GENERAL NOTES:

1. SUBJECT PROPERTY ZONED R-20 PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.

2. THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED

3. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 177A AND 177D WERE USED FOR THIS PROJECT.

4. PREVIOUS HOWARD COUNTY FILE NUMBERS: ECP-23-002, SP-23-002

5. TRACT BOUNDARY IS BASED ON FIELD RUN BOUNDARY SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT JUNE 1, 2022.

6. EXISTING UTILITIES SHOWN ARE BASED ON FIELD LOCATIONS BY BENCHMARK ENGINEERING, INC, HOWARD COUNTY GIS, F-19-038, F-98-057 AND F-97-042.

7. WETLAND AND FOREST STAND DELINEATIONS WERE PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED AUGUST 1, 2022 AND WERE APPROVED BY THE DIRECTOR'S SIGNATURE APPROVAL OF THE PRELIMINARY EQUIVALENT SKETCH PLAN, SP-23-002, ON JUNE 23, 2023.

8. THERE ARE NO DRAINAGE AREAS OF 30 ACRES OR LARGER OR HAVING A 10-YEAR RUNOFF IN EXCESS OF 100 CFS. NO NEW FLOODPLAIN STUDY IS REQUIRED. THE SUBJECT PROPERTY LIES WITHIN THE USE I WATERSHED OF THE PATAPSCO RIVER (02130906I017).

9. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS SITE.

10. THERE ARE NO HISTORIC SITES/STRUCTURES LOCATED ON THIS SITE. THE EXISTING STRUCTURE TO REMAIN ON-SITE (LOT 1) IS DATED CIRCA 1975. NO NEW BUILDINGS, EXTENSIONS, OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS REQUIREMENTS.

11. THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND THE PLANNED SERVICE AREA, EXISTING WATER AND SEWER CONNECTIONS ARE TO CONTRACTS 10-3938 AND W-70.

12. A NOISE STUDY IS NOT REQUIRED FOR THIS PLAN AS THE PROPERTY IS NOT LOCATED WITHIN 500 FEET OF ANY EXISTING OR PROPOSED PRINCIPAL OR INTERMEDIATE ARTERIAL HIGHWAY RIGHT-OF-WAY LINE. PER DESIGN MANUAL VOLUME III, COMPLETE STREETS AND BRIDGES, SECTION 5.2(G)(2)(2).

13. A TRAFFIC STUDY IS REQUIRED FOR THE PRELIMINARY EQUIVALENT SKETCH PLAN (SP-23-002), IT IS PROVIDED BY MARS GROUP, INC., DATED JUNE, 2019. THE ADEQUATE ROAD FACILITIES COMPLETE STREET MULTIMODAL TEST EVALUATION REPORT WAS APPROVED ON MAY 15, 2023. BASED ON THE DATA AND ANALYSIS PRESENTED IN THE TRAFFIC STUDY IT WAS DETERMINED THAT THE PROPOSED DEVELOPMENT CAN BE ADEQUATELY ACCOMMODATED BY THE SURROUNDING AREA ROAD SYSTEM. REPORT COMPILED ON: JUNE 23, 2022 PLAN NUMBER THE REPORT WAS SUBMITTED UNDER: SP-23-002 KEY INTERSECTION IDENTIFIED FOR THE STUDY: OLD FREDERICK ROAD @ ROGERS AVENUE JURISDICTION OVER THE KEY INTERSECTIONS: HOWARD COUNTY KEY INTERSECTION VOLUME COUNT COLLECTED ON: NOVEMBER 16, 2021 KEY INTERSECTION COUNT WERE COLLECTED WHILE: HOWARD COUNTY PUBLIC SCHOOL 2021-2022 WAS IN SESSION DESIGN YEAR LEVEL-OF-SERVICE AT KEY INTERSECTION: AM PEAK HOUR 'B'; PM PEAK HOUR 'C' MITIGATION REQUIREMENT: MITIGATION MEASURES ARE NOT REQUIRED BY THIS STUDY.

14. THIS SUBDIVISION IS NOT LOCATED ON A SCENIC ROAD.

15. COMMUNITY MEETING WAS HELD ON JULY 14, 2022 AT THE HOWARD COUNTY LIBRARY, MILLER BRANCH, 9421 FREDERICK ROAD, ELLICOTT CITY, MD 21042.

16. A DECLARATION OF COVENANTS SHALL BE RECORDED FOR ANY ON-LOT DEVICES, IF NECESSARY. IF ANY SHARED SWM DEVICES ARE PROPOSED THEY SHALL BE PRIVATELY OWNED AND MAINTAINED IN ACCORDANCE WITH MAINTENANCE EASEMENT AGREEMENT. SEE NOTE 17.

17. STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II AS AMENDED BY THE STORMWATER MANAGEMENT ACT OF 2007, ENVIRONMENTAL SITE DESIGN METHODS SHALL BE UTILIZED. FOR THIS PLAN THERE IS NO NEW IMPERVIOUSNESS, THEREFORE NO STORMWATER MANAGEMENT DEVICES ARE REQUIRED. THE FURTHER DEVELOPMENT OF NON-BUILDABLE BULK PARCEL 'A' WILL REQUIRE STORMWATER MANAGEMENT AT THE TIME OF THAT PARCEL'S DEVELOPMENT.

18. THIS SUBDIVISION COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY USING: 1) 0.27 ACRES OF OFF-SITE FOREST BANK ON THE VALLEY MEDE, SECTION 14, LOTS 71 AND 72 (F-09-051), PLAT NUMBER 20709-20710; AND 2) 0.53 AC. OF OFFSITE FOREST BANK ON THE PROPERTY OF FOREVER A FARM (SDP-14-005), PLAT Nos. 22726-22728. THERE IS NO SURETY OR INSPECTION FEE FOR THIS PLAN. THE USE OF THESE BANKS FULFILLS THE FULL FOREST CONSERVATION OBLIGATION FOR THE ENTIRE PROPERTY.

19. LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL IS NOT REQUIRED. THIS PLAN IS EXEMPTED FROM PROVIDING A LANDSCAPE PLAN BECAUSE IT IS A PARCEL SUBDIVISION, THE EXISTING HOUSE IS TO REMAIN, AND THERE ARE NO NEW BUILDABLE LOTS AT THIS TIME. EXEMPTION IS PER PAGE 3 OF THE LANDSCAPE MANUAL. THE FURTHER SUBDIVISION OF NON-BUILDABLE PARCEL 'A' WILL REQUIRE A LANDSCAPE PLAN.

20. FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY ONLY AND NOT ONTO THE FLAG OR PIPESTEM LOT DRIVEWAY.

21. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS THAT MEET FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH — 12' AND (16' SERVING MORE THAN ONE RESIDENCE).
B) SURFACE — 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
C) GEOMETRY — MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
D) STRUCTURES (CULVERTS/BRIDGES) — CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD)
E) DRAINAGE ELEMENTS — CAPABLE OF SAFELY PASSING 100 YEAR FLOOD PLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
F) STRUCTURE CLEARANCES — MINIMUM 12 FEET.
G) MAINTENANCE — SUFFICIENT TO INSURE ALL WEATHER USE.

22. SECTION 13.402(c)(e) OF THE HOWARD COUNTY CODE OF ORDINANCES

23. FOR MODERATE INCOME HOUSING UNITS APPLIES TO THIS PROPERTY. THIS SHALL BE ACCOMPLISHED BY A FEE-IN-LIEU OF CONSTRUCTION PAYMENT THAT IS TO BE CALCULATED AND PAID AT THE TIME OF BUILDING PERMIT ISSUANCE. LOT 1 IS EXEMPT AS IT CONTAINS THE EXISTING HOUSE, IF THE LOT 1 DWELLING IS REMOVED THE NEW DWELLING WILL BE SUBJECT TO THE MIHU REQUIREMENTS IN PLACE AT THAT TIME.

24. PER SECTION 16.121.a.2 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THIS PROJECT IS SUBJECT TO 6% OPEN SPACE REQUIREMENT (7,958 SF). LOT 1 IS AN EXISTING DWELLING AND DOES NOT CREATE AN OPEN SPACE OBLIGATION. THE FUTURE OPEN SPACE OBLIGATION IS TO BE FULFILLED BY A FEE IN LIEU PAYMENT OF 4 LOTS AT $1,500.00 PER LOT. AT THE TIME OF THE FUTURE SUBDIVISION OF NON-BUILDABLE BULK PARCEL 'A' INTO INDIVIDUAL LOTS, THE TOTAL PAYMENT IS TO BE $6,000.00. SEE DEPARTMENT OF RECREATION AND PARKS LETTER DATED FEBRUARY 21, 2023.

25. DPW HAS DETERMINED THAT OLD FREDERICK ROAD IS A NEIGHBORHOOD STREET 2, NO PARKING. THE LAND USE CONTEXT IS SUBURBAN AND THE TRANSPORTATION CLASSIFICATION IS COLLECTOR. THE DPW APPROVED STREET TYPE IS NEIGHBORHOOD STREET 2. THE EXISTING STREET CURRENTLY HAS NO PARKING AND THE RESIDENTIAL STRUCTURES HAVE ON-LOT PARKING SO THE ROADWAY IS ALSO GIVEN THE "NO PARKING" DESIGNATION. THE ULTIMATE RIGHT-OF-WAY IS 60', THE LANE WIDTH IS APPROXIMATELY 12' AND THERE ARE NO EXISTING SIDEWALKS, SHARED USE PATHWAYS OR ON-STREET PARKING AREAS IN THE VICINITY OF THE PROJECT EXCEPT SUNELL LANE WHICH HAS SIDEWALKS ALONG THE EAST SIDE OF OLD FREDERICK ROAD. THE POSTED SPEED IS 25 MPH AND THERE ARE NUMEROUS DRIVEWAYS. BIKEHOWARD MASTER PLAN AND HOWARD COUNTY INTERACTIVE MAP DESIGNATES OLD FREDERICK ROAD AS A SHARED ROADWAY WITH SAFETY TREATMENTS. DPW HAS VERIFIED AND APPROVED THE STREET TYPE DETERMINATION.

26. THE EXISTING POND DOES NOT CONSTITUTE WETLANDS. NO NEW WATERWAY WILL BE CONSTRUCTED. MDE HAS DETERMINED THE EXISTING POND IS NOT REGULATED. BASED ON THIS DETERMINATION HOWARD COUNTY WILL NOT REQUIRE AN ALTERNATIVE COMPLIANCE FOR THE POND REMOVAL. THE POND REMOVAL WILL BE REVIEWED BY MDE DAM SAFETY AND HOWARD SOIL CONSERVATION DISTRICT. THE INTENT IS TO PUMP THE POND THROUGH A FILTER BAG (DETAIL F-4) AND THEN FILLING AND STABILIZING THE DEPRESSION.

27. THE SUBJECT PROPERTY IS NOT LOCATED WITHIN THE BOUNDARIES OF THE OCTOBER 2019 HO.CO. BALTIMORE/WASHINGTON INTERNATIONAL AIRPORT (BWI) AIRPORT NOISE ZONE, AS WELL AS THE FOUR MILE RADIUS OF BWI AIRPORT. THEREFORE, NO APPROVAL FROM THE MARYLAND AVIATION ADMINISTRATION IS REQUIRED.

28. BRL INDICATES ZONING BUILDING RESTRICTION LINE, OTHER RESTRICTIONS MAY APPLY.

29. UNLESS OTHERWISE NOTED AS "PUBLIC", ALL EASEMENTS ARE "PRIVATE".

30. ALL AREAS ON THESE PLANS ARE "MORE OR LESS".

31. RIGHT-OF-WAY IMPROVEMENTS FOR THE PARCEL 23 FRONTAGE ARE TO BE COMPLETED AT THE TIME OF THE FUTURE SUBDIVISION. THIS PLAN DOES NOT RESULT IN A CHANGE TO OLD FREDERICK ROAD. THIS PLAN DOES NOT PROVIDE ANY NEW DRIVEWAYS OR ACCESS POINTS. THE FUTURE RIGHT-OF-WAY IMPROVEMENTS AS SHOWN ON SP-23-002 ARE AN OBLIGATION OF NON-BUILDABLE BULK PARCEL 'A' OWNER, AND TO BE COMPLETED WITH THAT PARCEL'S SUBDIVISION.

32. THIS SUBDIVISION (F-24-008) IS EXEMPT FROM PROVIDING ROADWAY IMPROVEMENTS IN ACCORDANCE WITH THE HO. CO. DESIGN MANUAL, VOL. II, COMPLETE STREETS AND BRIDGES. IN ACCORDANCE WITH EXEMPTIONS 2 & 4. THIS SUBDIVISION DOES NOT INCREASE THE TRAFFIC OR ACCESS POINTS. THEREFORE THERE IS A JUSTIFIABLE ABSENCE OF NEED. THIS PROJECT WILL PERMIT THE DEVELOPER TO SELL LOT 1 AND THEY WILL BE RETAINING THE BULK PARCEL. THE COST OF ACCOMMODATING THE REQUIRED IMPROVEMENTS IS GROSSLY DISPROPORTIONATE TO THE NEED.

33. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES, OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.

34. THE GEOTECHNICAL REPORTS WERE PREPARED BY GEOTECHNICAL LABORATORIES, INC., IN NOVEMBER 1, 2022.

35. A STREET LIGHT SHALL BE PROVIDED AT THE FUTURE SUBDIVISION OF BULK PARCEL "A" AND THE CONSTRUCTION OF THE SHARED DRIVEWAY. THE STREET LIGHT SHALL BE A NEW UNDERGROUND POWERED PUBLIC STREET LIGHT. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II (2006), SECTION 5.5.A. ANY TREE INSTALLED IN THE COUNTY ROW SHALL BE SPACED A MINIMUM OF 20 FEET FROM ANY PUBLIC STREET LIGHT. CONTACT HOWARD COUNTY TRAFFIC DIVISION PRIOR TO INSTALLING TREES SO NEW STREET LIGHT LOCATIONS CAN BE MARKED TO AVOID RELOCATING TREES PRIOR TO DEDICATION.

36. A PRIVATE RANGE OF ADDRESS STREET NAME SIGN (SNS) SHALL BE INSTALLED BY THE DEVELOPER ON THE PROPERTY AS PART OF THE FUTURE BULK PARCEL "A" DEVELOPMENT. THE DEVELOPER WILL BE RESPONSIBLE FOR PAYING FOR THIS SIGN TO BE INSTALLED AT THAT TIME. PLEASE CONTACT HOWARD COUNTY TRAFFIC (410-313-2430) TO MAKE ARRANGEMENTS FOR PAYMENT AT THAT TIME.

Specimen/Significant Tree Chart

Key (X#)	Species	Size (in.dbh)	Comments (Good unless otherwise noted)
1	Slippery elm	37.5	
2	Black locust	32.5	Poor, heart rot, damaged root
3	Black cherry	31	
4	Silver maple	35	
5	Red maple	27	
6	Siberian elm	28.5	
7	White pine	29	
8	Black cherry	28	fair - some decline noted

SITE DATA TABULATION

1) GENERAL SITE DATA
a. PRESENT ZONING: R-20
b. LOCATION: TAX MAP 18, GRID 07, PARCEL 23
c. APPLICABLE DPZ FILE REFERENCES: ECP-23-002, SP-23-002
d. DEED REFERENCE: BOOK 21530 PAGE 0136
e. PROPOSED USE OF SITE: 1 SFD LOT AND REMAINDER FOR FUTURE SUBDIVISION
f. PROPOSED WATER AND SEWER: PUBLIC WATER AND PUBLIC SEWER

2) AREA TABULATION
a. TOTAL AREA OF OVERALL SITE .... 2.93 Ac.±
b. AREA OF 100 YEAR FLOODPLAIN .... 0.00 Ac.±
c. AREA OF STEEP SLOPES (25% OR GREATER) .... 0.11 Ac.±
   AREA OF STEEP SLOPES LESS THAN 10 VERT. FEET .... 0.11 Ac.±
d. NET AREA OF SITE .... 2.93 Ac.±
e. AREA OF THIS PLAN SUBMISSION .... 2.93 Ac.±
f. LIMIT OF DISTURBANCE (APPROX.) .... 0.00 Ac.±
g. AREA OF PROPOSED BUILDABLE LOTS .... 0.60 Ac.±
h. AREA OF OPEN SPACE LOTS .... 0.00 Ac.±
i. AREA OF PROPOSED PUBLIC ROAD .... 0.00 Ac.±
j. AREA OF PROPOSED PUBLIC R/W DEDICATION .... 0.11 Ac.±
k. AREA OF NON-BUILDABLE BULK PARCEL .... 2.22 Ac.±

3) DENSITY TABULATION
a. NET AREA OF OVERALL SITE .... 2.93 Ac.±
b. MINIMUM LOT SIZE .... 20,000 SF
c. TOTAL NUMBER OF BUILDABLE LOTS 1
d. TOTAL NUMBER OF OPEN SPACE LOTS 0
e. TOTAL NUMBER OF NON-BUILDABLE BULK PARCELS 1
f. TOTAL NUMBER OF FUTURE LOTS 4

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. BOX 7006, GLEN ARM, MARYLAND 21057

J. Brody McAllister
ISA Certified Arborist
Cert ID: MA6471A
MD DNR FCA Qualified Professional

SOILS CHART SHEET

SYMBOL	HYDRIC	HYDROLOGIC GROUP	NAME	k-VALUE Whole Soil
GbB		A	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.32
GgC		B	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	0.43
GnB*	YES	C	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.49

** HIGHLY ERODIBLE, K>0.35, AND STEEPER THAN 5% OR 15% AND GREATER SLOPES TAKEN FROM THE NRCS WEB SOIL SURVEY MAY 2022, MAP 10.

VICINITY MAP
1" = 2000'
ADC MAP 4816, GRID A2

LEGEND
- LIMIT OF SUBMISSION
- EX. TREELINE
- EX. CONTOURS ---478---
- SOIL SYMBOL AND DELINEATION — GgC
- TREE 24" DBH OR GREATER
- LANDSCAPE TREE
- EDGE OF WATER
- SLOPES 25% AND GREATER
- SLOPES 20.00% TO 24.99%
- SLOPES 15.00% TO 19.99%
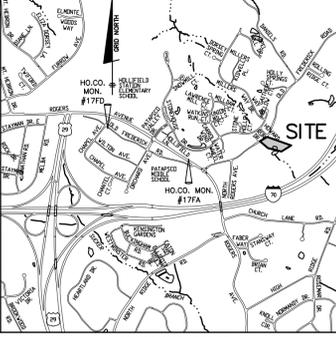
BOUNDARY COORDINATES

POINT #	NORTHING	EASTING
1	595335.7929	1366717.4798
2	595137.1380	1367283.6390
3	594993.9720	1367053.7670
4	595073.3667	1366736.9435
5	595234.7644	1366545.5055

Minimum Lot Size Chart

Lot	Gross Area (SF)	Pipestem Area (SF)	Minimum Lot Size (SF)
1	26,135	0	26,135
Bulk P.'A'	96,718	4,937	91,781

MODERATE INCOME HOUSING UNITS (MIHU) ALLOCATION EXEMPTIONS TRACKING

Total Number of Lots/Units Proposed	1
Number of MIHU Required	0
Number of MIHU Provided Onsite (exempt from APFO allocations)	0
Number of APFO Allocations Required (remaining lots/units)	0
MIHU Fee-in-Lieu (indicate lot/unit numbers)	Lot 1

Note: Lot 1 is exempt as it contains the existing house, if the lot 1 dwelling is removed the new dwelling will be subject to the MIHU requirement in place at that time.

FOREST CONSERVATION WORKSHEET FOR 8621 OLD FREDERICK ROAD

Net Tract Area
A.	Total (Gross) Tract Area	A =	2.9
B.	Area within 100-year Floodplain	B =	
C.	Other Deductions (Identify: _____)	C =	0
D.	Net Tract Area	D =	2.9

Land Use Category
Insert the number "1" under the appropriate land use (limit to only one entry)

	Resid. Rural LD	Resid. Rural MD	Resid. Suburban	Inst./ Linear	Retail/Ind./ Office	Mixed Use/ PUD
	0	0	1	0	0	0

		(Net Tract Area x)		
E.	Afforestation Threshold	(Net Tract Area x 15%)	E =	0.4
F.	Reforestation Threshold	(Net Tract Area x 20%)	F =	0.6

Existing Forest Cover
G.	Existing Forest Cover within the Net Tract Area	G =	0.0
H.	Area of Forest above Afforestation Threshold	H =	0.0
I.	Area of Forest above Reforestation Threshold	I =	0.0

Break Even Point
J.	Break Even Point	J =	0.0
K.	Forest Clearing Permitted without Mitigation	K =	0.0

Proposed Forest Clearing
L.	Total Area of Forest to be Cleared	L =	0.0
M.	Total Area of Forest to be Retained	M =	0.0

Planting Requirements Inside Watershed
N.	Reforestation for Clearing above the Reforestation Threshold	N =	0.0
P.	Reforestation for Clearing below the Reforestation Threshold	P =	0.0
Q.	Credit for Retention above the Reforestation Threshold	Q =	0.0
R.	Total Reforestation Required	R =	0.0
S.	Total Afforestation Required	S =	0.4
T.	Total Reforestation and Afforestation Requirement	T =	0.4
U.	75% of Total Obligation (Retention + Planting)	U =	0.3
V.	Planting Required Onsite to meet 75% Obligation	V =	0.3

Planting Requirements Outside Watershed
W.	Total Planting within Development Site Watershed	W =	0.4
X.	Total Afforestation Required	X =	0.0
Y.	Remaining Planting within Watershed for Conservation Credit	Y =	0.0
Z.	Reforestation for Clearing above the Reforestation Threshold	Z =	0.0
AA.	Reforestation for Clearing below the Reforestation Threshold	AA =	0.0
BB.	Credit for Retention above the Reforestation Threshold	BB =	0.0
CC.	Total Reforestation Required	CC =	0.0
DD.	Reforestation for Clearing below the Reforestation Threshold	DD =	0.0

Date: 8/1/22

SIMPLIFIED FOREST STAND DELINEATION/EXISTING CONDITIONS OVERVIEW

The subject property is located at 8621 Old Frederick Road in the Ellicott City section of Howard County, Maryland. The subject property encompasses 2.91 acres and is identified on tax map 18 as parcel 23.

The subject property is roughly rectangular in shape with Old Frederick Road creating its western boundary. An existing single family home is present along the road frontage. The house is surrounded by lawn and landscaping with scattered shade trees. Yews, azaleas, Japanese maple, flowing cherry and daffodils were notable landscaping elements around the home. Shade trees around the home include slippery elm, black locust, black cherry and silver maple.

Behind the home, the property descends to the east to an area that includes an excavated pond and a treed lawn. The pond appears to have been excavated in an area of Glenville silt loam. This soil type continues downslope off of the property. The downslope property adjacent to the subject property also has an excavated pond and further downslope a stream channel is present. Onsite the pond appears to receive hydrologic input from seasonally high groundwater and concentrated run-off. Three drainage pipes were observed coming to the pond, though no discharge was observed. No defined spring or stream flow was noted entering the pond. It is possible that the pond was also supplemented by well pump or outside water source.

At the time of our field review the water level in the pond was greatly reduced from historic water lines defined by the pond edge. Water level was at least three feet below the riser elevation. It did not appear that failure of the pond drainage system was causing the lack of hydrology in the pond. It is assumed that any overflow this pond is piped directly to the downslope pond as there was no notable defined discharge point from the pond and there are no stream channels or wetlands on or adjacent to the property.

No significant wetland development was noted around the pond. Some small black willow were noted along the top of the bank but these trees are no longer within the hydrologic influence of the pond. Broomsedge was growing on the exposed soils between the waterline and the top of the pond bank.

The property is maintained as lawn and treed lawn with patchy tree stands being present in the rear, eastern end of the site. These treed areas include Virginia and white pine, Norway spruce, black cherry, black locust, American holly, pin oaks, flowering dogwood, red maple and mulberry. Some dogbook was noted in the dogwood and Virginia pine.

The tree patches in the yard do not provide contiguous cover that is 35 feet wide and 10,000 sq.ft. in area. The treed areas also occur over mowed lawn and have no true shrub or understory development.

Field review of the site did find that there are four specimen trees near the home. Four trees 24-29.9" are present within the treed lawn in the rear of the lot. The location, species, size and condition of the trees are shown on the attached Simplified Forest Stand Delineation plan.

No State Champion trees or trees 75% of State Champion tree are present on the site.

The subject property lies within the Use I watershed of the Patapsco River (021309061017).

No 100 year floodplain is present on the site. Steep slopes are present on the property.

No rare, threatened or endangered species are present on the property.

No known cemeteries or historic elements are present on the property.

FOREST CONSERVATION COMPLIANCE

Proposed subdivision of the site will require compliance with the Forest Conservation Act. Since no forest is present on the site and the property is zoned for high density residential the afforestation obligation will be 15% of the net tract area or 0.4 acres. Given the small size of the property this obligation can be best met through the purchase of credit from a forest conservation bank or payment in to the County-fee-lieu fund. The owner has selected to obtain the credit from Property of Forever a Farm (SDP-14-005) and from Valley Mede, Section 14, Lots 71 and 72 (F-09-051).

Removal of specimen trees will require specific approval from Howard County. If approved, removal of the specimen trees will generate a mitigation obligation

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577. Expiration Date: 06-08-2024.

John M. Carney
STATE OF MARYLAND — JOHN M. CARNEY — PROFESSIONAL ENGINEER — 45577
11.14.2023

Title Block

CAPSTONE ESTATES
LOT 1 AND BUILDABLE BULK PARCEL 'A'
R-20 SINGLE FAMILY DETACHED

TAX MAP: 18, GRID: 07, PARCEL: 23
ZONED: R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONSTRUCTION / SUPPLEMENTAL PLANS
DEVELOPMENT AND FOREST CONSERVATION PLAN

DATE: NOVEMBER, 2023	BEI PROJECT NO. 3119
DESIGN: JC	DRAFT: JC/MCR	SCALE: AS SHOWN	SHEET 1 OF 2

OWNER:
RAINMAKER DEVELOPMENT, INC.
2101 MILLERS MILL ROAD
COOKSVILLE, MD 21723
443-829-9222

DEVELOPER:
RAINMAKER DEVELOPMENT, INC.
2101 MILLERS MILL ROAD
COOKSVILLE, MD 21723
443-829-9222

GRAPHIC SCALE (IN FEET) 1 inch = 50 ft.

LEGEND

LIMIT OF SUBMISSION	
EX. TREELINE	
EX. CONTOURS	—478— —480—
SOIL SYMBOL AND DELINEATION	GgC
TREE 24" DBH OR GREATER	◯
LANDSCAPE TREE F-19-038	◯
EDGE OF WATER	— — —
SLOPES 25% AND GREATER	
SLOPES 20.00% TO 24.99%	
SLOPES 15.00% TO 19.99%	

(IN FEET)
1 inch = 50 ft.

BORING LOGS

Boring logs B-1 through B-8, Client: Rainmaker Development, Inc., Project: Capstone Estates: 8621 Old Frederick Road, Ellicott City, MD. Project No. 122-164. Date: 11/1/2022. Geolab. Drilling method: Hand Auger. Driller: D. Rockwood.

The following table summarizes the groundwater at each test boring:

Test Boring No.	Depth to groundwater during drilling (feet)	Depth to groundwater after 24-hours (feet)	Approximate elevation of groundwater
B-1	No water	No water	-
B-2	No water	No water	-
B-3	No water	8.1	452.8
B-4	No water	No water	-
B-5	7.25	6.45	455.1
B-6	7.25	6.40	455.2
B-7	No water	No water	-
B-8	No water	No water	-

Bedrock Observations

Bedrock was not encountered within the test borings to the depths explored. Although Test Boring No. B-4 was terminated prior to its required depth, this is not necessarily indicative of bedrock, but rather dense and gravelly soils.

Field Infiltration Results

The following table summarizes our field infiltration test results:

Boring No.	Depth of pipe below grade (feet)	Approximate elevation of bottom of pipe	Average Infiltration Rate (inches/hour)	USDA Texture Class
B-3	4.5	456.4	8.0	Loamy Sand
B-6	2.3	459.3	1.3	Sandy Loam

The rates obtained by field testing are different than the laboratory derived USDA infiltration rates. The difference may be due to variations in the overall subsurface profile not revealed by the test borings performed for this study. In our view however, the field results are more indicative of the actual conditions and should be applied.

Stormwater Management Study
Proposed Single-Family Homes
Capstone Estates
8621 Old Frederick Road, Ellicott City, Howard County, MD
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Stormwater Management Design Recommendations

The "2000 Maryland Stormwater Design Manual", published by the Maryland Department of the Environment, states that stormwater management facilities utilizing infiltration shall have a Hydrologic Soil Group classification (HSG) of A or B and a minimum infiltration rate of 0.52 inches per hour. Hydrologic soil groups C or D may be used with the addition of underdrains. The bottom of any SWM facility utilizing infiltration should be located at least four feet above any groundwater or bedrock.

The results of our study indicate that suitable soils for SWM facilities utilizing infiltration were encountered at all of the eight test boring locations. The encountered soils all classified as either HSG A or B. Additionally, the field infiltration rates at Test Boring Nos. B-3 & B-6 were greater than 0.52 inches per hour. Groundwater was encountered at Test Boring Nos. B-3, B-5 & B-6 which may be related to the existing pond on the property as well as on the neighboring property.

SOILS CHART SHEET

SYMBOL	HYDRIC	HYDROLOGIC GROUP	NAME	k-VALUE Whole Soil
GbB		A	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.32
GgC		B	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	0.43
GnB*	YES	C	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.49

** HIGHLY ERODIBLE, K>0.35, AND STEEPER THAN 5% OR 15% AND GREATER SLOPES
TAKEN FROM THE NRCS WEB SOIL SURVEY MAY 2022, MAP 10.

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS &ROAD2 — DATE: 12/7/2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE: 12/7/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE: 12/20/2023

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
3300 NORTH RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577. Expiration Date: 06-06-2024.

STATE OF MARYLAND — JOHN M. CARNEY — 45577 — PROFESSIONAL ENGINEER

John M. Carney
11.14.2023

OWNER:
RAINMAKER DEVELOPMENT, INC.
2101 MILLERS MILL ROAD
COOKSVILLE, MD 21723
443-829-9222

DEVELOPER:
RAINMAKER DEVELOPMENT, INC.
2101 MILLERS MILL ROAD
COOKSVILLE, MD 21723
443-829-9222

CAPSTONE ESTATES
LOT 1 AND BUILDABLE BULK PARCEL 'A'
R-20 SINGLE FAMILY DETACHED

TAX MAP: 18, GRID: 07, PARCEL: 23
ZONED: R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONSTRUCTION / SUPPLEMENTAL PLANS
EXISTING CONDITION PLAN,
SOILS MAP AND BORING PLAN

DATE: NOVEMBER, 2023	BEI PROJECT NO. 3119
DESIGN: JC	DRAFT: JC/MCR	SCALE: AS SHOWN	SHEET 2 OF 2