

SHEET INDEX	
NO.	DESCRIPTION
1	EXISTING CONDITIONS
2	ROAD CONSTRUCTION AND PROFILE
3	GRADING & SEDIMENT CONTROL PLAN
4	FOREST CONSERVATION AND LANDSCAPE PLAN
5	FOREST CONSERVATION AND LANDSCAPE PLAN
6	STORM DRAIN DRAINAGE AREA MAP
7	STORMWATER MANAGEMENT DRAINAGE AREA MAP

# PRELIMINARY PLAN OLD MONTGOMERY MEADOWS

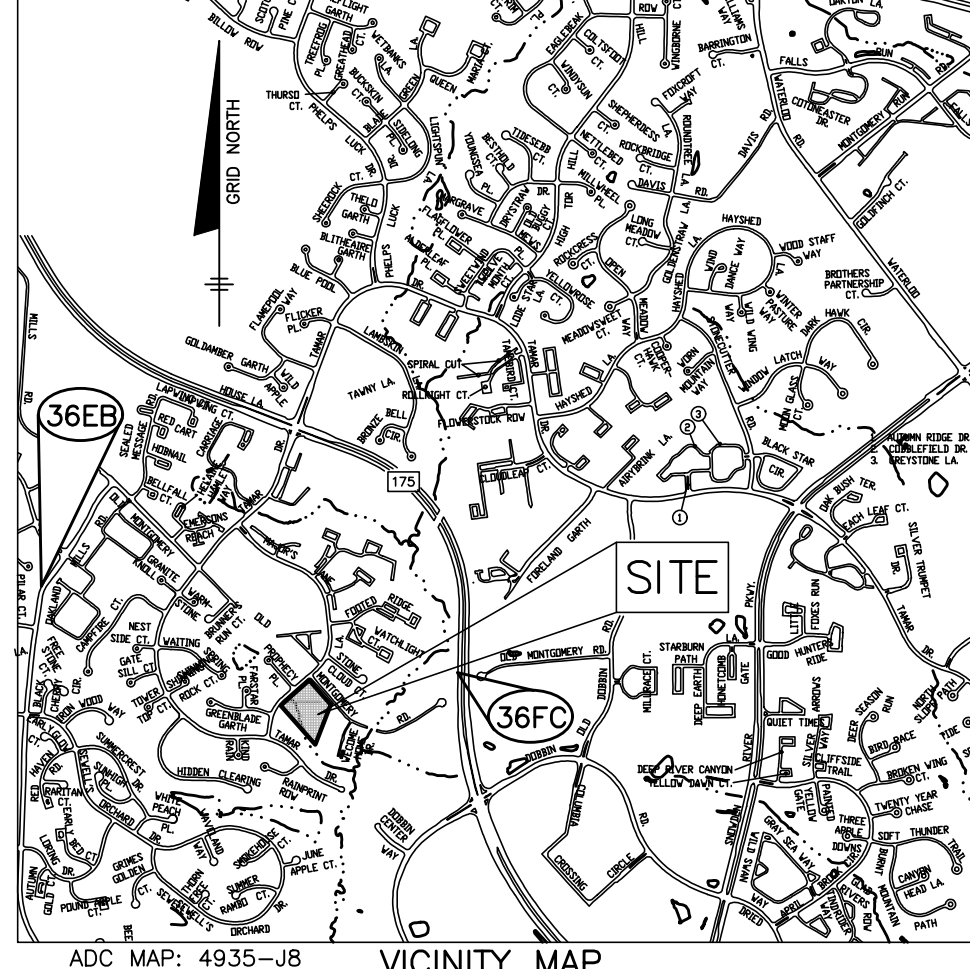
11 RESIDENTIAL SINGLE FAMILY LOTS  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

### LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED HOUSE
- APPROXIMATE 100 YEAR FLOODPLAIN
- LIMIT OF DISTURBANCE
- PROP. MICRO BIORETENTION FACILITY
- PROP. DRYWELL
- TREE PROTECTION FENCING
- ESD DRAINAGE AREA
- SOIL DIVIDES
- SPECIMEN TREE
- PRIVATE USE-IN-COMMON ACCESS EASEMENT
- PUBLIC SEWER & UTILITY EASEMENT
- PUBLIC SWM, DRAINAGE & UTILITY EASEMENT
- FCE (RETENTION)
- FCE (AFFORESTATION)
- SPECIMEN TREE TO BE REMOVED PER WP-22-093
- EX. UNDERGROUND ELECTRIC
- EX. UNDERGROUND GAS
- EX. UNDERGROUND FIBER OPTIC/CABLE

**BENCH MARKS--(NAD'83)**

36FC	EL.375.747	DISC SET ON TOP OF CONCRETE COLUMN SOUTH SIDE OF RTE 175, WEST OF DOBBIN ROAD.	N 559312.559	E 1363698.217
36EB	EL.411.469	DISC SET ON TOP OF CONCRETE COLUMN OAKLAND MILLS RD. 4400'S OF KILIMANJARO	N 562010.015	E 1359365.326



### GENERAL NOTES

- SUBJECT PROPERTY IS ZONED R-12 PER THE 10-9-2013 COMPREHENSIVE ZONING PLAN. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DATED OCTOBER 7, 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. BENCHMARK SURVEYS FOR THIS SITE ARE 36ES AND 36EB.
- 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.
- A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT PER SECTION 5.2.G.2 OF VOLUME III, COMPLETE STREETS AND BRIDGES.
- THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND THE PLANNED SERVICE AREA. WATER AND SEWER WILL BE PUBLIC. WATER CONTRACT: 374-WAS; SEWER CONTRACT: 374-WAS; DRAINAGE AREA: LONG REACH.
- THE FOREST CONSERVATION OBLIGATIONS FOR THIS SITE ARE PROVIDED ON SITE BY THE RETENTION OF 0.34 AC. OF FOREST AND ON-SITE REFORESTATION OF 0.60 AC. NO OFF-SITE RETENTION OR REFORESTATION IS REQUIRED. ANY INVASIVE SPECIES (BAMBOO) WITHIN THE FOREST CONSERVATION EASEMENTS ARE TO BE REMOVED PRIOR TO ACCEPTANCE OF THE FOREST CONSERVATION EASEMENT.
- THE FOREST STAND DELINEATION AND WETLANDS STUDY WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JANUARY 2022 AND APPROVED OCTOBER 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 AND MICRO-BIORETENTION FACILITIES FOR THE DRIVEWAYS AND PROPOSED ROAD. 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.
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- A GEOTECHNICAL ANALYSIS PREPARED BY GEOTECHNICAL LABORATORIES, INC. DATED NOVEMBER 25, 2022 AND APPROVED UNDER THIS PLAN.
- AN ALTERNATIVE COMPLIANCE TO SECTION 16.1205(g) WAS APPROVED DATED OCTOBER 17, 2022 FOR THE REMOVAL OF SPECIMEN TREES ST1 THRU ST4, S16 AND S17. REFERENCE WP-22-093 TO 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 1.12.22.
- 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.
- PER SECTION 16.116 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AN ESSENTIAL DISTURBANCE REQUEST HAS BEEN APPROVED ON MARCH 17, 2023 FOR THE SWM OUTFALLS AND REMOVAL OF THE BAMBOO WITHIN THE DEVELOPMENT. P-23-003.
- THE INSTALLATION OF THE SWM OUTFALL AND INVASIVE BAMBOO CLEARING SHALL ONLY DISTURB THOSE ENVIRONMENTAL AREAS AS STATED IN THE REQUEST AND AS DELINEATED ON THE OLD MONTGOMERY MEADOWS DEVELOPMENT, P-23-003. ANY DISTURBANCES TO REGULATED ENVIRONMENTAL FEATURES BEYOND THIS REQUEST ARE NOT PERMITTED UNLESS THE APPLICANT SUBMITS A FORMAL REQUEST TO THE DEPARTMENT OF PLANNING & ZONING IN ACCORDANCE WITH SECTION 16.116(f)(1).
- THE DISTURBED AREAS SHALL BE STABILIZED AND SEEDED OR PLANTED WITH NATIVE VEGETATION IN ACCORDANCE WITH THE DESIGN PLANS.
- THE APPLICANT WILL BE REQUIRED TO OBTAIN ALL NECESSARY APPROVALS AND AUTHORIZATIONS BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) AND THE U.S. ARMY CORPS OF ENGINEERS (USACE) FOR ACTIVITIES IN REGULATED AREAS PRIOR TO BEGINNING CONSTRUCTION.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED JUNE 13, 2022 AND APPROVED OCTOBER 19, 2022.
- SUMMARY OF FINDINGS FOR AFDD TRAFFIC ANALYSIS:
  - DATE OF REPORT: JUNE 2022
  - DATE OF COUNTS: JUNE 2022
  - REPORT SUBMITTED AS PART OF PLAN NUMBER: S-22-006
  - COUNTS WERE TAKEN WHEN HOWARD COUNTY SCHOOLS WERE IN SESSION
  - LIST INTERSECTIONS STUDIED, IDENTIFY INTERSECTION AS STATE OR COUNTY JURISDICTION AND LABEL LOS FOR THE HORIZON YEAR OF EACH INTERSECTION: MD 175 @ TAMAR DRIVE (A/D 2025) AND TAMAR DRIVE @ OLD MONTGOMERY ROAD (A/A 2025)
  - PROVIDE STATEMENT AS TO WHETHER MITIGATION IS REQUIRED AND EXPLAIN THE METHOD OF MITIGATION/IN LIEU FEE: NO MITIGATION/IN LIEU FEE IS REQUIRED
- FLOODPLAIN STUDY WAS PREPARED FOR THE OFFSITE INTERMITTENT STREAM BY BENCHMARK ENGINEERING, INC. DATED DECEMBER 2022 AND APPROVED UNDER THIS PLAN.
- A SIGHT DISTANCE ANALYSIS FOR THIS DEVELOPMENT WAS PREPARED BY BENCHMARK ENGINEERING, INC. AND APPROVED UNDER S-22-006.
- TWO RANGE OF ADDRESS SIGNS SHALL BE FABRICATED BY HOWARD COUNTY HIGHWAYS FOR THIS PROJECT. THESE SIGNS SHALL BE PAID FOR BY THE DEVELOPER. PLEASE CONTACT HOWARD COUNTY TRAFFIC AT 410-313-5752 FOR DETAILS.
- THIS DEVELOPMENT IS MEETS SECTION 16.121 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS BY PROVIDING THE MINIMAL LOT SIZE OF 7,200SF AND A MINIMUM OF 40% OPEN SPACE.

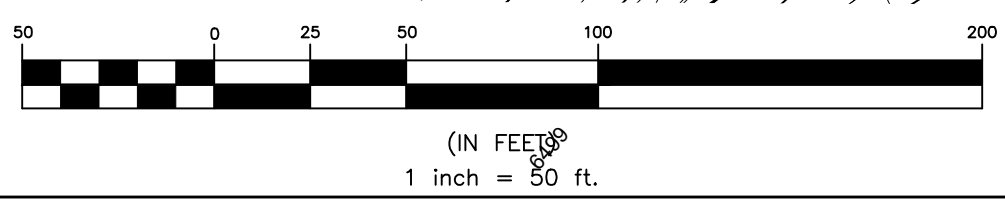
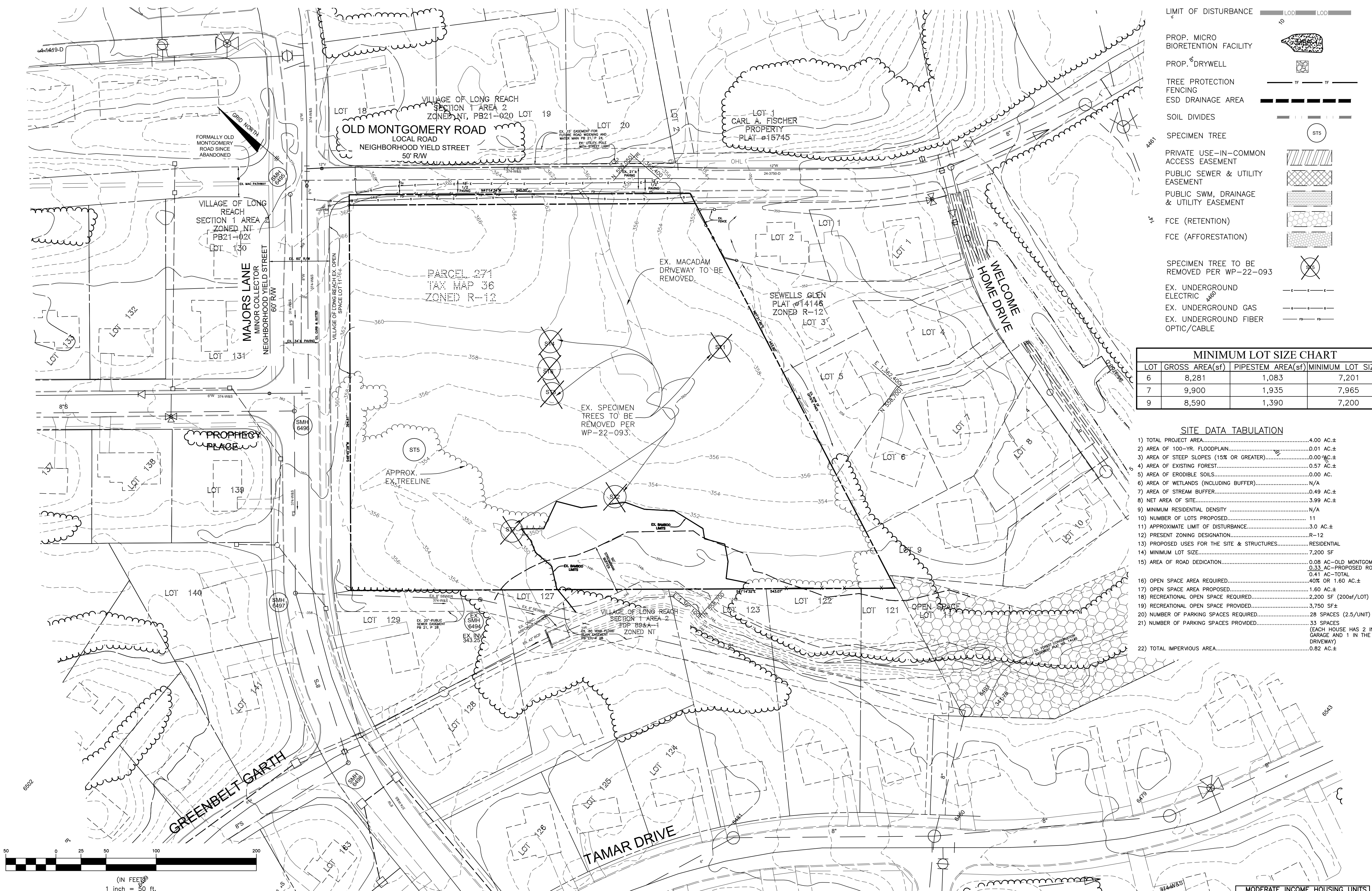
**MINIMUM LOT SIZE CHART**

LOT	GROSS AREA(sqft)	PIPESTEM AREA(sqft)	MINIMUM LOT SIZE(sqft)
6	8,281	1,083	7,201
7	9,900	1,935	7,965
9	8,590	1,390	7,200

### SITE DATA TABULATION

- TOTAL PROJECT AREA.....4.00 AC.±
- AREA OF 100-YR. FLOODPLAIN.....0.01 AC.±
- AREA OF STEEP SLOPES (15% OR GREATER).....0.00 AC.±
- AREA OF EXISTING FOREST.....0.57 AC.±
- AREA OF ERODIBLE SOILS.....0.00 AC.±
- AREA OF WETLANDS (INCLUDING BUFFER).....N/A
- AREA OF STREAM BUFFER.....0.49 AC.±
- NET AREA OF SITE.....3.99 AC.±
- MINIMUM RESIDENTIAL DENSITY.....N/A
- NUMBER OF LOTS PROPOSED.....11
- APPROXIMATE LIMIT OF DISTURBANCE.....3.0 AC.±
- PRESENT ZONING DESIGNATION.....R-12
- PROPOSED USES FOR THE SITE & STRUCTURES.....RESIDENTIAL
- MINIMUM LOT SIZE.....7,200 SF
- AREA OF ROAD DEDICATION.....0.08 AC-OLD MONTGOMERY ROAD  
0.33 AC-PROPOSED ROAD R/W
- OPEN SPACE AREA REQUIRED.....40% OR 1.60 AC.±
- OPEN SPACE AREA PROPOSED.....1.60 AC.±
- RECREATIONAL OPEN SPACE REQUIRED.....2,200 SF (200sf/LOT)
- RECREATIONAL OPEN SPACE PROVIDED.....3,750 SF±
- NUMBER OF PARKING SPACES REQUIRED.....28 SPACES (2.5/UNIT)
- NUMBER OF PARKING SPACES PROVIDED.....33 SPACES  
(EACH HOUSE HAS 2 IN GARAGE AND 1 IN THE DRIVEWAY)
- TOTAL IMPERVIOUS AREA.....0.82 AC.±

- CONDITIONS OF APPROVAL DATED OCTOBER 17, 2022 TO WP-22-093 PER THE DIRECTOR OF PLANNING AND ZONING, THE DIRECTOR OF THE DEPARTMENT OF RECREATION AND PARKS AND THE ADMINISTRATOR OF THE OFFICE OF COMMUNITY SUSTAINABILITY:
- REMOVAL OF THE SIX SPECIMEN TREES IS TO BE MITIGATED AT 2:1 BY THE PLANTING OF 12 NATIVE TREES WITH A DBH OF 3". THE LOCATION OF THE MITIGATION TREES SHALL BE CLEARLY SHOWN AND LABELED ON SUBSEQUENT SUBDIVISION AND SITE PLANS.
  - APPROVAL IS FOR REMOVAL OF SPECIMEN TREES 1-4 AND 6 AND 7 AS SHOWN ON THE EXHIBIT PROVIDED WITH THE ALTERNATIVE COMPLIANCE APPLICATION.
  - INCLUDE A GENERAL NOTE WITH THE ALTERNATIVE PLAN FILE NUMBER, SUMMARY OF REQUEST, DECISION, DATE OF DECISION AND CONDITIONS OF APPROVAL ON ALL PLANS SUBMITTED TO THE COUNTY FOR REVIEW
  - S-22-006 AND SUBSEQUENT PLAN SUBMITTALS SHALL MINIMIZE LOT ENCRUSHMENT INTO THE CRZ OF SPECIMEN TREE 5 TO LESS THAN 30% AND ST-9 SHALL BE PROTECTED WITHIN THE FOREST CONSERVATION EASEMENT AS SHOWN ON THE REVISED ALTERNATIVE COMPLIANCE APPLICATION EXHIBIT DATED SEPTEMBER 2022.
  - APPROVAL OF WP-22-093 IS FOR REMOVAL OF CITED SPECIMEN TREES ONLY. THE APPLICANT MUST COMPLY WITH COMMENTS AT PLAN REVIEW THAT MAY REQUIRE LAYOUT CHANGES IN ORDER TO MEET THE REGULATIONS.
  - SUBSEQUENT PLAN SUBMISSIONS SHOULD EXPLORE METHODS OF REMOVING THE BAMBOO THAT MAY PRESERVE ST-2. HOWEVER, COMPLETE REMOVAL OF THE BAMBOO IS THE PRIORITY IN ORDER TO PROTECT THE PROPOSED FOREST CONSERVATION AREAS FROM ENCRUSHMENT.



TENTATIVELY APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

**STORMWATER MANAGEMENT PRACTICES**

FACILITY NUMBER	TYPE	OWNERSHIP	MAINTENANCE RESPONSIBILITY
DW-1 THRU DW-20	DRYWELL	LOT OWNER	LOT OWNER
BR-1	BIORETENTION	HOA	HOA & HOWARD COUNTY
MBR-2	MICRO-BIORETENTION	HOA	HOA
MBR-3	MICRO-BIORETENTION	LOT OWNER	LOT OWNER
RG-4	RAIN GARDEN	LOT OWNER	LOT OWNER

- TRAFFIC CONTROL DEVICES:**
- THE R1-1 (STOP) SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE.
  - THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
  - ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  - ALL TRAFFIC CONTROL DEVICE SIGN POSTS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE)-3" LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO HOLES ABOVE THE GROUND LEVEL. GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
  - NO TREE SHALL BE INSTALLED WITHIN 20 FEET OF A PROPOSED STREET LIGHT LOCATION, AND NO TREE SHALL BE INSTALLED WITHIN 30' OF A STOP SIGN APPROACH SIDE. PLEASE CONTACT HOWARD COUNTY TRAFFIC TO MARK STREET LIGHT LOCATIONS BEFORE INSTALLING ANY NEW TREES.

**PROJECT BACKGROUND INFORMATION**  
 PRESENT ZONING: R-12  
 LOCATION: TAX MAP 36 - GRID 17 - PARCEL 271  
 APPLICABLE DPZ FILE REFERENCES: ECP-22-052, WP-22-093, S-22-006  
 DEED REFERENCES: L 21110 / F. 102  
 PROPOSED USE OF SITE: RESIDENTIAL  
 PROPOSED WATER AND SEWER SYSTEMS: PUBLIC WATER & SEWER

**MODERATE INCOME HOUSING UNITS (MIHU) ALLOCATION EXEMPTION TRACKING**

TOTAL NUMBER OF LOTS PROPOSED	NUMBER OF MIHU REQUIRED	NUMBER OF MIHU PROVIDED ON-SITE (EXEMPT FROM AFDD ALLOCATION)	NUMBER OF AFDD ALLOCATIONS REQUIRED (REMARKING UNITS)	MIHU FEE--IN-LIEU
11	2	0	11	TBD

**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-CVLENGINEERING.COM

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

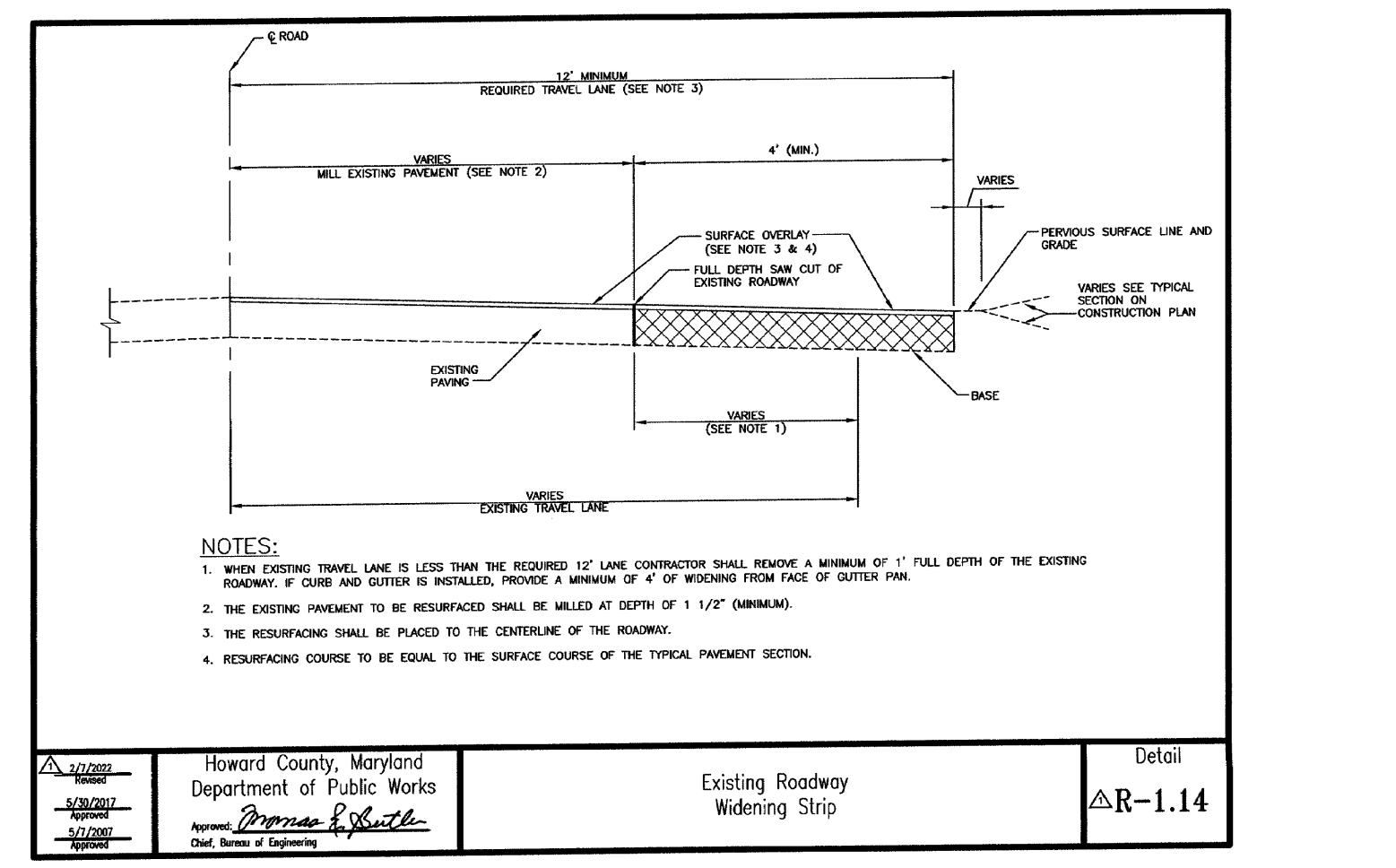
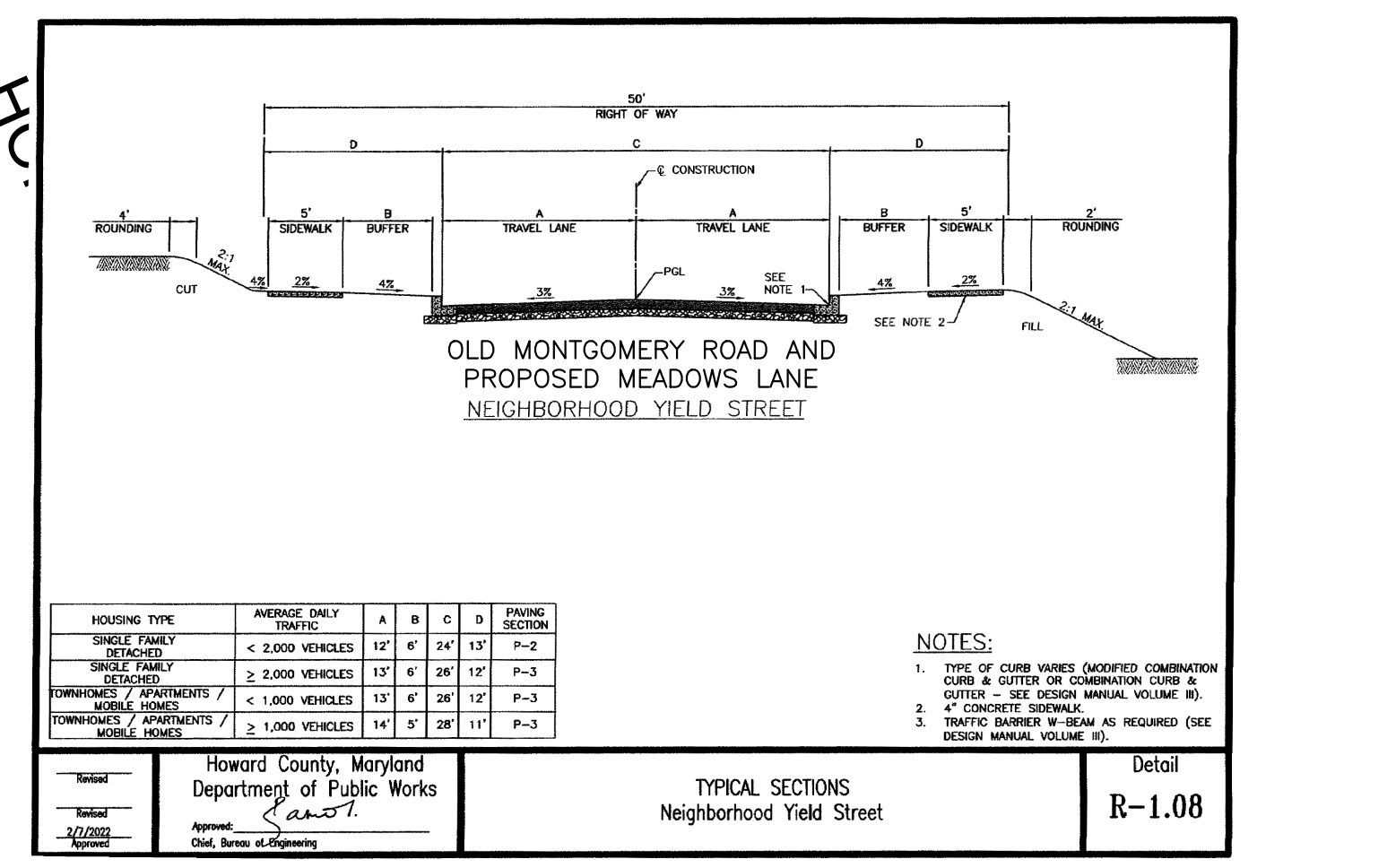
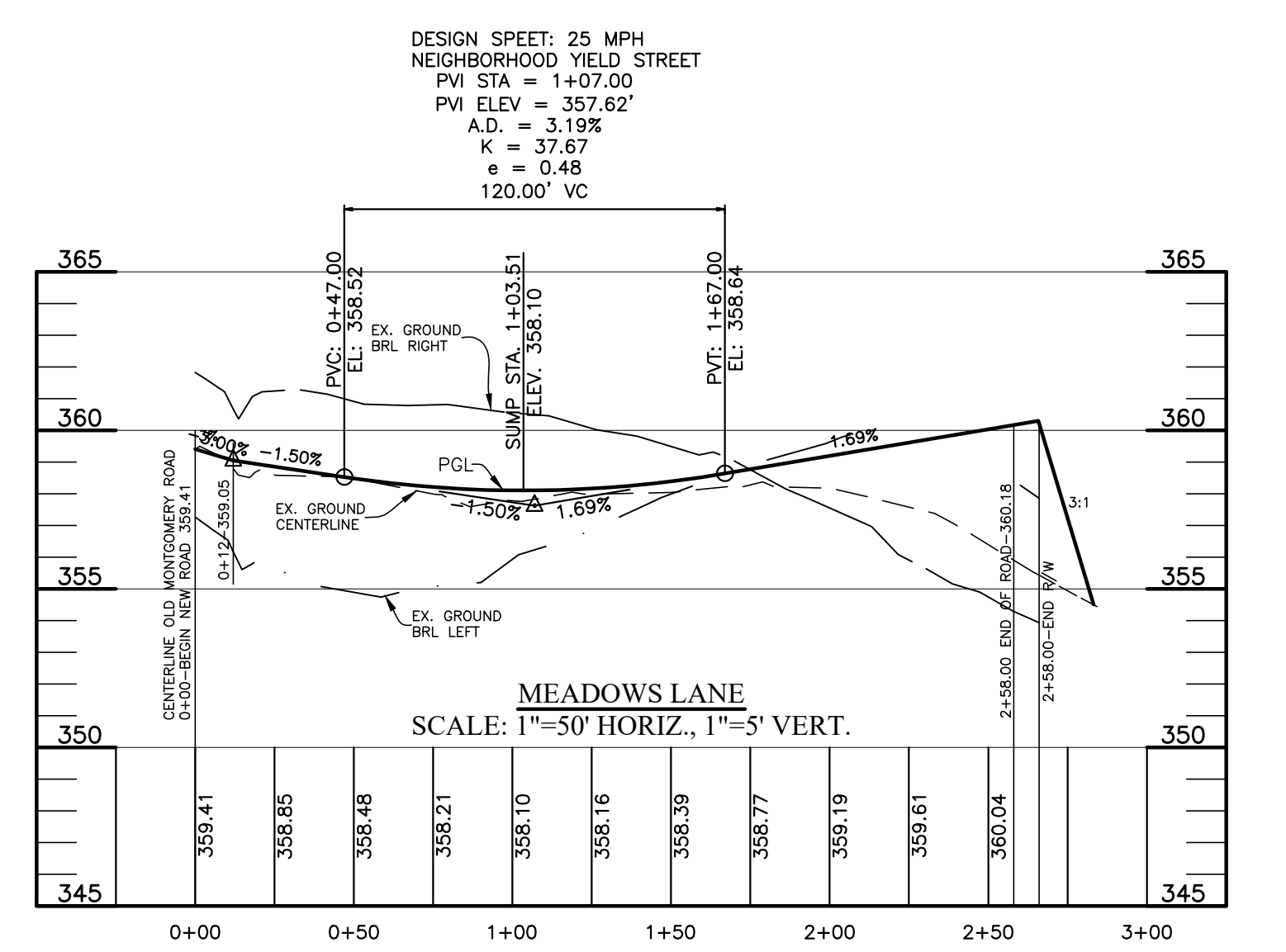
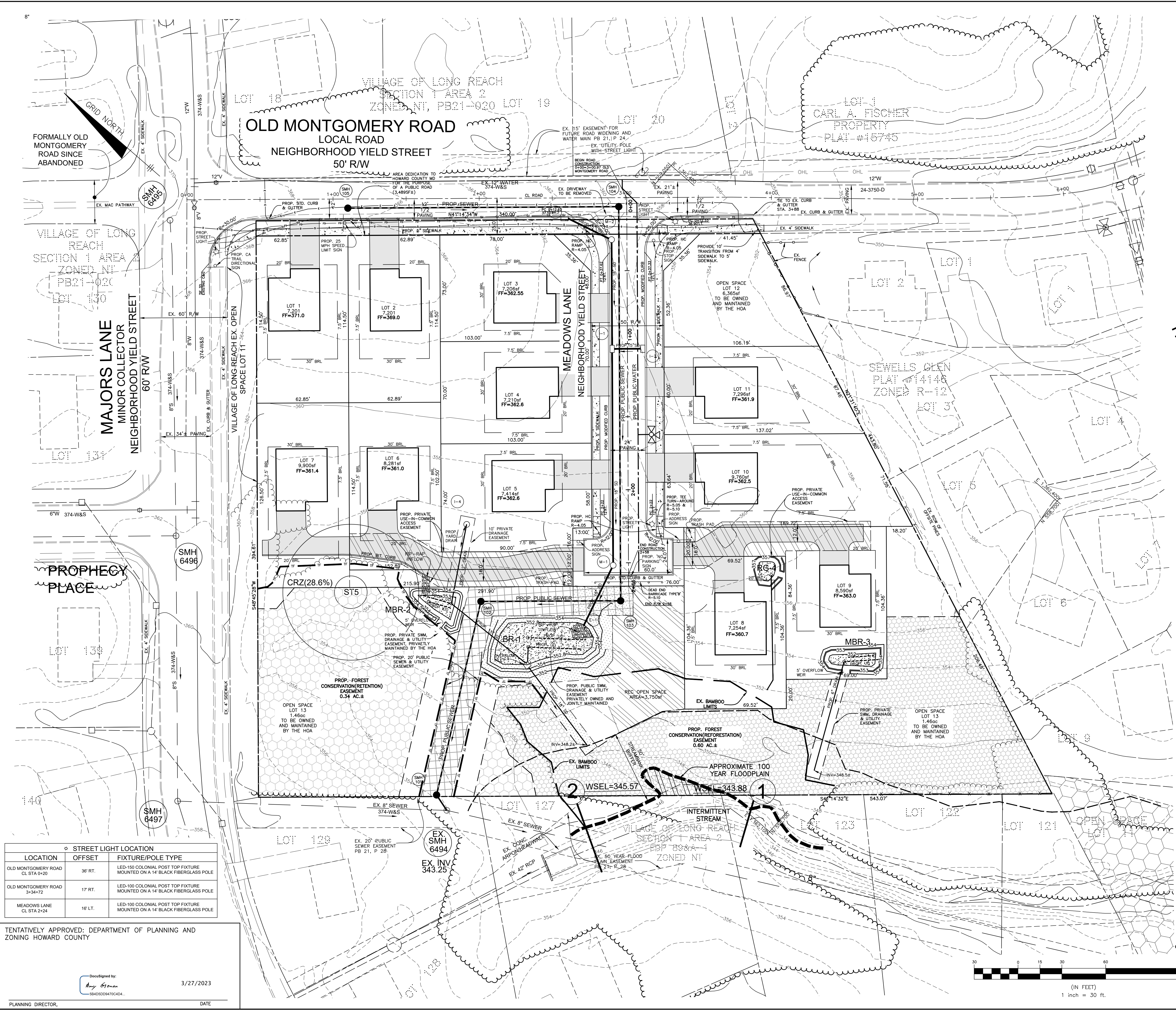
**DEVELOPER:**  
 DEVELOPMENT PARTNERS, LLC  
 9693 GERWIG LANE, SUITE L  
 COLUMBIA, MD 21046  
 443-676-2417

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

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

**RESIDENTIAL PRELIMINARY PLAN EXISTING CONDITIONS**

DATE: FEBRUARY 2023 BEI PROJECT NO. 3080  
 SCALE: AS SHOWN SHEET 1 OF 7



LOCATION	OFFSET	FIXTURE/POLE TYPE
OLD MONTGOMERY ROAD CL STA 0+00	36' RT.	LED-150 COLONIAL POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
OLD MONTGOMERY ROAD 3+34+72	17' RT.	LED-100 COLONIAL POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
MEADOWS LANE CL STA 2+24	16' LT.	LED-100 COLONIAL POST TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE

TENTATIVELY APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

DocuSigned by:  
 Amy Groman  
 58455009470C4D4

3/27/2023

PLANNING DIRECTOR, DATE

**BENCHMARK**  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
**ENGINEERING, INC.**  
 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 (or the holder of the license of the State of Maryland, License No. 22390, dated 06-30-2023).

02.22.2023

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

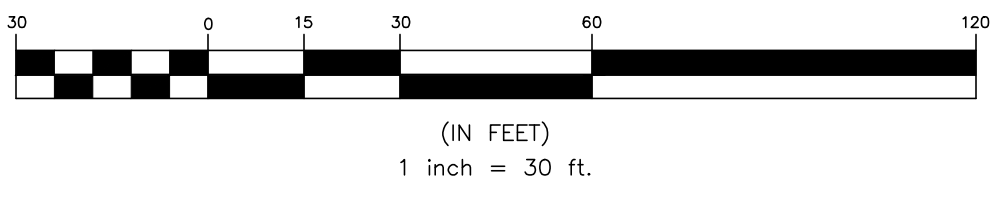
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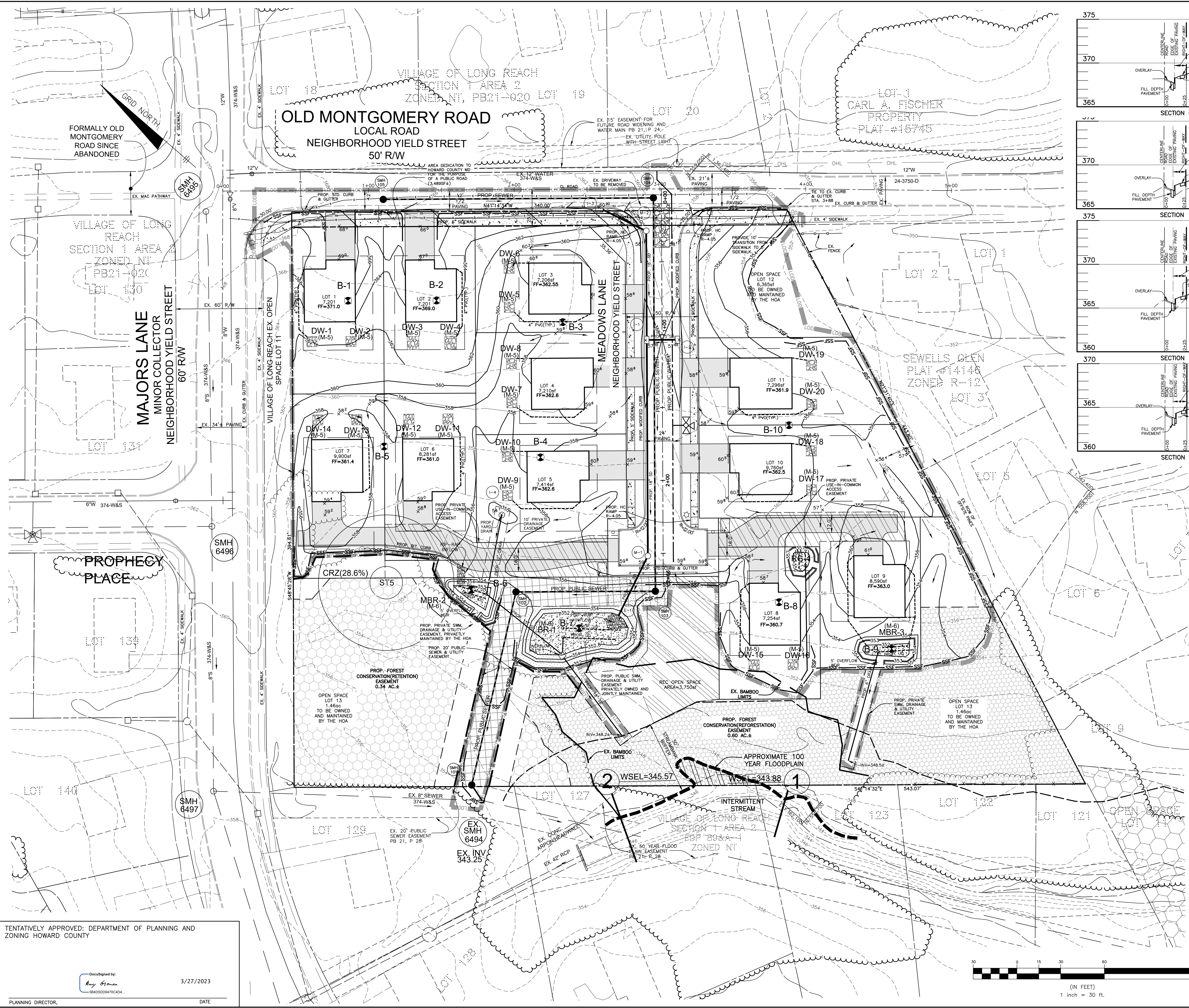
**OLD MONTGOMERY MEADOWS**  
 LOTS 1-11 AND OPEN SPACE LOTS 12 & 13  
 9005 OLD MONTGOMERY ROAD

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

**RESIDENTIAL PRELIMINARY PLAN ROAD CONSTRUCTION AND PROFILE**

DATE: FEBRUARY 2023 BEI PROJECT NO. 3080  
 SCALE: AS SHOWN SHEET 2 OF 7





SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
GhB		B	D	GLENELG URBAN LAND COMPLEX 0 TO 8 PERCENT SLOPES	0.43
GhB*	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

SEE SHEET 5 OF 7 FOR FCA PLANTING SPECIFICATIONS, NOTES AND DETAILS

SPECIMEN TREE IMPACT CALCULATION CHART

Key (X#)	Species	Size (in dbh)	CRZ (feet radius)	Comments	CRZ Area (SF)	CRZ Impact (SF)	Percent CRZ Impact	To Be Retained (Y/N)	Mitigation Requirement (# replacement 3" trees)
1	Norway maple	35.5	53.25	poor condition, hollow trunk deback NON-NATIVE	8904	8904	100	N	2
2	Silver maple	33.5	50.25	Some tip deback noted	7929	2190	28	N	2
3	White pine	32	48	Major scaffold branches 15" dia. damaged from storm removing 20% of canopy. Remaining canopy vigorous.	7235	7235	100	N	2
4	White pine	32	48	Two scaffold branches storm damaged removing 20% of the canopy. Remaining canopy vigorous.	7235	7235	100	N	2
5	Pin oak	31	46.5		6789	1906	28	Y	0
6	White pine	33	49.5	Good, some included bark	7694	7694	100	N	2
7	Black cherry	34	51	Very poor, only one small branch surviving, major storm damage	8167	8167	100	N	2
									Mitigation Requirement 12

FOREST CONSERVATION WORKSHEET FOR 9005 OLD MONTGOMERY ROAD

Net Tract Area	Total (Gross) Tract Area	A =
A.	Area within 100-year Floodplain	B = 0.1
B.	Other Deductions (Identify: )	C =
C.	Net Tract Area	D = 3.9

Land Use Category	Insert the number "1" under the appropriate land use (limit to only one entry)
Rural LD	Rural Mid Suburban Linear Retail/Office Mixed Use/ PUD
0	0 1 0 0 0 0

E.	Afforestation Threshold (Net Tract Area x 15%)	E =
F. <td>Reforestation Threshold (Net Tract Area x 20%)</td> <td>F = 0.8</td>	Reforestation Threshold (Net Tract Area x 20%)	F = 0.8

Existing Forest Cover	G =	
G.	Existing Forest Cover within the Net Tract Area	G = 0.6
H.	Area of Forest above Afforestation Threshold	H = 0.0
I.	Area of Forest above Reforestation Threshold	I = 0.0

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

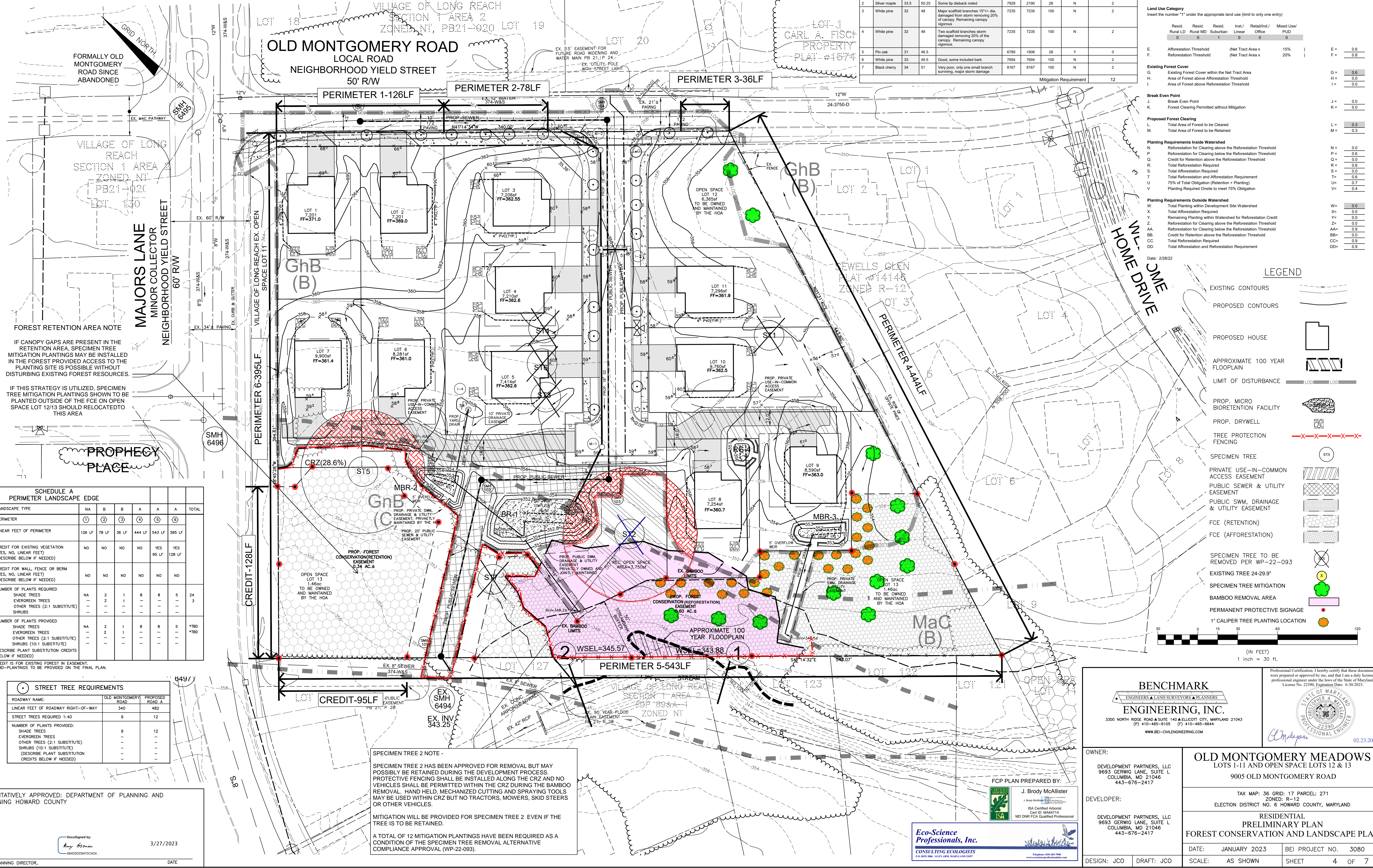
Proposed Forest Clearing	L =	
L.	Total Area of Forest to be Cleared	L = 0.3
M.	Total Area of Forest to be Retained	M = 0.3

Planting Requirements Inside Watershed	N =	
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 = 0.6
S.	Total Afforestation Required	S = 0.0
T.	Total Reforestation and Afforestation Requirement	T = 0.6
U.	75% of Total Obligation (Retention + Planting)	U = 0.7
V.	Planting Required Onsite to meet 75% Obligation	V = 0.4

Planting Requirements Outside Watershed	W =	
W.	Total Planting within Development Site Watershed	W = 0.0
X.	Total Afforestation Required	X = 0.0
Y.	Remaining Planting within Watershed for Reforestation 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.	Total Afforestation and Reforestation Requirement	DD = 0.0



**FOREST RETENTION AREA NOTE**

IF CANOPY GAPS ARE PRESENT IN THE RETENTION AREA, SPECIMEN TREE MITIGATION PLANTINGS MAY BE INSTALLED IN THE FOREST PROVIDED ACCESS TO THE PLANTING SITE IS POSSIBLE WITHOUT DISTURBING EXISTING FOREST RESOURCES.

IF THIS STRATEGY IS UTILIZED, SPECIMEN TREE MITIGATION PLANTINGS SHOWN TO BE PLANTED OUTSIDE OF THE FCE ON OPEN SPACE LOT 12/13 SHOULD BE RELOCATED TO THIS AREA

**PROPHECY PLACE**

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

LANDSCAPE TYPE	NA	B	B	A	A	A	TOTAL
PERIMETER	①	②	③	④	⑤	⑥	
LINEAR FEET OF PERIMETER	126 LF	78 LF	36 LF	444 LF	543 LF	395 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	YES 95 LF	YES 128 LF	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED							
SHADE TREES	NA	2	1	8	8	5	24
EVERGREEN TREES	-	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	3
SHRUBS	-	-	-	-	-	-	-
NUMBER OF PLANTS PROVIDED							
SHADE TREES	NA	2	1	8	8	5	**TBO
EVERGREEN TREES	-	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTE)	-	-	-	-	-	-	-

(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)

CREDIT IS FOR EXISTING FOREST IN EASEMENT. \*\*TBO-PLANTINGS TO BE PROVIDED ON THE FINAL PLAN.

**STREET TREE REQUIREMENTS**

ROADWAY NAME:	OLD MONTGOMERY ROAD	PROPOSED ROAD A
LINEAR FEET OF ROADWAY RIGHT-OF-WAY	340	482
STREET TREES REQUIRED 1:40	9	12
NUMBER OF PLANTS PROVIDED:		
SHADE TREES	9	12
EVERGREEN TREES	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-
SHRUBS (10:1 SUBSTITUTE)	-	-

(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)

TENTATIVELY APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

DocuSigned by: Amy Goman 3/27/2023

PLANNING DIRECTOR, DATE

**SPECIMEN TREE 2 NOTE**

SPECIMEN TREE 2 HAS BEEN APPROVED FOR REMOVAL BUT MAY POSSIBLY BE RETAINED DURING THE DEVELOPMENT PROCESS. PROTECTIVE FENCING SHALL BE INSTALLED ALONG THE CRZ AND NO VEHICLES SHALL BE PERMITTED WITHIN THE CRZ DURING THE BAMBOO REMOVAL. HAND HELD, MECHANIZED CUTTING AND SPRAYING TOOLS MAY BE USED WITHIN CRZ BUT NO TRACTORS, MOWERS, SKID STEERS OR OTHER VEHICLES.

MITIGATION WILL BE PROVIDED FOR SPECIMEN TREE 2 EVEN IF THE TREE IS TO BE RETAINED.

A TOTAL OF 12 MITIGATION PLANTINGS HAVE BEEN REQUIRED AS A CONDITION OF THE SPECIMEN TREE REMOVAL ALTERNATIVE COMPLIANCE APPROVAL (WP-22-093).

**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED HOUSE
- APPROXIMATE 100 YEAR FLOODPLAIN
- LIMIT OF DISTURBANCE
- PROP. MICRO BIOTRENTION FACILITY
- PROP. DRYWELL
- TREE PROTECTION FENCING
- SPECIMEN TREE
- PRIVATE USE-IN-COMMON ACCESS EASEMENT
- PUBLIC SEWER & UTILITY EASEMENT
- PUBLIC SWM, DRAINAGE & UTILITY EASEMENT
- FCE (RETENTION)
- FCE (AFFORESTATION)
- SPECIMEN TREE TO BE REMOVED PER WP-22-093
- EXISTING TREE 24-29.9'
- SPECIMEN TREE MITIGATION
- BAMBOO REMOVAL AREA
- PERMANENT PROTECTIVE SIGNAGE
- 1" CALIPER TREE PLANTING LOCATION

**BENCHMARK ENGINEERING, INC.**  
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 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. 22390, Expiration Date: 6-30-2023.

DATE: 02.23.2023

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

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

RESIDENTIAL PRELIMINARY PLAN FOREST CONSERVATION AND LANDSCAPE PLAN

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

DATE: JANUARY 2023 BEI PROJECT NO. 3080  
 SCALE: AS SHOWN SHEET 4 OF 7

FCP PLAN PREPARED BY: J. Brody McAllister  
 ISA Certified Arborist  
 GM 10, M&B&F&A  
 MD DNR FCA Qualified Professional

**Eco-Science Professionals, Inc.**  
 CONSULTING ECOLOGISTS  
 140 BIRCH HILL, CLEONAH, MARYLAND 21028  
 Telephone: 410-683-7568  
 www.ecosciencetree.com

**REFORESTATION 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.

Reforestation 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 used shall be made specifically to address woody plant material and shall be applied as per manufacturers 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 reforestation plantings, see Post Construction Management Plans.

**D. Guarantee Requirements**

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 third 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 Reforestation**

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 trees 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 LOD 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 well and septic systems, and construct houses. Stabilize all disturbed areas accordingly.
4. Begin multiflora rose removal. 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 3 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 plantings have been installed.

**POST-CONSTRUCTION MANAGEMENT PLAN**

Howard County requires a 3-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/reforestation 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 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 inspections, 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 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.

TENTATIVELY APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

DocuSigned by:  
Amy Simon  
5B4C9D2D470C4D4...  
3/27/2023  
PLANNING DIRECTOR, DATE

**PLANTING SCHEDULE**

**FCE Reforestation Area – 0.5 acres**

Planting Units Required: 350


Planting Units Provided: 350

Qty	Species	Canopy/Understory	Size	Spacing	Total FCA Units
8	Acer rubrum - Red maple	C	1" caliper	**	
8	Liriodendron tulipifera - Tulip poplar	C	1" caliper	**	
10	Pinus strobus - White pine	C	1" caliper	**	
26	Total 1" caliper plantings x 3.5 units/tree = FCA unit credit				91
5	Acer negundo - Box elder	U	1" caliper	15' oc.	
5	Acer rubrum - Red maple	C	1" caliper	15' oc.	
5	Cercis canadensis - Red bud	U	1" caliper	15' oc.	
10	Cornus florida - Flowering dogwood	U	1" caliper	15' oc.	
20	Liriodendron tulipifera - Tulip poplar	C	1" caliper	15' oc.	
5	Liquidambar styraciflua - Sweet gum	C	1" caliper	15' oc.	
10	Nyssa sylvatica - Black gum	C	1" caliper	15' oc.	
7	Pinus strobus - White pine	C	1" caliper	15' oc.	
7	Quercus palustris - Pin oak	C	1" caliper	15' oc.	
74	Total 1" caliper plantings x 3.5 units/tree = FCA unit credit				259
	Total Unit Credit				350

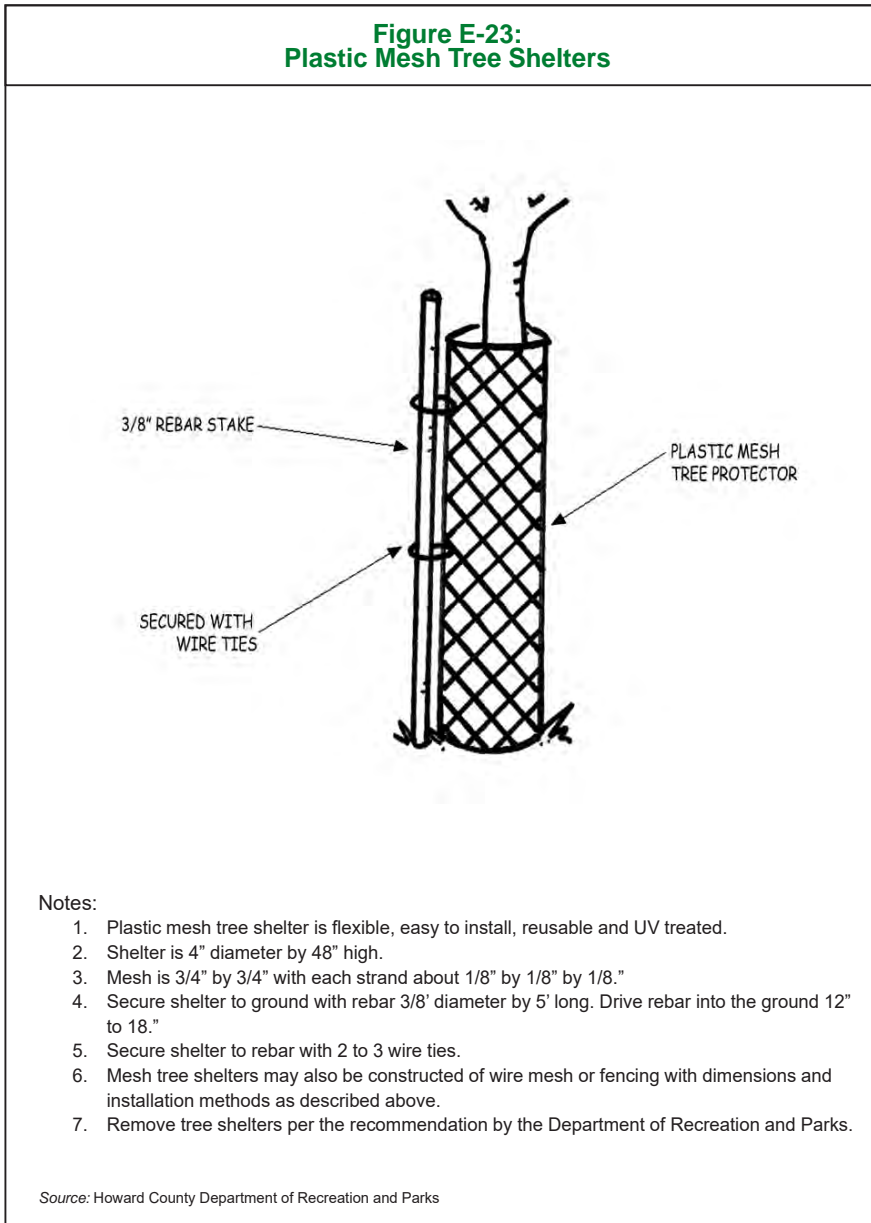
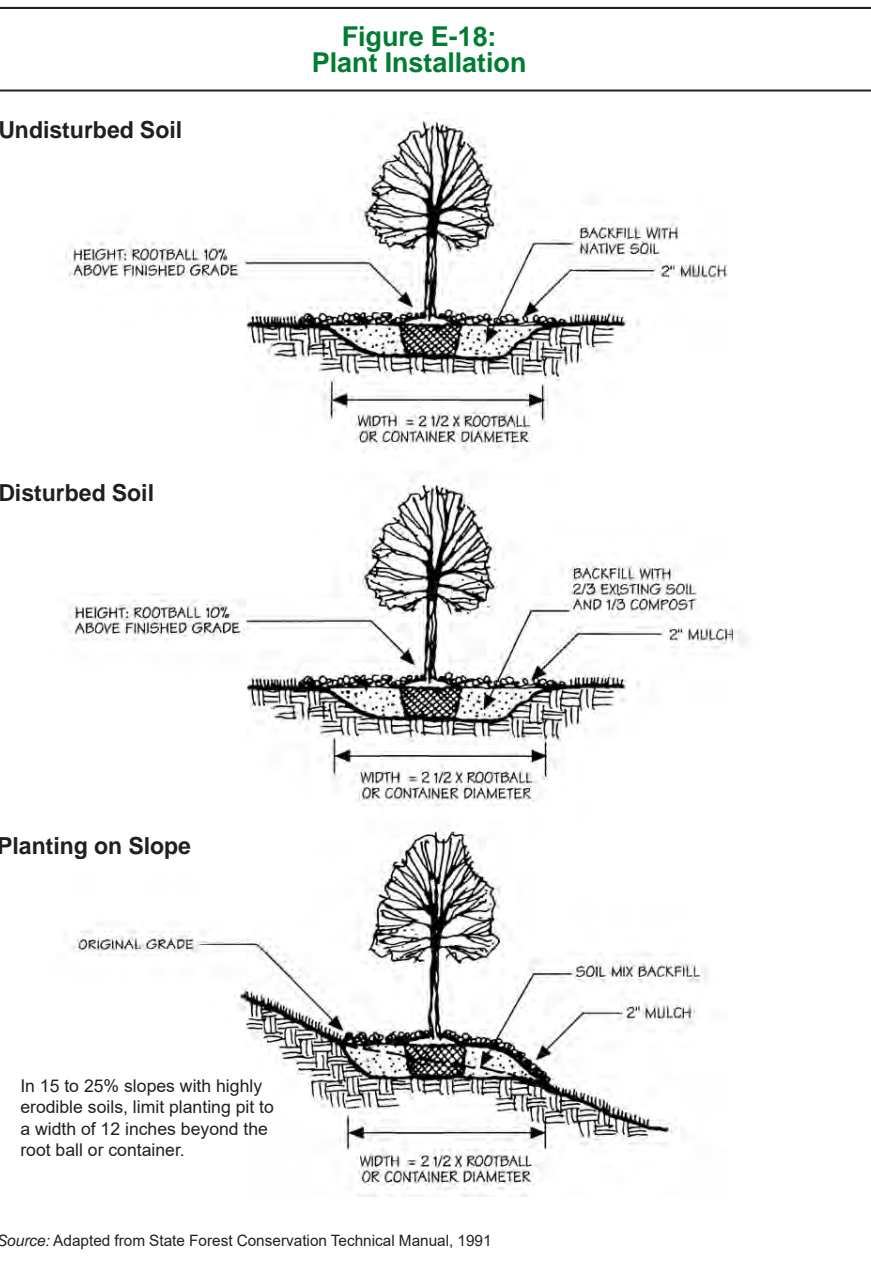
\*\* Trees shall be randomly planting in two rows along the lot lines in locations indicated by  
\*\*\* Tree shall be randomly intersperse

NOTE: Planting schedule to specify a minimum of 5 species is required per section 3.9.2 of the Forest Conservation Manual.

**Specimen Tree Mitigation Plantings**

Qty	Species	Size	Spacing as shown
12	Acer rubrum - Red maple	3" caliper	
	Liriodendron tulipifera - Tulip poplar		
	Liquidambar styraciflua - Sweet gum		
	Quercus palustris - Pin oak		
	Quercus phellos - Willow oak		

A MINIMUM OF THREE SPECIES SHOULD BE USED FOR SPECIMEN TREE MITIGATION PLANTINGS



- Notes:
1. Plastic mesh tree shelter is flexible, easy to install, reusable and UV treated.
  2. Shelter is 4" diameter by 48" high.
  3. Mesh is 3/4" by 3/4" with each strand about 1/8" by 1/8" by 1/8".
  4. Secure shelter to ground with rebar 3/8" diameter by 5' long. Drive rebar into the ground 12" to 18".
  5. Secure shelter to rebar with 2 to 3 wire ties.
  6. Mesh tree shelters may also be constructed of wire mesh or fencing with dimensions and installation methods as described above.
  7. Remove tree shelters per the recommendation by the Department of Recreation and Parks.

Source: Howard County Department of Recreation and Parks

**FCP NOTES**

1. THE FOREST CONSERVATION OBLIGATIONS FOR THIS SITE WILL BE ADDRESSED THROUGH THE CREATION OF CONSERVATION EASEMENTS FOR 0.3 ACRES OF ONSITE FOREST TO BE RETAINED AND 0.6 ACRES OF PLANTING.

2. BAMBOO REMOVAL SHALL OCCUR AS PART OF THE INITIAL SITE DEVELOPMENT OF THE SITE. THIS SHALL INCLUDE THE REMOVAL OF ALL ABOVE GROUND CANES. THE CANES SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN APPROPRIATE FACILITY. DETAILED BAMBOO REMOVAL SPECIFICATIONS ARE PROVIDED BUT MAY BE AMENDED BY THE LANDSCAPE CONTRACTOR BASED ON ACTUAL FIELD CONDITIONS AND BAMBOO RESPONSE TO TREATMENT.

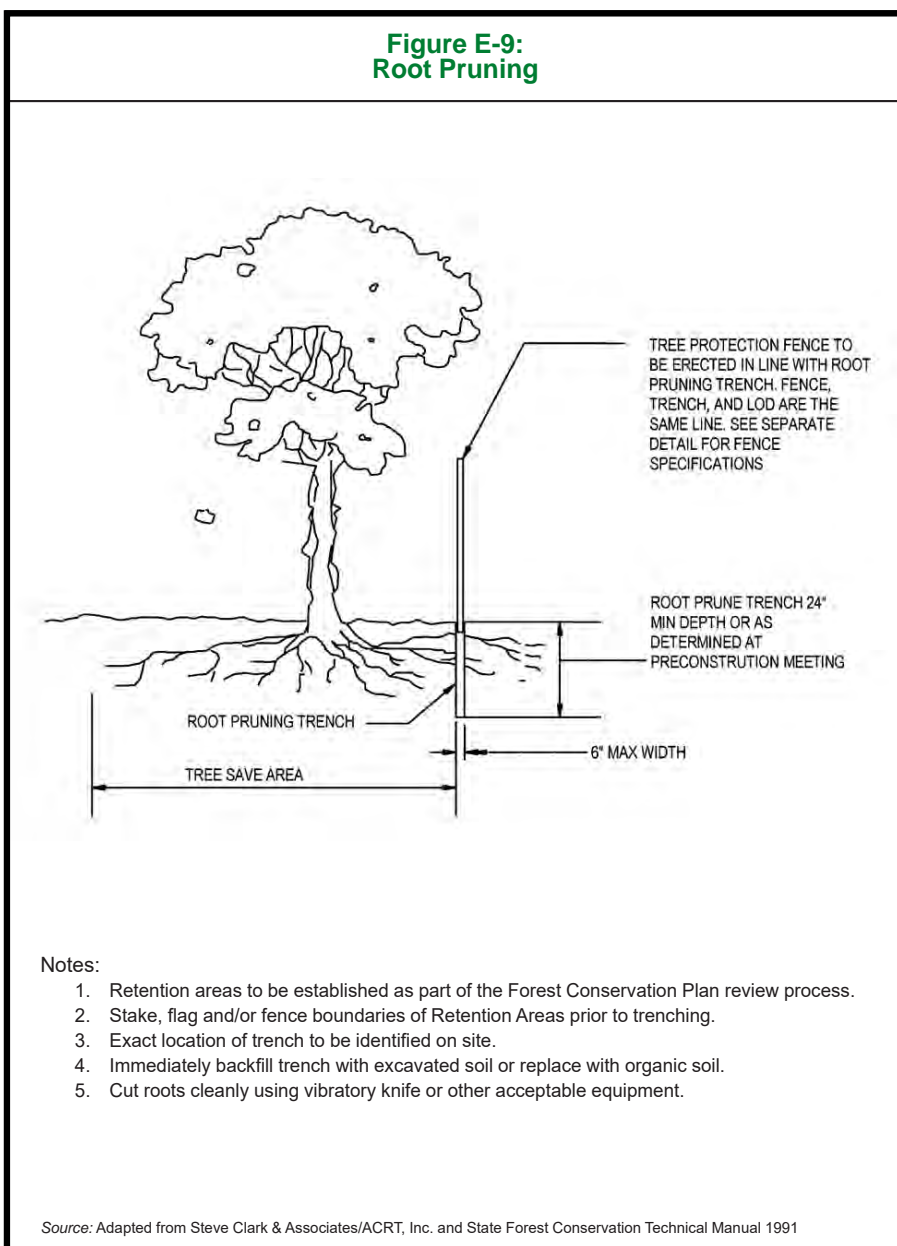
3. AN ALTERNATIVE COMPLIANCE REQUEST FOR REMOVAL OF SPECIMEN TREES HAS BEEN APPROVED (WP-22-093). CONDITIONS OF THIS APPROVAL ARE INDICATED BELOW:

**Directors Action:** Approval of alternative compliance of Section 16.1205(a) is subject to the following conditions:

1. Removal of the six specimen trees is to be mitigated at 2:1 by the planting of 12 native trees with a DBH of 3". The location of the mitigation trees shall be clearly shown and labeled on subsequent subdivision and site plans.
2. Approval is for removal of specimen trees 1-4 and 6 and 7 as shown on the exhibit provided with the alternative compliance application.
3. Include a general note with the alternative plan file number, summary of request, decision, date of decision and conditions of approval on all plans submitted to the County for review
4. S-22-006 and subsequent plan submittals shall minimize LOD encroachment into the CRZ of Specimen tree 5 to less than 30% and ST-5 shall be protected within the forest conservation easement as shown on the revised alternative compliance application exhibit dated September 2022.
5. Approval of WP-22-093 is for removal of cited specimen trees only. The applicant must comply with comments at plan review that may require layout changes in order to meet the regulations.
6. Subsequent plan submissions should explore methods of removing the bamboo that may preserve ST-2. However, complete removal of the bamboo is the priority in order to protect the proposed forest conservation areas from encroachment.

**Specimen/Significant Tree Chart**

Key (X#)	Species	Size (in dbh)	CRZ 1:1.5 (feet radius)	Condition (good unless otherwise noted)	Diameter of State Champion for Species (inches)
1	Norway maple	35.5	53.25	poor condition, hollow trunk dieback	66.5
2	Silver maple	33.5	50.25	Some tip dieback noted	94
3	White pine	32	48	Major scaffold branches 15"+ dia. damaged from storm removing 20% of canopy. Remaining canopy vigorous.	53
4	White pine	32	48	Two scaffold branches storm damaged removing 20% of the canopy. Remaining canopy vigorous.	53
5	Pin oak	31	46.5		63.4
6	White pine	33	49.5	Good, some included bark	53
7	Black cherry	34	51	Very poor, only one small branch surviving, major storm damage	64
8	White pine	29.5	44.25	Poor condition, notable included bark, needle loss	53
9	Silver maple	24.5	36.75		94
10	London plane tree	27	40.5		46
11	Tulip poplar	26	39		101
12	White pine	29.5	44.25		53
13	Pin oak	25	37.5		63.4
14	Norway maple	25	37.5	Fair, root damage and included bark	66.5



- Notes:
1. Retention areas to be established as part of the Forest Conservation Plan review process.
  2. Stake, flag and/or fence boundaries of Retention Areas prior to trenching.
  3. Exact location of trench to be identified on site.
  4. Immediately backfill trench with excavated soil or replace with organic soil.
  5. Cut roots cleanly using vibratory knife or other acceptable equipment.

Source: Adapted from Steve Clark & Associates/ACRT, Inc. and State Forest Conservation Technical Manual 1991

**UNIVERSITY OF MD EXTENSION SERVICE GUIDANCE FOR BAMBOO REMOVAL**

<https://extension.umd.edu/resource/containing-and-removing-bamboo>

**OVERVIEW**

Non-chemical control involves physically removing as much growth as possible. The easiest are the culms (canes, stems) that sprout above-ground. The most difficult are the underground rhizomes, which allow the plant to spread for a hundred or more feet in any unobstructed direction. Rhizome removal is the fastest and most effective approach, but the trade-off is that it will be more disruptive to your landscape and cost significantly more.

Flocks of some bird species will roost in bamboo. For respiratory safety, wear a mask and gloves when cutting and removing culms where large numbers of birds are roosting, due to health hazards from accumulated bird droppings.

**CUTTING CULMS**

The method of removal with minimal environmental impact is cutting culms. This may also be your only option if the colony is growing among desirable trees or other valuable landscape plants. As with any plant, continual removal of foliage deprives the plant of its way of feeding itself, thus eventually starving it to death. Energy stores are used in re-sprouting, and when they are not allowed to photosynthesize, the plant eventually runs out of energy. With bamboo, this process may take a long time, as much energy is stored in underground tissues. In addition, sprouts that appear outside of your yard, unnoticed or untreated, will continue to feed the root system and circumvent efforts to starve the plant. Therefore, for this method to work well, you must be thorough.

Tender new culms appearing in spring can simply be kicked- or knocked-over. Check for new shoots weekly as they grow rapidly. Culms that re-appear in summer will need to be cut down with loppers or a small folding saw with small razor-sharp teeth.

**REMOVING RHIZOMES**

Removing the rhizomes is another way to eradicate bamboo without resorting to herbicides. Hand removal is extremely difficult and requires sturdy tools and lots of effort. Some landscaping companies use power equipment, like mini-excavators, to lift rhizomes out of the soil after the culms are cut and removed. Such equipment will need room to maneuver in an established landscape or else plantings may be damaged. There will also be soil compaction during its use and possible regrading needed after removal. Any missed fragments of rhizome can re-sprout, so be prepared to cut new shoots at the soil level as soon as they appear.

For large bamboo patches, check with your local government to see if a permit is needed before excavating. Use erosion control measures to protect nearby surface water.

**CHEMICAL CONTROL**

Herbicides should be the method of last resort and require non-selective, systemic products that are absorbed by plant tissues and transported down into the roots. (Glyphosate is one example of a systemic active ingredient.) Be careful with applications, as non-selective herbicides will damage desirable plants if spray drifts or drips onto them. Due to the waxy nature of bamboo leaves, herbicides may benefit from the addition of a spreader sticker, which helps the spray adhere to the leaf. If you are in a wetland habitat or near open water, utilize herbicides manufactured for this environment only, with no surfactants.

**HERBICIDE APPLICATION**

1. Don't attempt to spray a mature stand of running bamboo without first cutting-down as much growth as you can. This greatly reduces the amount of herbicide needed and avoids you having to spray over your head.
2. Small, leafy shoots (under 5 ft. tall) can be sprayed anytime during the growing season. Systemic herbicides are most effective when applied from mid-September to mid-October and repeated in 14 days.
3. Cut culms and spray or paint a non-selective herbicide on the pruning cut within 5 minutes of cutting.

**DISPOSAL**

Cut culms can be dried and uses for stakes.

All other waste generated from the removal process shall be disposed of offsite in an appropriate disposal facility.

**BAMBOO REMOVAL IMPLEMENTATION SCHEDULE/SEQUENCE**

Year 1 and 2

Early Spring - March/April - cut down all bamboo canes to 6 inch height or less. Remove all vegetative waste and dispose of in landfill.

Late Spring - May/June - cut back any regrowth, remove all vegetative waste and dispose of in landfill

Mid-summer - August - cut bank any growth, remove all vegetative waste and dispose of in landfill

Early fall - October before frost - spray all top growth with appropriate herbicide. Rodeo or comparable is recommended due to proximity to stream. Control application of herbicide to avoid any desirable vegetation especially Specimen tree 2.

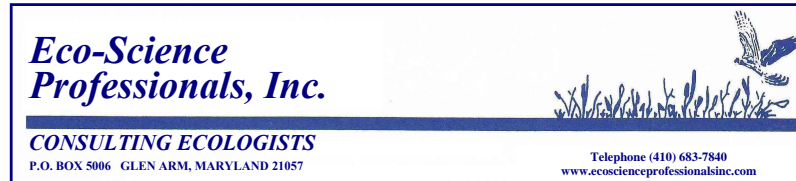
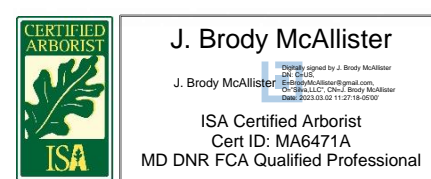
Repeat process through year 2 as needed.

Year 2/3 - Once bamboo has been sufficiently controlled the area may be planted. Spot treatment of any regrowth should be continued during the maintenance period for the FCA plantings.

**NOTES -**

No vehicular access is permitted within the critical root zone of Specimen tree 2. Bamboo should be removed by hand in this area. Mechanized, hand held cutting and spraying equipment may be used within the critical root zone.

**FCP PLAN PREPARED BY:**



**BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS**  
**ENGINEERING, INC.**

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443-676-2417

**DEVELOPER:**  
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COLUMBIA, MD 21046  
443-676-2417

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

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

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**RESIDENTIAL PRELIMINARY PLAN**  
**FOREST CONSERVATION AND LANDSCAPE PLAN**

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DATE: NOVEMBER 2022    BEI PROJECT NO. 3080

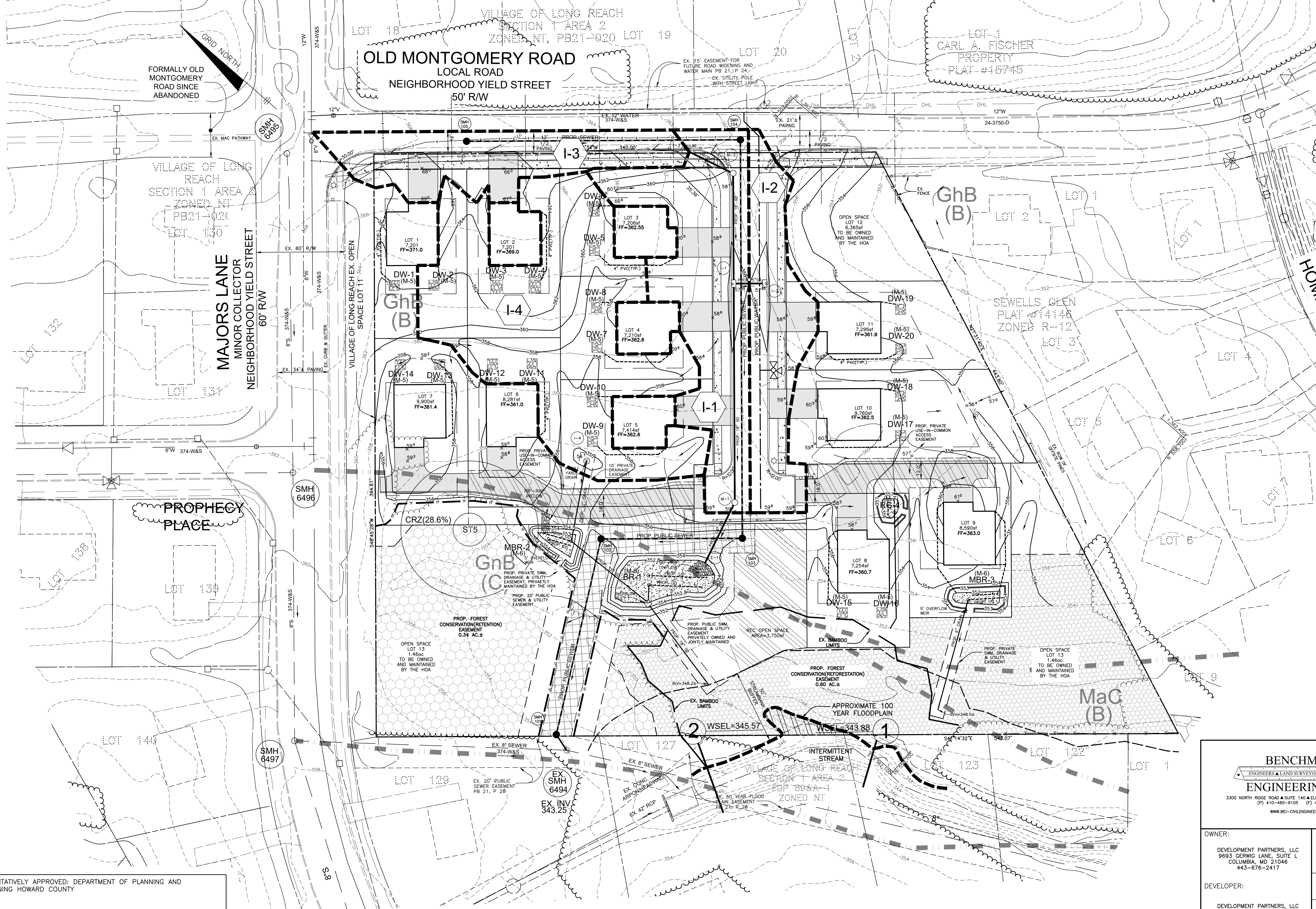
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DESIGN: JCO    DRAFT: JCO    SCALE: AS SHOWN    SHEET 5 OF 7

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
GhB		B	D	GLENELG URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	0.43
GhB*	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

**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED HOUSE
- APPROXIMATE 100 YEAR FLOODPLAIN
- LIMIT OF DISTURBANCE
- PROP. MICRO BIORETENTION FACILITY
- PROP. DRYWELL
- TREE PROTECTION FENCING
- STORM DRAIN DRAINAGE AREA



**DA DATA**

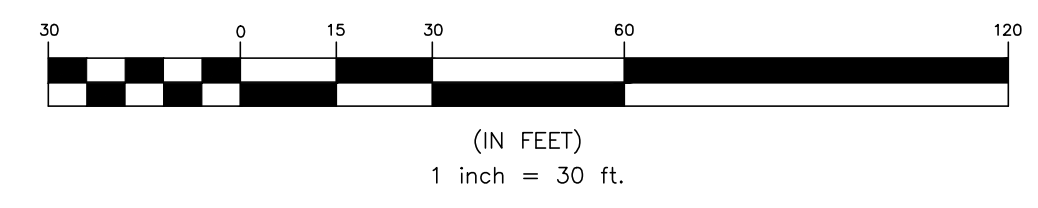
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"C" FACTOR = 0.56	I-2	IMPERVIOUS = 57%
AREA = 0.18 AC	I-3	ZONE = R-12
"C" FACTOR = 0.66	I-4	IMPERVIOUS = 70%
AREA = 0.19 AC	I-1	ZONE = R-12
"C" FACTOR = 0.67	I-2	IMPERVIOUS = 70%
AREA = 0.50 AC	I-3	ZONE = R-12
"C" FACTOR = 0.29	I-4	IMPERVIOUS = 0%

TENTATIVELY APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

DocuSigned by:  
Amy Groman  
5845509470C4D4

3/27/2023

PLANNING DIRECTOR, DATE



**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. 22390, Exp. 6-30-2023.

---

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

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

DESIGN: JCO DRAFT: JCO

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

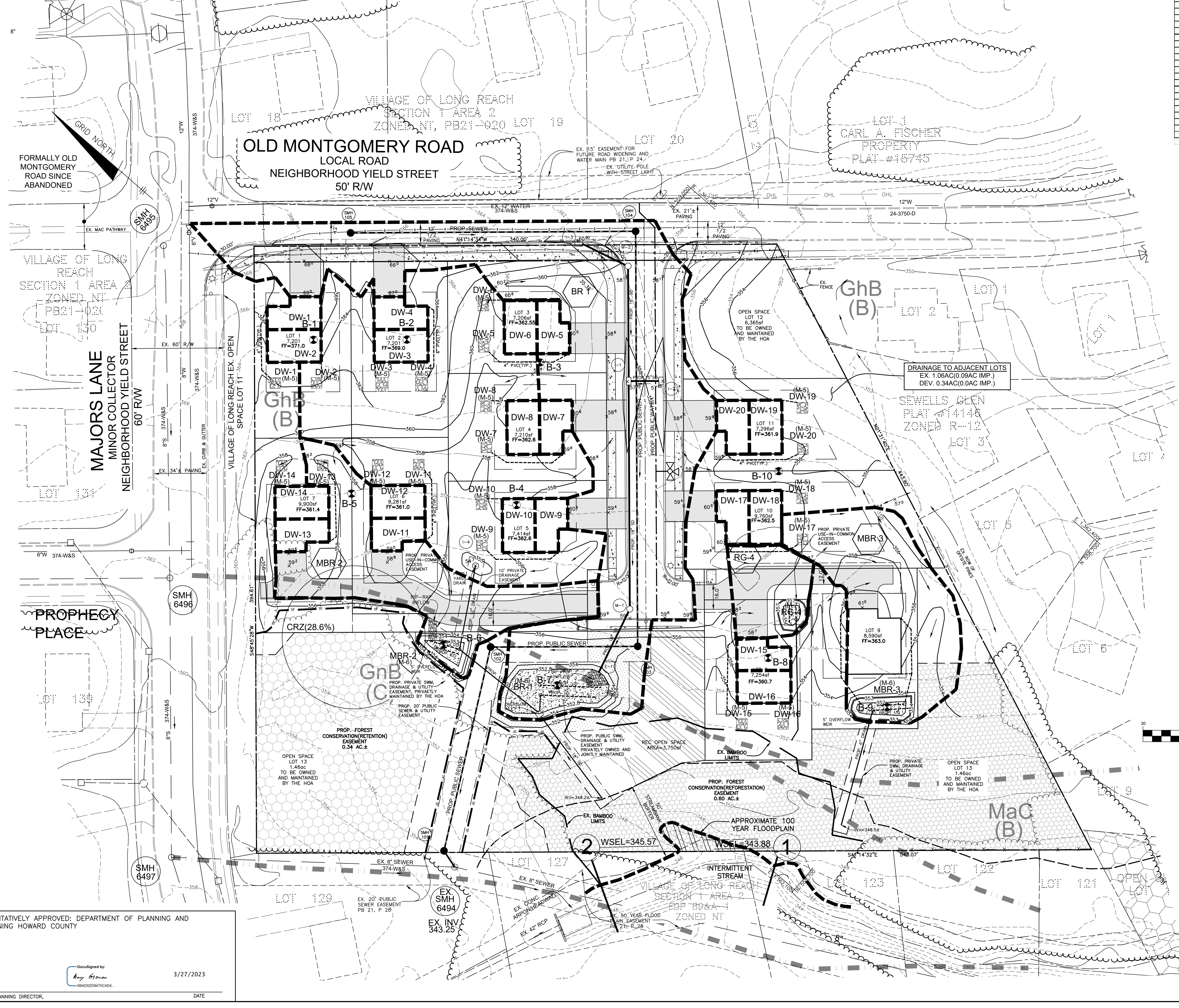
TAX MAP: 36 GRID: 17 PARCEL: 271  
ZONED: R-12  
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

**RESIDENTIAL PRELIMINARY PLAN**  
**STORM DRAIN DRAINAGE AREA MAP**

DATE: FEBRUARY 2023 BEI PROJECT NO. 3080  
SCALE: AS SHOWN SHEET 6 OF 7

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
GhB		B	D	GLENELG URBAN LAND COMPLEX 0 TO 8 PERCENT SLOPES	0.43
GhB*	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

D.A.	SIZE	MDE Type	Total DA	Impervious Area	Qe	Required		Provided		2% DA	Depth	Required	Provided	ESDv	RV	Pe					
						1.6	inches	1.6	inches												
BR 1	60x25'	(F-6)	34,098	18,240	0.54	882	1555	PASS	1.0	1812	1821	PASS	0.53	1.21							
MBR 2	25x13'	(M-6)	10,940	3,500	0.54	219	228	PASS	1.0	370	349	fail	0.34	1.13							
MBR 3	32x8'	(M-6)	9,600	2,270	0.42	192	240	PASS	1.0	134	186	PASS	0.28	0.88							
RG 4	13x10'	(M-7)	2,890	1,330	0.74	58	110	PASS	1.0	134	186	PASS	0.46	1.06							
DW-1	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-2	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-3	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-4	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-5	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-6	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-7	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-8	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-9	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-10	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-11	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-12	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-13	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-14	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-15	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-16	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-17	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-18	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-19	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
DW-20	7x7'	(M-5)	700	700	1.52	83	98	PASS	5.0	83	98	PASS	0.95	1.77							
Totals/Average														71,528	39,340	2,813	4,091	REV	755 cf	1119 cf	1.83



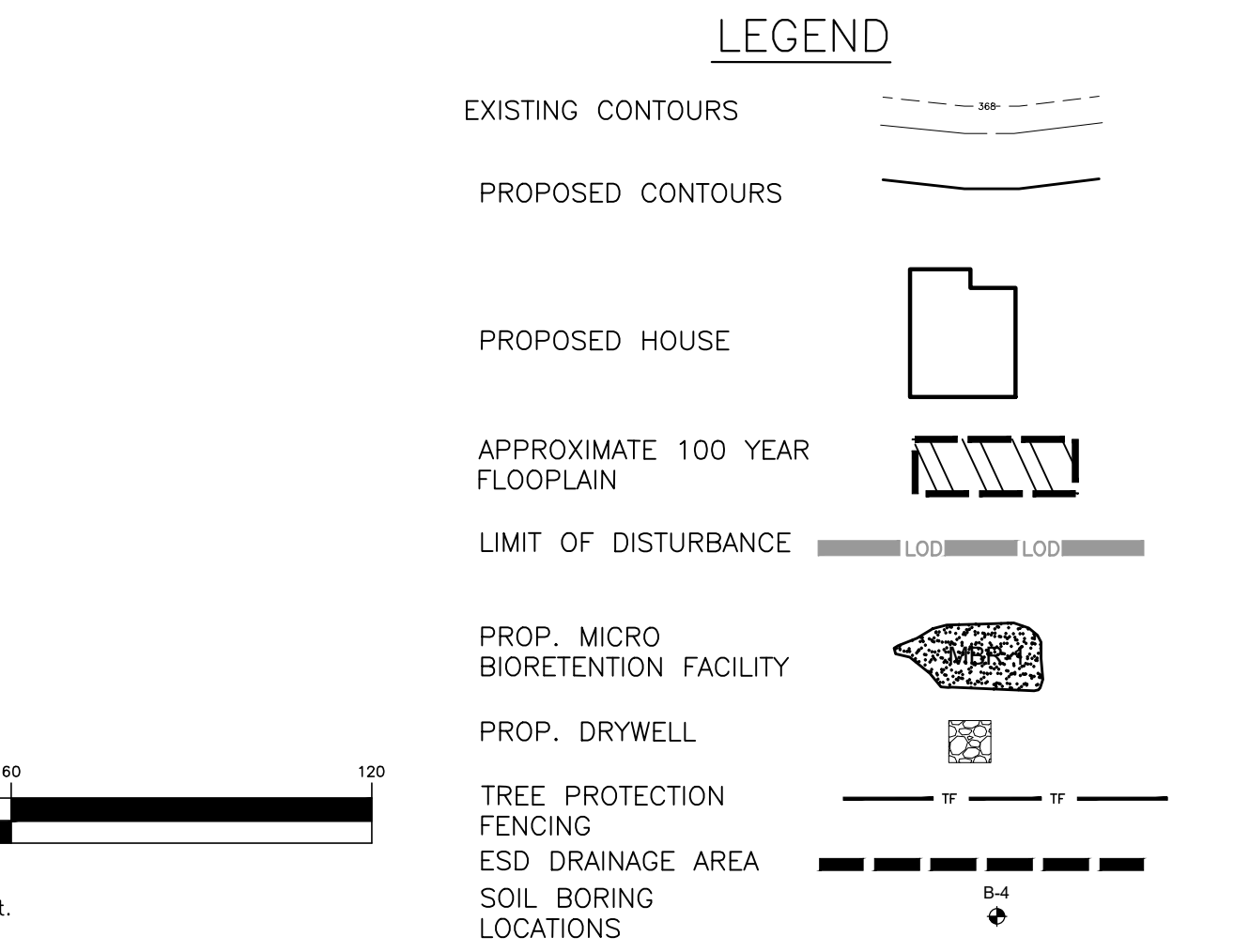
**Stormwater Management Design Recommendations**

The '2000 Maryland Stormwater Design Manual', published by the Maryland Department of the Environment, states that stormwater management facilities utilizing infiltration, such as the proposed drywells, micro-bioretenment, bioretention and rain garden facilities, shall have a Hydrologic Soil Group classification (HSG) of A or B. If the bottom of the proposed facilities will be located within soils of HSG C or D, drywells should not be used, however underdrains can be incorporated into the design of the micro-bioretenment, bioretention & rain garden facilities. The bottom of any SWM facility utilizing infiltration should also be located at least four feet above any groundwater or bedrock.

The following table summarizes the minimum depths and elevations until soils suitable for infiltration are encountered at each test boring. Additionally the table provides the lowest elevation that the bottom of the SWM facility should be located to allow for the four-foot clearance between groundwater and bedrock.

Test Boring No.	Shallowest depth to soils suitable for infiltration (feet)	Shallowest elevation to soils suitable for infiltration	Recommended lowest elevation for bottom of SWM facilities	FACILITY	PROP. FACILITY BOTTOM
B-1	3.5	381.5	354.0	DW-1	356.0
B-2	4.5	381.5	355.0	DW-2	357.0
B-3	1.5	380.5	351.0	DW-3	352.0
B-4	3.0	355.0	347.3	DW-4	352.0
B-5	6.5	351.5	351.5	DW-5	352.0
B-6	4.5	348.5	350.2	MBR-2	349.0*
B-7	3.0	349.0	346.5	MBR-1	348.0*
B-8	3.0	353.0	347.0	DW-8	352.0
B-9	7.0	347.0	344.1	DW-9	348.0
B-10	3.0	355.0	347.0	DW-10	352.0

\*UNDERDRAIN PROVIDED



**BENCHMARK ENGINEERING, INC.**  
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 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 in the State of Maryland. License No. 22390, expires 6-30-2023.  
 02.22.2023

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

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

**RESIDENTIAL PRELIMINARY PLAN STORMWATER MANAGEMENT PLAN**

DATE: FEBRUARY 2023 | BEI PROJECT NO. 3080  
 SCALE: AS SHOWN | SHEET 7 OF 7

TENTATIVELY APPROVED: DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

DocuSigned by: Amy Groman 5845509470404  
 3/27/2023

PLANNING DIRECTOR, DATE