

ESD STORMWATER MANAGEMENT SUMMARY TABLE														
Drainage Area	Code	Type	BMF	No. Used	DA (sq ft)	Imp Area (sq ft)	% Imp	Rv	Pe	Required	Provided	25,000	Ownership	
LOT 1	(N-1)	Roof-top Disconnection	RDC-1B	1	1,150	1,150	100%	0.05	1.0	0	0	0	Private	
UC LOT-1	(N-2)	Non-Roof-top Disconnection	NRDC-1A	1	10,486	5,440	52%	0.02	1.0	0	5046	N/A	Private	
DRWY LOT-1	(N-2)	Non-Roof-top Disconnection	NRDC-1B	1	3,611	1,804	50%	0.00	1.0	0	1807	N/A	Private	
LOT 1	(N-1)	Roof-top Disconnection	RDC-1A	1	575	575	100%	0.05	1.0	0	0	N/A	Private	
LOT 1	(N-1)	Roof-top Disconnection	RDC-1B	1	575	575	100%	0.05	1.0	0	0	N/A	Private	
UC LOT-1	(N-2)	Non-Roof-top Disconnection	NRDC-2A	1	14,685	7,426	51%	0.02	1.0	0	8887	N/A	Private	
DRWY LOT-1	(N-2)	Non-Roof-top Disconnection	NRDC-2B	1	3,611	1,804	50%	0.00	1.0	0	1807	N/A	Private	
LOT 2	(N-1)	Roof-top Disconnection	RDC-2A	1	575	575	100%	0.05	1.0	0	0	N/A	Private	
LOT 2	(N-1)	Roof-top Disconnection	RDC-2B	1	575	575	100%	0.05	1.0	0	0	N/A	Private	
LOT 2	(N-1)	Roof-top Disconnection	RDC-2C	1	575	575	100%	0.05	1.0	0	0	N/A	Private	
LOT 2	(N-1)	Roof-top Disconnection	RDC-2D	1	575	575	100%	0.05	1.0	0	0	N/A	Private	
Totals per Individual Drainage Areas				12	38,393	21,583	56%	0.11	1.0	0	1791	1784	0.6	761
Totals per Overall Site					38,495	21,900	57%	0.11	1.0	0	2282	1784		1510

- Notes:
- The Pe required column is based on total site Pe calculation. The Rv is based on individual drainage area percent impervious (per DED).
 - Total Site Pe and Total Site ESD numbers are based on the Effective Area.
 - Note there is approximately 500 sq ft of impervious area at the LIC entrance that cannot be treated on-site due to existing topography elevation discrepancies.

Site Analysis Data Sheet	
Gross Area	7.08 ac
100yr Floodplain	0.00 ac
Slopes 25% or Greater	0.00 ac
Wetlands	0.00 ac
Wetlands Buffer	0.00 ac
Stream Buffer	0.00 ac
Forested Area (Excluding Floodplain)	7.08 ac
Erodible Soils	0.03 ac
Right-of-Way Dedication	0.27 ac
Net Site Area	7.08 ac
Limit of Disturbance	2.80 ac
Impervious Area (Developed)	0.50 ac
Green Space (Within LOD)	2.30 ac

* This Project is exempt from Forest Conservation Requirements per Section 16.1202(b)(1)(vii) of the Howard County Subdivision Regulations. This is a minor subdivision that creates only one additional lot and has no further subdivision potential.

DESIGN NARRATIVE:

THERE ARE NO WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, 100-YEAR FLOODPLAIN OR STEEP SLOPES LOCATED ON THIS PROPERTY. THERE ARE NO NATURAL RESOURCES TO BE PRESERVED. THE MAJORITY OF THE PROPERTY IS WOODED. THERE ARE 8 SPECIMEN TREES AND 11 TREES OF 24"-30" BASE ON THE PROPERTY. TREES WILL BE REMOVED AS PART OF THE DEVELOPMENT. THE ACTUAL NUMBER OF SPECIMEN TREES REMOVED WILL BE DETERMINED AS THE DESIGN AND PLANS PROGRESS.

EXISTING FLOW PATTERNS SHALL BE MAINTAINED. THE PROPOSED OVERALL DRAINAGE PATTERNS SHALL MIMIC THE EXISTING CONDITION DRAINAGE PATTERNS. THE SITE TOPOGRAPHY IS DOMINATED BY AN EXISTING HIGH POINT TOWARDS THE EASTERN/REAR OF THE PROPERTY, WITH RUN-OFF PREDOMINANTLY FLOWING SOUTHWEST & SOUTHEAST OFF-SITE. THE SOUTHWEST RUN-OFF DRAINS TOWARDS AN EXISTING SWALE, TO THE SE CORNER OF THE PROPERTY, AND ONTO ADDISON WAY. THE SOUTHWEST RUN-OFF FLOWS TOWARDS THE TRIANGULAR CONFLUENCE AND THEN OFFSITE THRU AN EXISTING SWALE ON ADJOINING PARCEL 158 OPEN SPACE LOT 26. THESE ULTIMATELY FLOW INTO THE LOWER NORTH BRANCH-PATAPOSCO RIVER AREA WATERSHED (2-13-09-06) A CLASS M-P STREAM.

IMPERVIOUS AREAS ARE BEING MINIMIZED AND WILL ONLY CONSIST OF THE PROPOSED USE-IN-COMMON DRIVE, DRIVEWAYS, AND ROOFTOPS.

SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARD SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. OFFSITE CLEAN WATER SHALL BE DIVERTED AROUND THE SITE. THE ENTIRE PERIMETER OF THE LIMIT OF DISTURBANCE SHALL INCLUDE CONTROLS SUCH AS SILT FENCE, SUPER SILT FENCE, DIVERSION FENCING AND/OR DIKES BASED ON TOPOGRAPHY. THERE ARE NO IMPACTS TO THE STORMWATER MANAGEMENT DESIGN BASED ON SEDIMENT AND EROSION CONTROL.

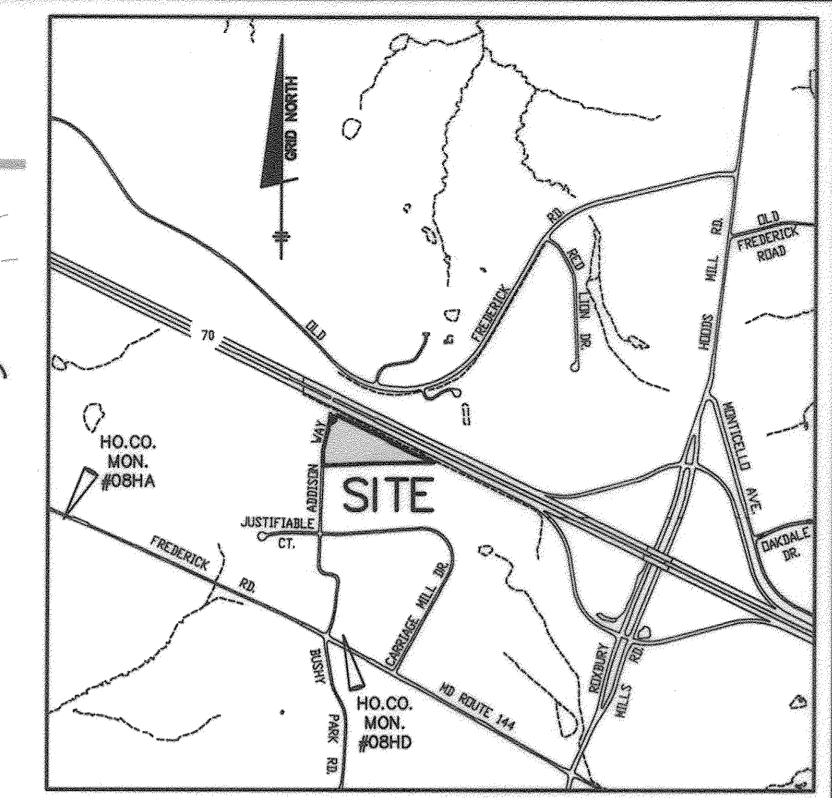
THE 2 PROPOSED (M-5) DRY WELLS, 4 PROPOSED USES OF (N-2) NON-ROOFTOP DISCONNECTION & PROPOSED USES OF (N-1) ROOFTOP DISCONNECTION SHALL ADEQUATELY TREAT THE PROPOSED IMPERVIOUS AREAS. THE PRACTICES SHALL ALL DISCHARGE AT A LOCATION THAT IS NOT DETRIMENTAL TO THE ADJACENT PROPERTIES.

AT FUTURE STAGES OF THE PROJECT, ADDITIONAL TREATMENT PRACTICES MAY BE INVESTIGATED AND UTILIZED, IF POSSIBLE.

96% TREATMENT OF THE PROPOSED IMPERVIOUS IS BEING PROVIDED THEREFORE THIS PROJECT CAN BE CONSIDERED TO BE TREATED TO THE MAXIMUM EXTENT PRACTICAL.

LEGEND

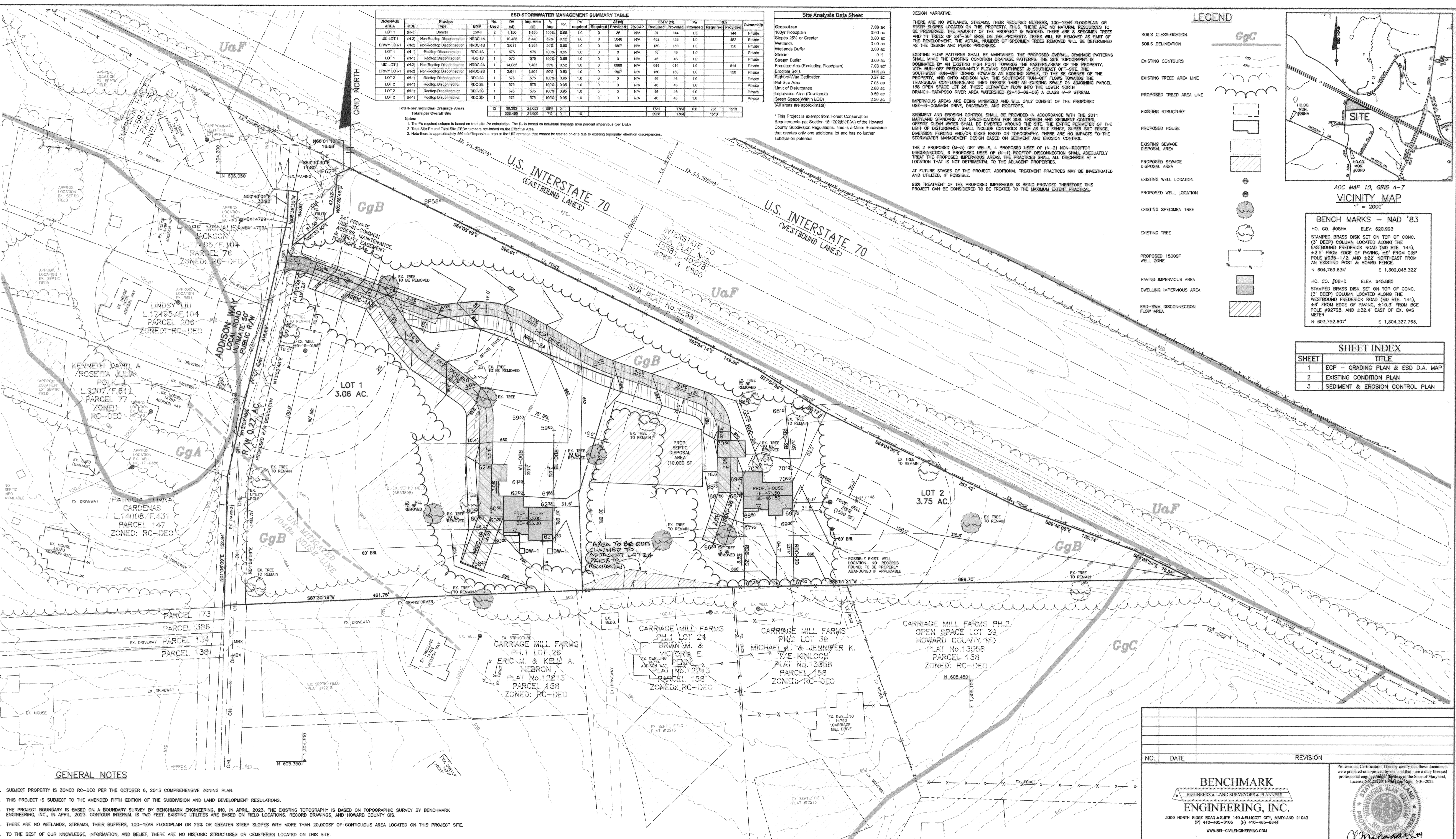
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- PROPOSED HOUSE
- EXISTING SEWAGE DISPOSAL AREA
- PROPOSED SEWAGE DISPOSAL AREA
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING SPECIMEN TREE
- EXISTING TREE
- PROPOSED 1500SF WELL ZONE
- PAVING IMPERVIOUS AREA
- DWELLING IMPERVIOUS AREA
- ESD-SWM DISCONNECTION FLOW AREA



ADC MAP 10, GRID A-7
VICINITY MAP
1" = 2000'

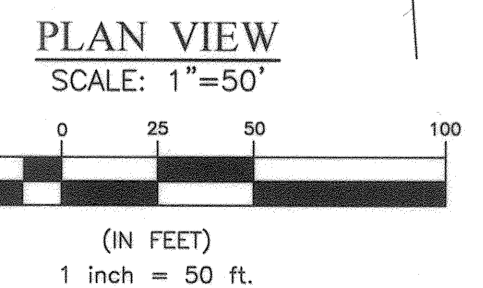
BENCH MARKS - NAD '83	
HO. CO. #081A	ELEV. 620.993
STAMPED BRASS DISK SET ON TOP OF CONC. (3" DEEP) COLUMN LOCATED ALONG THE GASTRINO FREDERICK ROAD (MD RTE. 144), ±2.5' FROM EDGE OF PAVING, ±9' FROM C&P POLE #935-112, AND ±22' NORTHEAST FROM AN EXISTING FENCE & BOARD FENCE.	
N 604,769.634'	E 1,302,045.322'
HO. CO. #081B	ELEV. 645.885
STAMPED BRASS DISK SET ON TOP OF CONC. (3" DEEP) COLUMN LOCATED ALONG THE WESTBROOK FREDERICK ROAD (MD RTE. 144), ±5' FROM EDGE OF PAVING, ±10.2' FROM DSE POLE #92728, AND ±32.4' EAST OF EX. GAS METER	
N 603,752.607'	E 1,304,327.763'

SHEET INDEX	
SHEET	TITLE
1	ECP - GRADING PLAN & ESD D.A. MAP
2	EXISTING CONDITION PLAN
3	SEDIMENT & EROSION CONTROL PLAN



GENERAL NOTES

- SUBJECT PROPERTY IS ZONED RC-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY BY BENCHMARK ENGINEERING, INC. IN APRIL, 2023. THE EXISTING TOPOGRAPHY IS BASED ON TOPOGRAPHIC SURVEY BY BENCHMARK ENGINEERING, INC. IN APRIL, 2023. CONTOUR INTERVAL IS TWO FEET. EXISTING UTILITIES ARE BASED ON FIELD LOCATIONS, RECORD DRAWINGS, AND HOWARD COUNTY GIS.
- THERE ARE NO WETLANDS, STREAMS, THEIR BUFFERS, 100-YEAR FLOODPLAIN OR 25% OR GREATER STEEP SLOPES WITH MORE THAN 20,000SF OF CONTIGUOUS AREA LOCATED ON THIS PROJECT SITE.
- TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEF, THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES LOCATED ON THIS SITE.
- THE ENVIRONMENTAL DESCRIPTION REPORT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED OCTOBER 31, 2023.
- THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202(b)(1)(vii) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS. THIS IS A MINOR SUBDIVISION THAT CREATES ONE ADDITIONAL LOT AND HAS NO FURTHER SUBDIVISION POTENTIAL.
- STORMWATER MANAGEMENT PRACTICES SHOWN ON THIS PLAN ASSUME ADEQUATE SOIL BORING TEST RESULTS. THE DESIGN MAY NEED TO BE ADJUSTED AT THE NEXT PLAN STAGE AFTER SOIL BORING TESTING HAS BEEN COMPLETED AND AN ALTERNATE PRACTICE MAY NEED TO BE UTILIZED.
- THE SEDIMENT AND EROSION CONTROL SHOWN IN THIS PLAN SET IS A SCHEMATIC PRELIMINARY DESIGN. A MORE DETAILED DESIGN COMPLETE WITH SEQUENCE OF CONSTRUCTION, NOTES, DETAILS AND COMPUTATIONS SHALL BE PROVIDED AT THE NEXT PLAN STAGE.
- THE STORMWATER MANAGEMENT SYSTEM SHOWN ON THIS PLAN 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 ALLOCATED FOR THIS DEVELOPMENT.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION AND/OR SITE DEVELOPMENT 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. THEREFORE, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.
- THE 70DBA NOISE CONTOUR LINE DRAWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 69DBA NOISE EXPOSURE. THE 69DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- LANDSCAPING WILL BE PROVIDED AT A LATER PLAN STAGE.



SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND				
SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	U-VALUE Whole Soil
GgA		B	GLENEGLD LOAM, 0 TO 3 PERCENT SLOPES	0.37
GgB		B	GLENEGLD LOAM, 3 TO 8 PERCENT SLOPES	0.37
GgC+		B	GLENEGLD LOAM, 8 TO 15 PERCENT SLOPES	0.43
UaF		B	UDORTHERTS, HIGHWAY, 0 TO 65 PERCENT	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 2-22-24
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 2-22-24
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
3300 NORTH RIDGE ROAD & SUITE 140 A ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (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 in the State of Maryland. License No. 107,414, Exp. 6-30-2025.

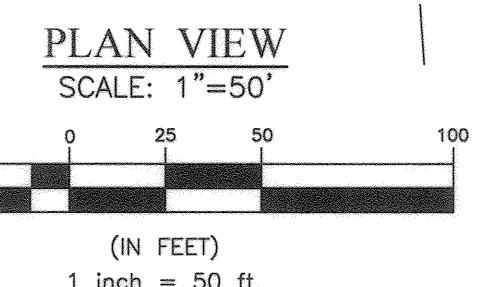
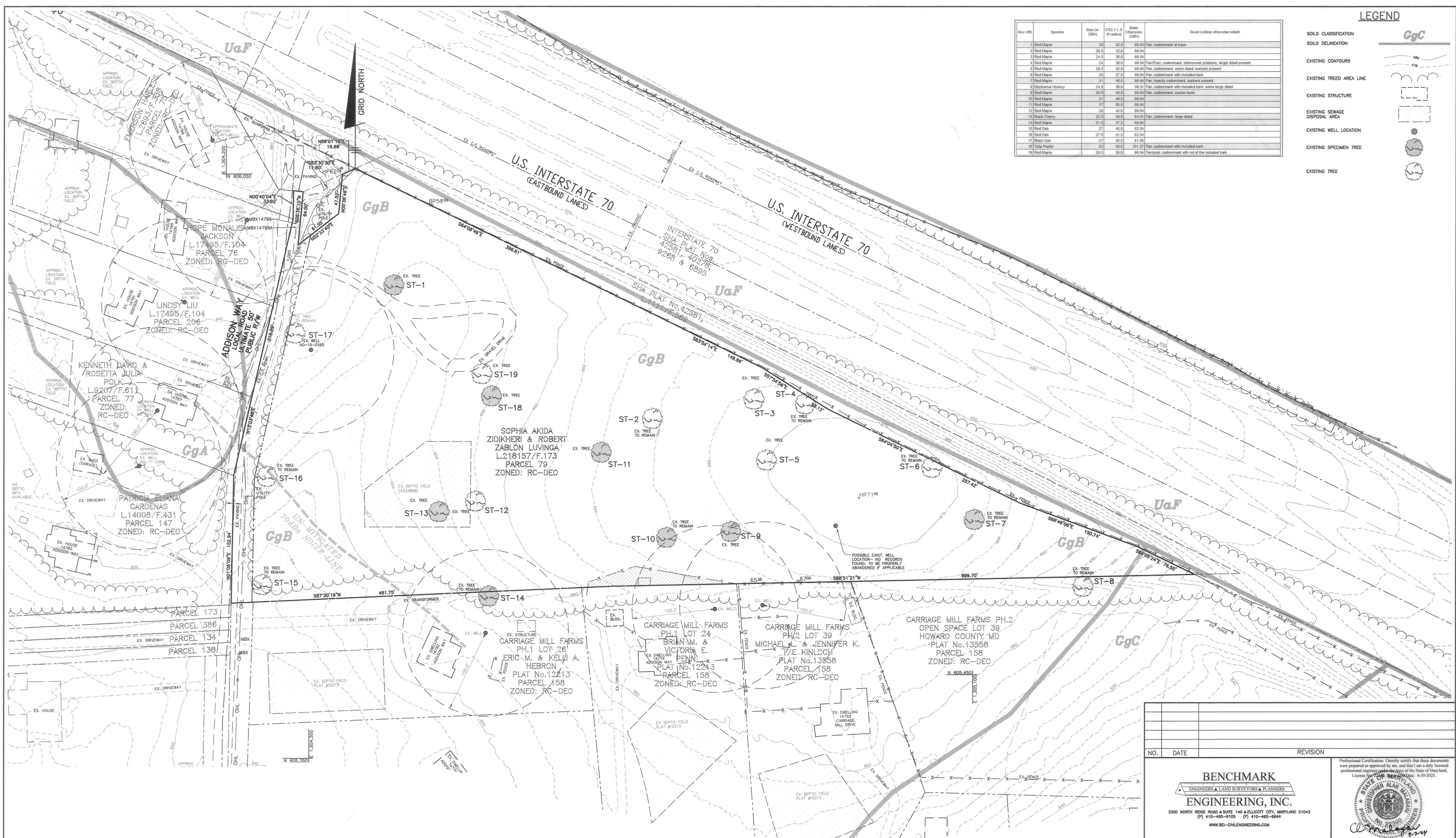
[Signature]

OWNER: SOPHIA AKIDA ZIDIKHERI AND ROBERT ZABLON LUVINGA 23906 TRADING POST DRIVE CLARKSBURG MD 20871 202-790-9724	RESIDENTIAL MINOR SUBDIVISION 14786 ADDISON WAY LOTS 1 & 2
DEVELOPER:	TAX MAP: 08 GRID: 16 PARCEL: 79 ZONED: RC-DEO ELECTION DISTRICT NO.4 HOWARD COUNTY, MARYLAND
	ENVIRONMENTAL CONCEPT PLAN GRADING PLAN & ESD DRAINAGE AREA MAP
DESIGN: CAM/MCR	DATE: JANUARY 6, 2024 BEI PROJECT NO. 3148
DRAFT: MCR	SCALE: AS SHOWN SHEET 1 OF 3

LEGEND

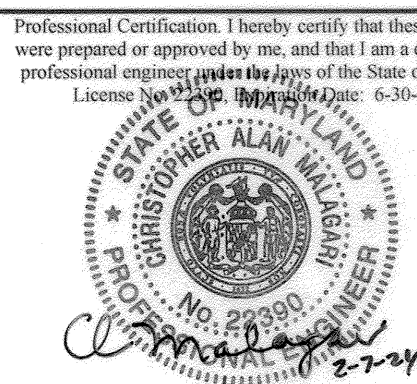
Key (N)	Species	Size (in. DBH)	CRZ 1:1.5 (ft radius)	Date	Change (DBH)	Good (unless otherwise noted)
1	Red Maple	35	52.5	08/04	Fair	codominant at base
2	Red Maple	28.5	42.8	08/04		
3	Red Maple	24.5	36.8	08/04		
4	Red Maple	24	36.0	08/04	Fair/Poor	codominant, bitternest present, larger dead present
5	Red Maple	28.5	42.8	08/04	Fair	codominant, some dead, suckers present
6	Red Maple	25	37.5	08/04	Fair	codominant with included bark
7	Red Maple	31	46.5	08/04	Fair	heavily codominant, suckers present
8	Mockernut Hickory	24.5	36.8	08/04	Fair	codominant with included bark, some large dead
9	Red Maple	30.5	45.8	08/04	Fair	codominant, sucker burts
10	Red Maple	31	46.5	08/04	Fair	codominant, sucker burts
11	Red Maple	37	55.5	08/04		
12	Red Maple	28	42.0	08/04		
13	Black Cherry	32.5	48.8	04/01	Fair	codominant, large dead
14	Red Maple	31.5	47.3	08/04		
15	Red Oak	27	40.5	02/04		
16	Red Oak	27.5	41.3	02/04		
17	Black Oak	27	40.5	01/05		
18	Tulip Poplar	32	48.0	10/27	Fair	codominant with included bark
19	Red Maple	28.5	39.8	08/04	Fair/Poor	codominant with rot at the included bark

- SOILS CLASSIFICATION **GgC**
- SOILS DELINEATION
- EXISTING CONTOURS
- EXISTING TREE AREA LINE
- EXISTING STRUCTURE
- EXISTING SEWAGE DISPOSAL AREA
- EXISTING WELL LOCATION
- EXISTING SPECIMEN TREE
- EXISTING TREE



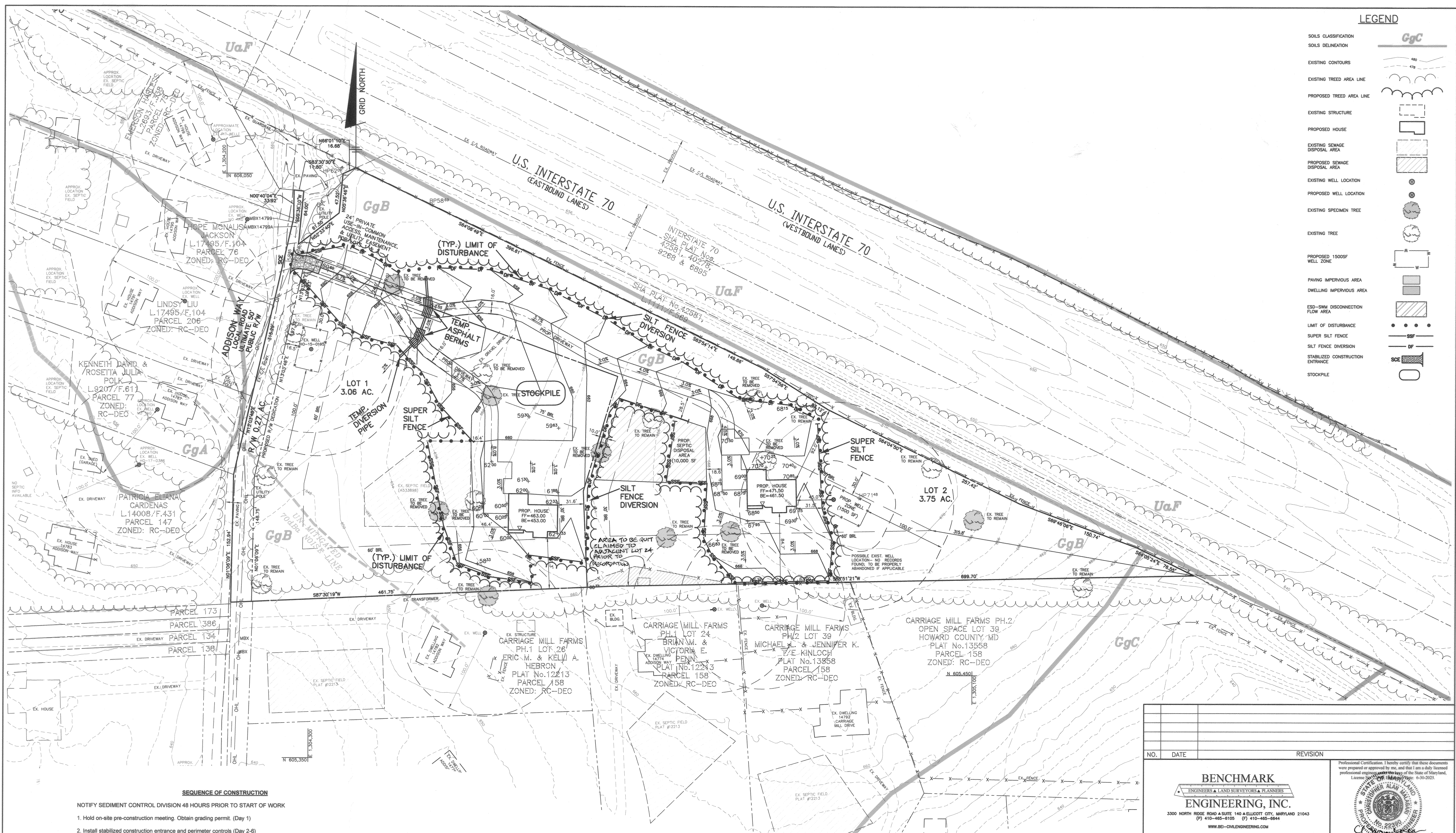
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UaF				UDORTHENTS, HIGHWAY, 0 TO 65 PERCENT	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 2/22/24
 DATE: 2/20/24

NO. DATE REVISION		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. 100,174,111, dated 6-30-2025. 
BENCHMARK ENGINEERING, INC. 3300 NORTH RIDGE ROAD & SUITE 140 • ELICOTT CITY, MARYLAND 21043 (P) 410-485-6105 (F) 410-485-6644 WWW.BE-CVLENGINEERING.COM		
OWNER:		RESIDENTIAL MINOR SUBDIVISION 14786 ADDISON WAY LOTS 1 & 2 TAX MAP: 08 GRID: 16 PARCEL: 79 ZONED: RC-DEO ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DEVELOPER:		
DESIGN: CAM/MCR DRAFT: MCR		ENVIRONMENTAL CONCEPT PLAN EXISTING CONDITIONS PLAN DATE: JANUARY 6, 2024 BEI PROJECT NO. 3148 SCALE: AS SHOWN SHEET 2 OF 3

LEGEND

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- EXISTING TREE
- PROPOSED 1500SF WELL ZONE
- PAVING IMPERVIOUS AREA
- DWELLING IMPERVIOUS AREA
- ESD-SWM DISCONNECTION FLOW AREA
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE
- SILT FENCE DIVERSION
- STABILIZED CONSTRUCTION ENTRANCE
- STOCKPILE

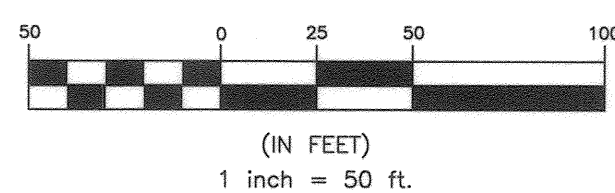


SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

1. Hold on-site pre-construction meeting. Obtain grading permit. (Day 1)
2. Install stabilized construction entrance and perimeter controls (Day 2-6)
3. Upon approval from the Howard County sediment control inspector, proceed to raze existing ancillary structures, clear and grade within the perimeter. (Day 7-30)
4. Install Septic System; Drill/Install Wells (Day 31-80)
5. Install use-in-common drive base paving (Day 81-100)
6. Construct proposed building and driveways - INDIVIDUAL HOUSE CONSTRUCTION (Day 101-240)
7. Install proposed ESD-BMP concurrent with the listed construction activities, utilizing SEC as indicated on these plans (Day 241-300 as applicable).
8. Install final paving. (Day 301-320)
10. Upon approval from the Howard County sediment control inspector, remove remaining SEC devices and permanently stabilize the site. (Day 321-330)

PLAN VIEW
SCALE: 1"=50'



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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 2/22/24
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 2/22/24

NO.	DATE	REVISION		
BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 3300 NORTH RIDGE ROAD SUITE 140 A ELLOTT CITY, MARYLAND 21043 (P) 410-466-8100 (F) 410-466-8844 WWW.BE-CMENGINEERING.COM				
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer with the State of Maryland, License No. 106194.				
OWNER:		RESIDENTIAL MINOR SUBDIVISION		
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