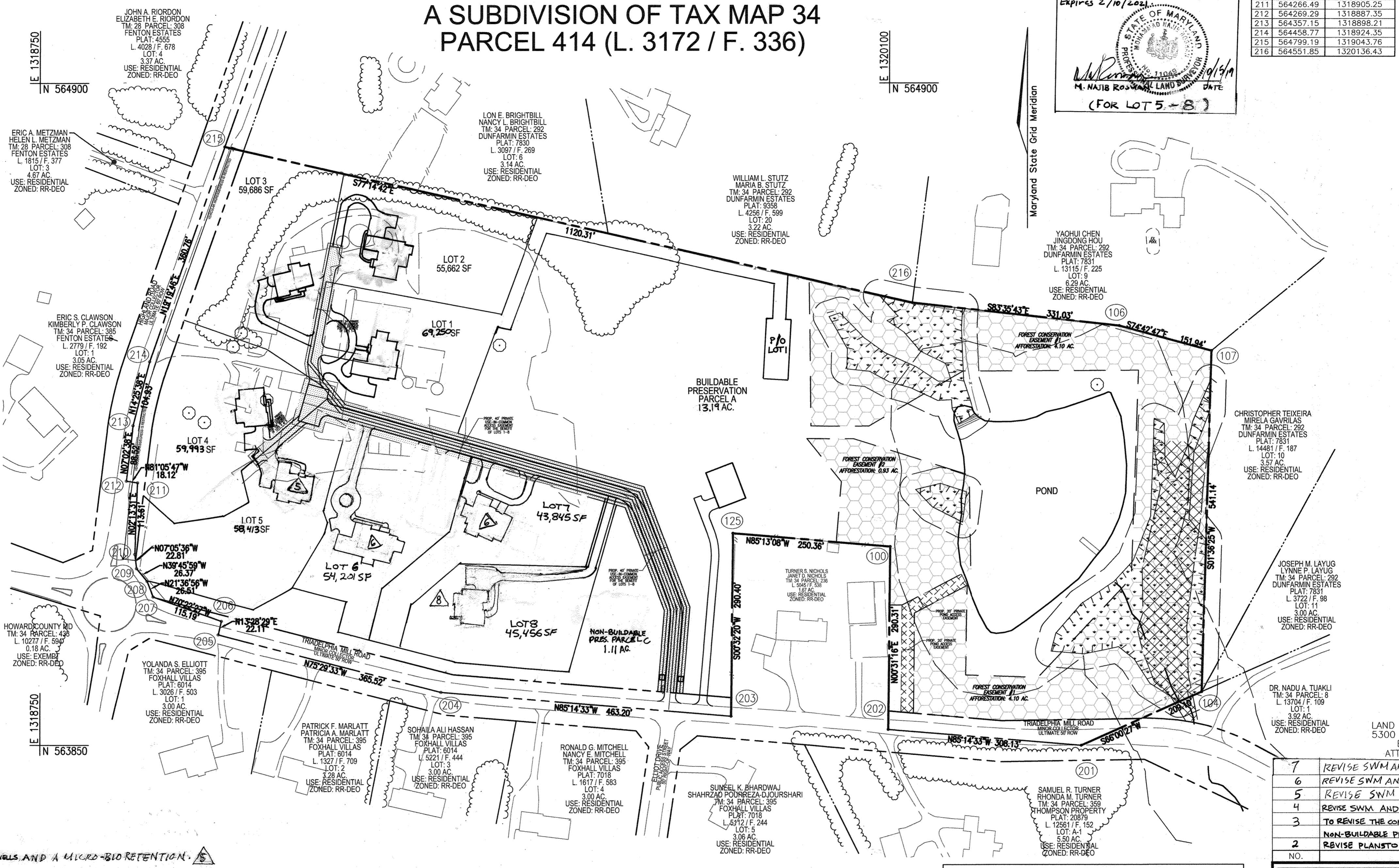
8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE JURISDICTION OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2014

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: MARCH 2014
 SCALE: AS SHOWN
 W.O. NO.: 13-31

1 SHEET OF 12



MINIMUM LOT SIZE CHART

LOT	GROSS AREA	PIPESTEM AREA	NET AREA	MIN. LOT SIZE
1	69,250 SF	3,235 SF	66,015 SF	40,000 SF
2	55,662 SF	5,227 SF	50,435 SF	40,000 SF
3	59,686 SF	4,341 SF	55,345 SF	40,000 SF
4	59,913 SF	4,214 SF	55,719 SF	40,000 SF
5	58,413 SF	3,452 SF	54,961 SF	40,000 SF
6	54,204 SF	2,915 SF	51,289 SF	40,000 SF
7	43,845 SF	1,757 SF	42,088 SF	40,000 SF
8	45,456 SF	1,623 SF	43,833 SF	40,000 SF

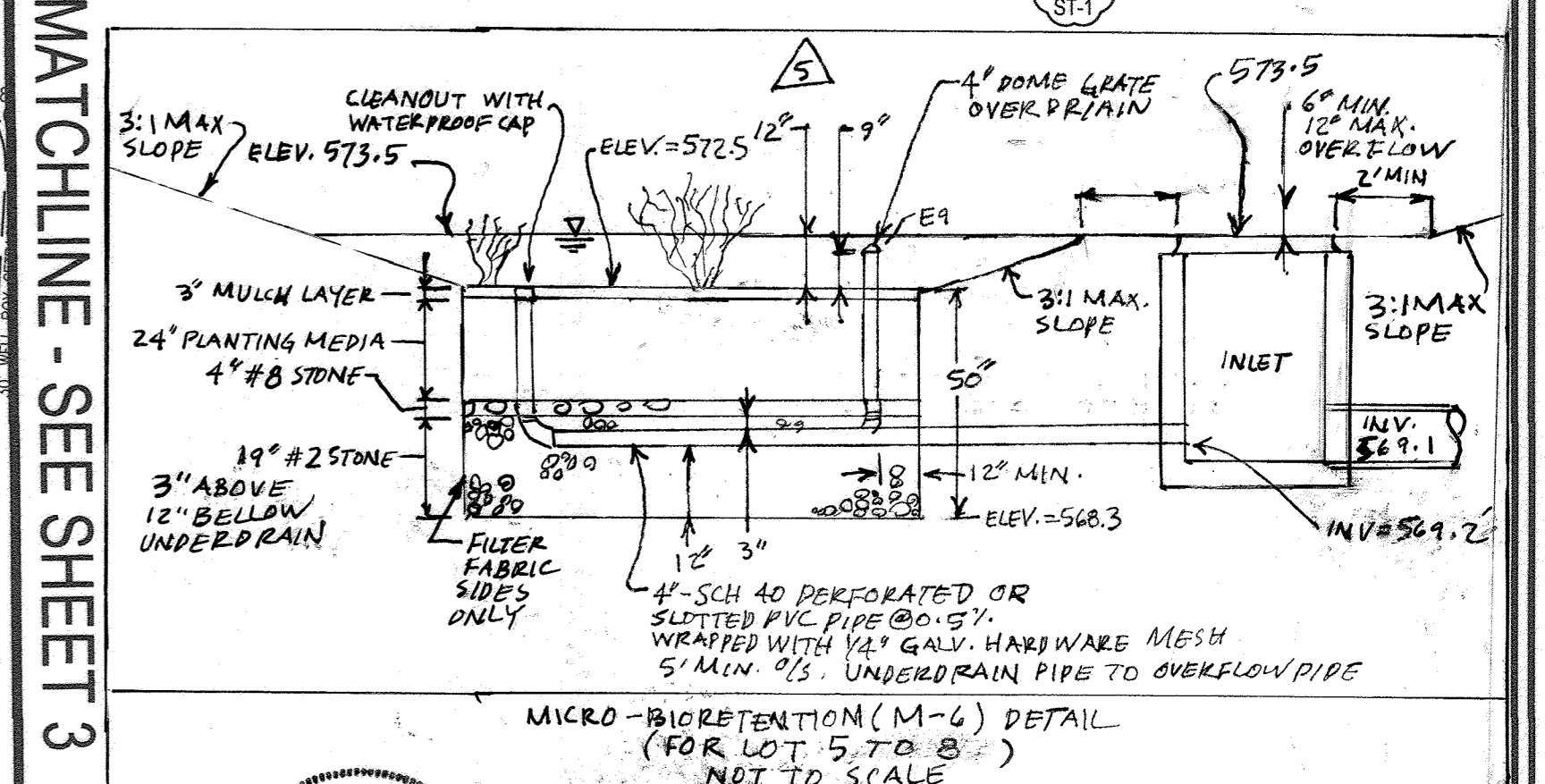
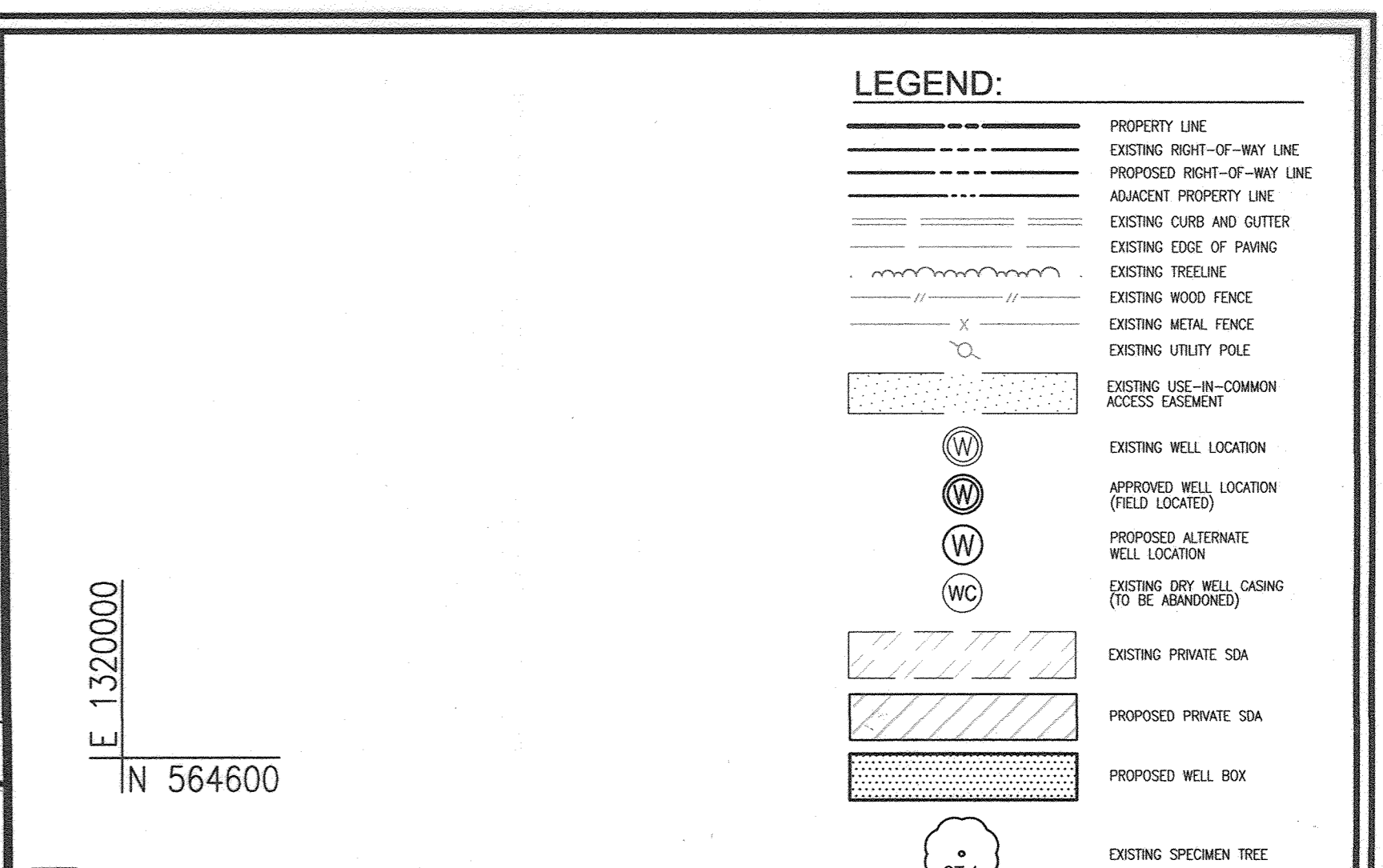
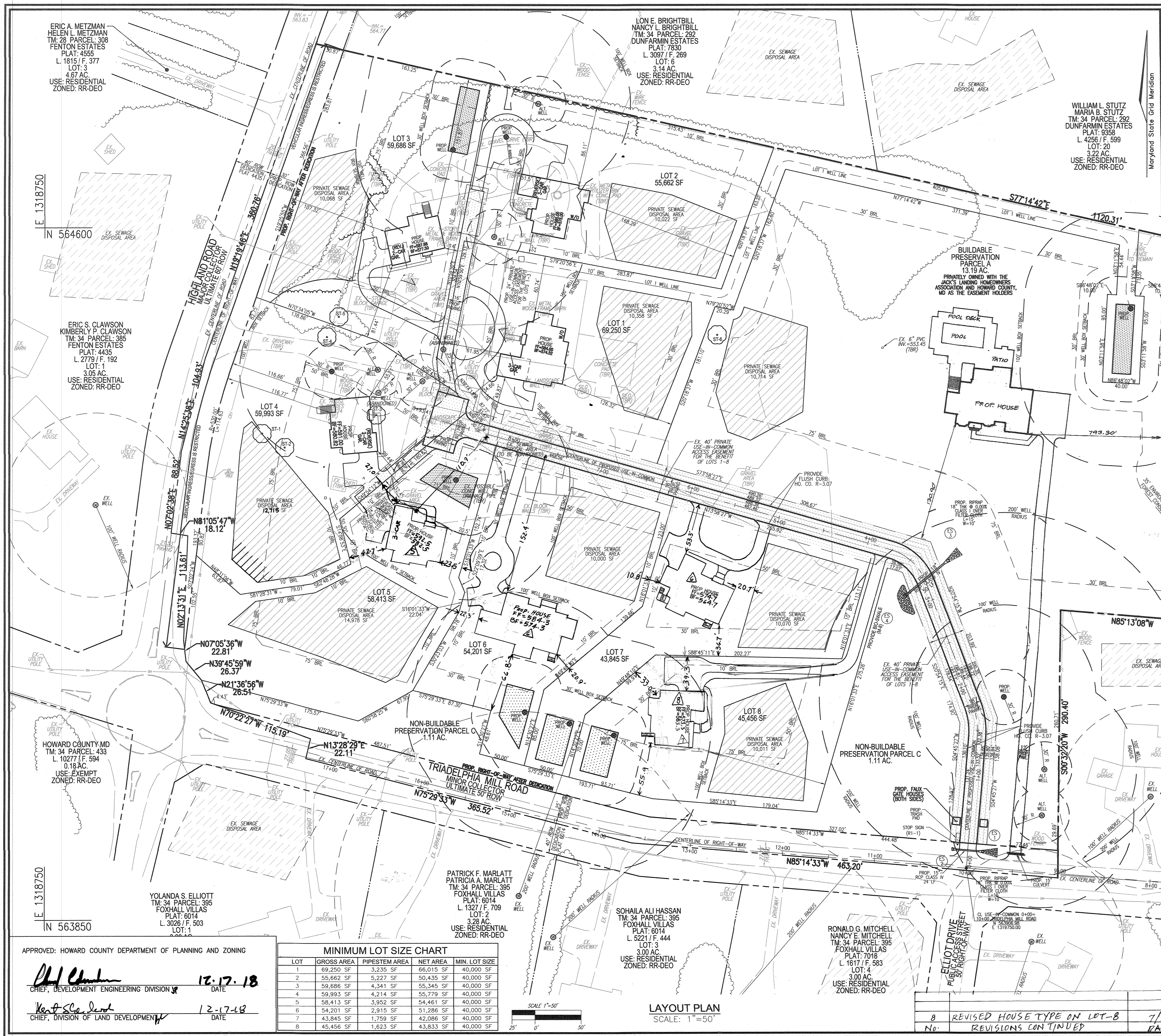
SITE DATA

LOCATION: TAX MAP 34, BLOCK 03, PARCEL 414
 13938 HIGHLAND ROAD, CLARKSVILLE, MD, 21029
 DEED REFERENCE: L-3172 / F. 336
 5TH ELECTION DISTRICT

PRESENT ZONING: RR-DEO
 PROPOSED USE OF SITE: RESIDENTIAL (SFD)
 GROSS AREA OF PROJECT: 25.81 AC.
 AREA OF FLOOD PLAIN: 0.68 AC.
 NET PROJECT AREA: 25.13 AC. (25.81 - 0.68 = 25.13)
 AREA OF WETLANDS/BUFFER: 2.91 AC.
 AREA OF STREAM/BUFFER: 5.75 AC.
 AREA OF EXISTING FOREST COVER: 0.00 AC.
 AREA OF STEEP SLOPES (25% OR GREATER): 0.00 AC.
 AREA OF FLOODABLE SOILS: 9.13 AC.
 TOTAL NUMBER OF UNITS ALLOWED BY RIGHT: 25.81/4.25 = 6
 TOTAL NUMBER OF UNITS ALLOWED: 25.13/2 = 12
 AREA OF RESIDENTIAL LOTS PROPOSED:
 LOTS 1-8: 10.25 AC.
 BUILDABLE PRESERVATION PARCEL A: 13.19 AC.
 NON-BUILDABLE PRESERVATION PARCEL C: 1.11 AC.
 OPEN SPACE REQUIRED: N/A
 AREA OF RIGHT-OF-WAY DEDICATION: 1.26 AC.
 PROPOSED WATER SYSTEM: PRIVATE WELL
 PROPOSED SEWER SYSTEM: PRIVATE SEPTIC
 LIMIT OF DISTURBANCE: 2.59 AC.

SHEET INDEX

DESCRIPTION	SHEET NO.
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LANDSCAPE AND FOREST CONSERVATION PLAN	10 OF 12
LANDSCAPE AND FOREST CONSERVATION PLAN	11 OF 12
LANDSCAPE AND FOREST CONSERVATION PLAN NOTES AND DETAILS	12 OF 12



SPECIMEN TREE CHART

NO.	SIZE	COMMON NAME	COMMENTS
ST-1	40" DBH	ELM	TO REMAIN
ST-2	40" DBH	ELM	TO REMAIN
ST-3	42" DBH	OAK	TO REMAIN
ST-4	36" DBH	OAK	TO REMAIN
ST-5	44" DBH	PINE	TO REMAIN
ST-6	42" DBH	ELM	TO REMAIN
ST-7	40" DBH	MULTI-STEM	TO REMAIN

NOTE: FOR SPECIMEN TREES 3, 4, & 5 TREE PROTECTION FENCING WILL BE REQUIRED

OWNER
 MARTY A. HOWARD
 P.O. BOX 740
 CLARKSVILLE, MD 21029

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MD 21042
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

NO.	REVISION	DATE
7	REVISE SWM AND HOUSE TYPE FOR LOT-8	7-16-21
6	REVISE SWM AND HOUSE TYPE FOR LOTS 6 & 7	2-16-21
5	REVISE SWM AND HOUSE TYPE FOR LOT-5	10-15-19
4	REVISE SWM AND SEWAGE DISPOSAL AREA ON LOT 4	8-14-19
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-8 AND NON-BUILDABLE PRESERVATION PARCEL B	11-15-18

REVISION SUPPLEMENTAL INFORMATION PLAN

SITE LAYOUT PLAN

JACK'S LANDING
 LOTS 1-8, BUILDABLE PRESERVATION PARCEL A,
 AND NON-BUILDABLE PRESERVATION PARCEL C
 A SUBDIVISION OF TAX MAP 34
 PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03
 5TH ELECTION DISTRICT

PARCELS: 414
 ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND

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

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: OCTOBER 2018
 SCALE: AS SHOWN
 W.O. NO.: 13-31

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18183 EXPIRATION DATE: 09-27-2020

2 OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 12-17-18
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 12-17-18
 CHIEF, DIVISION OF LAND DEVELOPMENT

MINIMUM LOT SIZE CHART

LOT	GROSS AREA	PIPESTEM AREA	NET AREA	MIN. LOT SIZE
1	69,250 SF	3,235 SF	66,015 SF	40,000 SF
2	55,662 SF	5,227 SF	50,435 SF	40,000 SF
3	59,696 SF	4,341 SF	55,355 SF	40,000 SF
4	59,993 SF	4,214 SF	55,779 SF	40,000 SF
5	58,413 SF	3,952 SF	54,461 SF	40,000 SF
6	54,201 SF	2,915 SF	51,286 SF	40,000 SF
7	43,845 SF	1,759 SF	42,086 SF	40,000 SF
8	45,456 SF	1,623 SF	43,833 SF	40,000 SF

LAYOUT PLAN
 SCALE: 1"=50'

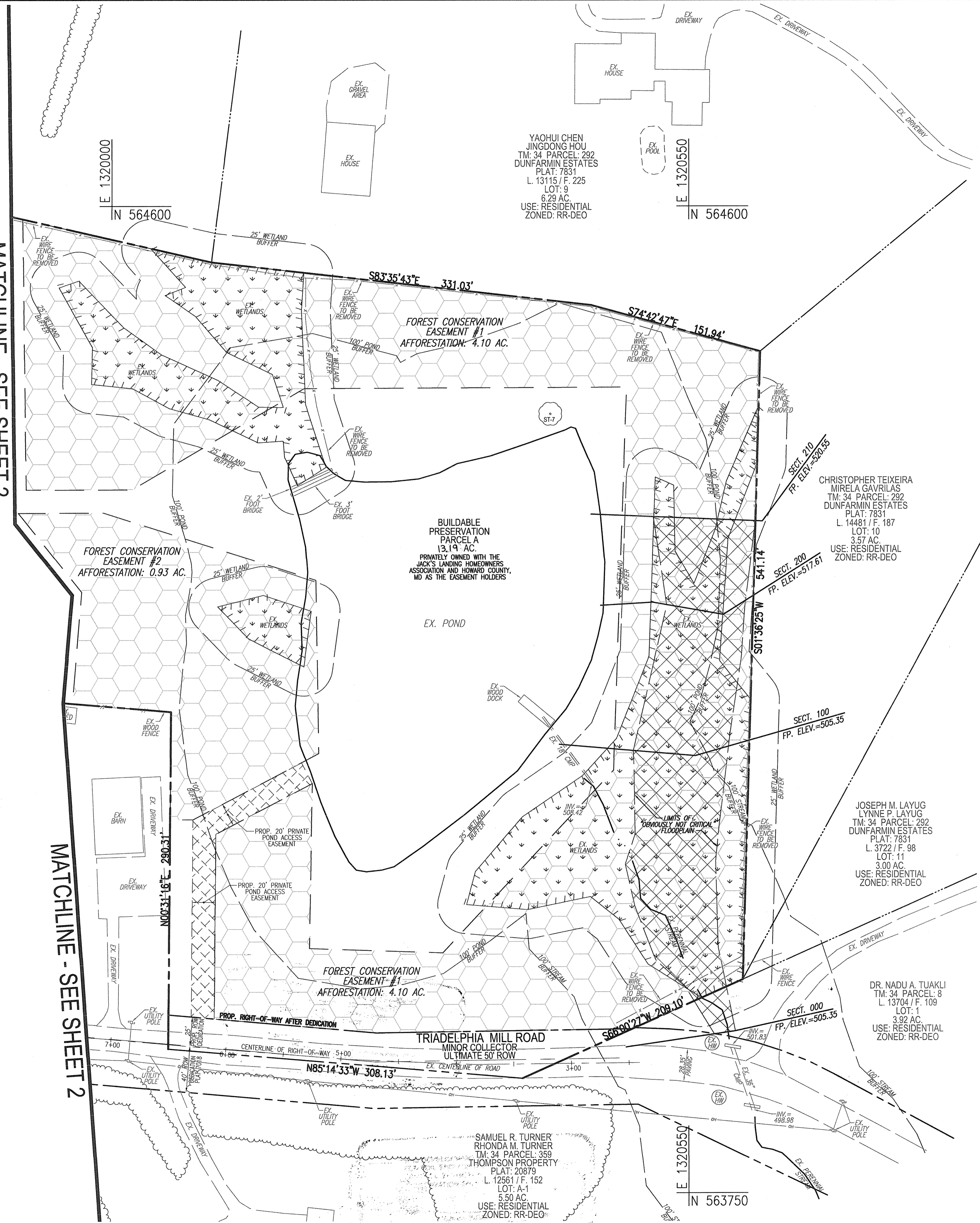
8 REVISED HOUSE TYPE ON LOT-8 7/10/22
 No. REVISIONS CONTINUED DATE

NO.	SIZE	COMMON NAME	COMMENTS
ST-1	40" DBH	ELM	TO REMAIN
ST-2	40" DBH	ELM	TO REMAIN
ST-3	42" DBH	OAK	TO REMAIN
ST-4	36" DBH	OAK	TO REMAIN
ST-5	44" DBH	PINE	TO REMAIN
ST-6	42" DBH	ELM	TO REMAIN
ST-7	40" DBH	MULTI-STEM	TO REMAIN

NOTE: FOR SPECIMEN TREES 3, 4, & 5 TREE PROTECTION FENCING WILL BE REQUIRED

MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 2



LEGEND:

	PROPERTY LINE
	EXISTING RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING EDGE OF PAVING
	EXISTING WETLANDS
	EXISTING WETLAND BUFFER
	EXISTING TREELINE
	EXISTING TREES
	EXISTING WOOD FENCE
	EXISTING METAL FENCE
	EXISTING STREAM
	EXISTING STREAM BUFFER
	OBVIOUSLY NOT CRITICAL FLOODPLAIN
	PROPOSED TREELINE
	PROP. FOREST CONSERVATION EASEMENT (AFFORESTATION) PLAT: _____
	EXISTING UTILITY POLE
	PROP. PRIVATE POND ACCESS EASEMENT PLAT: _____

Maryland State Grid Meridian

YACHUI CHEN
JINGDONG HOU
TM: 34 PARCEL: 292
DUNFARMIN ESTATES
PLAT: 7831
L. 13115 / F. 225
LOT: 9
6.29 AC.
USE: RESIDENTIAL
ZONED: RR-DEO

CHRISTOPHER TEIXEIRA
MIRELA GAVRILAS
TM: 34 PARCEL: 292
DUNFARMIN ESTATES
PLAT: 7831
L. 14481 / F. 187
LOT: 10
3.57 AC.
USE: RESIDENTIAL
ZONED: RR-DEO

BUILDABLE
PRESERVATION
PARCELA
13.19 AC.
PRIMATELY OWNED WITH THE
JACK'S LANDING HOMEOWNERS
ASSOCIATION AND HOWARD COUNTY,
MD AS THE EASEMENT HOLDERS

JOSEPH M. LAYUG
LYNNE P. LAYUG
TM: 34 PARCEL: 292
DUNFARMIN ESTATES
PLAT: 7831
L. 3722 / F. 98
LOT: 11
3.00 AC.
USE: RESIDENTIAL
ZONED: RR-DEO

DR. NADU A. TUAKLI
TM: 34 PARCEL: 8
L. 13704 / F. 108
LOT: 1
3.92 AC.
USE: RESIDENTIAL
ZONED: RR-DEO

SAMUEL R. TURNER
RHONDA M. TURNER
TM: 34 PARCEL: 359
THOMPSON PROPERTY
PLAT: 20879
L. 12561 / F. 152
LOT: A-1
5.50 AC.
USE: RESIDENTIAL
ZONED: RR-DEO

OWNER
MARTY A. HOWARD
P.O. BOX 740
CLARKSVILLE, MD 21029

DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR., SUITE 102
ELLICOTT CITY, MD 21042
ATTN: MR. DONALD R. REUWER
(443) 367-0422

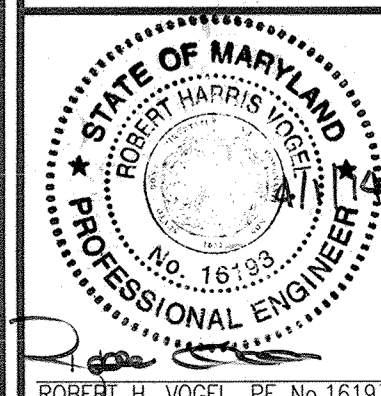
3	TO REMOVE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-B AND	11-15-18
	NON-BUILDABLE PRESERVATION PARCEL B	
NO.	REVISION	DATE

**SUPPLEMENTAL INFORMATION PLAN
SITE LAYOUT PLAN**

JACK'S LANDING
LOTS 1-8, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCEL C
A SUBDIVISION OF TAX MAP 34 PARCELS: 414
PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03 ZONED: RR-DEO
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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



PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: MARCH 2014
SCALE: AS SHOWN
W.O. NO.: 13-31

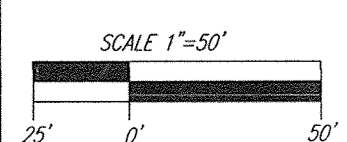
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18133, EXPIRATION DATE: 09-27-2014

3 SHEET OF 12

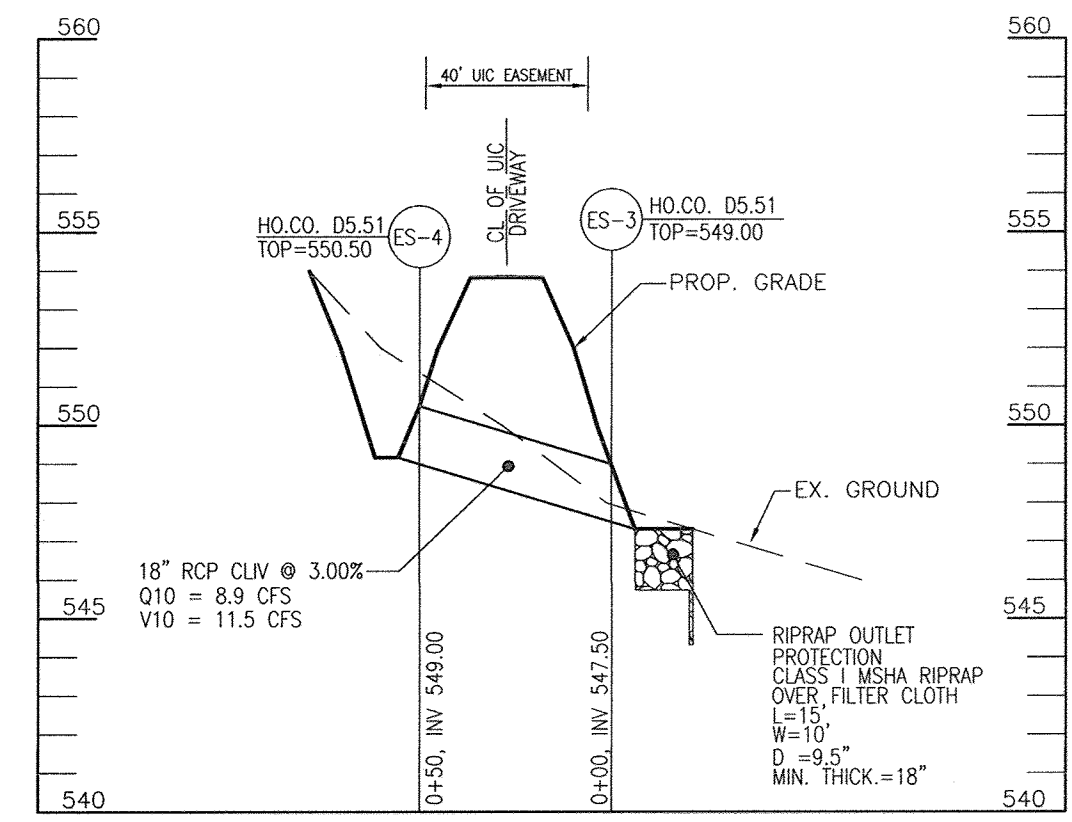
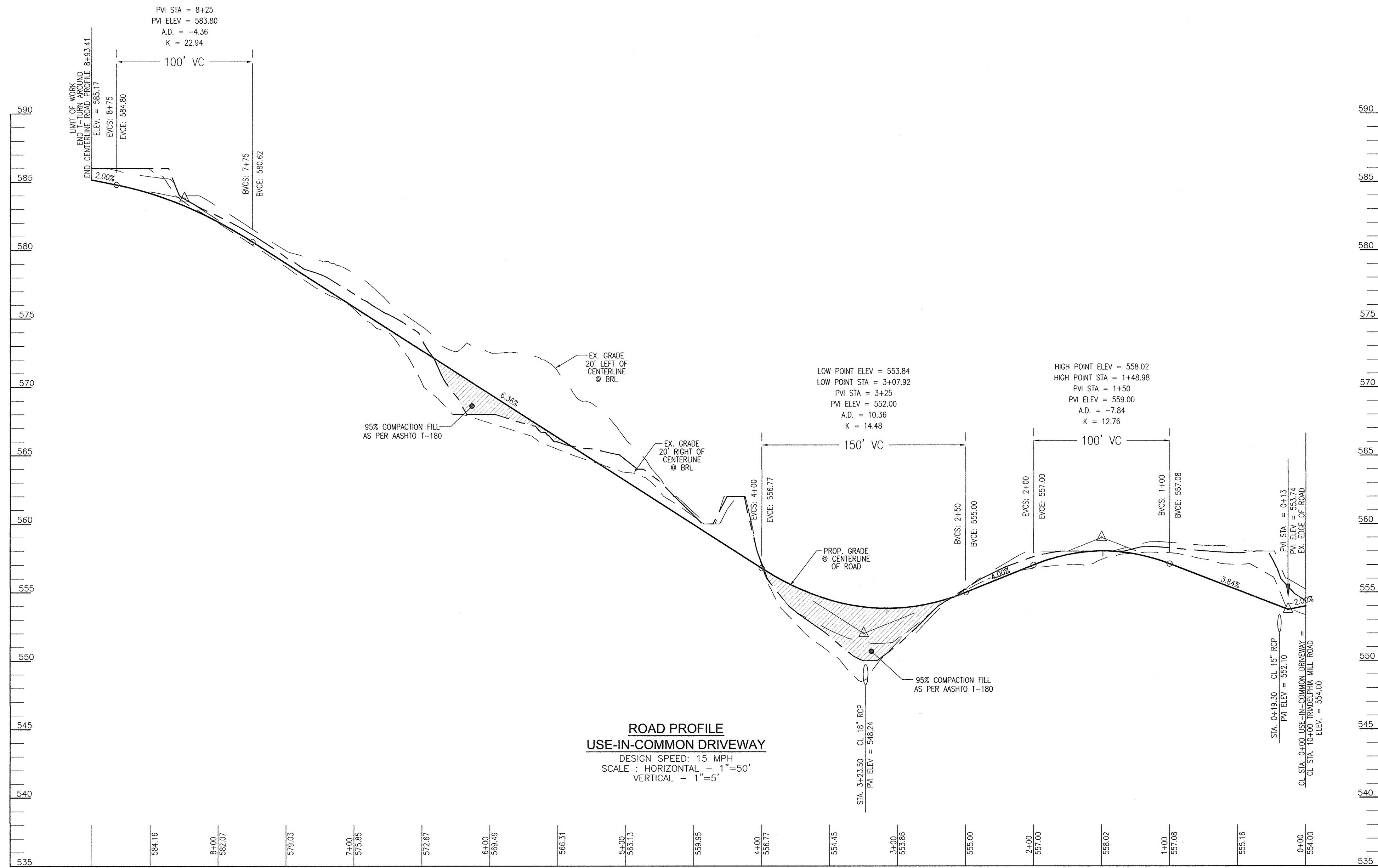
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 7-8-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

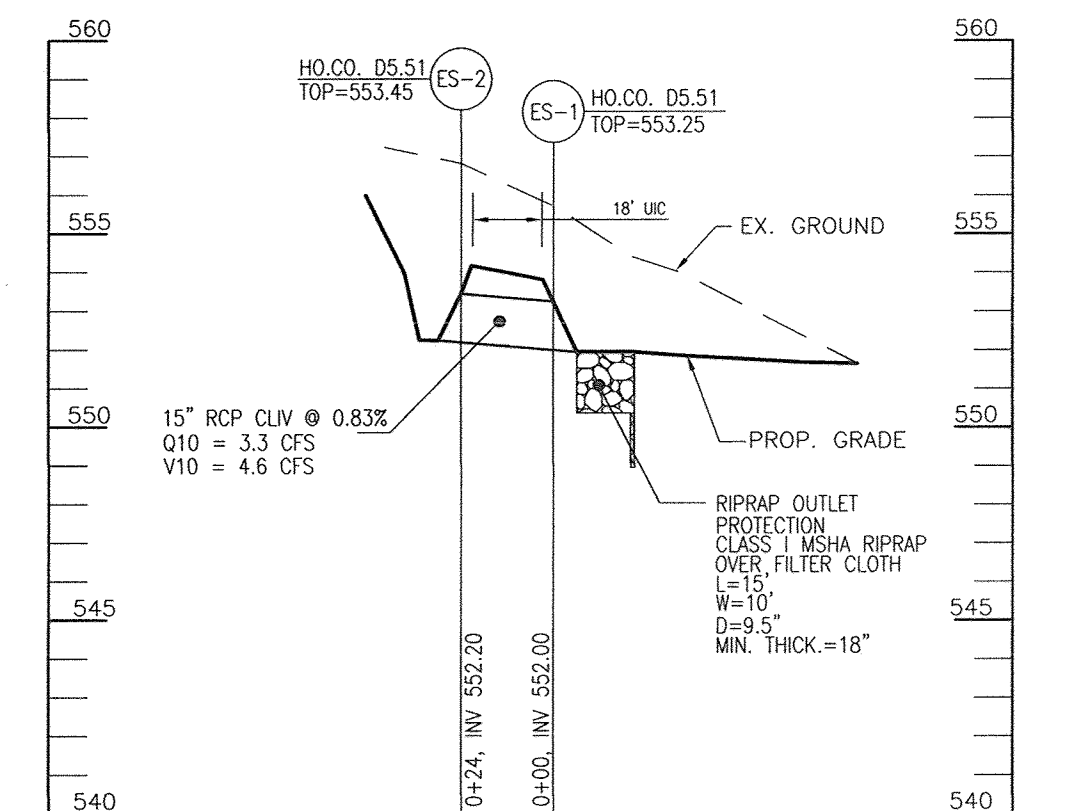
Keith Seaman 7-09-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



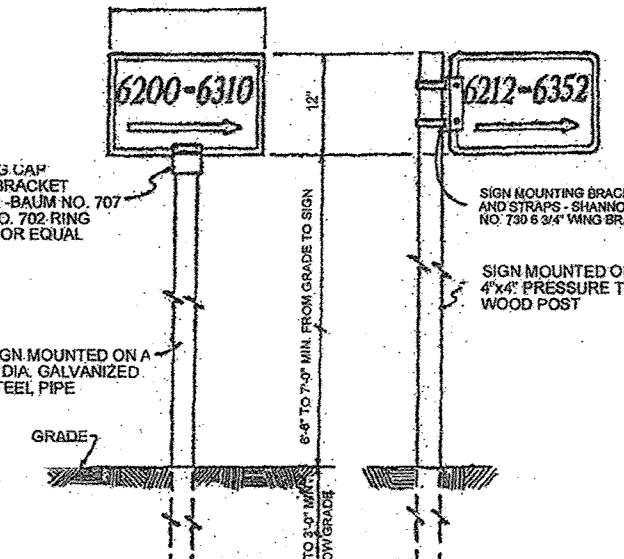
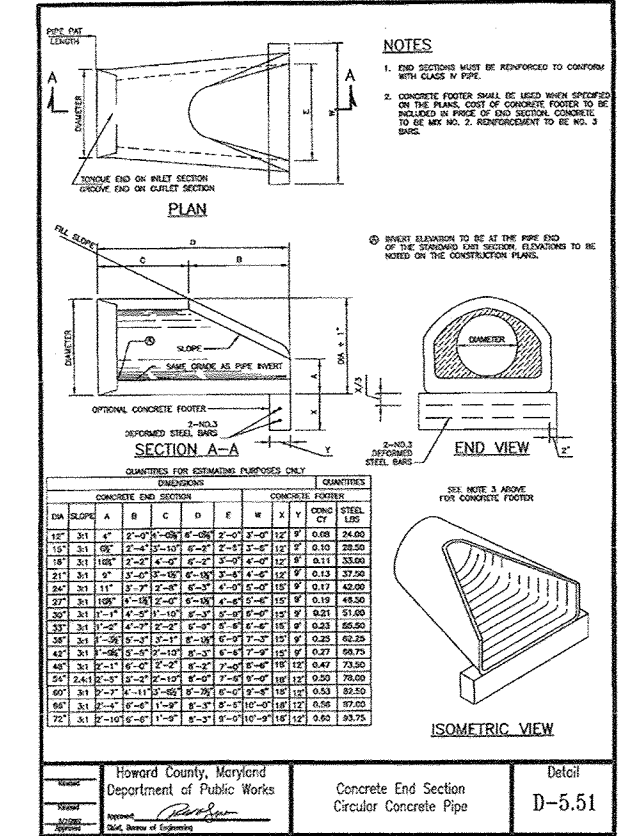
LAYOUT PLAN
SCALE: 1"=50'



USE-IN-COMMON DRIVEWAY 3+25
18" DRIVEWAY CULVERT
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



USE-IN-COMMON DRIVEWAY 0+19
15" DRIVEWAY CULVERT
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

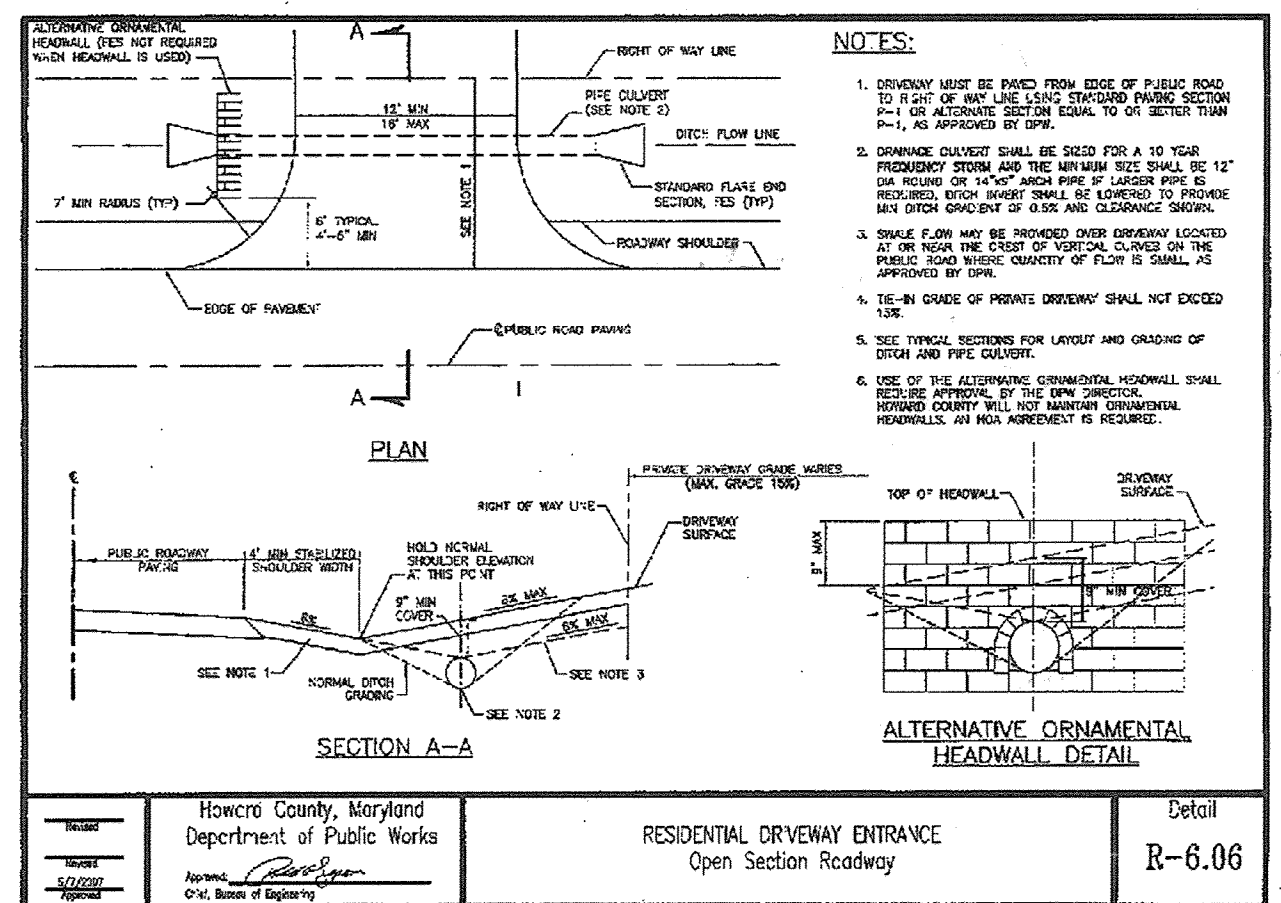


OWNER
MARTY A. HOWARD
P.O. BOX 740
CLARKSVILLE, MD 21029

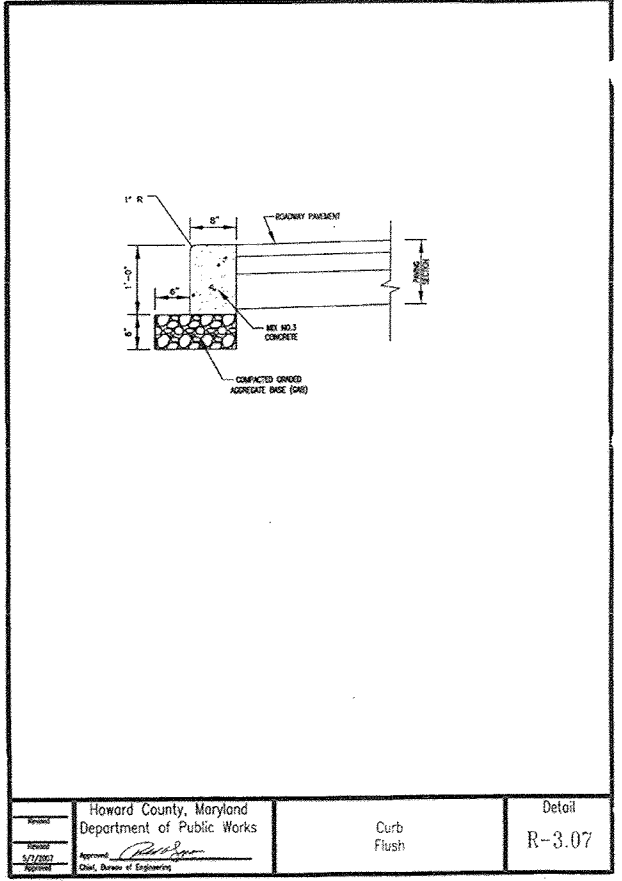
DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR., SUITE 102
ELLCOTT CITY, MD 21042
ATTN: MR. DONALD R. REUWER
(443) 367-0422

END TREATMENT SCHEDULE					
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
ES-1	15" CONCRETE END SECTION (HO. CO. D-5.51)	N 563,924.23 E 1,319,763.53	553.25	-	552.00
ES-2	15" CONCRETE END SECTION (HO. CO. D-5.51)	N 563,926.22 E 1,319,739.61	553.45	552.20	-
ES-3	18" CONCRETE END SECTION (HO. CO. D-5.51)	N 564,236.04 E 1,319,725.80	549.00	-	547.50
ES-4	18" CONCRETE END SECTION (HO. CO. D-5.51)	N 564,204.27 E 1,319,687.47	550.50	549.00	-

PIPE SCHEDULE		
PIPE SIZE	TYPE	TOTAL LENGTH
15"	RCP CLASS IV	24 LF
18"	RCP CLASS IV	50 LF



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	MIN 18AL WITH GAS		MIN 18AL WITH CONSTANT GAS	
			3 TO 4S	5 TO 4T	2.7	3 TO 4S
P-1	RESIDENTIAL	HMA SUPERFINE FINAL SURFACE 2.5 MM PG 64-22 LEVEL 1 (ESAL)	2.5	2.0	2.0	1.5
			19.0 MM PG 64-22 LEVEL 1 (ESAL)	8.5	7.0	7.0
P-2	LOCAL ROADS	HMA SUPERFINE INTERMEDIATE SURFACE 2.5 MM PG 64-22 LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5
			19.0 MM PG 64-22 LEVEL 1 (ESAL)	2.0	2.0	2.0
P-3	LOCAL ROADS	HMA SUPERFINE INTERMEDIATE SURFACE 2.5 MM PG 64-22 LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5
			19.0 MM PG 64-22 LEVEL 1 (ESAL)	3.0	3.0	3.0
P-4	LOCAL ROADS	HMA SUPERFINE INTERMEDIATE SURFACE 2.5 MM PG 64-22 LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5
			19.0 MM PG 64-22 LEVEL 1 (ESAL)	2.0	2.0	2.0



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Phil Edin 7.8.14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kat DeJure 7.09.14
CHIEF, DIVISION OF LAND DEVELOPMENT

Howard County, Maryland
Department of Public Works
RESIDENTIAL DRIVEWAY ENTRANCE
Open Section Roadway
Detail
R-6.06

Howard County, Maryland
Department of Public Works
PAVING SECTIONS
P-1 to P-4
Detail
R-2.01

3 TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-8 AND 11-15-19
NON-BUILDABLE PRESERVATION PARCEL B

NO. REVISION DATE

SUPPLEMENTAL INFORMATION PLAN
SITE DETAILS AND PROFILES

JACK'S LANDING
LOTS 1-8, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCEL C
A SUBDIVISION OF TAX MAP 34
PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03
5TH ELECTION DISTRICT

PARCELS: 414
ZONED: RR-DEO
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
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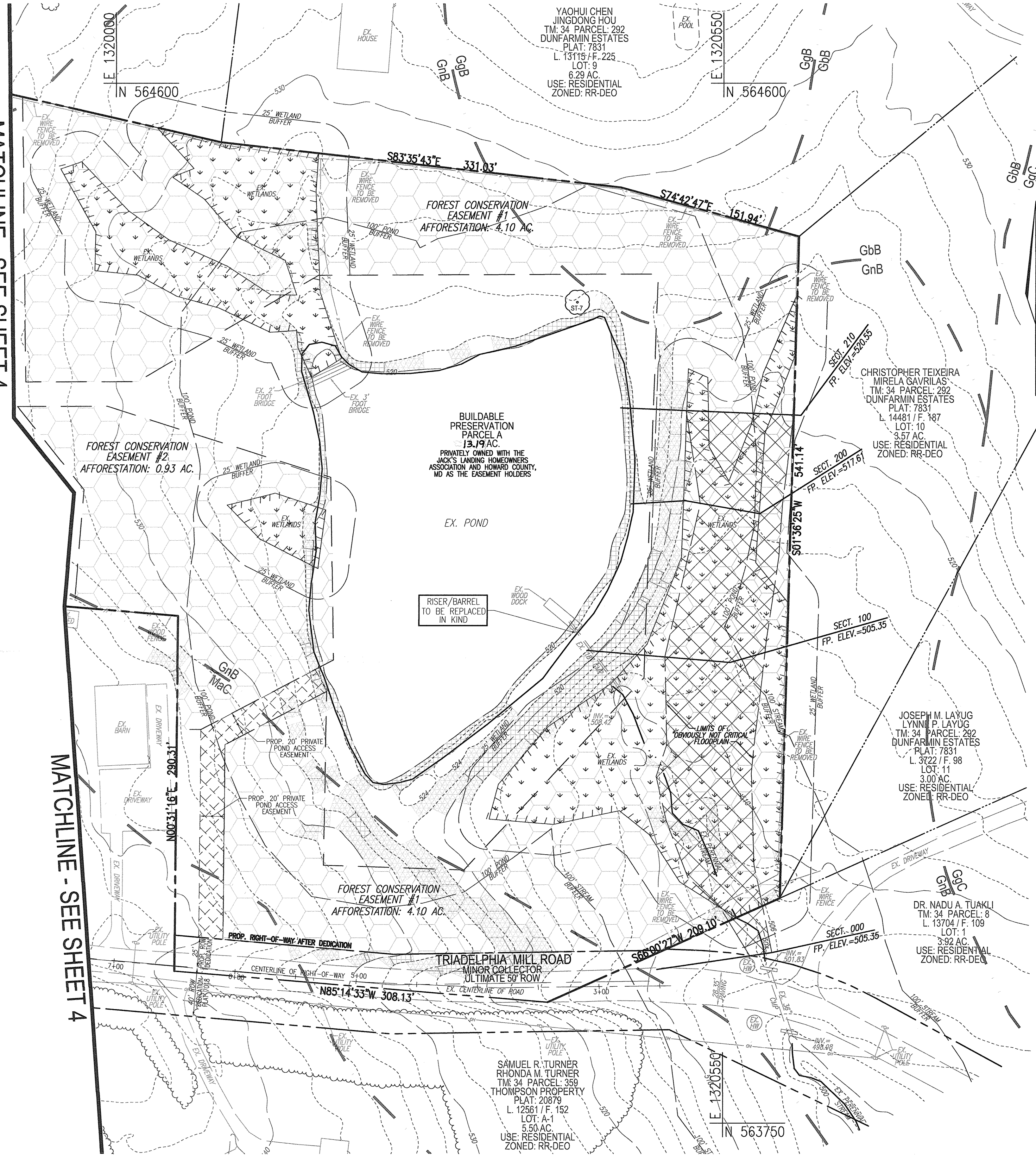
DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: MARCH 2014
SCALE: AS SHOWN
W.O. NO.: 13-31

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16183
EXPIRATION DATE: 09-27-2014

4 SHEET OF 12

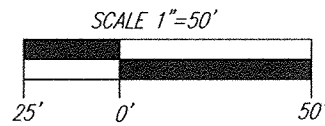
MATCHLINE - SEE SHEET 4

MATCHLINE - SEE SHEET 4



GRADING & SEDIMENT CONTROL PLAN

SCALE: 1"=50'



SOILS LEGEND				
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	.37	YES
GnB	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	.37	YES
MoC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	C	.24	NO

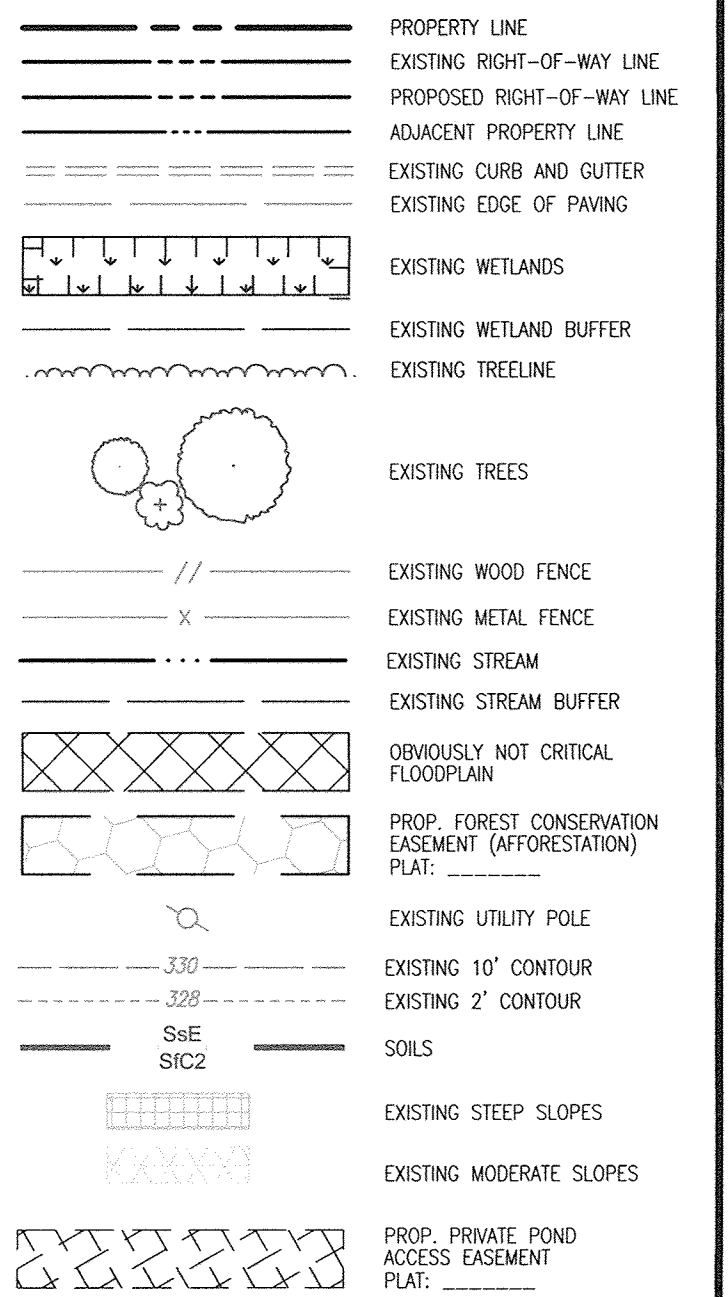
SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

SEQUENCE OF CONSTRUCTION

1. REQUEST FOR A PRE-CONSTRUCTION MEETING WITH HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION.
2. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-5172) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
3. CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS. (2 DAYS)
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)
5. INSTALL CULVERT ES-3 TO ES-4, INSTALL EARTH DIKES AND PIPE SLOPE DRAIN (P50-21) TO RIP-RAP LOCATED AT ES-4. (2 DAYS)
6. INSTALL SEDIMENT TRAP INFLOW PROTECTION AND PIPE SLOPE DRAIN AT OUTFALL TO RIP-RAP LOCATED AT ES-4. INSTALL SUPER SILT FENCE AT ES-3 AND ES-4. (5 DAYS)
7. INSTALL PERIMETER SUPER SILT FENCE AND SILT FENCE. (3 DAYS)
8. GRADE SWALE ON SOUTH SIDE OF DRIVEWAY AND DISCHARGE TO SEDIMENT TRAP. (3 DAYS)
9. PERFORM GRADING FOR ALL USE-IN-COMMON DRIVEWAYS. (10 DAYS)
10. INSTALL SWALES, SEED AND MULCH, AND INSTALL STABILIZATION MATING. (3 DAYS)
11. INSTALL PAVING, LANDSCAPING, AND PERMANENT SWALE CHECK DAMS. (5 DAYS)
12. STABILIZE ALL DISTURBED AREAS. (1 DAY)
13. UPON APPROVAL FROM THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION, REMOVE SEDIMENT CONTROLS AND REGRADE SWALES TO SWM SPECIFICATIONS. (3 DAYS)
14. STABILIZE ALL AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS. (1 WEEK)

NOTE:
 ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

LEGEND:



THIS PLAN MAY NOT BE USED TO OBTAIN GRADING OR BUILDING PERMITS FOR THE SHOWN HOUSES

OWNER
 MARTY A. HOWARD
 P.O. BOX 740
 CLARKSVILLE, MD 21029

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MD 21042
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

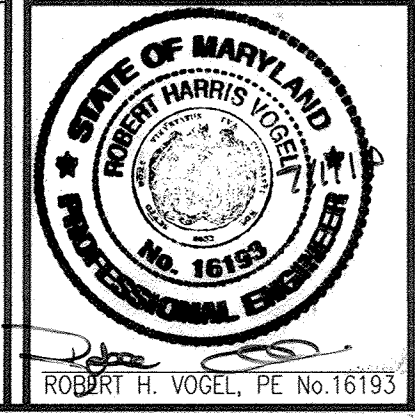
NO.	REVISION	DATE
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-8 AND NON-BUILDABLE PRESERVATION PARCEL B	11-15-18

SUPPLEMENTAL INFORMATION PLAN
 SOILS MAP, GRADING & SEDIMENT CONTROL PLAN

JACK'S LANDING
 LOTS 1-8, BUILDABLE PRESERVATION PARCEL A
 AND NON-BUILDABLE PRESERVATION PARCEL C
 A SUBDIVISION OF TAX MAP 34
 PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03 PARCELS: 414
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND ZONED: RR-DEO

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



DESIGN BY: RHW
 DRAWN BY: JMR
 CHECKED BY: RHW
 DATE: MARCH 2014
 SCALE: AS SHOWN
 W.O. NO.: 13-31

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2014.

6 SHEET OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clendenen 7-8-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Karl S. J. J... 7-09-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

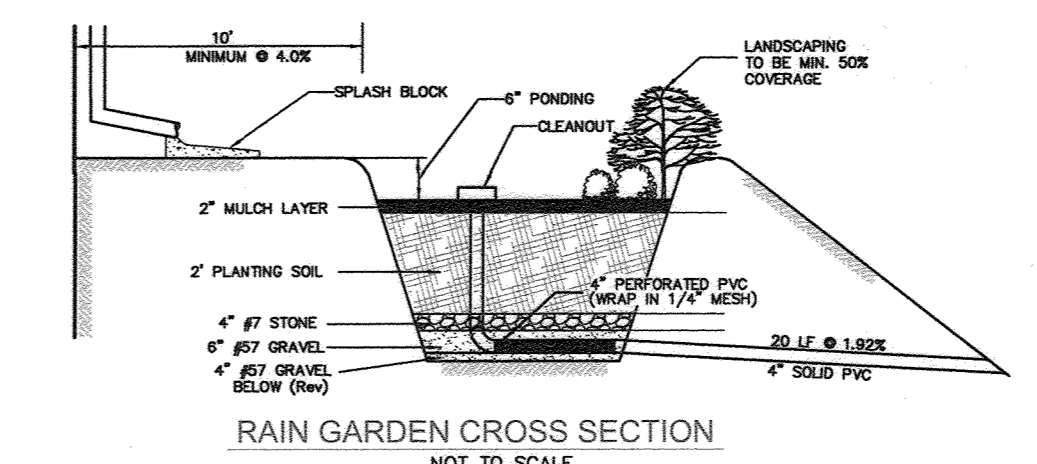
John R. Blotz 7/1/14
 HOWARD S.C.D. DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 7/1/14
 SIGNATURE OF ENGINEER DATE

BY THE DEVELOPER:
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 7/1/14
 SIGNATURE OF DEVELOPER DATE



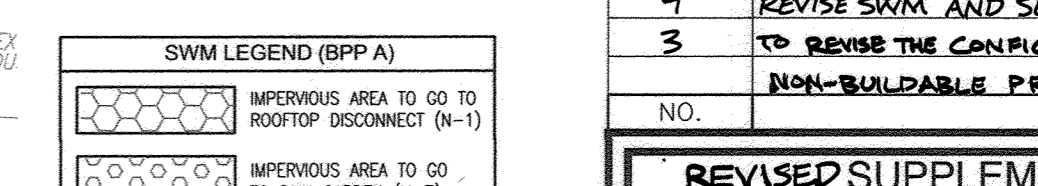
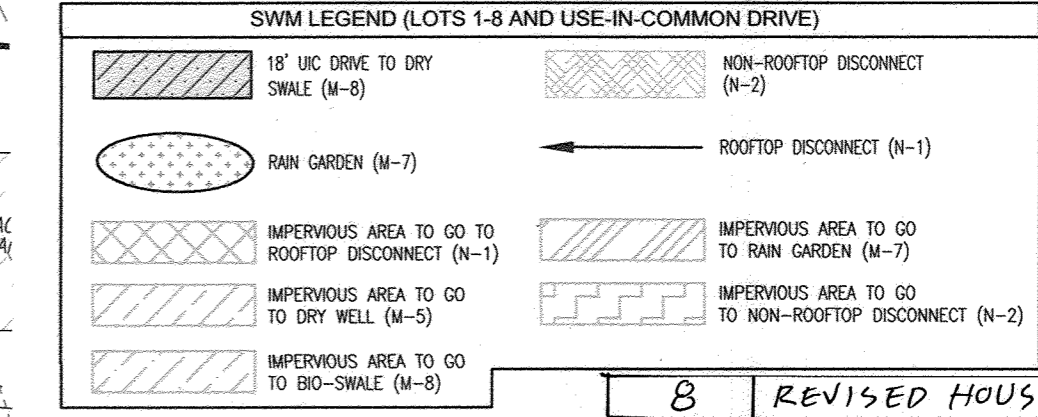
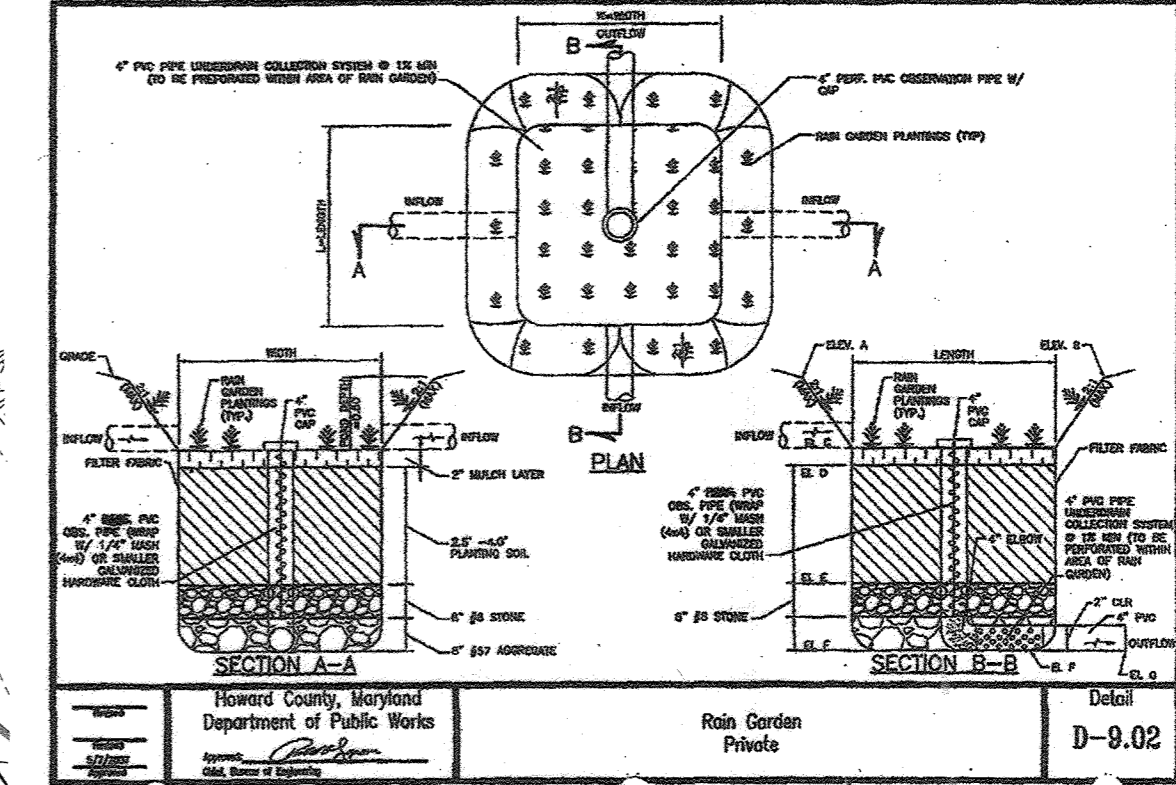
OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.



"MICRO-BIORETENTION" PLANTING SCHEDULE NOTES:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY. BE WELL FORMED AND SYMMETRICAL. CONFORM TO THE MOST CURRENT AMI SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
5. SEE SHEET 10 FOR TYPICAL PLANTING SPECIFICATIONS AND DETAILS.
6. MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDV SUMMARY.



LEGEND:

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- PROPOSED RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVING
- EXISTING TRENCH
- EXISTING WOOD FENCE
- EXISTING METAL FENCE
- EXISTING UTILITY POLE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- EXISTING USE-IN-COMMON ACCESS EASEMENT
- EXISTING WELL LOCATION
- APPROVED WELL LOCATION (FIELD LOCATED)
- PROPOSED ALTERNATE WELL LOCATION
- EXISTING DRY WELL CASING (TO BE ABANDONED)
- EXISTING PRIVATE SDA
- PROPOSED PRIVATE SDA
- PROPOSED WELL BOX
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPECIMEN TREE

OWNER
MARTY A. HOWARD
P.O. BOX 740
CLARKSVILLE, MD 21029

DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR., SUITE 102
ELLICOTT CITY, MD 21042
ATTN: MR. DONALD R. REUWER
(443) 367-0422

NO.	REVISION	DATE
8	REVISED HOUSE TYPE ON LOT 8	7-10-22
7	REVISE SWM AND HOUSE TYPE FOR LOT-B	7-15-21
6	REVISE SWM AND HOUSE TYPE FOR LOTS G AND T	2-15-21
5	REVISE SWM AND HOUSE TYPE FOR LOT-S	10-15-19
4	REVISE SWM AND SEWAGE DISPOSAL AREA ON LOT 4	8-14-19
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-8 AND NON-BUILDABLE PRESERVATION PARCEL B	11-18-18

REVISED SUPPLEMENTAL INFORMATION PLAN
ULTIMATE GRADING, SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN
JACK'S LANDING
LOTS 1-8, BUILDABLE PRESERVATION PARCEL A, AND NON-BUILDABLE PRESERVATION PARCEL C
A SUBDIVISION OF TAX MAP 34 PARCEL 414 (L. 3172/F. 336)

TAX MAP: 34 GRID: 03
5TH ELECTION DISTRICT

PARCELS: 414
ZONED: RR-DEO
HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE
DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: OCTOBER 2018
SCALE: AS SHOWN
W.O. NO.: 13-31

1 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. 16193 EXPIRATION DATE: 09-27-2020

7 SHEET OF 12

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Patrick F. Marlatt 12-3-18
SIGNATURE OF DEVELOPER DATE

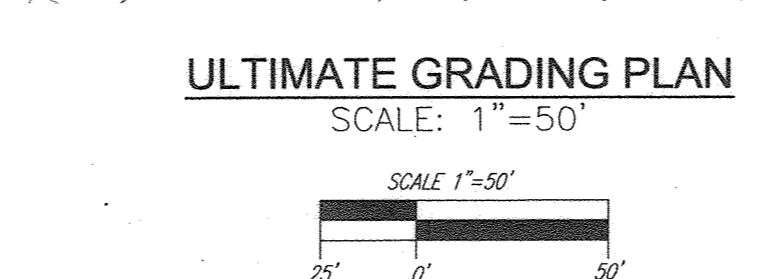
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
John Clark 12-17-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Keith A. Jones 12-17-18
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
GcB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO
GcB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO
GcH	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	.37	YES
GcH	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	.37	YES
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	C	.24	NO

SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT



(3) RAINGARDEN PLANT LIST

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
1	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	2 1/2"-3" Cal.
1	ILEX GLABRA	INK BERRY	2"-3" HT.
6	LOBELIA CARDINALIS	CARDINAL FLOWER LOBELIA	1 GAL. CONTAINER
4	DRYOPTERIS SP.	WOOD FERN	1 GAL. CONTAINER
3	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER

NOTE:
THIS SHEET IS NOT TO BE USED FOR GRADING UNDER THIS PLAN. THIS PLAN SHOWS THE ULTIMATE GRADING OF THE LOTS ON THE SITE AND IS CONCEPTUAL ONLY. SEE SHEET 5 FOR GRADING AND SEDIMENT CONTROL UNDER THIS PLAN.

HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES

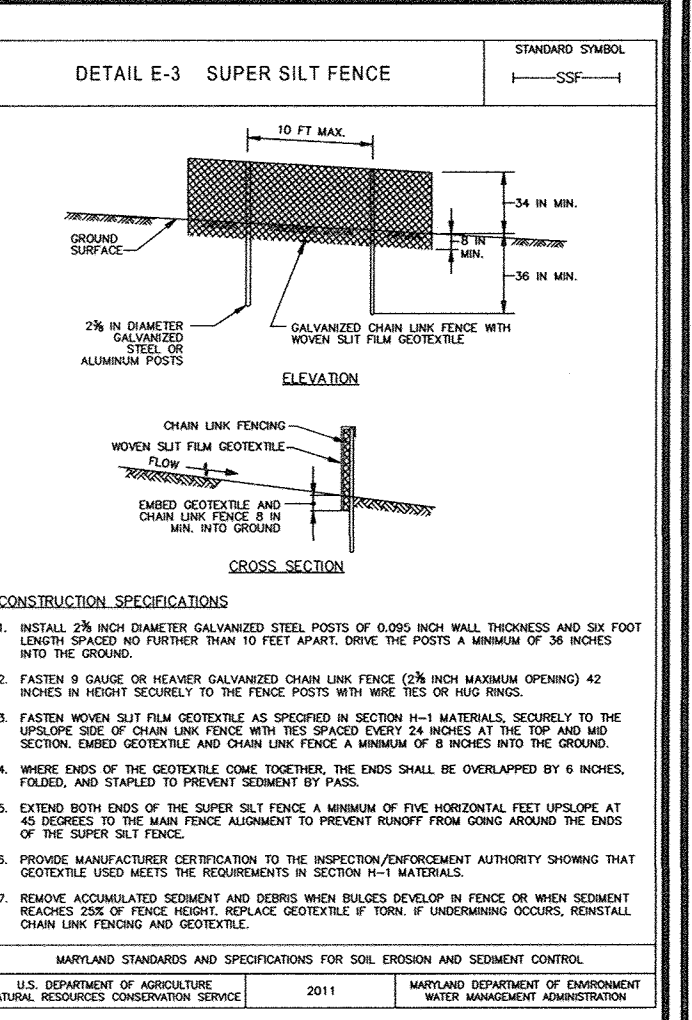
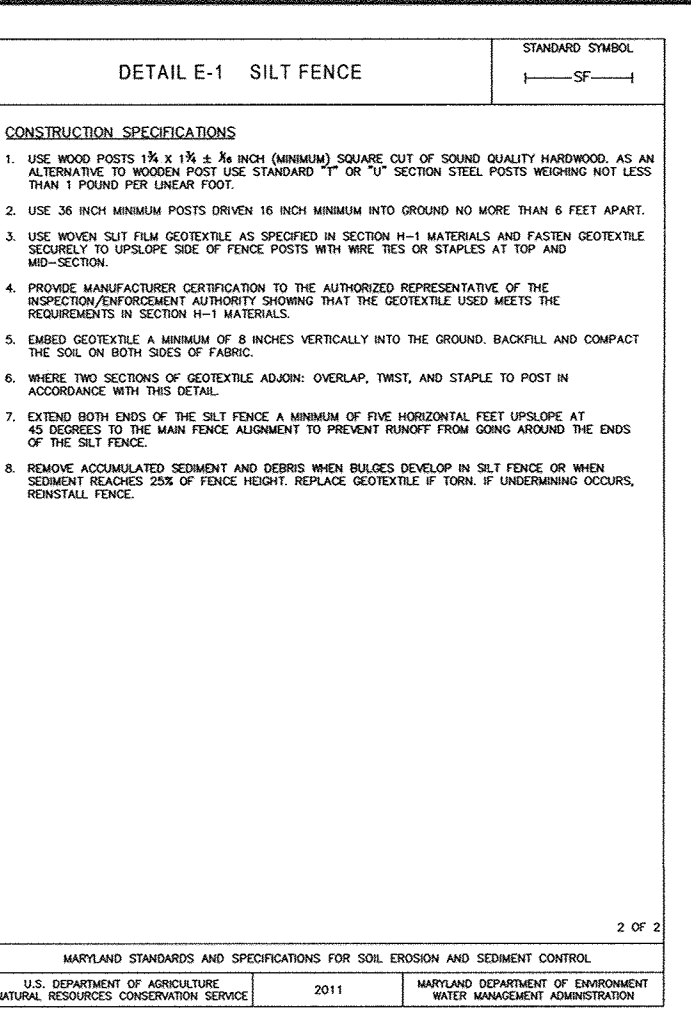
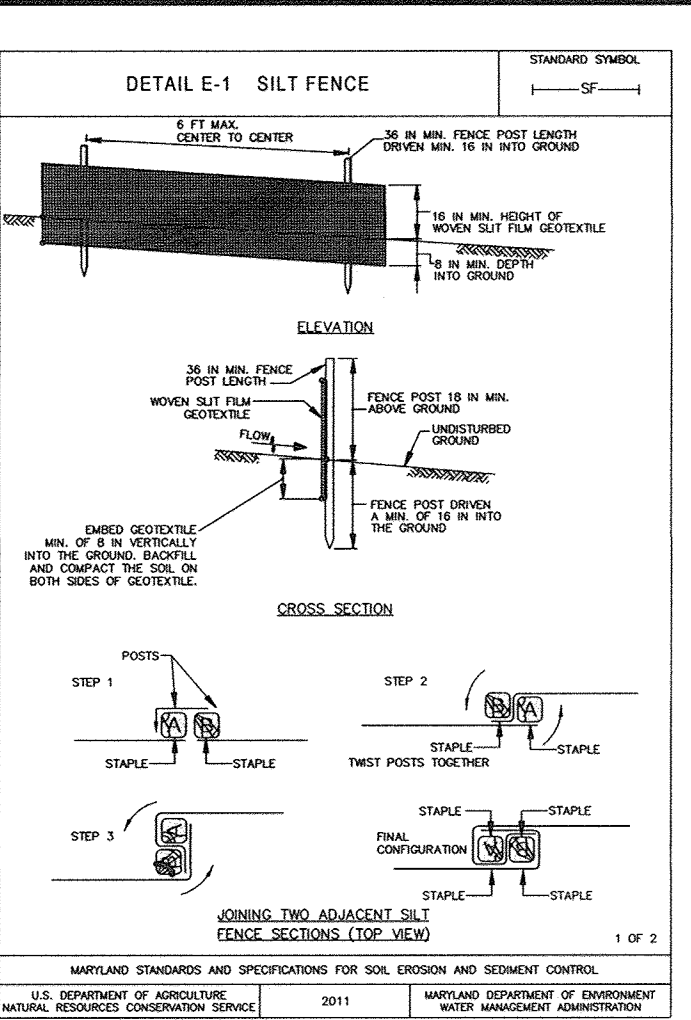
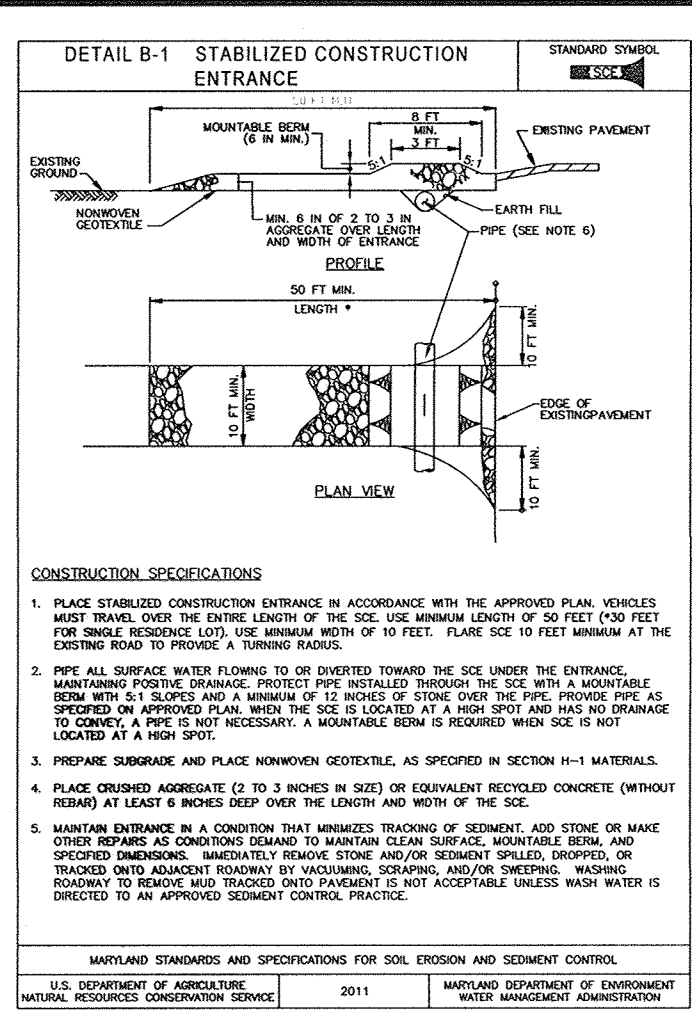
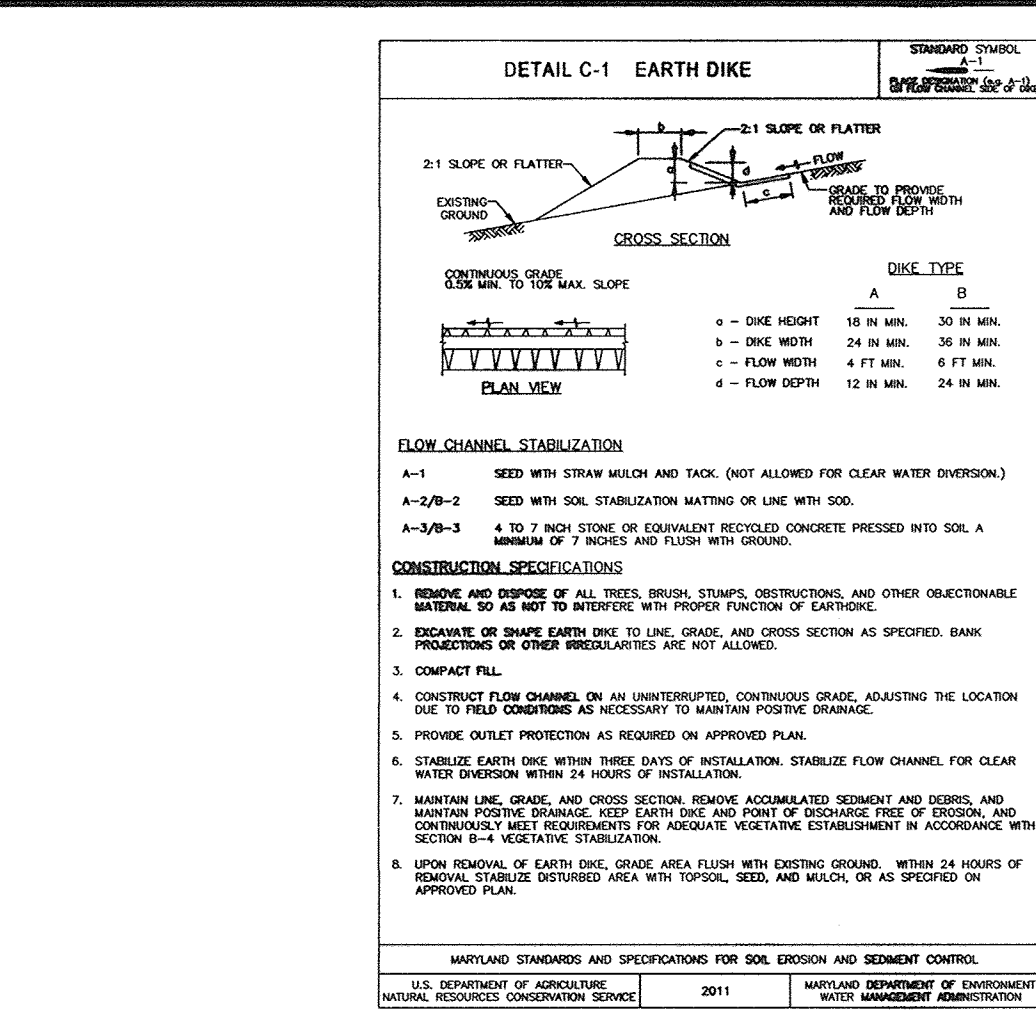
1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION...
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN...

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

R-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CONDITIONS WHERE PRACTICE APPLIES: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.



B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

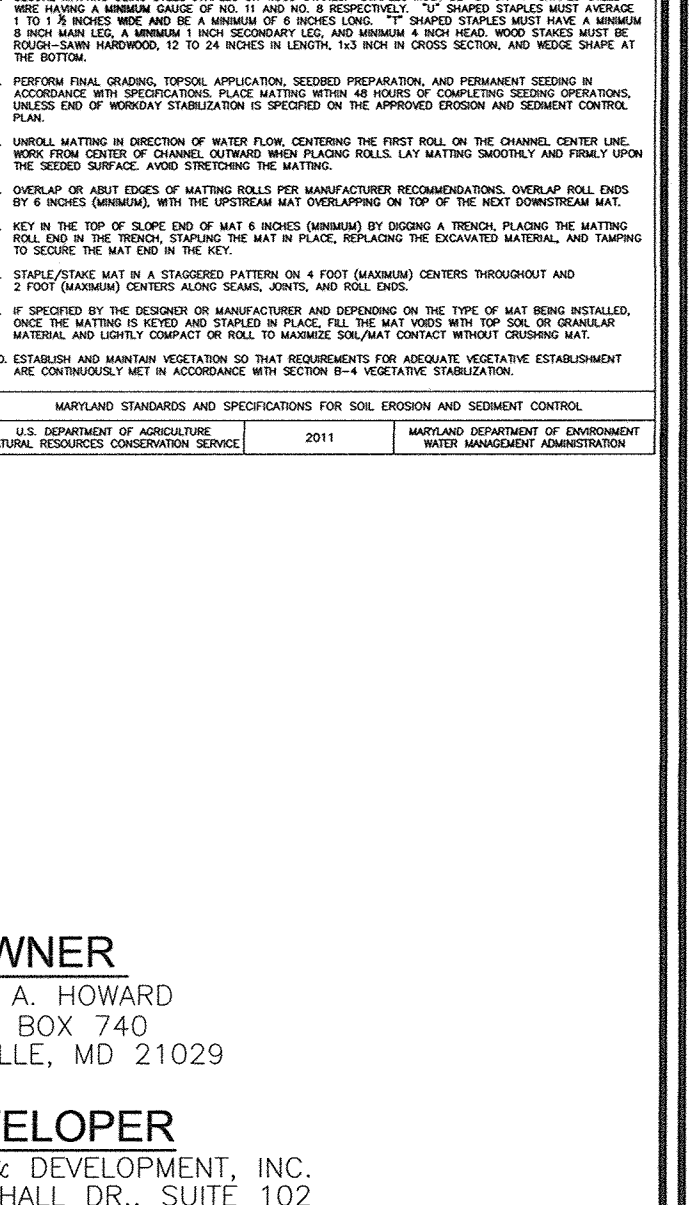
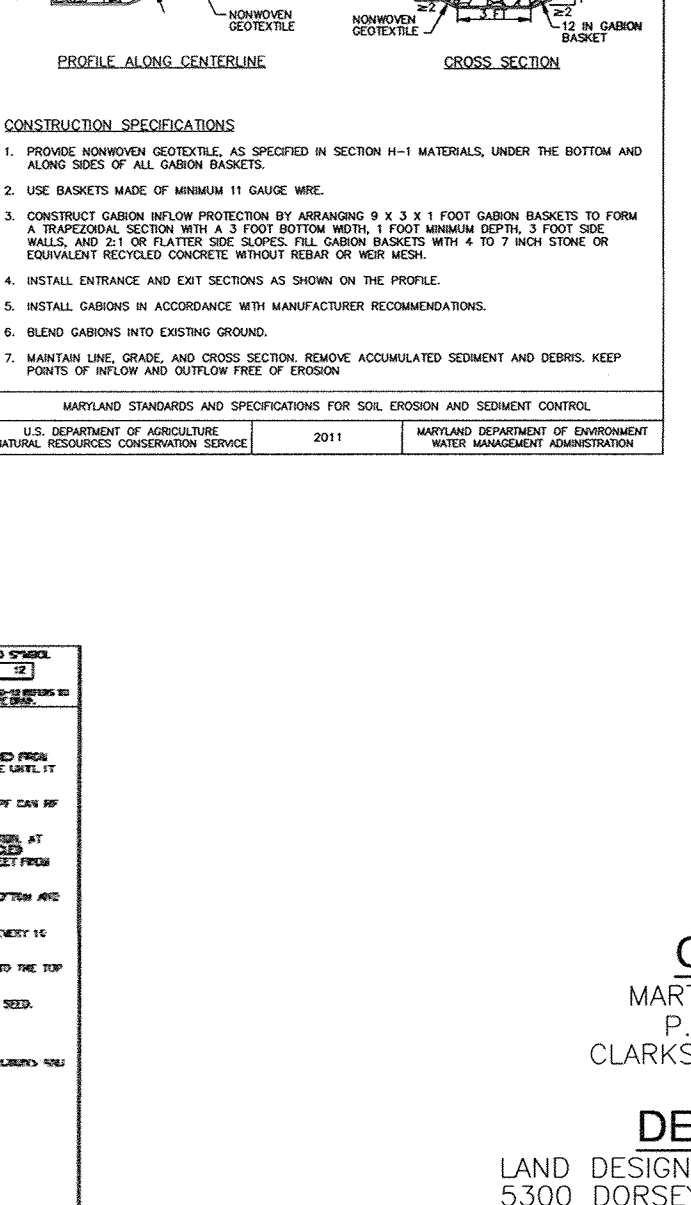
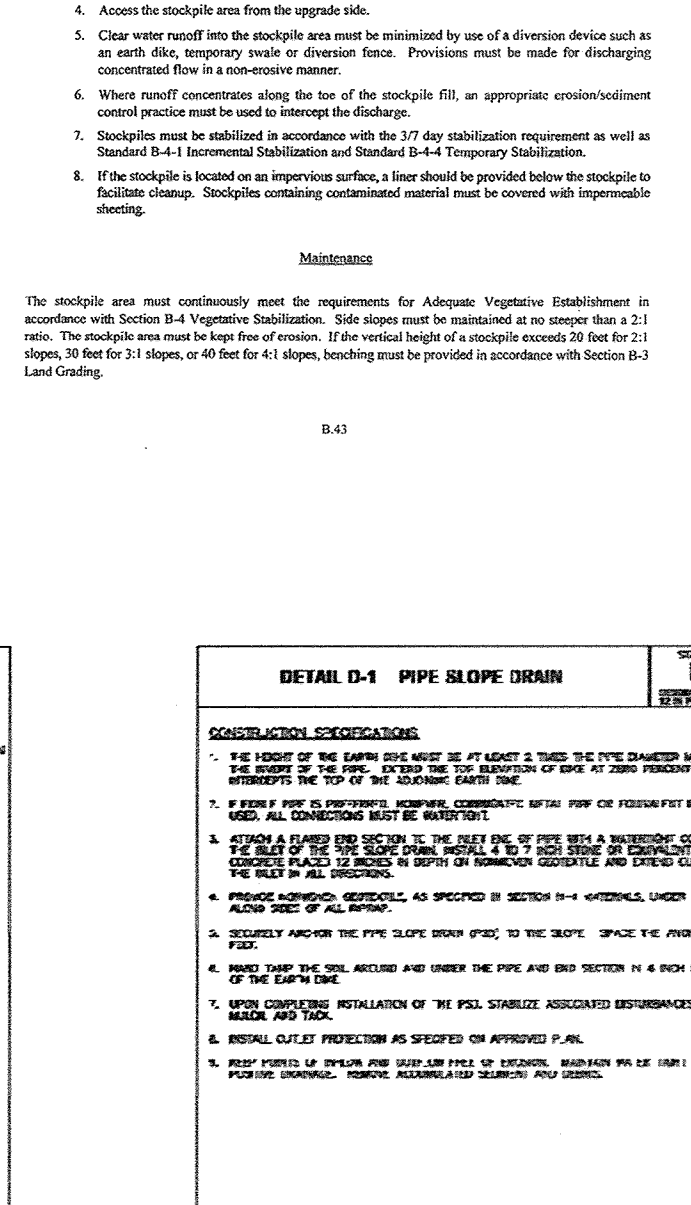
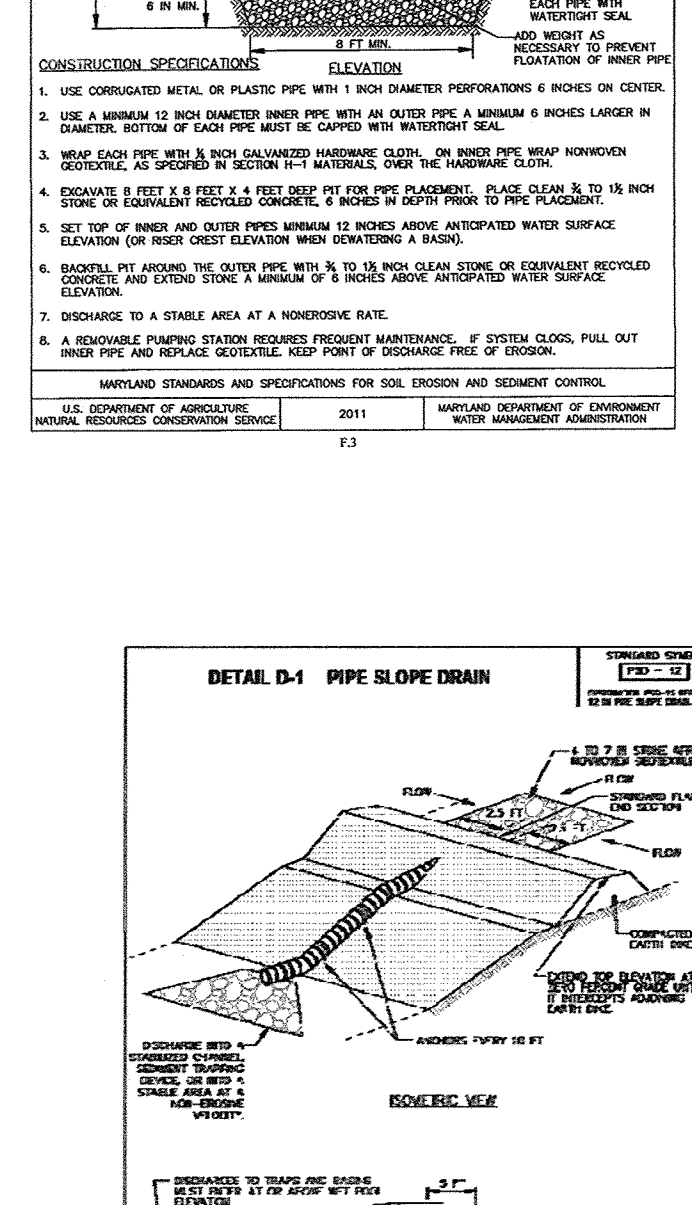
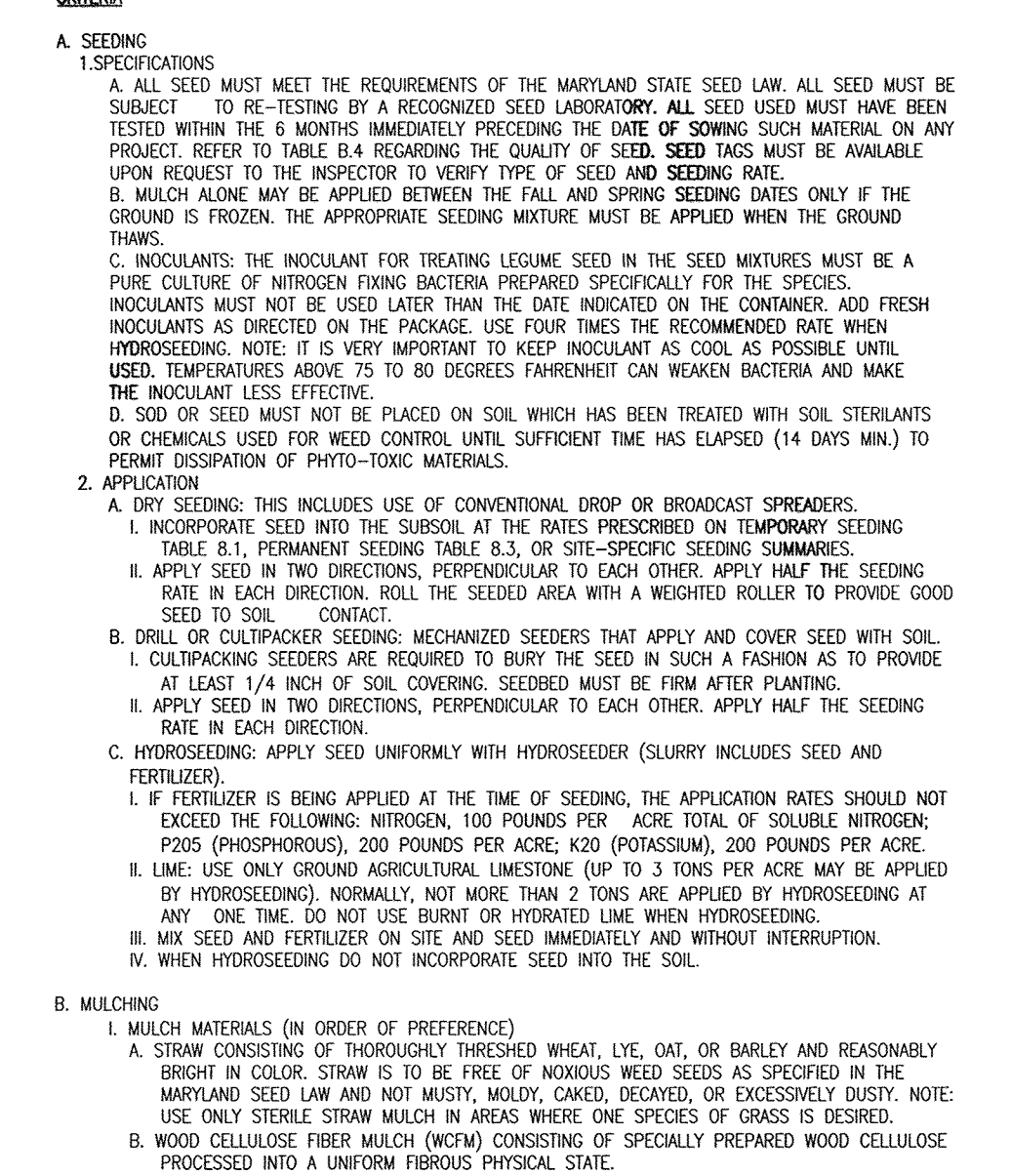
DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
PURPOSE: TO USE FAST-GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CONDITIONS WHERE PRACTICE APPLIES: TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CONDITIONS WHERE PRACTICE APPLIES: TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

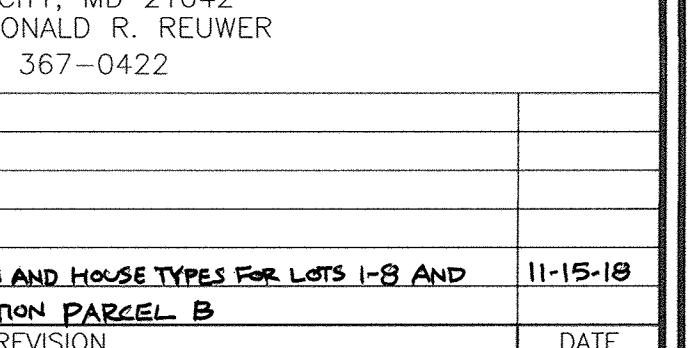
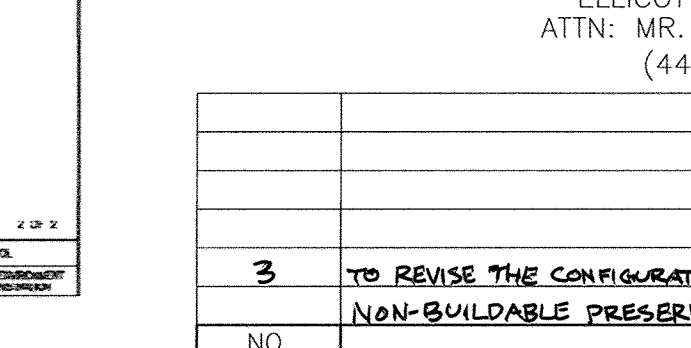
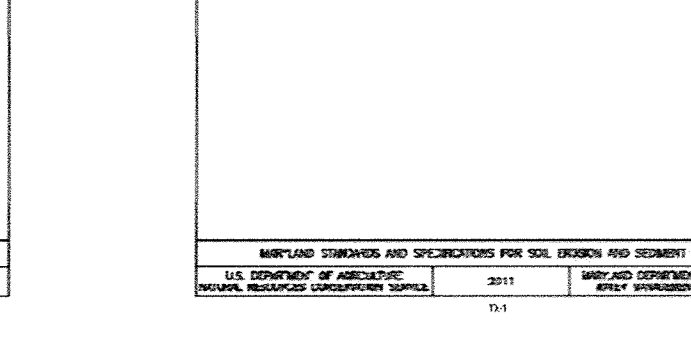
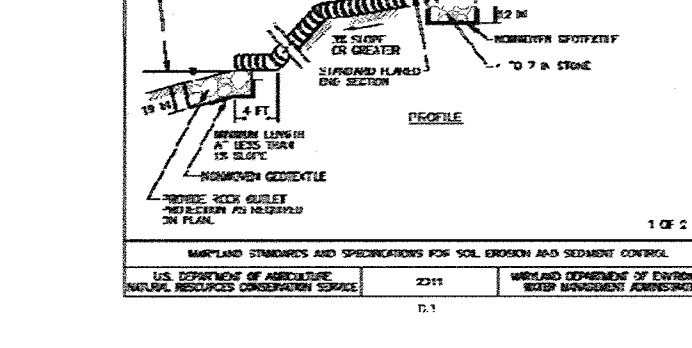
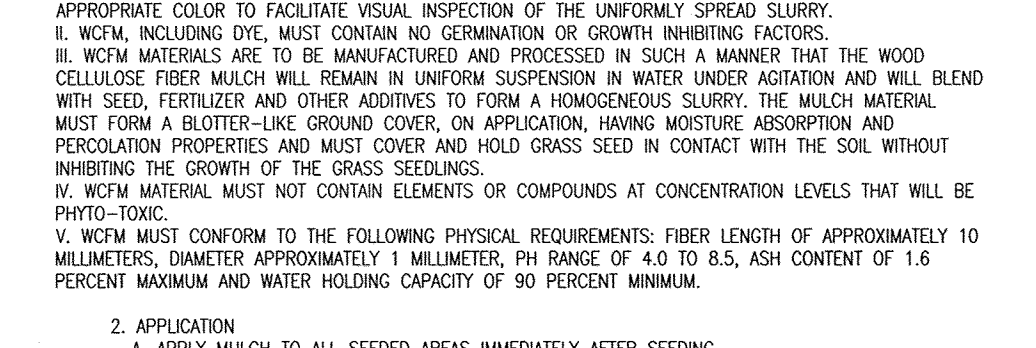
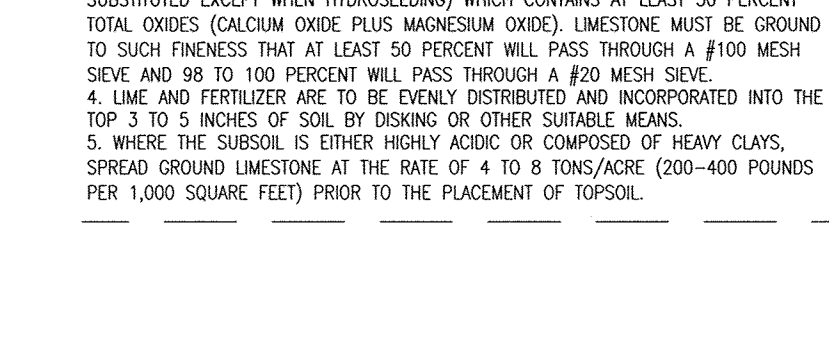


TEMPORARY SEEDING SUMMARY table with columns for HARDFNESS ZONE, SEED MIXTURE, APPLICATION RATE, SEEDING DATES, and LIME RATE.

PERMANENT SEEDING SUMMARY table with columns for HARDFNESS ZONE, SEED MIXTURE, APPLICATION RATE, SEEDING DATES, and LIME RATE.

TEMPORARY SEEDING SUMMARY table with columns for HARDFNESS ZONE, SEED MIXTURE, APPLICATION RATE, SEEDING DATES, and LIME RATE.

PERMANENT SEEDING SUMMARY table with columns for HARDFNESS ZONE, SEED MIXTURE, APPLICATION RATE, SEEDING DATES, and LIME RATE.



DEVELOPER and ENGINEER signature blocks for temporary stabilization plan.

DEVELOPER and ENGINEER signature blocks for permanent stabilization plan.

DEVELOPER and ENGINEER signature blocks for seeding and mulching plan.

DEVELOPER and ENGINEER signature blocks for seeding and mulching plan.

DEVELOPER and ENGINEER signature blocks for seeding and mulching plan.

DEVELOPER and ENGINEER signature blocks for seeding and mulching plan.

DEVELOPER and ENGINEER signature blocks for seeding and mulching plan.

DEVELOPER and ENGINEER signature blocks for seeding and mulching plan.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

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APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR COMBINED WITH THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A HYDROBARRIER TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMOUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOODS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
 * **SOIL COMPONENT** - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).
 * **ORGANIC CONTENT** - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COURSE SAND (30%), AND COMPOST (40%).
 * **CLAY CONTENT** - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
 * **PH RANGE** - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, ION SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
 THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL COMPLY WITH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR WASH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LOGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE AVOIDED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHESEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACURE THE SOIL PROFILE THROUGHOUT THE 12 INCH OPERATION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE REFRACURING (ROTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE 12 TO 18" OF 1" TO 1.5" DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION ZONE. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPORT LOGS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SUBORDINATING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDED (OR CHIPPED) HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH SHOULD BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL SET AND MAINTAIN THE PLANT STRAIGHT THROUGH THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE GRADED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLOUS SHALL BE PLANTED FOLLOWING THE NON-GRASS COVER PLANTING SCHEDULE. THE PLANTING SCHEDULE SHALL BE AS FOLLOWS:

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY, ADDING FERTILIZERS DEFATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
 * PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER.
 * PERFORATIONS - PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4A) GALVANIZED HARDWARE CLOTH.
 * GRAVEL - THE GRAVEL UNDERDRAIN SHOULD BE AT LEAST 1/2" THICK ABOVE AND BELOW THE UNDERDRAIN.
 * THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
 * A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
 * A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".
 * THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

N-1. DISCONNECTION OF ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:
THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED ROOFTOP DISCONNECTIONS:
 - EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF.
 - SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:
A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAVE BEEN MET AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

MAINTENANCE CRITERIA:
MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

N-2. DISCONNECTION OF NON-ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:
THE FOLLOWING SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH NON-ROOFTOP DISCONNECTIONS:
 - EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN AREAS DESIGNATED FOR NON-ROOFTOP DISCONNECTIONS.
 - SITE DISTURBANCE: TO MINIMIZE DISTURBANCE AND COMPACTION, CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:
A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT ADEQUATE TREATMENT AREAS AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

MAINTENANCE CRITERIA:
MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, HIGH FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

A. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

B.4.1. SPECIFICATIONS FOR PERMEABLE PAVEMENTS & REINFORCED TURF

THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING. THE USER IS RESPONSIBLE FOR THE APPLICATION OF THESE SPECIFICATIONS FOR INDIVIDUAL PROJECTS AND SPECIFIC CONDITIONS.

1. PERVIOUS CONCRETE SPECIFICATIONS
DESIGN THICKNESS - PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE PERVIOUS CONCRETE SHALL SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED. APPLICATIONS SHOULD BE DESIGNED USING OTHER STANDARDS (E.G., AASHTO, MD 325.9K, AASHTO) OR USING STRUCTURAL VALUES DERIVED FROM TESTS.
 MIX & INSTALLATION - TRADITIONAL PORTLAND CEMENTS (ASTM C 150) SHALL BE USED FOR PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADJUSTERS MAY ALSO BE USED. MATERIALS SHOULD BE TESTED FOR CRITICAL PROPERTIES (E.G., SETTING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY, PERMEABILITY) CAN BE DETERMINED BY TESTING PERVIOUS CONCRETE. PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE. OTHER AGGREGATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO. 10) AND NO. 28 (3/16 IN. TO NO. 20). SINGLE-SIZED AGGREGATE (NO. 10) MAY ALSO BE USED.
 AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE. OTHER AGGREGATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO. 10) AND NO. 28 (3/16 IN. TO NO. 20). SINGLE-SIZED AGGREGATE (NO. 10) MAY ALSO BE USED.
 WATER CONTENT - WATER-TO-CEMENT RATIOS OF 0.427 AND 0.30 ARE USED ROUTINELY WITH PERVIOUS CONCRETE. WATER QUALITY SHOULD MEET AQA. AS A GENERAL RULE, PERVIOUS CONCRETE WATER MEETING ASTM C 94 OR AASHTO M 157 MAY ALSO BE USED.
 ADJUSTERS - CHEMICAL ADJUSTERS (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADJUSTERS SHALL MEET ASTM C 494 (CHEMICAL ADJUSTERS) AND ASTM C 260 (AIR ENTRAINING ADJUSTERS) AND CLOSELY FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
 COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).

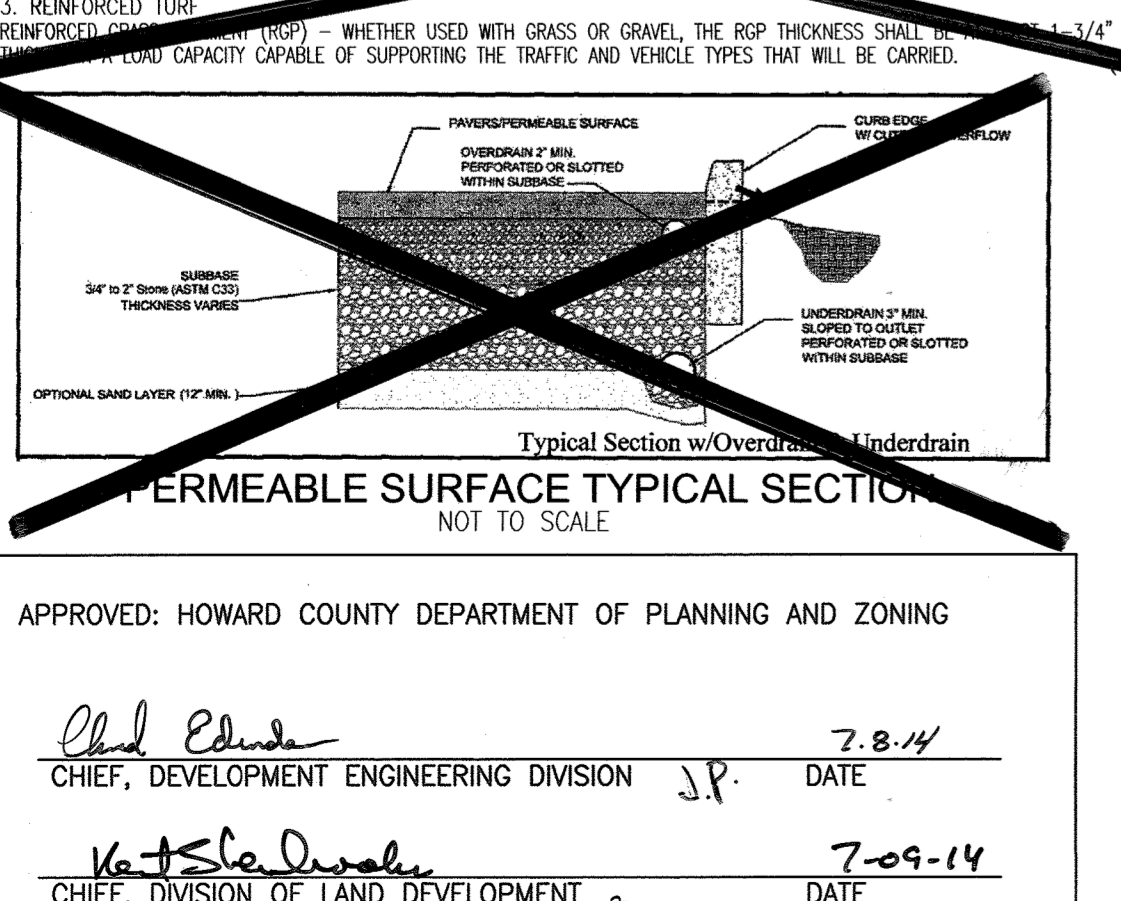
2. REINFORCED TURF
REINFORCED TURF (RTP) - WHETHER USED WITH GRASS OR GRAVEL, THE RTP THICKNESS SHALL BE SUFFICIENT TO SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.
 REINFORCED TURF CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.

APPENDIX B.4. - CONSTRUCTION SPECIFICATIONS

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

Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration.

Material	Specification	Notes
Planting soil	See Appendix A, Table A.4	Plantings are site-specific
Planting soil	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%) & compost (40%)	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	
Mulch	shredded hardwood	aged 6 months, minimum no pine or wood chips
Pea gravel/drainage	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")
Curbs	conventional stone: washed cobble	stone: 2" to 5"
Geotextile	see Appendix A, Table A.4	see Appendix A, Table A.4
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 37 OR NO. 6 AGGREGATE (3/8" TO 3/4")
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35
Precast in place concrete (if required)	MSHA Mix No. 3, F _c = 3000 psi @ 28 days, normal weight, air-entrained, conforming to meet ASTM-615-60	skirted or perforated pipe, 3/4" perf. @ 6" on center, 4 holes per foot; minimum of 3" of gravel over pipe; not necessary; underdrain pipe. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth. Inside joints of precast in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using precast approved State or local standards; requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308.8R; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil permeability) and modulus of potential energy. Sand substitutions such as Diabase and Gypstone (AASHTO) #10 are not acceptable. No calcium sulfonate or dolomite sand substitutions are acceptable. No "truck dust" can be used for sand.
Sand	AASHTO M-6 or ASTM-C-33	0.075 to 0.04"



BUSHMAN

BRTT205 Round Tank

Capacity: 205 U.S. Gallons (773 Liters)

Water capacity of four 50 gallon rain barrels

Quality rotational-molded polyethylene construction assures maximum strength

One-piece construction and horizontal ribs around the tank provide added wall strength

Inlet strainer with mosquito screen and cover

Overflow assembly provided with mosquito screen and 90 degree elbow

Tank openings are pre-installed for easy installation

Bushman 5 Year Warranty

Capacity: 205 U.S. Gallons (773 Liters), 170 Imperial Gallons

Overflow Outlet

Spigot Outlet

NEW 205 Gallon Cap City

Ordering Information

EASY STEPS TO ORDER

- Bushman Tank Configuration - BRTT - Round Tank
- Capacity (U.S. Gallons) - 205 - 205 U.S. Gallons (170 Imperial Gallons, 773 Liters)
- Color - C0 - Black, C3 - Forest Green, C4 - Mocha Brown, C5 - Brick Red
- Package - P1 - Basic Tank System, Package 1, P2 - Premier System, Package 2

Refer to Bushman Business Harvesting and Food Systems Product Catalog

Example: BRTT205C3P2, 205 U.S. Gallons Capacity, Forest Green, Premier Package.

Note: Actual colors will vary from the example shown.

Color Key: C0 Black, C3 Forest Green, C4 Mocha Brown, C5 Brick Red

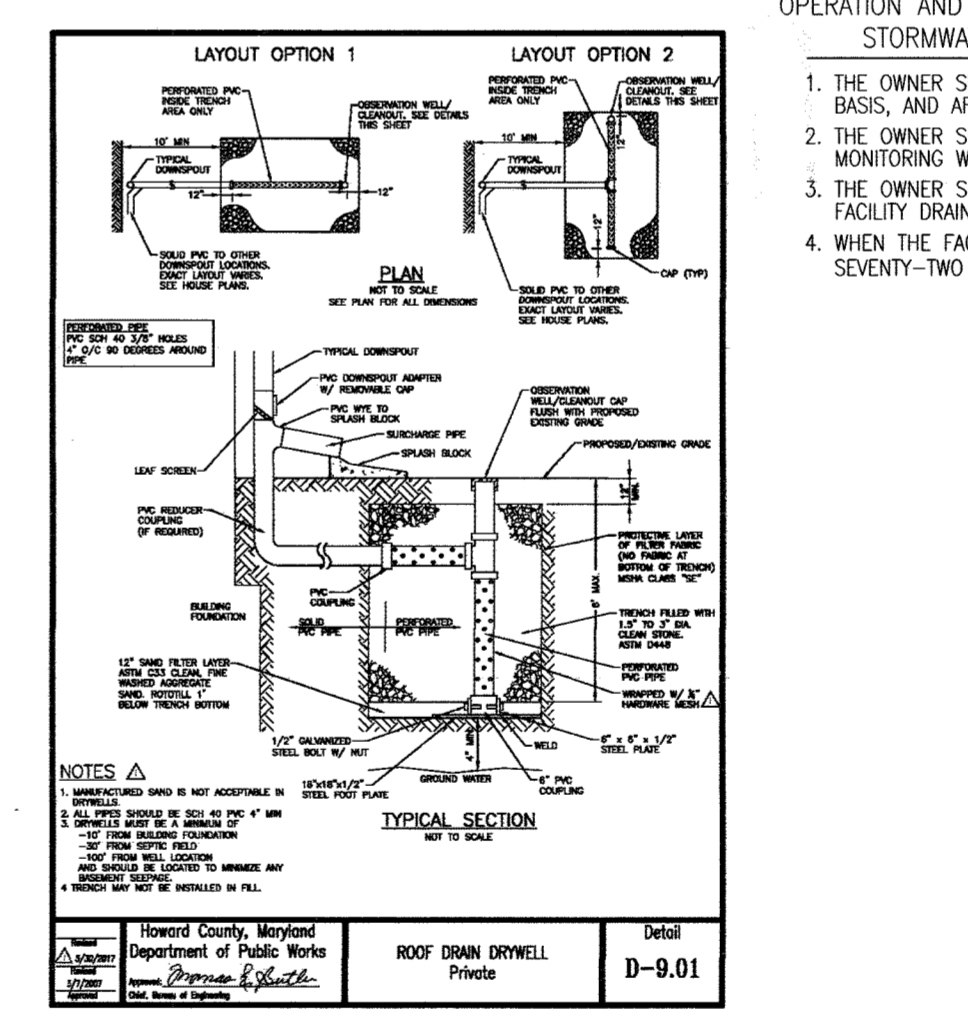
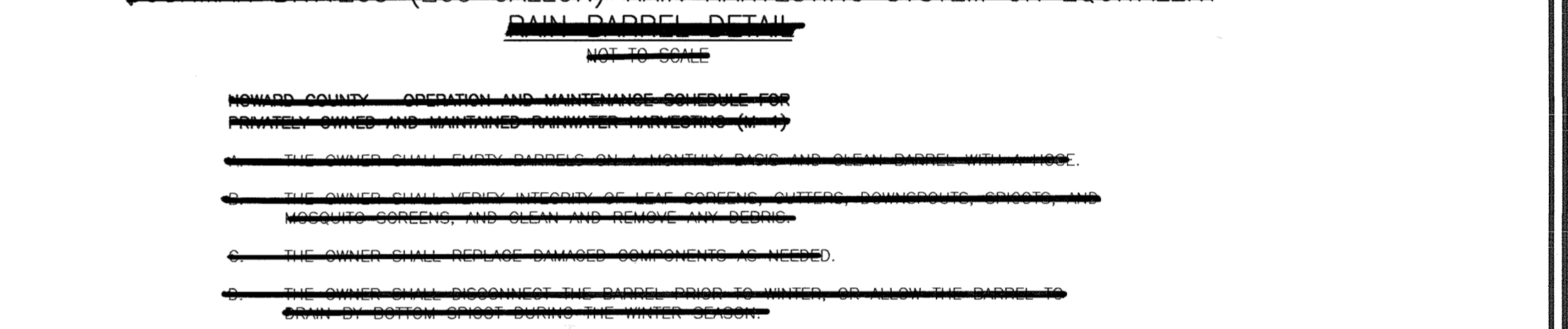
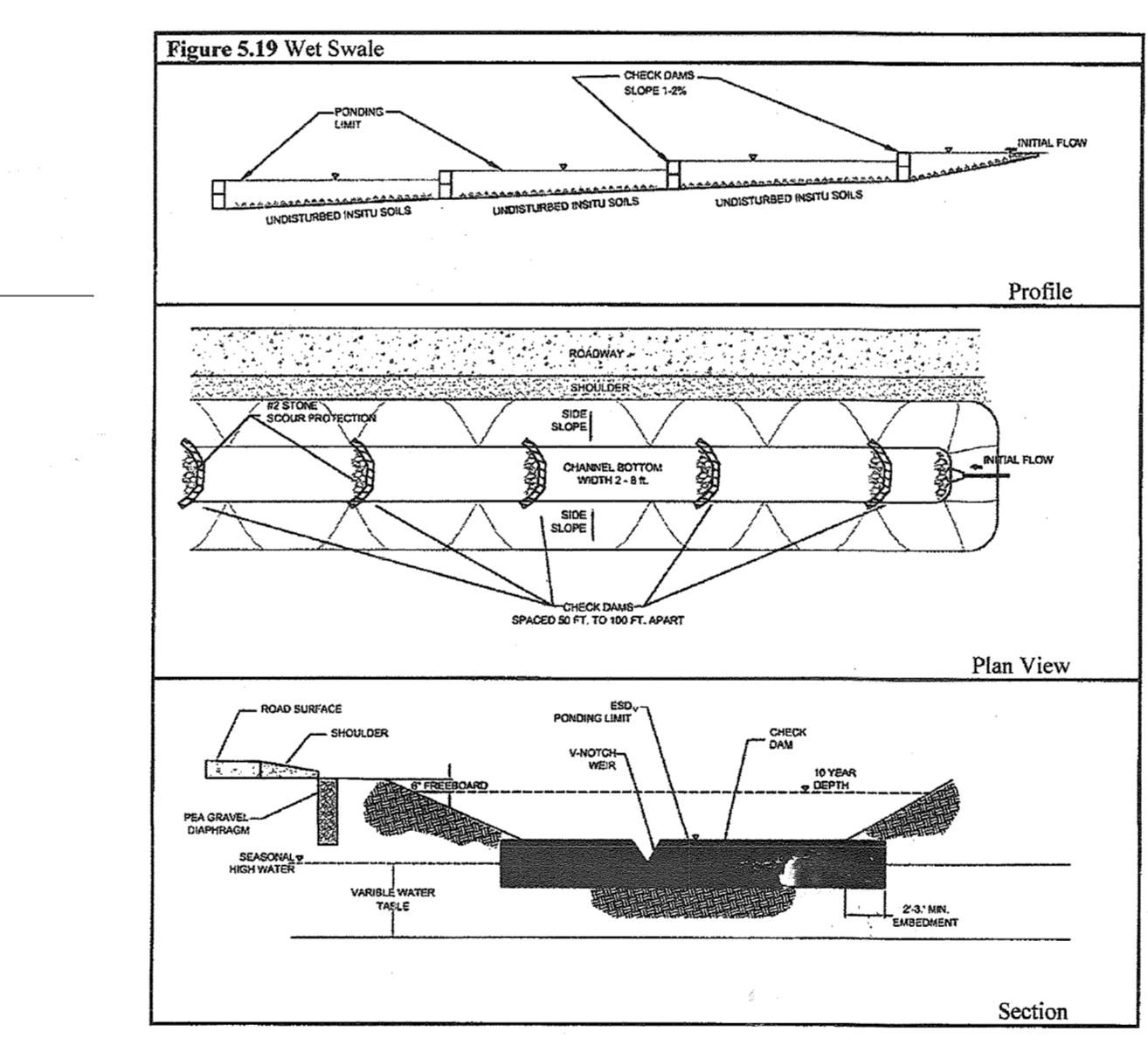
BUSHMAN
SEMI-CUSTOM AND CUSTOM WHITE

Canada: Bushman, Canada
1185 Tenken Road, Unit 3 - 5
Mississauga, Ontario L5T 1X3
Tel: 800.987.8332 Fax: 905.565.8282
www.bushmancanada.com

Americas: Bushman, USA
26640 Ynez Road, P.O. Box 890351
Temecula, CA 92589-0351
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www.bushmanusa.com

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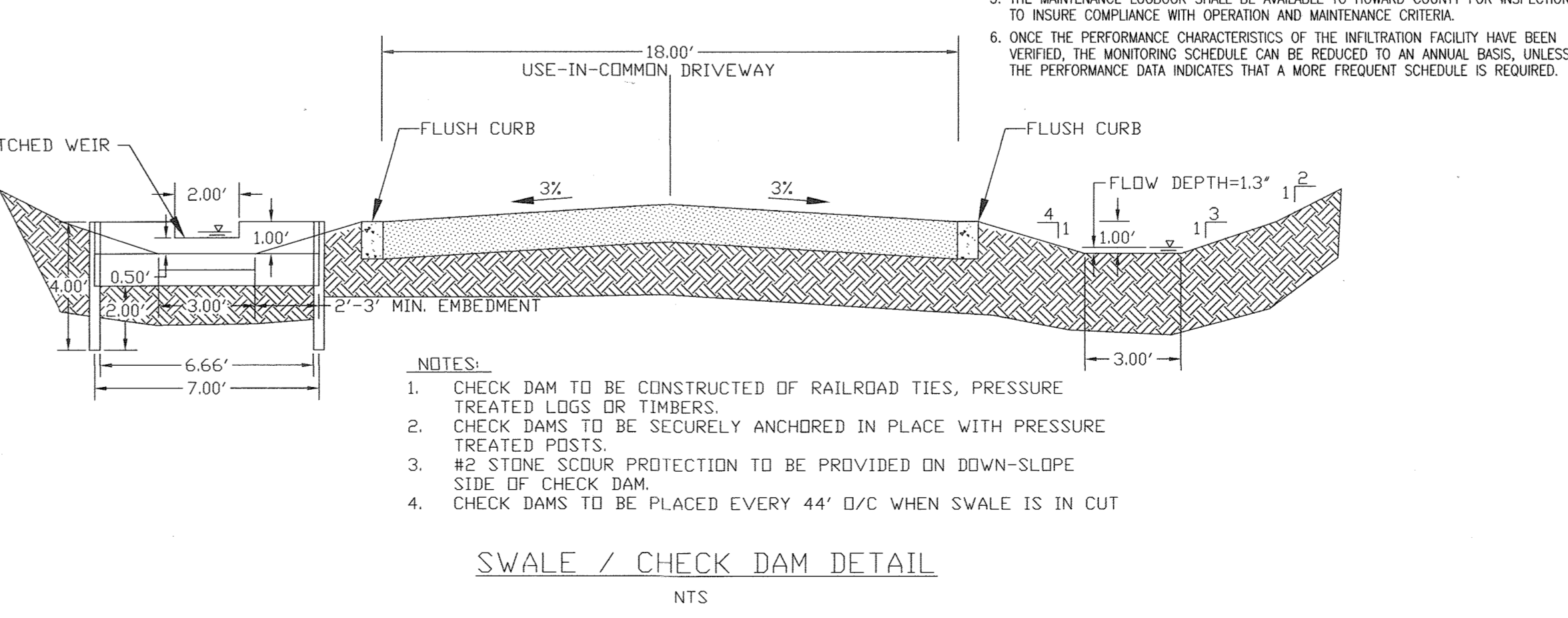
Chapter 5. Environmental Site Design - Nonstructural and Micro-Scale Practices



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1) AND DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS, AND AFTER EVERY LARGE STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED, SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.

NO.	REVISION	DATE
4	REVISE SWM AND SEWAGE DISPOSAL AREA ON LOT 4	8-14-19
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-9 AND	11-15-18
	NON-BUILDABLE PRESERVATION PARCEL B.	
2	REVISE PLANS TO REVISE LOT 4	9/20/18



SUPPLEMENTAL INFORMATION PLAN

STORM WATER MANAGEMENT NOTES AND DETAILS

JACK'S LANDING
LOTS 1-8, BUILDABLE PRESERVATION PARCEL A, AND NON-BUILDABLE PRESERVATION PARCEL C
A SUBDIVISION OF TAX MAP 34
PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03
5TH ELECTION DISTRICT

PARCELS: 414
ZONED: RR-DEO
HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE

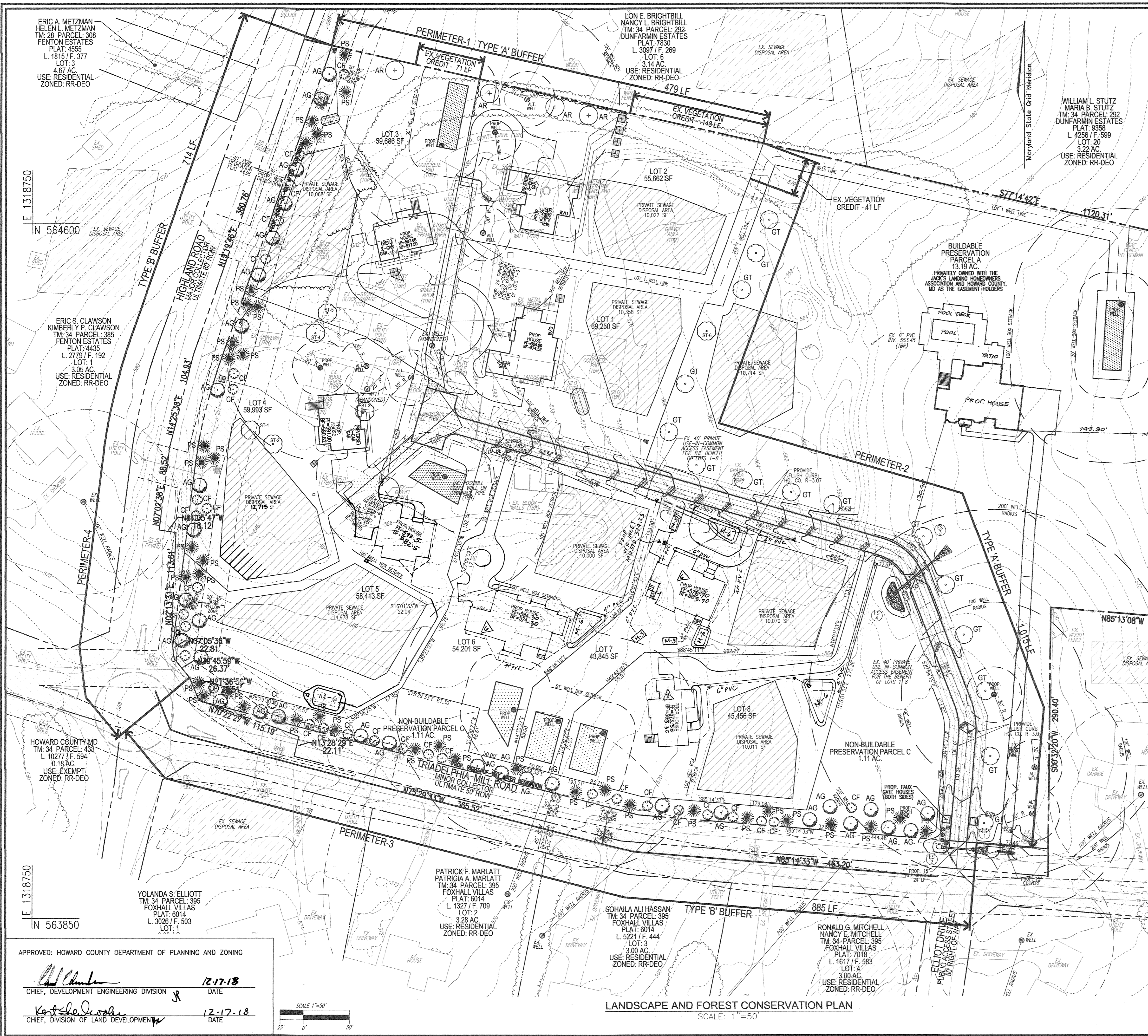
STATE OF MARYLAND
ROBERT H. VOGEL, PE No. 16193

DESIGN BY: RHY
DRAWN BY: JMR
CHECKED BY: RHY
DATE: MARCH 2014
SCALE: AS SHOWN
W.O. NO.: 13-31

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. 16193, EXPIRATION DATE: 08-27-2019

9 SHEET OF 12

F-08-101 1/2018



DEVELOPER/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.17A 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 EXCISED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 Signature: [Signature] DATE: 12-3-18

LEGEND:

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- PROPOSED RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVING
- EXISTING TREELINE
- EXISTING WOOD FENCE
- EXISTING METAL FENCE
- EXISTING UTILITY POLE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING USE-IN-COMMON ACCESS EASEMENT
- EXISTING WELL LOCATION
- APPROVED WELL LOCATION (FIELD LOCATED)
- PROPOSED ALTERNATE WELL LOCATION
- EXISTING DRY WELL CASING (TO BE ABANDONED)
- EXISTING PRIVATE SDA
- PROPOSED PRIVATE SDA
- PROPOSED WELL BOX
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING SPECIMEN TREE
- EXISTING B&E GREEN ZONE
- EXISTING B&E YELLOW ZONE
- PROPOSED FOREST CONSERVATION SIGN

E 1318750
 IN 564600
 MATCHLINE - SEE SHEET 10

SPECIMEN TREE CHART

NO.	SIZE	COMMON NAME	COMMENTS
ST-1	40" DBH	ELM	TO REMAIN
ST-2	40" DBH	ELM	TO REMAIN
ST-3	42" DBH	OAK	TO BE REMOVED
ST-4	36" DBH	OAK	TO REMAIN
ST-5	44" DBH	PINE	TO REMAIN
ST-6	42" DBH	ELM	TO REMAIN
ST-7	40" DBH	MULTI-STEM	TO REMAIN

NOTE: FOR SPECIMEN TREES 4 & 5 TREE PROTECTION FENCING WILL BE REQUIRED

- B & E NOTES:**
- THE LANDSCAPING ON WIREZONE (40' FROM B&E POLES) IS IN ACCORDANCE WITH B&E LIST OF TREES AND PLANTS.
 - B&E RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF B&E SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
 - THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE B&E R/W OR EASEMENT, IF B&E DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT, IF B&E INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

- FSD NOTES:**
- NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR APPROPRIATE HABITAT WERE OBSERVED ON THE PROPERTY.
 - SURROUNDING LAND USE IS MEDIUM-HIGH DENSITY RESIDENTIAL DEVELOPMENT.
 - THERE ARE NO FOREST PRESENT ON SUBJECT PROPERTY.
 - SPECIMEN TREES ARE SHOWN HEREON PER THE 10-6-2006 CAPITOL DEVELOPING DESIGN, INC. DELINEATION.

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 1999-2024
 12345
 5-B ONLY

OWNER
 MARTY A. HOWARD
 P.O. BOX 740
 CLARKSVILLE, MD 21029

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MD 21042
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

NO.	REVISION	DATE
7	REVISE SWM AND HOUSE TYPE ON LOT-8	7-15-21
6	REVISE SWM AND HOUSE TYPE ON LOTS 6 AND 7	2-15-21
5	REVISE SWM AND HOUSE TYPE ON LOT-5	10-15-19
4	REVISE SWM AND SEWAGE DISPOSAL AREA ON LOT-4	9-14-19
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-8 AND NON-BUILDABLE PRESERVATION PARCELS B	11-15-18

REVISED SUPPLEMENTAL INFORMATION PLAN
LANDSCAPE AND FOREST CONSERVATION PLAN
JACK'S LANDING
 LOTS 1-8, BUILDABLE PRESERVATION PARCEL A
 AND NON-BUILDABLE PRESERVATION PARCEL C
 A SUBDIVISION OF TAX MAP 34
 PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03
 5TH ELECTION DISTRICT

PARCELS: 414
 ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND

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 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 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. 16193, EXPIRATION DATE: 08-27-2020

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: OCTOBER 2018
 SCALE: AS SHOWN
 W.D. NO.: 13-31

10 SHEET OF 12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12-17-18

[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 12-17-18

SCALE: 1"=50'

LANDSCAPE AND FOREST CONSERVATION PLAN
 SCALE: 1"=50'

LANDSCAPE NOTES

- 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.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

B G & E NOTES:

- THE LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS.
- BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
- THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT. IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

LANDSCAPE SCHEDULE					
SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
+	AR	4	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2"-3" CAL.	B & B
○	GT	15	GLEDTISIA TRIACANTHOS INERMIS 'IMPERIAL' IMPERIAL THORNLESS HONEYLOCUST	2-1/2"-3" CAL.	B & B
○	CF	32	CORNUS FLORIDA 'WHITE' WHITE FLOWERING DOGWOOD	8'-10" HT.	B & B
○	AG	32	ACER GRISEUM PAPERBARK MAPLE	1-1/2"-2" CAL.	B & B
☀	PS	40	PINUS STROBUS EASTERN WHITE PINE	6'-8' HT.	B & B

TRASH PAD LANDSCAPING				
SYMBOL	QTY.	DESCRIPTION	SIZE	REMARKS
☉	5	DWARF JAPANESE YEW	3"-4" HT	B & B

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			
	1	2	3	4
LANDSCAPE TYPE	A	B	C	D
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	479'	1015'	885'	714'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	219'	41'	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (IF REMAINING)	260	974	885	714
SHADE TREES	1:60	1:60	1:50	1:50
EVERGREEN TREES	-	-	1:40	22
SHRUBS	-	-	1:40	18
NUMBER OF PLANTS PROVIDED	4	15*	22**	18**
SHADE TREES	-	-	-	-
EVERGREEN TREES	-	-	-	-
OTHER TREES (2:1 SUBSTITUTION)	-	-	36**	28**
SHRUBS (1:1 SUBSTITUTION)	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED	* CREDIT 42' ELM TO REMAIN (SPECIMEN TREE #6) ** BGE COMPLIANT			

GENERAL NOTES

- WATERSHED NAME: MIDDLE PATUXENT RIVER
WATERSHED NUMBER: 2131106
WATERSHED NAME: ROCKY GORGE DAM
WATERSHED NUMBER: 2131107
- A. GROSS SITE AREA: 25.81 AC.
NET SITE AREA: 25.13 AC.
B. AREA OF 100-YEAR FLOODPLAIN: 0.68 AC.
C. AREA OF WETLANDS AND BUFFERS(ONSITE): 2.91 AC.*
D. AREA OF STREAM AND BUFFERS(ONSITE): 5.75 AC.*
E. AREA OF > 25% STEEP SLOPES: 0.00 AC.
F. EXISTING FOREST: 0.00 AC.
G. ZONED: RR-DEO
H. EXISTING USE: FARMLAND
I. PROPOSED USE: RESIDENTIAL
- * WETLAND & STREAM BUFFERS OVERLAP

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY FOR THE PERIMETER LANDSCAPING IN THE AMOUNT OF \$21,750.00 FOR THE REQUIRED 52 SHADE TREES (15,600) 40 EVERGREENS (6,000) AND 5 SHRUBS (150 - TRASH PAD) SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

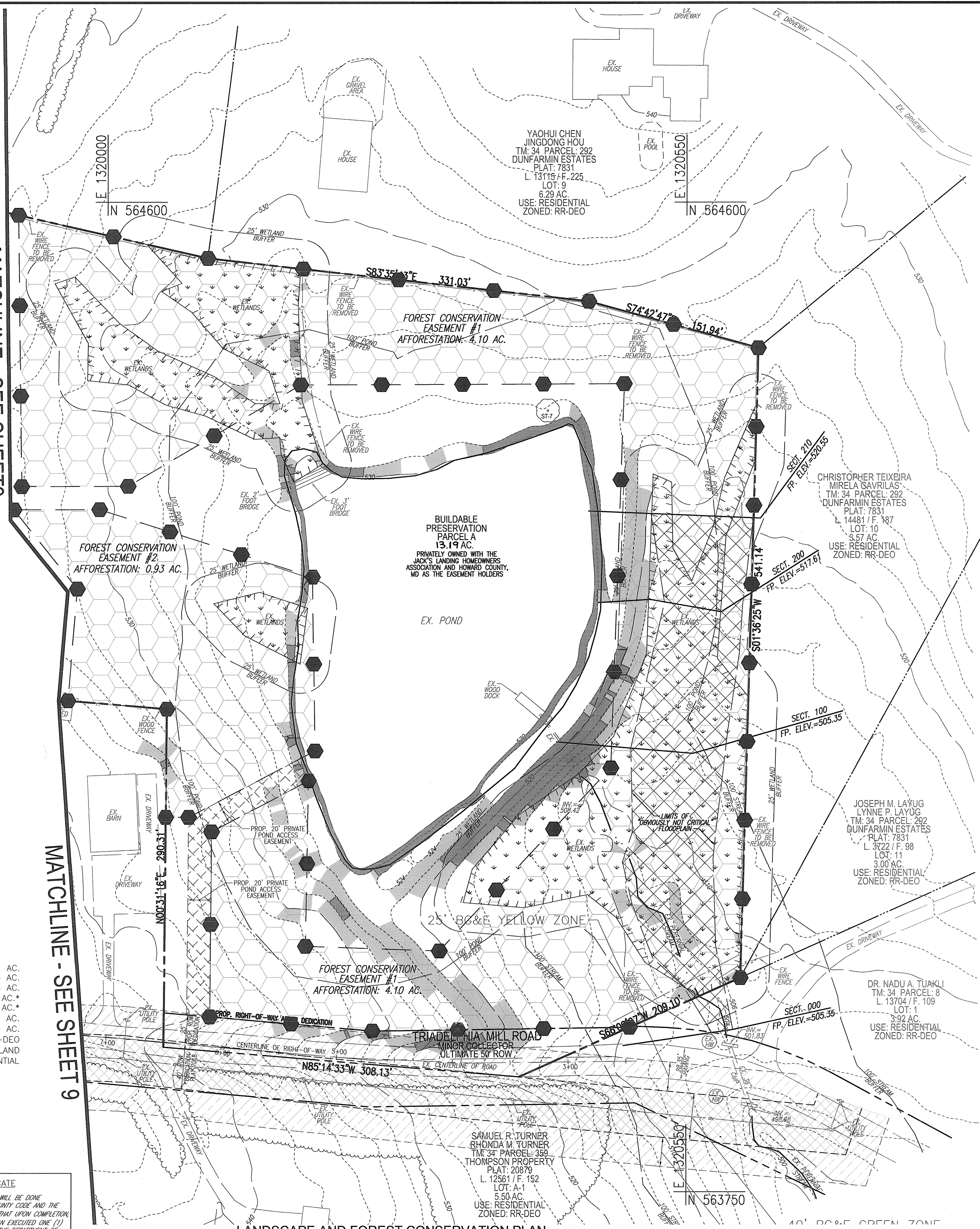
Chief, Development Engineering Division 18 DATE 7-8-14

Chief, Division of Land Development 88 DATE 7-09-14

DEVELOPER/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.

Signature of Developer DATE 4/2/14



LEGEND:

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- PROPOSED RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAWING
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WOOD FENCE
- EXISTING METAL FENCE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- OBVIOUSLY NOT CRITICAL FLOODPLAIN
- PROP. FOREST CONSERVATION EASEMENT (AFFORESTATION) PLANT
- EXISTING UTILITY POLE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- EXISTING STEEP SLOPES
- EXISTING MODERATE SLOPES
- EXISTING B&E GREEN ZONE
- EXISTING B&E YELLOW ZONE
- PROPOSED FOREST CONSERVATION SIGN
- PROP. PRIVATE POND ACCESS EASEMENT PLANT

SPECIMEN TREE CHART

NO.	SIZE	COMMON NAME	COMMENTS
ST-1	40" DBH	ELM	TO REMAIN
ST-2	40" DBH	ELM	TO REMAIN
ST-3	42" DBH	OAK	TO BE REMOVED
ST-4	36" DBH	OAK	TO REMAIN
ST-5	44" DBH	PINE	TO REMAIN
ST-6	42" DBH	ELM	TO REMAIN
ST-7	40" DBH	MULTI-STEM	TO REMAIN

NOTE: FOR SPECIMEN TREES 4 & 5 TREE PROTECTION FENCING WILL BE REQUIRED

OWNER
MARTY A. HOWARD
P.O. BOX 740
CLARKSVILLE, MD 21029

DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR., SUITE 102
ELLCOTT CITY, MD 21042
ATTN: MR. DONALD R. REUWER
(443) 367-0422

NO.	REVISION	DATE
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-8 AND NON-BUILDABLE PRESERVATION PARCEL B	11-15-18

SUPPLEMENTAL INFORMATION PLAN
LANDSCAPE AND FOREST CONSERVATION PLAN

JACK'S LANDING
LOTS 1-8, BUILDBLE PRESERVATION PARCEL A, AND NON-BUILDBLE PRESERVATION PARCEL C
A SUBDIVISION OF TAX MAP 34 PARCEL 414 (L. 3172 / F. 336)

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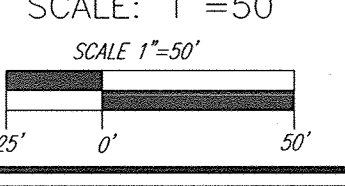
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DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: MARCH 2014
SCALE: AS SHOWN
W.O. NO.: 13-31

10 SHEET OF 12

LANDSCAPE AND FOREST CONSERVATION PLAN



F-08-101 0808-0008

AFFORESTATION PLAN

A. PLANTING PLAN AND METHODS

PLANT SPECIES SELECTION WAS BASED ON OUR KNOWLEDGE REGARDING PLANT COMMUNITIES IN MARYLAND'S PIEDMONT PLATEAU AND INFORMATION PROVIDED IN THE SOIL SURVEY ON TYPICAL VEGETATION FOR THE SOIL TYPE ON THE PLANTING SITE. SPECIES SELECTION WAS ALSO BASED ON OUR KNOWLEDGE OF PLANT AVAILABILITY IN THE NURSERY INDUSTRY.

AFFORESTATION WILL BE ACCOMPLISHED THROUGH A MIXED PLANTING OF WHIPS AND BRANCHED TRANSPLANTS. CONTAINER GROWN STOCK IS RECOMMENDED BUT BAREROOT STOCK MAY BE USED TO HELP CONTROL AFFORESTATION COSTS. IF BAREROOT STOCK IS USED THE ROOT SYSTEMS OF ALL PLANTS WILL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING TO IMPROVE MOISTURE RETENTION IN THE ROOT SYSTEMS.

PRIOR TO PLANTING THE PROPOSED FOREST CONSERVATION EASEMENTS ALL MULTIFLORA ROSE IN THE PLANTING AREA SHALL BE REMOVED. REMOVAL OF THE ROSE MAY BE PERFORMED WITH MOWING AND HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWING BY A PERIODIC HERBICIDE TREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN THE ROSE THICKETS SHOULD BE RETAINED WHEREVER POSSIBLE. HERBICIDE TREATMENTS SHALL OCCUR ON 2 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR SUBSEQUENT YEARS. HERBICIDE USE SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURER'S SPECIFICATIONS. CARE SHOULD BE TAKEN NOT TO SPRAY PLANTED TREES OR NATURALLY OCCURRING NATIVE TREE/SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING.

B. PLANTING AND SOIL SPECIFICATIONS

PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE PLANTING DETAIL AND PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN.

AMENDMENTS TO EXISTING SOIL WILL BE IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN. SOIL DISTURBANCE WILL BE LIMITED TO INDIVIDUAL PLANTING LOCATIONS.

C. MAINTENANCE OF PLANTINGS

FOR INFORMATION REGARDING MAINTENANCE OF THE AFFORESTATION PLANTINGS, SEE SECTION VIII B.

D. GUARANTEE REQUIREMENTS

A 90 PERCENT SURVIVAL RATE OF THE AFFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON. ALL PLANT MATERIAL BELOW THE 90 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE SECOND GROWING SEASON. AT THE END OF THE SECOND GROWING SEASON, A 75 PERCENT SURVIVAL RATE WILL BE REQUIRED. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED BY THE BEGINNING OF THE NEXT GROWING SEASON.

E. SECURITY FOR AFFORESTATION

SECTION 16-1209 OF THE HOWARD COUNTY FOREST CONSERVATION ACT REQUIRES THAT A DEVELOPER SHALL POST A SECURITY (BOND, LETTER OF CREDIT, ETC.) WITH THE COUNTY TO INSURE THAT ALL WORK IS DONE IN ACCORDANCE WITH THE FCP.

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. FOREST PROTECTION TECHNIQUES

1. SOIL PROTECTION AREA (CRITICAL ROOT ZONE)

THE SOIL PROTECTION AREA, OR CRITICAL ROOT ZONE, OF A TREE IS THAT PORTION OF THE SOIL COLUMN WHERE MOST OF ITS ROOTS MAY BE FOUND. THE MAJORITY OF ROOTS RESPONSIBLE FOR WATER AND NUTRIENT UPTAKE ARE LOCATED JUST BELOW THE SOIL SURFACE. TEMPORARY FENCING SHALL BE PLACED AROUND THE CRITICAL ROOT ZONE OF THE FOREST IN AREAS WHERE THE FOREST LIMITS OCCUR WITHIN 25 FEET OF THE LIMIT OF DISTURBANCE.

2. FENCING AND SIGNAGE

EXISTING FOREST LIMITS OCCURRING WITHIN 25 FEET OF THE LIMITS OF DISTURBANCE SHALL BE PROTECTED USING TEMPORARY PROTECTIVE FENCING. PERMANENT SIGNAGE SHALL BE PLACED AROUND THE AFFORESTATION AREA PRIOR TO PLANT INSTALLATION, AS SHOWN ON THE PLAN.

B. PRE-CONSTRUCTION MEETING

UPON STAKING OF LIMITS OF DISTURBANCE A PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN THE DEVELOPER, CONTRACTOR AND APPROPRIATE COUNTY INSPECTOR. THE PURPOSE OF THE MEETING WILL BE TO VERIFY THAT ALL SEDIMENT CONTROL IS IN ORDER, AND TO NOTIFY THE CONTRACTOR OF POSSIBLE PENALTIES FOR NON-COMPLIANCE WITH THE FCP.

C. STORAGE FACILITIES/EQUIPMENT CLEANING

ALL EQUIPMENT STORAGE, PARKING, SANITARY FACILITIES, MATERIAL STOCKPILING, ETC. ASSOCIATED WITH CONSTRUCTION OF THE PROJECT WILL BE RESTRICTED TO THOSE AREAS OUTSIDE OF THE PROPOSED FOREST CONSERVATION EASEMENT. CLEANING OF EQUIPMENT WILL BE LIMITED TO AREA WITHIN THE LOOP OF THE PROPOSED HOMESITES. WASTEWATER RESULTING FROM EQUIPMENT CLEANING WILL BE CONTROLLED TO PREVENT RUNOFF INTO ENVIRONMENTALLY SENSITIVE AREAS.

D. SEQUENCE OF CONSTRUCTION

THE FOLLOWING TIMETABLE REPRESENTS THE PROPOSED TIMETABLE FOR DEVELOPMENT. THE ITEMS OUTLINED IN THE FOREST CONSERVATION PLAN WILL BE ENACTED WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL.

BELOW FIND A PROPOSED SEQUENCE OF CONSTRUCTION.

1. INSTALL ALL SIGNAGE AND SEDIMENT CONTROL DEVICES.
2. HOLD PRE-CONSTRUCTION MEETING BETWEEN DEVELOPER, CONTRACTOR AND COUNTY INSPECTOR.
3. BUILD ACCESS ROADS, INSTALL UTILITIES, AND CONSTRUCT HOME. STABILIZE ALL DISTURBED AREAS ACCORDINGLY.
4. BEGIN MULTIFLORA ROSE REMOVAL, AS NEEDED. INSTALL PERMANENT PROTECTIVE SIGNAGE FOR EASEMENTS AND INITIATE PLANTINGS IN ACCORDANCE WITH FOREST CONSERVATION PLAN. PLANTINGS WILL BE COMPLETED WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL.
5. REMOVE SEDIMENT CONTROL.
6. HOLD POST-CONSTRUCTION MEETING WITH COUNTY INSPECTORS TO ASSURE COMPLIANCE WITH FCP. SUBMIT CERTIFICATION OF INSTALLATION.
7. MONITOR AND MAINTAIN PLANTINGS FOR 2 YEARS.

E. CONSTRUCTION MONITORING

ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL MONITOR CONSTRUCTION OF THE PROJECT TO ENSURE THAT ALL ACTIVITIES ARE IN COMPLIANCE WITH THE FOREST CONSERVATION PLAN.

F. POST-CONSTRUCTION MEETING

UPON COMPLETION OF CONSTRUCTION, ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL NOTIFY THE COUNTY THAT CONSTRUCTION HAS BEEN COMPLETED AND ARRANGE FOR A POST-CONSTRUCTION MEETING TO REVIEW THE PROJECT SITE. THE MEETING WILL ALLOW THE COUNTY INSPECTOR TO VERIFY THAT AFFORESTATION PLANTINGS HAVE BEEN INSTALLED.

POST-CONSTRUCTION MANAGEMENT PLAN

HOWARD COUNTY REQUIRES A TWO YEAR POST-CONSTRUCTION MANAGEMENT PLAN BE PREPARED AS PART OF THE FOREST CONSERVATION PLAN. THE PLAN GOES INTO EFFECT UPON ACCEPTANCE OF THE CONSTRUCTION CERTIFICATION OF COMPLETION BY THE COUNTY. ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE POST-CONSTRUCTION MANAGEMENT PLAN.

THE FOLLOWING ITEMS WILL BE INCORPORATED INTO THE PLAN:

A. FENCING AND SIGNAGE

PERMANENT SIGNAGE INDICATING THE LIMITS OF THE RETENTION/AFFORESTATION AREA SHALL BE MAINTAINED.

B. GENERAL SITE INSPECTIONS/MAINTENANCE OF PLANTINGS

SITE INSPECTIONS WILL BE PERFORMED A MINIMUM OF THREE TIMES DURING THE GROWING SEASON. THE PURPOSE OF THE INSPECTIONS WILL BE TO ASSESS THE HEALTH OF THE AFFORESTATION PLANTINGS. APPROPRIATE MEASURES WILL BE TAKEN TO RECTIFY ANY PROBLEMS WHICH MAY ARISE.

IN ADDITION, MAINTENANCE OF THE AFFORESTATION PLANTINGS WILL INVOLVE THE FOLLOWING STEPS:

1. WATERING ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON, MORE OR LESS FREQUENTLY DEPENDING ON WEATHER CONDITIONS. DURING THE SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.
2. REMOVAL OF INVASIVE EXOTICS AND NOXIOUS WEEDS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.
3. IDENTIFICATION OF SERIOUS PLANT PESTS AND DISEASES, TREATMENT WITH APPROPRIATE AGENT.
4. PRUNING OF DEAD BRANCHES.
5. AFTER 12 AND 24 MONTHS, REPLACEMENT OF PLANTS, IF REQUIRED, IN ACCORDANCE WITH THE GUARANTEE REQUIREMENTS SHOWN ON THE FCP.

C. EDUCATION

THE DEVELOPER WILL PROVIDE APPROPRIATE MATERIALS TO PROPERTY OWNERS INFORMING THEM OF THE LOCATION AND PURPOSE OF THE AFFORESTATION AREA. MATERIALS MAY INCLUDE SITE PLANS AND INFORMATION EXPLAINING THE INTENT OF THE FOREST CONSERVATION LAW.

D. FINAL INSPECTION

AT THE END OF THE TWO YEAR POST-CONSTRUCTION MANAGEMENT PERIOD, ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL, WILL SUBMIT TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL RETENTION/AFFORESTATION REQUIREMENTS HAVE BEEN MET. UPON ACCEPTANCE OF THIS CERTIFICATION, THE COUNTY WILL RELEASE THE DEVELOPER FROM ALL FUTURE OBLIGATIONS AND RELEASE THE DEVELOPER'S BOND.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edinger 7-8-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Kate Schell 7-9-14
 CHIEF, DIVISION OF LAND DEVELOPMENT

PLANTING NOTES:

- PLANTING DENSITY BASED SPACING REQUIREMENTS WHIPS WITH SHELTER @ 11' ON CENTER.
- PLANTING MAY 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 REQUIREMENTS.
- 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 DETERMINED THAT A SEEDLING OR WHIP WITHOUT SHELTER = 1 UNIT, WHIP WITH SHELTER = 2 UNITS, 1" CALIPER TREE = 3.5 UNITS AND 2" CALIPER TREE = 7 UNITS. THE USE OF PLANT UNITS SIMPLIFIES THE PLANT DENSITY CALCULATIONS WHEN MIXING STOCK SIZE.

PLANTING/SOIL SPECIFICATIONS

1. INSTALLATION OF BAREROOT/PLUG PLANT STOCK SHALL TAKE PLACE BETWEEN MARCH 15 - APRIL 20. B&B/CONTAINER STOCK MARCH 15 -MAY 30 OR SEPTEMBER 15 - NOVEMBER 15. FALL PLANTING OF B&B STOCK IS NOT RECOMMENDED.
2. DISTURBED AREAS SHALL BE SEEDING AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL HAVE NO ADDITIONAL TOPSOIL INSTALLED.
3. BAREROOT PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. ROOTS SHALL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING. BACKFILL IN THE PLANTING FITS SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART FINE FINES OR EQUIVALENT. FERTILIZER SHALL CONSIST OF AGRIFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S SPECIFICATIONS, FOR WOODY PLANTS. HERBACEOUS PLANT SHALL BE FERTILIZED WITH OSMOCOTE 8-6-12.
4. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.
5. THE CONTRACTOR SHALL REMOVE ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION FROM THE SITE.
6. SEDIMENT CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE.

SEQUENCE OF CONSTRUCTION

1. SEDIMENT CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE.
2. PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND THE PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.
3. UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS SHOWN.
4. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

1. MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF TWO YEARS.
2. PLANTINGS MUST RECEIVE 2 GALLONS OF WATER, EITHER THROUGH PRECIPITATION OR WATERING, WEEKLY DURING THE 1ST GROWING SEASON, AS NEEDED. DURING SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.
3. INVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED, AS REQUIRED, FROM PLANTING AREAS MECHANICALLY AND/OR WITH LIMITED HERBICIDE. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.
4. PLANTS SHALL BE EXAMINED A MINIMUM TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.
5. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS

1. A 90 PERCENT SURVIVAL RATE OF THE REFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON. ALL PLANT MATERIAL BELOW THE 90 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE SECOND GROWING SEASON. AT THE END OF THE SECOND GROWING SEASON, A 75 PERCENT SURVIVAL RATE WILL BE REQUIRED. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED BY THE BEGINNING OF THE NEXT GROWING SEASON.

EDUCATION OF NEW OCCUPANTS

1. THE DEVELOPER SHALL PROVIDE EDUCATIONAL INFORMATION TO ALL PROPERTY OWNERS WITHIN THE NEW DEVELOPMENT/HOME ABOUT THE PROPER USE OF FOREST CONSERVATION AREAS.

FINAL INSPECTION AND RELEASE OF OBLIGATIONS

1. AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD THE DEVELOPER SHALL SUBMIT A CERTIFICATION TO THE COUNTY THAT ALL FOREST CONSERVATION AREAS HAVE REMAINED INTACT OR HAVE BEEN RESTORED TO APPROPRIATE CONDITION, THAT THE STIPULATED SURVIVAL RATES HAVE BEEN ACHIEVED, AND THAT ANY PERMANENT PROTECTION MEASURES REQUIRED BY THE PLAN ARE IN PLACE. UPON REVIEW AND ACCEPTANCE, THE COUNTY WILL INFORM THE DEVELOPER OF THEIR RELEASE OF THE DEVELOPMENT OF FUTURE OBLIGATIONS RELATED TO THE FOREST CONSERVATION ACT.

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

ZONED RR-DEO

NET TRACT AREA:

A. TOTAL TRACT AREA	25.81 AC.
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.68 AC.
C. AREA IN PRESERVATION PARCEL	0.00 AC. N/A
D. NET TRACT AREA	25.13 AC.

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED RR-DEO

ARA	MDR	IDA	HDR	MPD	CJA
0	1	0	0	0	0

- E. AFFOREST THRESHOLD 20% X 9.25 = 5.03 AC
- F. CONSERVATION THRESHOLD 25% X 9.25 = 6.28 AC

EXISTING FOREST COVER:

- G. EXISTING FOREST COVER = 0.00 AC
- H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 0.00 AC
- I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.00 AC

BREAK EVEN POINT:

- (2 X I) + F = BREAK EVEN POINT (0 AC)
- J. FOREST RETENTION WITH NO MITIGATION = 0.00 AC
- K. CLEARING PERMITTED WITHOUT MITIGATION = 0.00 AC

PROPOSED FOREST CLEARING:

- L. TOTAL AREA OF FOREST TO BE CLEARED = 0.00 AC
- M. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC

PLANTING REQUIREMENTS:

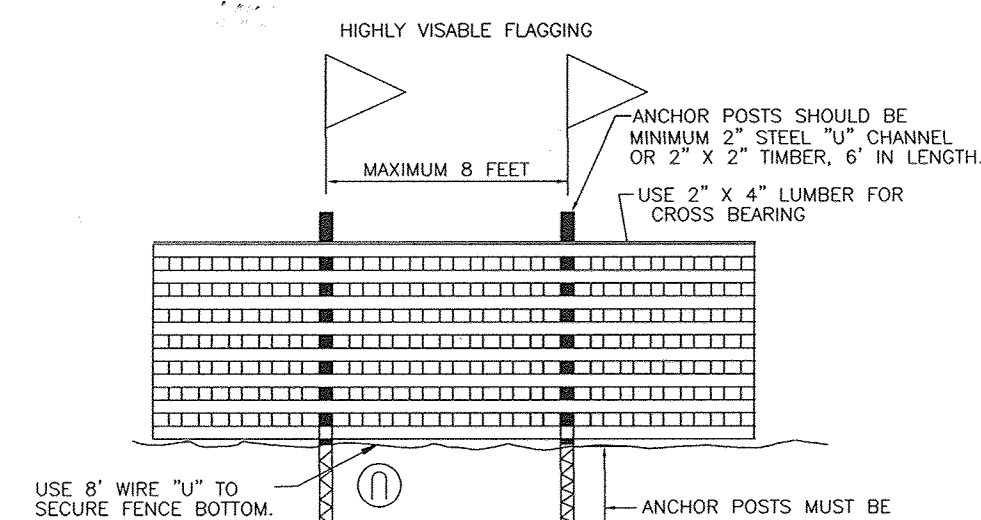
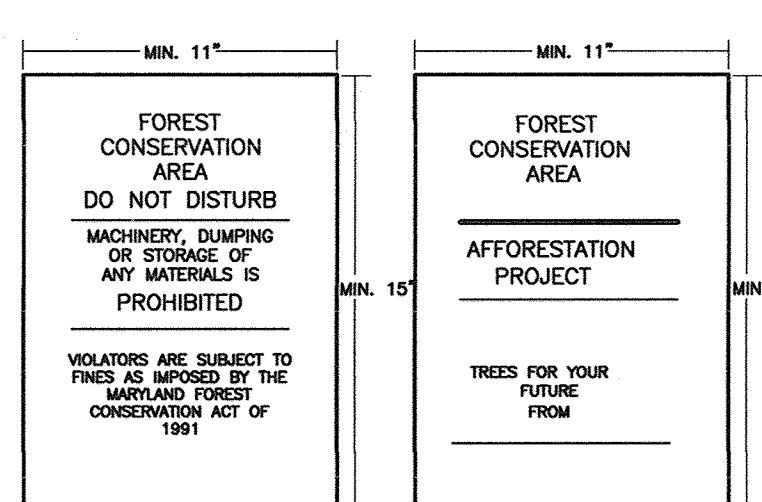
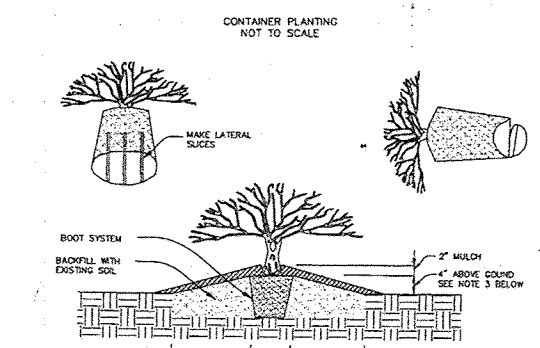
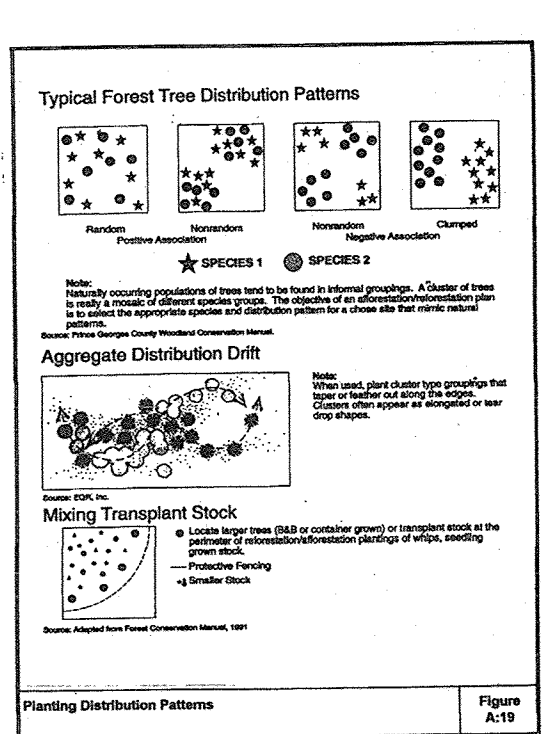
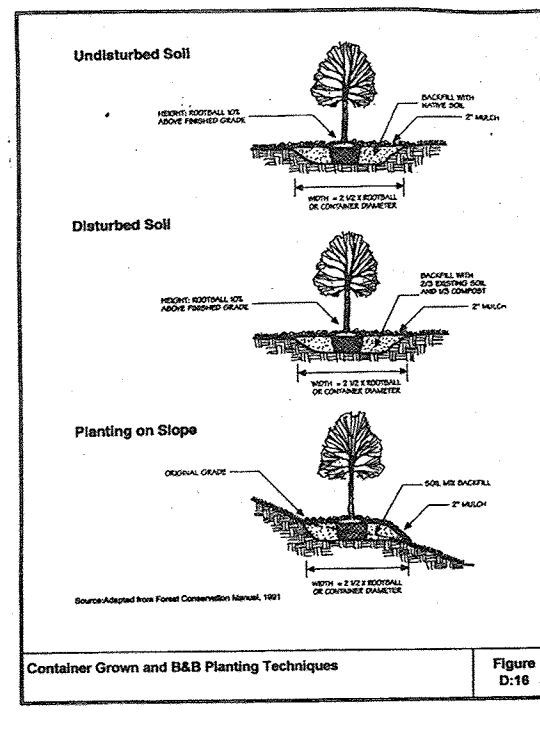
- N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 25) = 0.00 AC
- P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.00 AC
- Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F) = 0.00 AC
- R. TOTAL REFORESTATION REQUIRED (N+P-Q) = 0.00 AC
- S. TOTAL AFFORESTATION REQUIRED = 5.03 AC
- T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 5.03 AC

FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1209 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT WILL BE FULFILLED BY ONSITE AFFORESTATION OF 5.03 AC. FINANCIAL SURETY IN THE AMOUNT OF \$ 109,504 (219,008 x 0.50) WILL BE POSTED AS PART OF DEPARTMENT OF PUBLIC WORKS DEVELOPER'S AGREEMENT.

AFFORESTATION PROVIDED - TOTAL

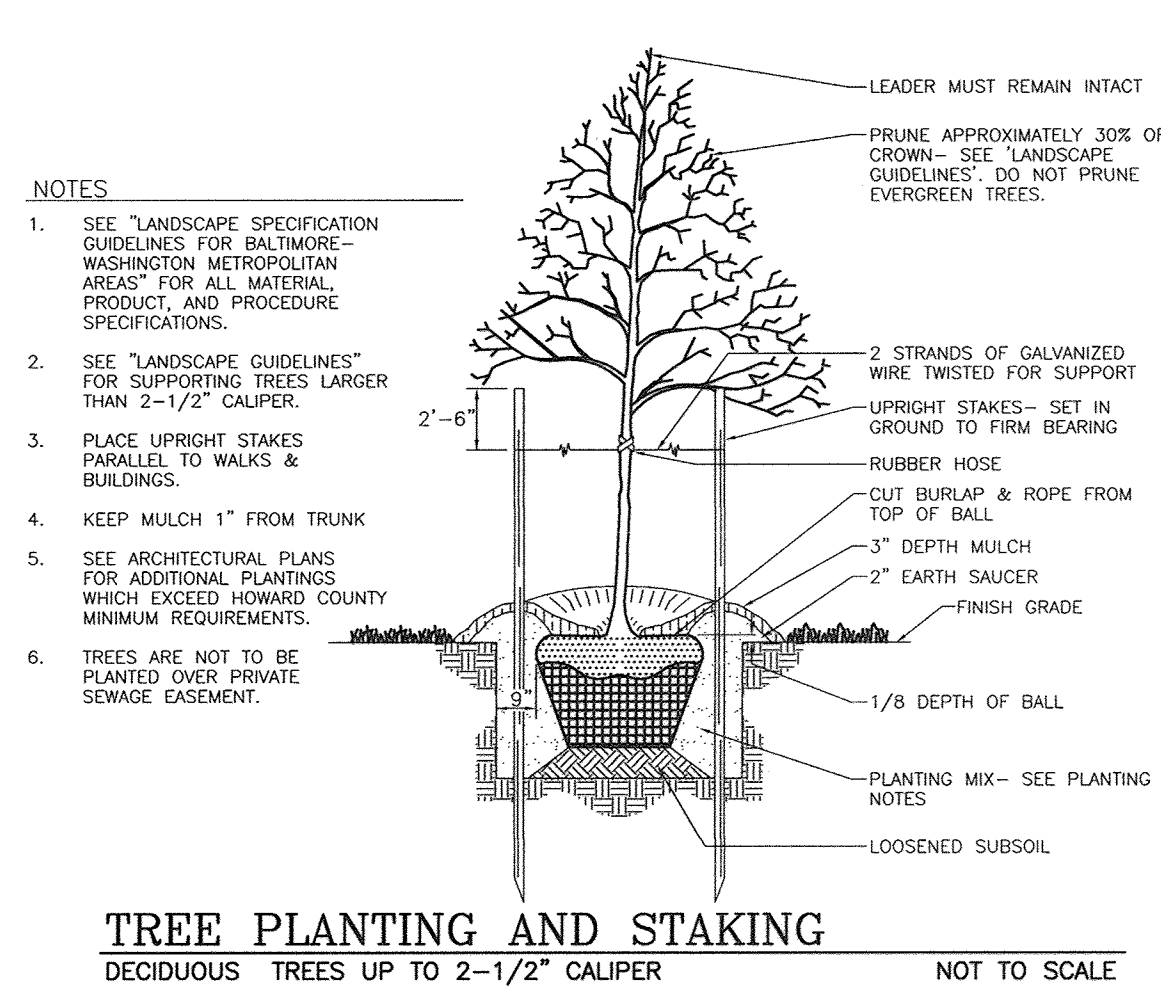
5.03 ACRES
 @ 200 TREES PER ACRE
 = 1,006 TREES REQUIRED
 USE 1" CALIPER TREES (1=3.5 UNITS)
 1006/3.5 = 288 TREES PROVIDED

AFFORESTATION PLANT SCHEDULE FOREST CONSERVATION EASEMENTS 5.03 ACRES			
EASEMENT #1: 178,607 SF = 4.10 AC. (AFFORESTATION) @ 200 TREES/AC./3.5 = 235 TREES			
QTY.	BOTANICAL NAME	SIZE	SPACING
58	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
58	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	1" CAL.	15' x 15'
58	CORNUS KOUSA KOUSA DOGWOOD	1" CAL.	15' x 15'
61	QUERCUS RUBRA RED OAK	1" CAL.	15' x 15'
EASEMENT #2: 40,401 SF = 0.93 AC. (AFFORESTATION) @ 200 TREES/AC./3.5 = 53 TREES			
QTY.	BOTANICAL NAME	SIZE	SPACING
13	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
13	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	1" CAL.	15' x 15'
13	CORNUS KOUSA KOUSA DOGWOOD	1" CAL.	15' x 15'
14	QUERCUS RUBRA RED OAK	1" CAL.	15' x 15'



NOTE:
 1. 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.
 3. CONDITIONS ON-SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 4. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 5. SIGN LOCATION SYMBOL.
 6. PROTECTIVE SIGNAGE SHALL REMAIN IN PERPETUITY.

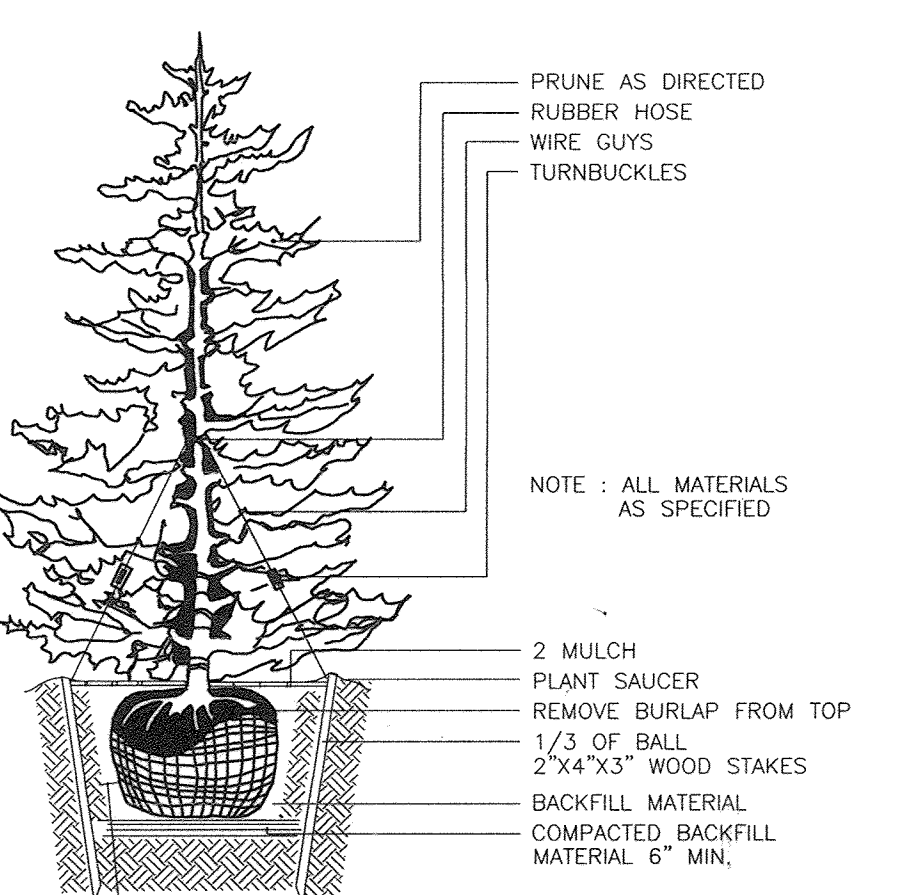
BLAZE ORANGE PLASTIC MESH TYPICAL TREE PROTECTION FENCE DETAIL



TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

DEVELOPER/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.



TYPICAL EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

OWNER
 MARTY A. HOWARD
 P.O. BOX 740
 CLARKSVILLE, MD 21029

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MD 21042
 ATTN: MR. DONALD R. REUWER
 (443) 367-0422

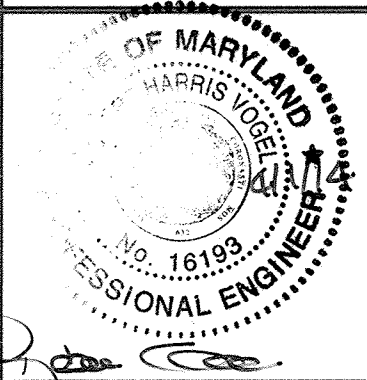
NO.	REVISION	DATE
3	TO REVISE THE CONFIGURATION AND HOUSE TYPES FOR LOTS 1-9 AND NON-BUILDABLE PRESERVATION PARCELS	11-16-18

SUPPLEMENTAL INFORMATION PLAN LANDSCAPE AND FOREST CONSERVATION PLAN NOTES AND DETAILS

JACK'S LANDING
 LOTS 1-8, BUILDABLE PRESERVATION PARCEL A, AND NON-BUILDABLE PRESERVATION PARCEL C
 A SUBDIVISION OF TAX MAP 34 PARCEL 414 (L. 3172 / F. 336)

TAX MAP: 34 GRID: 03 PARCELS: 414
 5TH ELECTION DISTRICT ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND

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



DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: MARCH 2014
 SCALE: AS SHOWN
 W.O. NO.: 13-31

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16193 EXPIRATION DATE: 09-27-2014

12 SHEET OF 12

F-08-101 E108A000