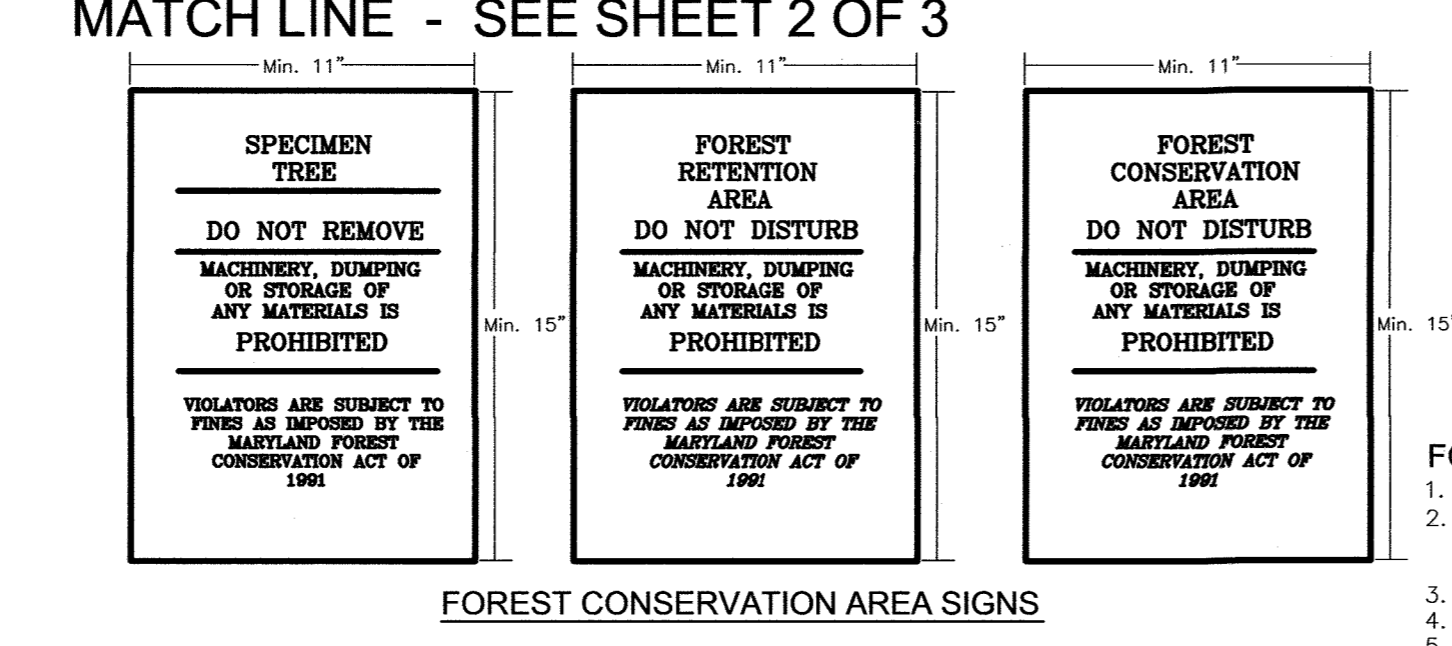
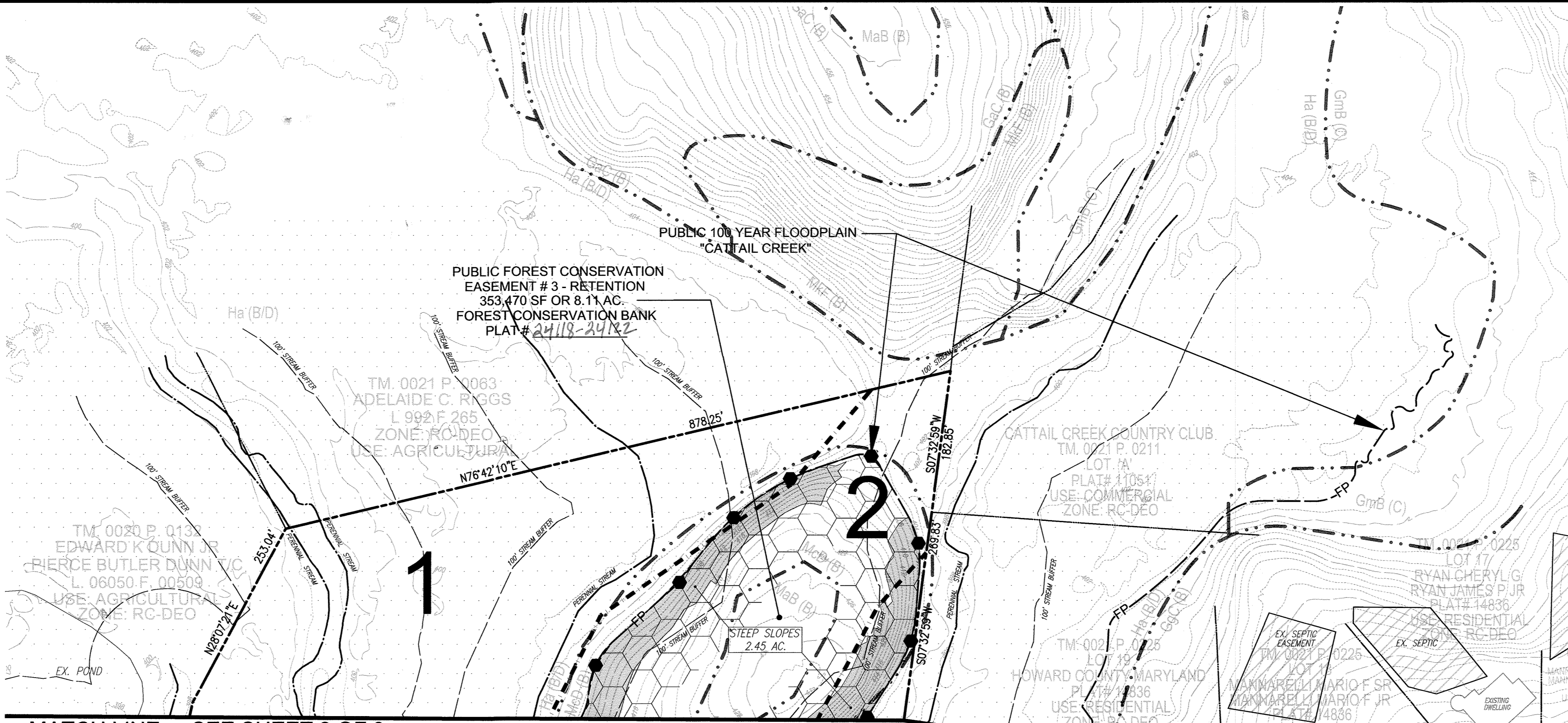


GENERAL NOTES:

- SITE DATA**
 LOCATION: TAX MAP 21, GRID 14, PARCEL 13
 3RD ELECTION DISTRICT
 DEED/PLAT REFERENCES:
 PRESENT ZONING: RC-DEO
 SUBDIVISION: CATTAIL MEADOWS
 SECTION/AREA: N/A
 SITE ADDRESS: 15325 LEONIDINA DRIVE, GLENWOOD, MD 21738
 STREAM BUFFERS ON SITE: 38.63 ACRES ±
 AREA OF ON-SITE 100' YEAR FLOODPLAIN: 42.39 ACRES ±
 AREA OF EXISTING FOREST ON SITE: 13.9 ACRES ±
 AREA OF STEEP SLOPES: 10.46 ACRES ±
 ERODIBLE SOILS AND FLOODPLAIN AREA: 52.85 ACRES ±
 DPZ REFERENCES: HISTORIC HO-287, AG PRES HO-16-02-E
 SITE AREA: 167.82 AC. ±
 LIMIT OF DISTURBED AREA: N/A - FOREST BANK EASEMENT ESTABLISHMENT ONLY
 2. THE SUBJECT PROPERTY IS ZONED RC-DEO IN ACCORDANCE WITH OCT. 6, 2013 COMPREHENSIVE ZONING PLAN.
 3. THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY BY VOGEL & ASSOCIATES DATED JULY, 1998.
 4. TOPOGRAPHY SHOWN HEREON IS OBTAINED FROM HOWARD COUNTY PHOTOGRAMETRIC MAPS AND FIELD RUN TOPOGRAPHY BY ROBERT H. VOGEL, ENGINEERING, INC., DATED APRIL 2015.
 5. SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE HOWARD COUNTY SOIL SURVEY.
 6. GROSS AREA OF TRACT = 167.81 ACRES ±
 76.6 ACRES ± FOREST
 5.4 ACRES ± RESIDENTIAL
 1.7 ACRES ± POND
 84.1 ACRES ± AGRICULTURAL FIELD
 7. ALL WELLS AND SEPTIC SYSTEMS WITHIN 100' FROM THE PROPERTY BOUNDARIES HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
 8. EXISTING SEPTIC AREAS AND WELLS TAKEN FROM RECORDED PLATS, FIELD EVIDENCE, AND AVAILABLE HEALTH DEPARTMENT RECORDS.
 9. ALL WELLS SHALL BE DRILLED PRIOR TO RECORD PLAT APPROVAL.
 10. TWO (2) EXISTING RESIDENTIAL STRUCTURES EXIST ON SITE.
 11. WATER AND SEWER SYSTEMS FOR THIS PROJECT WILL BE PRIVATE.
 12. THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT.
 13. -NO CEMETERY EXISTS ON THE PROJECT SITE. ACCORDING TO THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING, THE LOCATION OF THE CEMETERY IS LOCATED ON AN ADJACENT PARCEL THAT WAS PREVIOUSLY SUBDIVIDED FROM THIS PROPERTY.
 -THE EXISTING HISTORIC HOUSE AND ITS ASSOCIATED OUTBUILDINGS AT #4088 ROUTE 97 ARE LISTED ON THE HISTORIC SITES INVENTORY AS HO-287
 -ALL EXISTING STRUCTURES ARE TO REMAIN.
 14. THE EXISTING WELL ON THE TENANT HOUSE SITE IS TO REMAIN AND IS TO BE USED FOR IRRIGATION PURPOSES ONLY. IN ACCORDANCE WITH SECTION 104.2.2 OF THE ZONING REGULATIONS, A FARM TENANT HOUSE OR CARETAKER DWELLING IS ALLOWED AS AN ACCESSORY USE FOR PARCELS GREATER THAN 50 ACRES.
 15. FLOODPLAIN IS BASED ON HOWARD COUNTY STUDY FOR "CATTAIL CREEK"
 16. THE PROPERTY SHOWN HEREON IS PART OF THE FIRST PARCEL, ALL OF THE SECOND PARCEL AND PART OF THE THIRD PARCEL OF LIBER 257 FOLIO 518.
 17. COURSES AND DISTANCES SHOWN HEREON ARE BASED ON THE MARYLAND STATE GRID MERIDIAN AS PROJECTED BY HOWARD COUNTY CONTROL STATIONS
 21DA N82213.3720 E1238954.8840
 21EA N582715.1130 E1300495.9840
 21. - FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL, NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
 THIS PLAN WILL CREATE 38.42 ACRES OF FOREST BANK:
 - FOREST CONSERVATION EASEMENTS 1 - 5 ARE FOREST RETENTION AREAS EQUAL TO 36.36 AC. (NO SURETY REQ.)
 22. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
 23. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE COVENANTS.
 24. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
 25. NO STOCKING, PLANTING, WEEDING, EQUIPMENT-CLEARING AREAS, ETC., SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
 26. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING FUTURE CONSTRUCTION PROJECTS. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES THAT OCCUR WITHIN 50 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
 27. PERMANENT PROTECTIVE SIGNAGE SHALL BE INSTALLED ALONG THE BOUNDARY OF THE FOREST CONSERVATION EASEMENT. SIGNS SHALL BE INSTALLED AT 50-100 FOOT INTERVALS AND AT ANGLES ALONG THE OUTSIDE PERIMETER OF THE EASEMENT.
 28. NO DEBRIS, DUMPING ETC. EXISTS WITHIN THE FOREST CONSERVATION EASEMENT, OR IF IT DOES, THAT IT WILL BE CLEANED PRIOR TO THE RECORDED OF THE EASEMENT.
 29. THE SITE IS EXEMPT FROM FOREST CONSERVATION REQUIREMENT BECAUSE THERE ARE NO IMPROVEMENTS AND THIS SPP ESTABLISHES A FOREST RETENTION BANK.
 30. THE FOREST INFORMATION SHOWN HEREON WAS TAKEN FROM THE "GREEN INFRASTRUCTURE HABITAT MANAGEMENT - FOREST STEWARDSHIP PLAN" BY DANIEL J. LEWIS, FORESTER AND JAMES C. EIERDAM, FORESTER JUNE 19, 2015
 THIS PROPERTY IS HOWARD COUNTY AGRICULTURAL LAND PRESERVATION EASEMENT HO-16-02-E.
 31. REFERENCE WP-16-023, APPROVED SEPTEMBER 8, 2015, TO WAIVE SECTION 16.102 & 16.147(c) SUBJECT TO THE FOLLOWING CONDITIONS:
 1. APPROVAL OF THIS WAIVER IS ONLY FOR THE MERGER OF THREE EXISTING DEEDED PARCELS UNDER THE SAME OWNERSHIP AS DESCRIBED IN DEED LIBER 4468, FOLIO 0485, AND DATED OCTOBER 2, 1998. NO OTHER PARCELS ARE BEING ENDORSED AND NO ADDITIONAL PARCELS SHALL BE CREATED.
 2. THE "ADJOINER DEEDS" TO MERGE PARCELS 1, 2 AND 3 SHALL BE RECORDED IN THE LAND RECORDS OF THE HOWARD COUNTY WITHIN 120 DAYS OF THE DATE OF THIS WAIVER PETITION APPROVAL (ON OR BEFORE JANUARY 6, 2016).
 3. A RECORDED COPY OF THE "ADJOINER DEEDS" SHALL BE SUBMITTED TO THIS DEPARTMENT FOR FILE RETENTION PURPOSES WITHIN 140 DAYS OF THE DATE OF THIS WAIVER PETITION APPROVAL (ON OR BEFORE FEBRUARY 15, 2016).
 4. THE "ADJOINER DEEDS" SHALL REFERENCE THIS WAIVER PETITION FILE NUMBER, WP-16-023.
 5. ON ANY FUTURE SUBDIVISION OR BUILDING PERMIT, A NOTE SHALL BE ADDED THAT REFERENCE THIS WAIVER PETITION FILE NUMBER AND APPROVAL DATE.
 32. 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.
 33. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 34. A WETLAND DELINEATION WAS NOT PREPARED FOR THIS FOREST BANK ESTABLISHMENT SITE DEVELOPMENT PLAN.
 35. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.



NOTE:
 1. THIS PROPERTY IS HOWARD COUNTY AGRICULTURAL LAND PRESERVATION EASEMENT HO-16-02-E.
 2. HISTORIC STRUCTURE HO-287 IS LOCATED ON THIS PARCEL.
 3. THE PARCEL IS LOCATED WITHIN GROWTH TIER AREA III.

FOREST CONSERVATION AREA SIGN NOTES:
 1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 2. SIGNS TO BE PLACED APPROXIMATELY 50-100 FEET APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FURTHER APART.
 3. ANCHORAGE OF SIGNS TO TREES IS PROHIBITED.
 4. ALL FOREST CONSERVATION SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.
 5. SIGN LOCATION SYMBOL = ●

RESERVATION OF FOREST CONSERVATION BANK EASEMENT:
 OWNER RESERVES UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR FOREST CONSERVATION (DESIGNATED AS "FOREST CONSERVATION BANK EASEMENT AREA"), LOCATED IN AND ON THE PROPERTY. ANY CONVEYANCES OF THE FORESAID PROPERTY SHALL BE SUBJECT TO THE EASEMENT HEREIN RESERVED, WHETHER OR NOT EXPRESSLY STATED IN THE DEED CONVEYING SAID PROPERTY. OWNER SHALL EXECUTE AND DELIVER A DEED OF EASEMENT TO HOWARD COUNTY WITH A METES AND BOUNDS DESCRIPTION OF THE FOREST CONSERVATION BANK EASEMENT AREA. UPON COMPLETION OF THE OWNER'S OBLIGATIONS UNDER THE FOREST CONSERVATION INSTALLATION AND MAINTENANCE AGREEMENT EXECUTED BY THE OWNER AND THE COUNTY, AND THE RELEASE OF OWNER'S SURETY POSTED WITH SAID AGREEMENT, THE COUNTY SHALL ACQUIRE THE EASEMENTS AND RECORD THE DEED OF EASEMENT IN THE LAND RECORDS.

EASEMENT	RETENTION CREDITED	REFORESTATION CREDITED	TOTAL
FCE#1	1.99 AC	-	1.99 AC
FCE#2	25.46 AC	-	25.46 AC
FCE#3	8.11 AC	-	8.11 AC
FCE#4	0.25 AC	-	0.25 AC
FCE#5	0.43 AC	-	0.43 AC
TOTALS	36.24 AC	-	36.24 AC

FCE#1 - SHEET 2
 FCE#2 - P/O SHEET 2 & SHEET 3
 FCE#3 - P/O SHEET 1 & SHEET 2
 FCE#4 - SHEET 2
 FCE#5 - SHEET 2

EXISTING CONDITIONS NARRATIVE
 INFORMATION TAKEN FROM THE "GREEN INFRASTRUCTURE HABITAT MANAGEMENT - FOREST STEWARDSHIP PLAN" BY DANIEL J. LEWIS, FORESTER AND JAMES C. EIERDAM, FORESTER JUNE 19, 2015
 THE SUBJECT PROPERTY IS 167.82 ACRES LOCATED OFF THE SOUTH SIDE OF LEONIDINA DRIVE APPROXIMATELY 650 FEET WEST OF THE INTERSECTION OF LEONIDINA DRIVE AND SOPHIA COURT. THE VEGETATION COVER IS A LITTLE LESS THAN HALF FOREST WITH THE REST OF THE PROPERTY CONSISTING OF AGRICULTURAL FIELDS, 2 RESIDENCES AND A SMALL POND. THE CATTAIL CREEK AND LITTLE CATTAIL CREEK RUN THROUGH THE WESTERN HALF OF THE PROPERTY. THIS PROPERTY IS WITHIN THE BRIGHTON DAM SUBWATERSHED (#2131108) OF THE PATUXENT RIVER WATERSHED. A SURVEY OF THE PROPERTY FOR RARE, THREATENED AND ENDANGERED SPECIES HAS BEEN COMPLETED. ACCORDING TO THE NATURAL HERITAGE PROGRAM DATABASE, THERE ARE NO SUCH SPECIES ON THE PROPERTY.
 WOODLANDS ON THE SUBJECT PROPERTY WERE CHECKED FOR FORESTS OF RECOGNIZED IMPORTANCE (FORI) AND IT WAS FOUND THAT A FORI AREA DOES EXIST ON THIS PROPERTY WITHIN THE 100 FOOT STREAM BUFFER AREA. WHEN PLANNING ANY FOREST MANAGEMENT ACTIVITIES WITHIN THIS FORI AREA, A PROFESSIONAL FORESTER SHOULD BE CONSULTED TO ENSURE THAT PLANNED ACTIVITIES DO NOT HARM OR DIMINISH THE HIGH QUALITY STREAM RESOURCE THAT DESIGNATES THIS AS A FORI.
 THIS PROPERTY WAS CHECKED FOR CULTURAL AND HISTORICAL RESOURCES AS PART OF THE FOREST STEWARDSHIP PLANNING PROCESS USING DATA PROVIDED BY THE MARYLAND HISTORICAL TRUST, AND NO RESOURCES WERE NOTED AS BEING LOCATED ON THE PROPERTY.
 ELEVEN SOIL TYPES OCCUR ON THE PROPERTY OF THE GLENELG-MANOR-GLENVILLE ASSOCIATION. THE GLENELG-MANOR-GLENVILLE ASSOCIATION HAS VERY DEEP, NEARLY LEVEL TO VERY STEEP THAT ARE FORMED IN RESIDUUM DERIVED FROM MICACEOUS SCHIST AND PHYLITE.
 MANAGEMENT UNIT # 1 IS AN UNEVEN-AGED IMMATURE MANAGEMENT UNIT. THE UNIT CONSISTS OF BOXELDER, SLIPPERY ELM, YELLOW-POPLAR, BLACK CHERRY, BLACK WALNUT, BLACKGUM, SWAMP CHESTNUT OAK, HICKORY, SYCAMORE, RED MAPLE, PIN OAK, SILVER MAPLE AND GREEN ASH IN THE OVERSTORY. THE UNDERSTORY CONSISTS OF JAPANESE STILTGRASS, ORIENTAL BITTERSWET, JAPANESE BARBERRY, JAPANESE HONEYSUCKLE, MULTIFLORA ROSE, GARLIC MUSTARD, MULTIFLORA ROSE, GARLIC MUSTARD, MILE-A-MINUTE, SKUNK CABBAGE, BLACKHAW VIBURNUM, CLOVER, BLACK WALNUT, NETTLE, BOX ELDER, ASH, GREENBRIAR, HAY SCENTED FERN, AND JACK-IN-THE-PULPIT.
 MANAGEMENT UNIT # 2 IS AN UNEVEN-AGED IMMATURE SAWTIMBER MANAGEMENT UNIT. THE UNIT CONSISTS OF MAINLY YELLOW POPLAR. OTHER OVERSTORY SPECIES INCLUDE CHESTNUT OAK, BLACKGUM, AND SYCAMORE. THE UNDERSTORY CONSISTS OF JAPANESE STILTGRASS, JAPANESE BARBERRY, MULTIFLORA ROSE, MILE-A-MINUTE, GARLIC MUSTARD, BLACKHAW VIBURNUM, BLACK WALNUT, ASH, AMERICAN HORNBEEAM, EASTERN RECEDAR, GREENBRIAR, DEER TONGUE SPICEBUSH, JACK-IN-THE-PULPIT, CHRISTMAS FERN, HICKORY, VIRGINIA CREEPER, SASSAFRAS, POISON IVY AND DOGWOOD.
 MANAGEMENT UNIT # 3 IS AN UNEVEN AGED MATURE STAND. THE UNIT CONSISTS OF YELLOW POPLAR, BLACK CHERRY, CHESTNUT OAK, NORTHERN RED OAK, RED MAPLE, HICKORY, AND WHITE OAK IN THE OVERSTORY. THE UNDERSTORY CONSISTS OF JAPANESE STILTGRASS, JAPANESE BARBERRY, JAPANESE HONEYSUCKLE, MULTIFLORA ROSE, GARLIC MUSTARD, GRAPE, HAY SCENTED FERN, VIRGINIA CREEPER, VIOLETS, RED MAPLE, YELLOW POPLAR, BLUEBERRY, AMERICAN HORNBEEAM, CHESTNUT OAK, SASSAFRAS, DOGWOOD, DEER TONGUE, SPICEBUSH, AND BLACKHAW VIBURNUM.
 MANAGEMENT UNIT # 4 IS AN EVEN-AGED, IMMATURE SAWTIMBER UNIT. THE UNIT CONSISTS OF LOBLOLLY PINE, WHITE PINE, AND SYCAMORE IN THE OVERSTORY. THE UNDERSTORY CONSISTS OF JAPANESE STILTGRASS, JAPANESE HONEYSUCKLE, JAPANESE BARBERRY, GARLIC MUSTARD, DOGWOOD, SPICEBUSH, BLACKHAW VIBURNUM, VIRGINIA CREEPER AND JACK-IN-THE-PULPIT.

MANAGEMENT UNIT	A. TYPE OF COMMUNITY	B. AREA	C. SOILS INFORMATION			D. EXISTING VEGETATION	E. STAND CHARACTERISTICS	F. FOREST AREA IN SEN. ENV.	G. HABITAT		
			1. SOILS TYPES	2. TYPICAL FOREST COVER FOR SOILS TYPE	3. WOODLAND SUITABILITY INDEX						
1	IMMATURE FOREST	52.92 Ac	Ho MfK McD GgB GgC	VARIOUS PINES, OAKS RED MAPLE, HICKORY, POPLAR, SYCAMORE AND OTHER WETLAND HARDWOODS	-	PRIMARYLY BLACK WALNUT AND RED MAPLE OVERSTORY JAPANESE STILTGRASS WETLAND HARDWOODS	-	UNEVEN	FAIR	0.00 Ac	P
2	IMMATURE SAWTIMBER FOREST	9.79 Ac	McD MfK	VARIOUS PINES OAKS RED MAPLE, HICKORY, POPLAR, AND OTHER UPLAND HARDWOODS	-	PRIMARYLY YELLOW POPLAR OVERSTORY AND JAPANESE STILTGRASS UNDERSTORY	-	UNEVEN	FAIR AVERAGE	0.00 Ac	P
3	MATURE FOREST	10.20 Ac	MfK McD GgB	VARIOUS PINES, OAKS RED MAPLE, HICKORY, POPLAR, AND OTHER UPLAND HARDWOODS	-	PRIMARYLY HICKORY OVERSTORY AND VARIOUS UNDERSTORY SPECIES	-	UNEVEN	GOOD	0.00 Ac	P
4	IMMATURE FOREST	3.73 Ac	MfK McD GgB McD	VARIOUS PINES, OAKS RED MAPLE, HICKORY, POPLAR, AND OTHER UPLAND HARDWOODS	-	PRIMARYLY LOBLOLLY PINE OVERSTORY AND JAPANESE STILTGRASS UNDERSTORY	-	EVEN	FAIR	0.00 Ac	P

INFORMATION TAKEN FROM THE "GREEN INFRASTRUCTURE HABITAT MANAGEMENT - FOREST STEWARDSHIP PLAN" BY DANIEL J. LEWIS, FORESTER AND JAMES C. EIERDAM, FORESTER JUNE 19, 2015

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	ERODIBLE	K FACTOR	PERCENT	CROSS SLOPE
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	C/D	YES	NO	0.20	NO	NO
BaD	BRINKLOW CHANNERY LOAM, 15 TO 20 PERCENT SLOPES	C	NO	NO	0.20	NO	NO
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
GgC	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
GgB	GLENELG-BALE SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	NO	0.43	NO	YES
MhA	HARBOR-CODDERS SILT LOAMS, 0 TO 3 PERCENT SLOPES	B/D	YES	YES	0.37	NO	NO
MhB	HARBOR LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
MhC	HARBOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
MhD	HARBOR LOAM, 15 TO 25 PERCENT SLOPES	B	NO	NO	0.28	NO	YES
MhE	HARBOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	NO	0.28	NO	YES
MhF	HARBOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	NO	NO	0.32	NO	YES
W	WATER	-	NO	NO	-	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 *BALE COMPONENT OF GgB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRO
 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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

10-13-16
 DATE
 3-13-17
 DATE
 2-12-17
 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

Eco-Science Professionals, Inc.
 Consulting Ecologists
 P.O. Box 5066 Glen Arden, Maryland 21057 Telephone: (410) 932-2490 Fax: (410) 822-2488

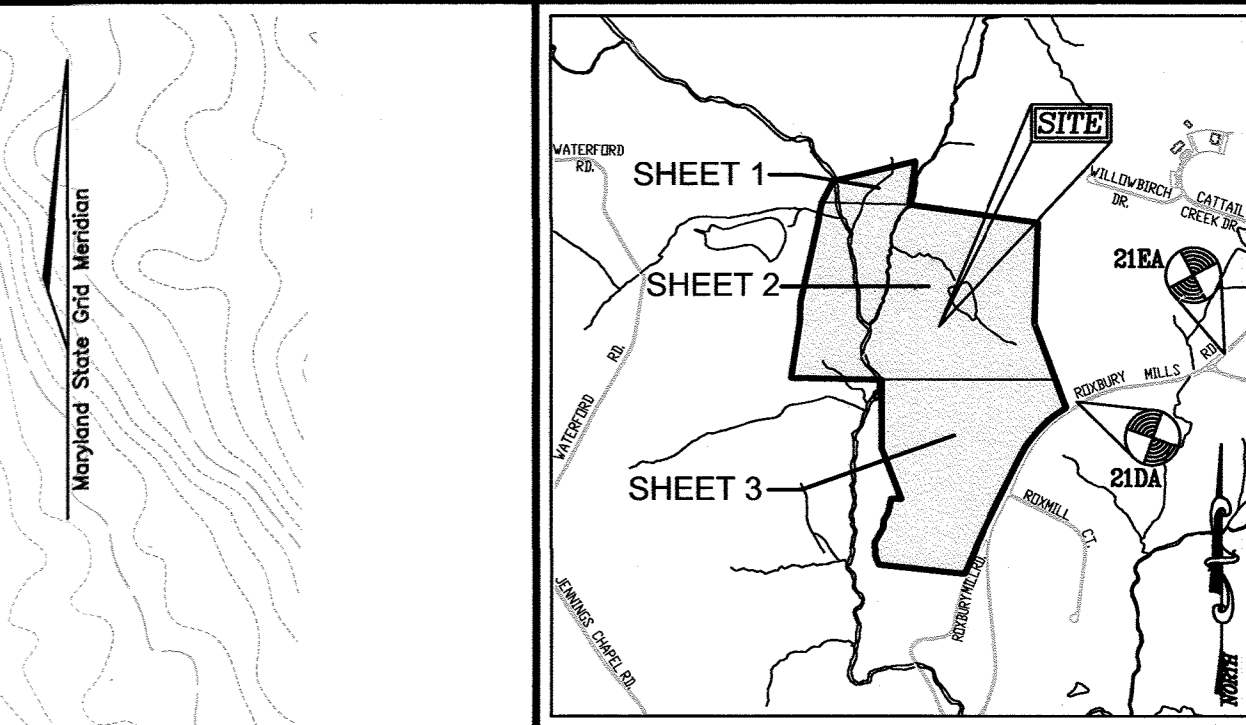
4d DNR Qualified Professional
 USACOE Wetland Delimitator
 Certification # W303535/0906004423

7 REVISION THE PLAN TO ADD SALE #9 TO THE FCE/BANK SALES ACREAGE CHART 12-12-19
 6 REVISION THE PLAN TO AMEND FCE 1 AND 2 8-26-19
 5 REVISION THE PLAN TO CHANGE THE FCE/BANK SALES ACREAGE CHART TO ADD CLEAR CREEK F-18-091 8-25-19
 4 REVISION THE PLAN TO ADD ROCKBURN MEADOWS AND CSXT JESSUP AUTOMOTIVE SUPPORT YARD TO THE FCE/BANK SALES ACREAGE CHART 2-4-19

BUILDING NO.	STREET ADDRESS
4078	ROXBURY MILL ROAD

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCEL #
CATTAIL MEADOWS	N/A	13

PLAT # OR L/F	BLOCK NO.	ZONE	TAX MAP	N/A	ELECT. DIST.	CENSUS TR.
24118-24127	14	RC-DEO	21	NO	3RD	6040.02



VICINITY MAP
 SCALE 1" = 2000'
 ADC MAP/GRID: MAP 8 / J, D

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING TREE
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- SOILS BOUNDARY
- STEEP SLOPE (25%)
- PUBLIC 100 YR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT/PUBLIC FOREST CONSERVATION EASEMENT (RETENTION, NON-CREDITED)
- EXISTING SEPTIC EASEMENT
- EXISTING APPROVED SEPTIC AREA (TO BE ABANDONED)
- GREEN INFRASTRUCTURE HABITAT MANAGEMENT FOREST STEWARDSHIP PLAN
- MANAGEMENT UNIT BOUNDARY LABEL AREA
- EXISTING FLOOD PLAN AREA
- FOREST CONSERVATION SIGN
- FOREST CONSERVATION AREA
- PUBLIC FOREST CONSERVATION EASEMENT (RETENTION, CREDITED)

DESCRIPTION	SHEET NO.
SIMPLIFIED FOREST STAND DELINEATION AND FOREST RETENTION BANK CREATION PLAN	1 OF 3
SIMPLIFIED FOREST STAND DELINEATION AND FOREST RETENTION BANK CREATION PLAN	2 OF 3
SIMPLIFIED FOREST STAND DELINEATION AND FOREST RETENTION BANK CREATION PLAN	3 OF 3

CATTAIL MEADOWS, LLC P.O. BOX 274 GLENWOOD, MARYLAND 21738 (443) 516-1316
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NO.	REVISION	DATE
3	REVISE PLAN TO ADD 0.31 ACRES FROM MAPLE LAWN FARMS OPEN SPACE LOT 10 (P-09-007) AND 0.07 ACRES FROM THE VINE (SDP-15-040) TO FCE/BANK CHART	6/19/18
2	REVISE PLAN TO CHANGE THE FCE/BANK SALES ACREAGE CHART TO INCLUDE 0.26 ACRES FOR KEEHN ESTATES LOTS 54 AND 55	3/13/18
1	REVISE PLAN TO ADD TWO PROPERTIES TO THE FCE/BANK SALES ACREAGE CHART	9/21/17

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

TAX MAP 21 GRID 14
 4TH ELECTION DISTRICT

PARCEL 13
 HOWARD COUNTY, MARYLAND

DESIGN BY: RVE
 DRAWN BY: GH/RVE/KG
 CHECKED BY: RHV
 DATE: AUGUST 2016
 SCALE: 1" = 100'
 W.O. NO.: 12-39

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: 09-27-2018

1 SHEET OF 3

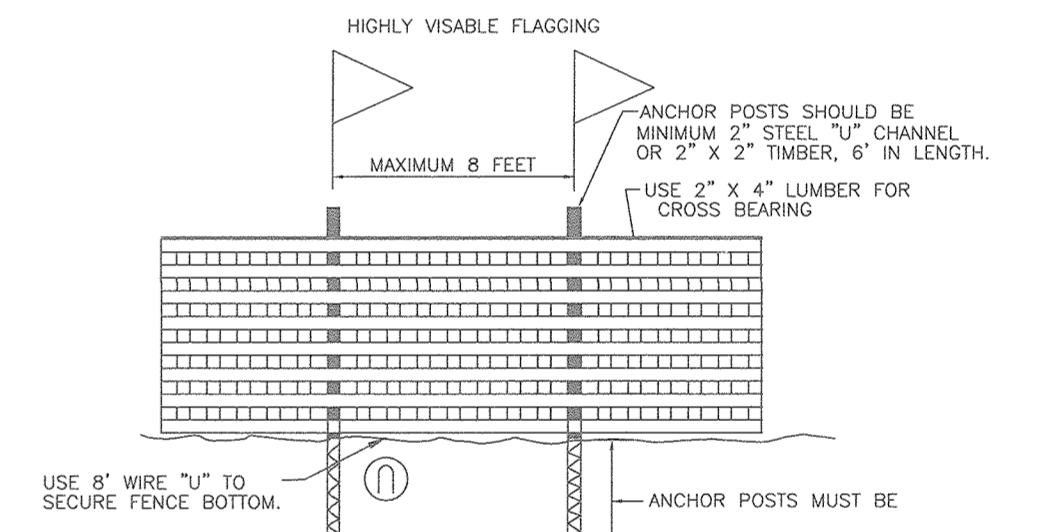
MATCH LINE - SEE SHEET 1 OF 3

NOTE:
THIS PROPERTY IS HOWARD COUNTY AGRICULTURAL
LAND PRESERVATION EASEMENT HO-16-02-E.

MATCH LINE - SEE SHEET 1 OF 3

LEGEND:

- - - - - EXISTING CONTOUR
- - - - - PROPOSED CONTOUR
- + 40.25 EXISTING SPOT ELEVATION
- + 42.85 EXISTING SPOT ELEVATION
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING TREE
- EXISTING TREELINE (FIELD LOCATED)
- - - - - EXISTING FENCE
- - - - - PROPERTY LINE
- - - - - RIGHT-OF-WAY LINE
- - - - - EXISTING STREAM
- - - - - EXISTING STREAM BUFFER
- - - - - SOILS BOUNDARY
- STEEP SLOPE (>25%)
- PUBLIC 100 YR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT/PUBLIC FOREST CONSERVATION EASEMENT/RETENTION, NON-CREDITED
- EXISTING SEPTIC EASEMENT
- EXISTING APPROVED SEPTIC AREA (TO BE ABANDONED)
- PUBLIC FOREST CONSERVATION EASEMENT (RETENTION, CREDITED)
- 2 FOREST STEWARDSHIP PLAN
- MANAGEMENT UNIT BOUNDARY LABEL AND AREA
- EXISTING FLOOD PLAN AREA
- FOREST CONSERVATION SIGN
- FOREST CONSERVATION AREA



- NOTES:**
1. FOREST PROTECTION DEVICE ONLY
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOT DAMAGE SHOULD BE AVOIDED.

BLAZE ORANGE PLASTIC MESH TYPICAL TEMPORARY TREE PROTECTION FENCE DETAIL

OWNER/DEVELOPER
CATTAIL MEADOWS, LLC
P.O. BOX 274
GLENWOOD, MARYLAND 21738
(443) 516-1316

6	REVISE THE PLAN TO AMEND PAGE 1 AND 2	8-26-19
NO.	REVISION	DATE

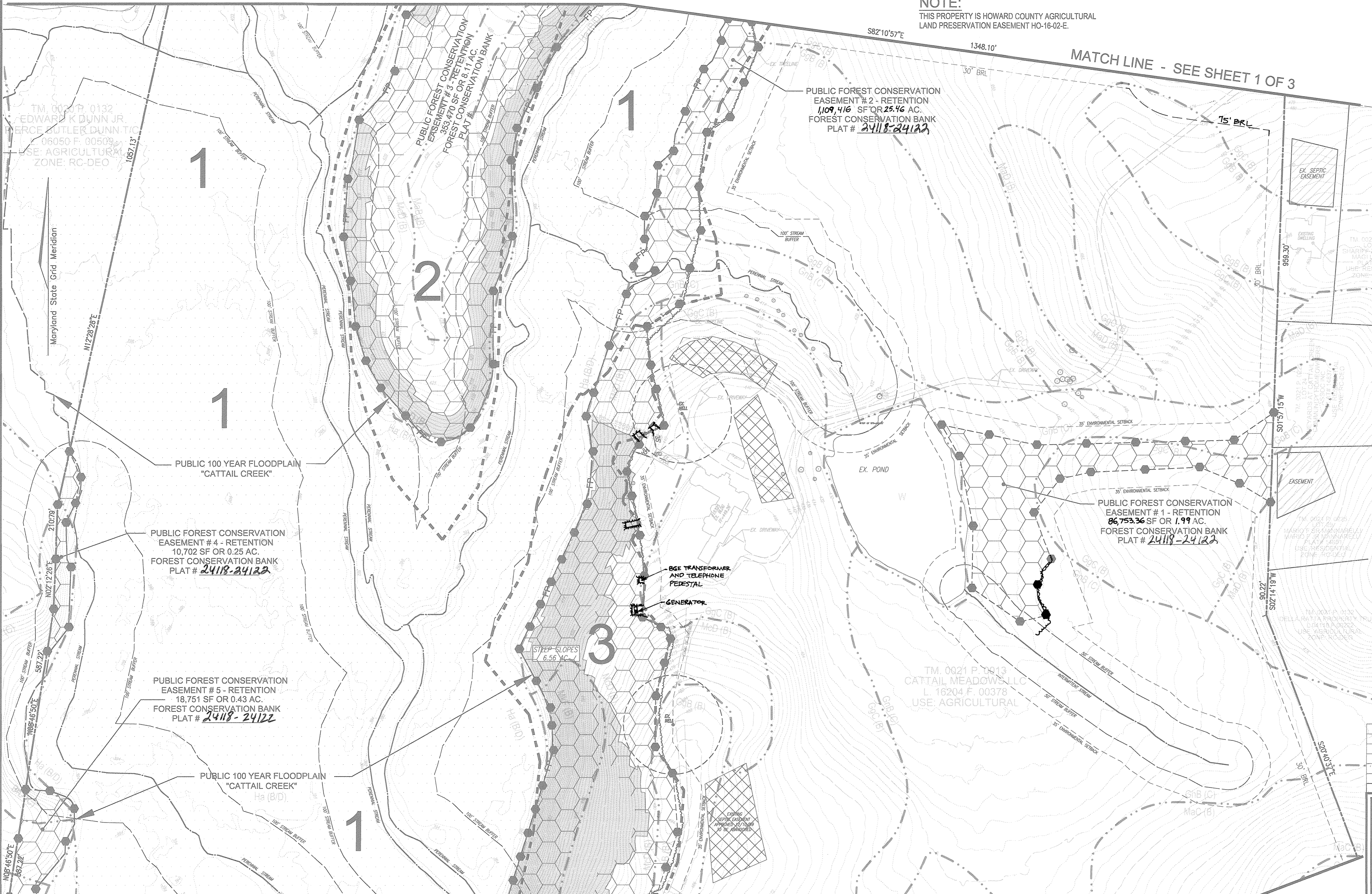
SITE DEVELOPMENT PLAN
SIMPLIFIED FOREST STAND DELINEATION,
FOREST CONSERVATION PLAN AND
FOREST RETENTION MITIGATION BANK
PROPERTY OF
CATTAIL MEADOWS LLC
TAX MAP 21 GRID 14
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
PARCEL 13

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

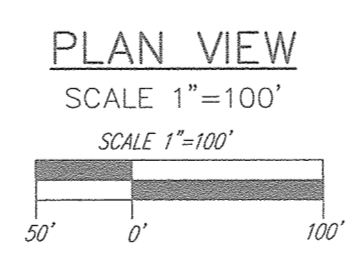
PROFESSIONAL CERTIFICATE
DESIGN BY: RVE
DRAWN BY: GH/RVE/KG
CHECKED BY: RRV
DATE: AUGUST 2016
SCALE: 1"=100'
W.O. NO.: 12-39

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: 09-27-2018.

2 SHEET OF 3



MATCH LINE - SEE SHEET 3 OF 3



NOTE:
ACCORDING TO THE HOWARD COUNTY CEMETERY INVENTORY, PARCEL 13 CONTAINS A CEMETERY KNOWN AS #21-6 DUVAL AT CATTAIL FARM CEMETERY.
-THE EXISTING HISTORIC HOUSE AND ITS ASSOCIATED OUTBUILDINGS AT #4088 ROUTE 97 ARE LISTED ON THE HISTORIC SITES INVENTORY AS HO-287.
-ALL EXISTING STRUCTURES ARE TO REMAIN.

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #10

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	ERODIBLE	K FACTOR	PERCENT SAND	PERCENT SILT	PERCENT CLAY	PERCENT ORGANIC MATTER
UaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	C/D	YES	YES	0.37	NO	NO	NO	NO
UaD	BRINKLOW CHANNERY LOAM, 15 TO 20 PERCENT SLOPES	C	NO	NO	0.20	NO	NO	NO	NO
GaB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
GaC	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
GaB	GLENMILL-BALE SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.43	NO	NO	NO	NO
UaH	WATERBORO-COCKEYS SILT LOAM, 0 TO 3 PERCENT SLOPES	B/D	YES	YES	0.37	NO	NO	NO	NO
MaB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO	NO	NO
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	NO	NO	0.28	NO	NO	YES	NO
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	NO	0.28	NO	NO	YES	NO
MaF	MANOR-BRINKLOW COMPLEX, 25 TO 85 PERCENT SLOPES, VERY ROCKY	B	NO	NO	0.32	NO	NO	YES	NO
Ua	UPLAND	B	NO	NO	0.20	NO	NO	NO	NO

TALEN FROM: USDA, SCS-HEB SOIL SURVEY, HOWARD COUNTY *BALE COMPONENT OF GaB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC
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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad C. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8-13-16

Kurt ...
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8-13-17

A. G. ...
DIRECTOR
DATE: 8-16-17

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	WATER LOGGING	K FACTOR	ERODIBILITY	CRIPPLE SOILS
Bsk	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	C/D	YES	YES	0.37	NO	NO
B/D	BROOKLOW CHANNERY LOAM, 15 TO 20 PERCENT SLOPES	C	NO	NO	0.20	NO	NO
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
GgC	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
GgB	GLENVILLE-BALE SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.43	NO	YES
Hg	HARBOR-CODRUS SILT LOAMS, 0 TO 3 PERCENT SLOPES	B/D	YES	YES	0.37	NO	NO
MgB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
MgC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	YES	NO
MgD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	NO	NO	0.28	NO	YES
MgE	MANOR LOAM, 15 TO 25 PERCENT SLOPES, VERY ROCKY	B	NO	NO	0.28	NO	YES
MgF	MANOR-BROOKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	NO	NO	0.32	NO	YES
W	WATER	-	NO	NO	-	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY *BALE COMPONENT OF GgB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC
 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.

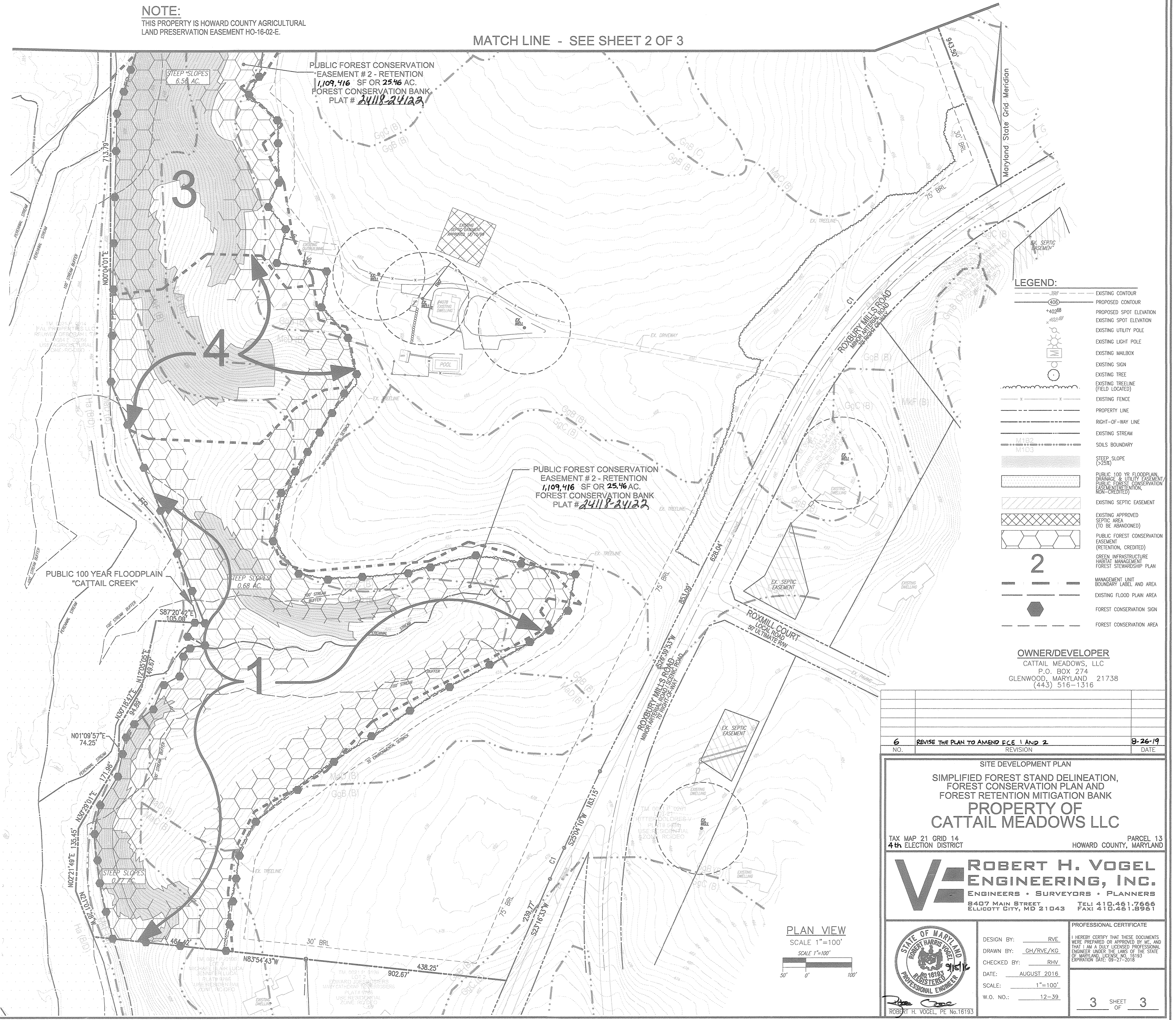
- ### SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION
1. PRECONSTRUCTION MEETING /SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
 2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
 3. INSTALL TREE PROTECTION FENCING; FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
 4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
 5. TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

- ### CONSTRUCTION PERIOD PROTECTION AND MANAGEMENT NOTES FOR FOREST CONSERVATION
- #### PRE-CONSTRUCTION PHASE
1. FOR PROTECTION AREA: INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
 2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
 3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNING SHALL BE REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- #### CONSTRUCTION PHASE
1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
 2. NO EQUIPMENT SHALL BE OPERATED, STAGED OR STORED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
 3. IN THE EVENT OF DROUGHT THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.
- #### POST-CONSTRUCTION PHASE
1. AT THE DISCRETION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
 2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
 3. POST CONSTRUCTION MANAGEMENT PROGRAM (FOREST CONSERVATION MANUAL)
 - INSPECTION
 - NOTICE OF TWO YEAR GROWING SEASON MANAGEMENT PROGRAM
 - MANAGEMENT OF RETENTION AREAS
 4. DO NOT REMOVE SIGNS.

- ### FOREST RETENTION MANAGEMENT NOTES
1. ANY PROPOSED FUTURE ACTIVITIES SHALL ADHERE TO THE CONDITIONS, SCHEDULES AND TERMS OF AN APPROVED SEDIMENT AND EROSION CONTROL PLAN.
 2. AFTER THE BOUNDARIES OF THE RETENTION AREA HAVE BEEN STAKED AND FLAGGED AND BEFORE ANY DISTURBANCE HAS TAKEN PLACE ON-SITE, ANY FUTURE CONSTRUCTION ON SITE WILL REQUIRE A PRECONSTRUCTION MEETING AT THE CONSTRUCTION SITE IN WHICH THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER AND APPROPRIATE COUNTY INSPECTORS SHALL ATTEND.
 3. TREE PROTECTION FOR ALL RETAINED AREAS:
 - A. ALL RETENTION AREAS WITHIN 50 FEET OF PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROTECTED BY HIGHLY VISIBLE, WHEEL ANCHORED TEMPORARY PROTECTION DEVICES (SILT FENCE OR BLAZE ORANGE PLASTIC MESH).
 - B. ALL PROTECTION DEVICES SHALL BE IN PLACE PRIOR TO ANY GRADING OR LAND CLEARING.
 - C. ALL PROTECTION DEVICES SHALL BE PROPERLY MAINTAINED AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS CEASED.
 - D. ATTACHMENT OF SIGNS, FENCING OR OTHER OBJECTS TO TREES IS PROHIBITED.
 - E. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN PROTECTED AREAS.
 4. IF THE CRITICAL ROOT ZONE IS AFFECTED BY ANY FUTURE CONSTRUCTION ACTIVITIES, SUCH AS GRADE CHANGE, DIGGING FOR FOUNDATIONS AND ROAD UTILITY INSTALLATION:
 - A. PRUNE ROOTS WITH A CLEAN CUT USING PROPER PRUNING EQUIPMENT
 - B. WATER AND FERTILIZE AS NEEDED.
 5. DURING ANY FUTURE CONSTRUCTION ON THE SITE, MONITOR AND CORRECT CONDITION OF RETAINED TREES FOR SOIL COMPACTION ROOT INJURY, FLOOD CONDITIONS, DROUGHT CONDITIONS AND OTHER STRESS SIGNS.
 6. AFTER ANY FUTURE CONSTRUCTION IS COMPLETED, THE FOLLOWING PROCEDURES AND PROTECTIONS SHALL OCCUR:
 - A. INSPECT EXISTING TREES AROUND THE PERIMETER OF DISTURBED LIMITS FOR EVIDENCE OF SOIL COMPACTION, ROOT INJURY, LIMB INJURY OR OTHER STRESS SIGNS AND CORRECT WITH PROPER MANAGEMENT TECHNIQUES SUCH AS ROOT OR LIMB PRUNING, SOIL AERATION, FERTILIZATION, CROWN REDUCTION OR WATERING. INSPECTION AND EVALUATION SHALL BE PERFORMED BY A LICENSED ARBORIST.
 - B. INSPECT FOR DEAD OR DYING TREES OR LIMBS WHICH MAY POSE SAFETY HAZARD AND REMOVE.
 - C. NO BURIAL OF DISCARDED MATERIALS WILL OCCUR ON-SITE WITHIN THE CONSERVATION AREAS.
 - D. NO BURNING WITHIN 100 FEET OF WOODED AREA.
 - E. ALL TEMPORARY FOREST PROTECTION STRUCTURES WILL BE REMOVED AFTER CONSTRUCTION.
 - F. FOLLOWING COMPLETION OF CONSTRUCTION, PRIOR TO USE, THE COUNTY INSPECTOR SHALL INSPECT THE ENTIRE AREA.

NOTE:
 THIS PROPERTY IS HOWARD COUNTY AGRICULTURAL LAND PRESERVATION EASEMENT HO-16-02-E.

MATCH LINE - SEE SHEET 2 OF 3



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 08-13-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 3-13-17
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3-15-17
 DIRECTOR DATE

6	REVISE THE PLAN TO AMEND ECE 1 AND 2	8-26-19
NO.	REVISION	DATE

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 SIMPLIFIED FOREST STAND DELINEATION,
 FOREST CONSERVATION PLAN AND
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