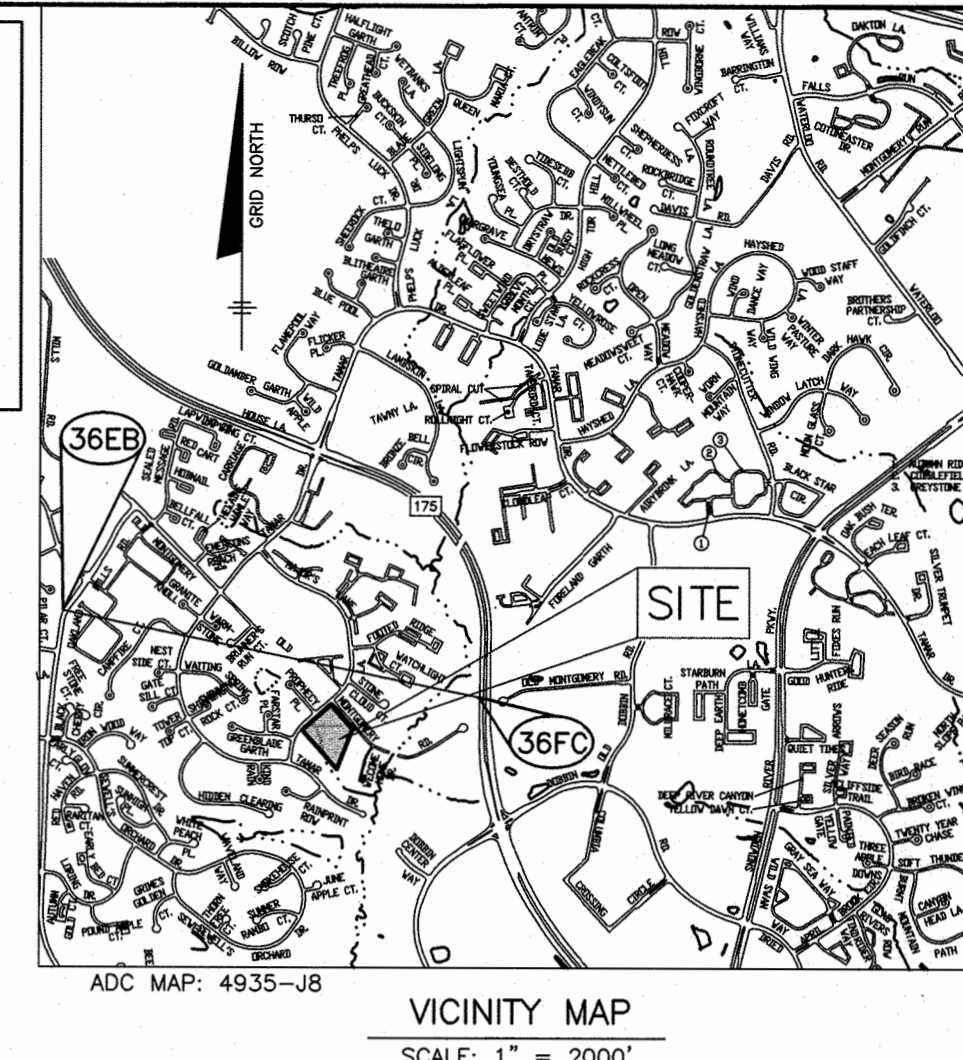


SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
GhB		B	D	GLENELG URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	0.43
GnB*	YES	C	D	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.49
MaC		B		MANOR LOAM, 8 TO 15 PERCENT SLOPES	0.32

ENVIRONMENTAL CONCEPT PLAN OLD MONTGOMERY MEADOWS

11 RESIDENTIAL SINGLE FAMILY LOTS
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

BENCH MARKS-(NAD'83)	
36FC	EL.375.747 DISC SET ON TOP OF CONCRETE COLUMN SOUTH SIDE OF RTE 175, WEST OF DOBBS ROAD. N 559312.559 E 1363698.217
36EB	EL.411.469 DISC SET ON TOP OF CONCRETE COLUMN OAKLAND MILLS RD. ±400'S OF KILIMANJARO N 560210.015 E 1359365.326



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED HOUSE
- APPROXIMATE 100 YEAR FLOODPLAIN
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROP. MICRO BIORETENTION FACILITY
- PROP. DRYWELL
- TREE PROTECTION FENCING
- ESD DRAINAGE AREA
- SPECIMEN TREE
- PRIVATE USE-IN-COMMON ACCESS EASEMENT
- PUBLIC SEWER & UTILITY EASEMENT
- PUBLIC SWM, DRAINAGE & UTILITY EASEMENT

- ### GENERAL NOTES
- SUBJECT PROPERTY IS ZONED R-12 PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.
 - THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DATED OCTOBER 2007.
 - THE BOUNDARY SHOWN IS BASED ON A BOUNDARY SURVEY PREPARED BY BENCHMARK ENGINEERING, INC. DATED SEPTEMBER 2021.
 - TOPOGRAPHY SHOWN HEREON BASED ON A FIELD RUN SURVEY PREPARED BY BENCHMARK ENGINEERING, INC. DATED SEPTEMBER 2021.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS FOR THIS SITE ARE 36EB AND 36FC.
 - THERE ARE NO STEEP SLOPES LOCATED ON THIS SITE.
 - THERE ARE NO STREAMS OR WETLANDS LOCATED ON THE PROPERTY BASED ON A SITE ANALYSIS BY ECO-SCIENCE PROFESSIONALS DATED JANUARY 2022.
 - TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS SITE.
 - THE HOUSE ON THE PROPERTY HAS BEEN REMOVED.
 - A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT.
 - THIS SITE IS TO BE LOCATED WITHIN THE METROPOLITAN DISTRICT AND THE PLANNED SERVICE AREA. WATER AND SEWER WILL BE PUBLIC. WATER CONTRACT: 374-W&S, SEWER CONTRACT: 374-W&S; DRAINAGE AREA: LONG REACH.
 - THE FOREST CONSERVATION OBLIGATIONS FOR THIS SITE ARE INTENDED TO BE PROVIDED BY ONSITE RETENTION AND WILL BE PROVIDED AT THE NEXT STAGE OF THE DEVELOPMENT. ANY INVASIVE SPECIES WITHIN THE FOREST CONSERVATION EASEMENT ARE TO BE REMOVED PRIOR TO APPROVAL OF THE FOREST CONSERVATION EASEMENT.
 - THE FOREST STAND DELINEATION AND WETLANDS STUDY WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JANUARY 2022.
 - EXISTING UTILITIES SHOWN ARE BASED ON A FIELD SURVEY, HOWARD COUNTY GIS, AND INFORMATION OF RECORD.
 - THE ANTICIPATED STORMWATER MANAGEMENT METHODS FOR THIS DEVELOPMENT ARE DRYWELLS FOR THE HOUSES, RAIN GARDEN BIORETENTION & MICRO-BIORETENTION FACILITIES FOR THE DRIVEWAYS AND THE ROAD WIDENING.
 - THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
 - A GEOTECHNICAL ANALYSIS MAY BE PROVIDED AT THE NEXT STAGE OF THE DEVELOPMENT.
 - AN ALTERNATIVE COMPLIANCE FOR THE REMOVAL OF SPECIMEN TREES ST1-ST7 HAS BEEN SUBMITTED. REFERENCE WP-22-093. NO OTHER ALTERNATIVE COMPLIANCE OR DESIGN MANUAL WAIVER REQUESTS ARE CURRENTLY ANTICIPATED FOR THIS DEVELOPMENT AT THIS STAGE OF THE DESIGN.
 - THIS DEVELOPMENT WAS PRESENTED AT A VIRTUAL COMMUNITY INPUT MEETING DATED 11.22.22.
 - EXISTING SEPTIC AND WELL HAVE BEEN ABANDONED PER THE HOWARD COUNTY HEALTH DEPARTMENT REQUIREMENTS.
 - OLD MONTGOMERY ROAD IS CONSIDERED A NEIGHBORHOOD YIELD STREET PER STANDARD DETAIL R-1.08.
 - THIS PLAN IS SUBJECT TO WP-22-093 TO WAVE SECTION 16.1205(g) TO REMOVE SPECIMEN TREES ST1-ST7.
 - THE STORMWATER MANAGEMENT SYSTEM SHOWN ON THESE PLANS IS AN APPROXIMATION OF THE SIZE, SHAPE AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN DESIGNED AND THE ACTUAL DESIGN MAY CHANGE, ALTERING THE NUMBER OF UNITS ALLOWED FOR THIS DEVELOPMENT.
 - APPROVAL OF THE EOP DOES NOT CONSTITUTE APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN, SITE DEVELOPMENT PLAN, OR GRADING OR BUILDING PERMIT PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND/OR SITE DEVELOPMENT PLAN STAGES. THE APPLICANT AND CONSULTANTS SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.

Site Analysis Data Sheet

Gross Site Area	4.00 ac
100yr Floodplain	0.01 ac
Slopes 15% or greater	0.00 ac
Slopes 25% or greater	0.00 ac
Wetlands	0.00 ac
Wetlands Buffer	0.00 ac
Forested Area	0.57 ac
Erodible Soils	0.00 ac
Limit of Disturbance	3.00 ac
Impervious Area	0.95 ac
Green Space	2.05 ac
Public Road Right-of-Way	0.41 ac
Site Use	RESIDENTIAL
Open Space	1.60 ac

DESIGN NARRATIVE

This project is known as Tax Map 36, Parcel 271 and is 4.0 acres. The parcel is zoned R-12 with the developer proposing an in-fill development of 11 single-family lots accessing off Old Montgomery Road. The property currently contains an existing dwelling and a majority of the property is maintained lawn. There is a tree area along the southeast corner of the property with a stream that runs along the southern edge just off the property. The stream has an associated floodplain based on the requirement for Howard County. The drainage watershed for his property is Little Patuxent River (02131105), a Class I, Use IV-P intermittent stream.

The target Pe for this site is 1.6 inch based on the imperviousness of the proposed conditions. The target Pe was treated using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual, as amended by Maryland's Stormwater Management Act of 2007. The selected methods to provide ESDv are; Drywells (M-5) for the houses, 1 bioretention facility (F-6) for driveways and roadway, 2 micro bioretention facility (M-6) for the use in common driveways and the house on Lot 9 and one rain garden (M-7) for Lot 8/9 use in common driveway. The site is predominantly 'B' soils (GhB) Glenelg. A geotechnical analysis will be performed at the next phase of the development to verify the methods.

Maintenance of the natural flow patterns is provided by limiting the site disturbance and by the use of micro-bioretention and drywells opposed to structural practices altering the drainage patterns and limiting concentrated flows. Utilizing micro bioretention facilities, a nonstructural practice, makes for a better site design as well as maintaining the original drainage patterns.

As a result of fully addressing the stormwater management by use of micro bioretention and drywells the land conditions have theoretically been returned to woods in good condition. Therefore, providing the reduction in impervious areas through non-structural practices we have met the ESD requirements for this site.

Sediment and erosion control shall comply with the latest edition of the MDE Standards and Specifications for Sediment Control and has been limited to the areas necessary to conduct ESD practices and onsite functionality.

To protect natural resources, it is important to minimize and adequately treat the stormwater runoff. The final design will incorporate adequate treatment and storage in order to create the least possible stormwater runoff in general compliance with this concept plan. The runoff will be treated on-site using approved methods. Outfalls generally correspond with the natural drainage patterns for the site.

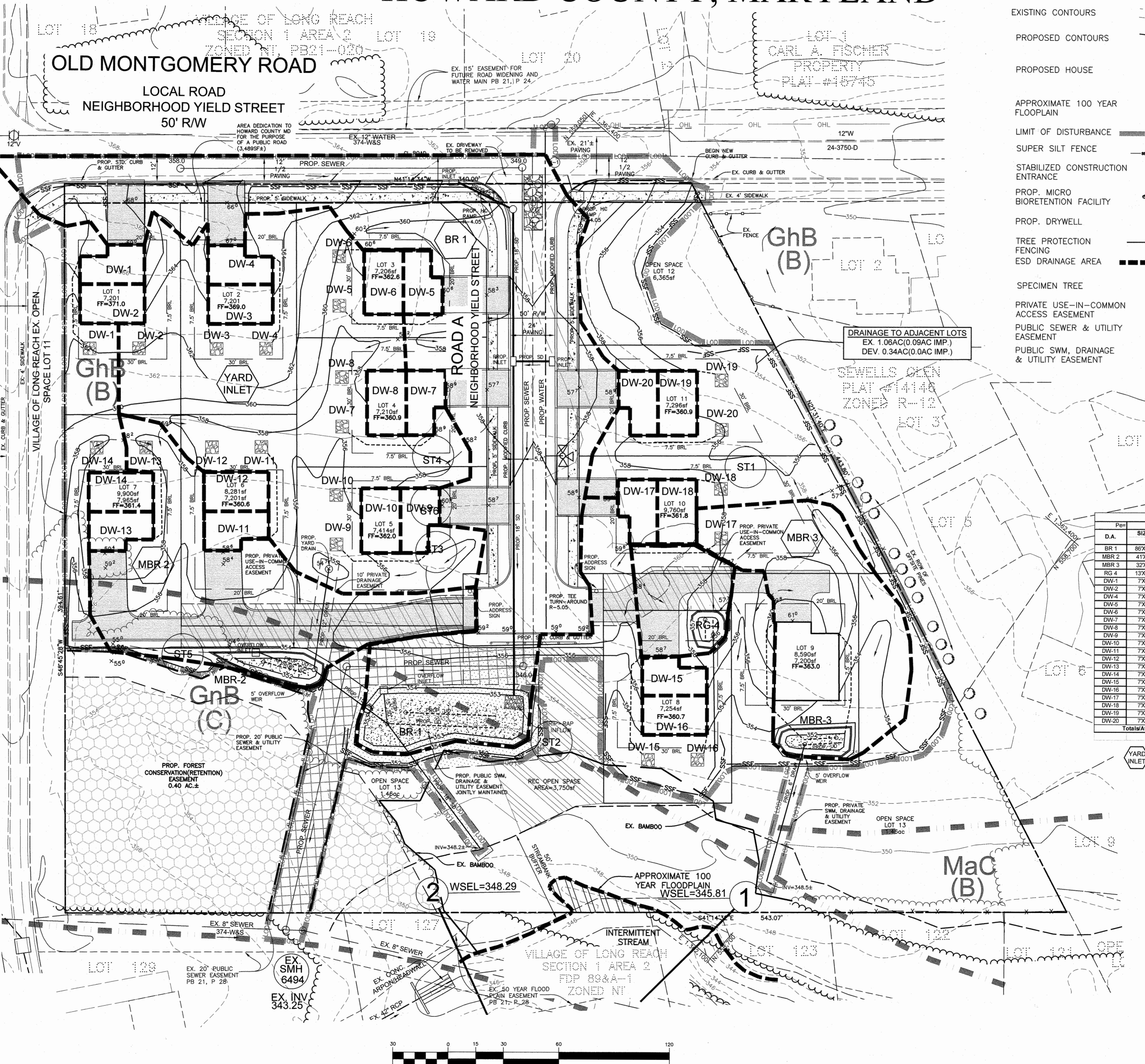
It is concluded that all ESD to the MEP requirements as defined in the Stormwater Management Act of 2007 have been met for the proposed development. The Water Quality has been provided by the implementation of bioretention (F-6), micro bioretention (M-6), rain garden (M-7) and Drywells (M-5) to treat the proposed impervious onsite.

It is anticipated that this site will meet the forest conservation requirements by onsite forest retention.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 8/17/22
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 8/17/22
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



ESD SUMMARY TABLE

D.A.	SIZE	MDE Type	Total DA	Impervious Area		Q ₅₀		At		Depth		ESDv		RV	Pe
				Area	Q ₅₀	Required	Provided	2% DA	5% DA	Required	Provided	7% ESDv			
BR 1	85'x28'	(F-6)	34,098	18,240	0.54	82	2268	PASS	1.0	1812	2383	PASS	0.50	1.58	
MBR 2	41'x9'	(M-6)	10,940	3,500	0.64	219	288	PASS	1.0	370	458	PASS	0.34	1.48	
MBR 3	32'x8'	(M-6)	9,600	2,270	0.42	192	240	PASS	1.0	134	186	PASS	0.26	0.88	
RG 4	13'x10'	(M-7)	2,890	1,330	0.74	58	110	PASS	1.0	134	186	PASS	0.48	1.66	
DW-1	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-2	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-3	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-4	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-5	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-6	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-7	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-8	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-9	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-10	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-11	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-12	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-13	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-14	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-15	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-16	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-17	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-18	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-19	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
DW-20	7'x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77	
Total/Average			70,828	38,640		2,730	4,568		REV	4,029	5,084		1,119	1.78	

REV = 25% OF THE PROVIDED ESDv

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
3300 NORTH RIDGE ROAD & SUITE 140 & ELLICOTT CITY, MARYLAND 21043
(P) 410-465-8105 (F) 410-465-6644
WWW.BE-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. 22336, Expiration Date: 6-30-2023.

[Signature] 8-11-22

OWNER:
DEVELOPMENT PARTNERS, LLC
9693 GERWIG LANE, SUITE L
COLUMBIA, MD 21046
443-676-2417

OLD MONTGOMERY MEADOWS
LOTS 1-11 AND OPEN SPACE LOTS 12 & 13
9005 OLD MONTGOMERY ROAD

DEVELOPER:
DEVELOPMENT PARTNERS, LLC
9693 GERWIG LANE, SUITE L
COLUMBIA, MD 21046
443-676-2417

TAX MAP: 36 GRID: 17 PARCEL: 271
ZONED: R-12
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

RESIDENTIAL ENVIRONMENTAL CONCEPT PLAN

DATE: AUGUST 2022
SCALE: AS SHOWN

BEI PROJECT NO. 3080
SHEET 1 OF 1