

SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET/EXISTING CONDITIONS AND SOILS MAP
2	ENVIRONMENTAL CONCEPT PLAN
3	CONCEPT SEDIMENT CONTROL PLAN

SOILS LEGEND		
SYMBOL	TYPE	NAME
G6B	A	GLADSTONE LOAM - 3 TO 8 PERCENT SLOPES
G6B**	C/D	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES

SOIL MAPPING AND SOIL DATA TAKEN FROM NRCS WEB SOIL SURVEY, AUGUST 2022.
 *WHOLE SOIL K FACTOR
 **HIGHLY ERODIBLE SOILS K>0.35, AND/OR 15% OR GREATER SLOPES

DESIGN NARRATIVE:

The site includes a man-made pond and wetland areas with their associated buffers. There is no forest on the property, however, there is one specimen tree and a number of 'significant' trees. The pond will be removed, and a stream restoration will be part of the site development plan. To protect natural resources, it is important to minimize and adequately treat the stormwater runoff. The design incorporates water quality treatment in order to create the least possible stormwater runoff impact. The runoff will be treated on-site using approved methods. Outfalls generally correspond with the natural drainage patterns for the site.

Many of the micro-bioretenion facilities have somewhat oversized drainage areas. The impervious area to MB-8 (the largest) is around 22%. The resulting ESD volume is less than the requirement for MB-7, which meets the maximum drainage area requirement, but has a higher percent impervious. We believe that MB-8 meets the intent of the ESD design, since the required facility size falls below a 'normal' facility size. The remaining 'oversized' drainage areas are close to the maximum size. At final design, these areas will be analyzed to see if there are opportunities to further divide them and add additional facilities.

A 'necessary disturbance' justification will be processed with the Site Development plan. The disturbances will be necessary to construct a stream restoration and to remove a pond which is out of place in this urbanized area and does not meet current MDE-378 pond specifications.

Sediment and erosion controls will be designed based on the 2011 Maryland Specifications for Soil Erosion and Sediment Control. A double row of super silt fence will be used to prevent runoff containing unacceptable levels of TSS from leaving the site and entering the adjacent wetlands during the construction. It will be the obligation of the contractor to install, inspect and maintain these practices.

The target Pe for this site is 1.72 inches. By using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual as amended by Maryland Stormwater Management Act of 2007, full treatment of the target Pe of 1.72 will be achieved, fully addressing the stormwater management requirements. Selected treatment methods include Micro-Bioretenion (M-6), Permeable Pavement (A-2) and Drywells (M-5).

SPECIMEN AND SIGNIFICANT TREE CHART			
ID#	SIZE	SPECIE	CONDITION
ST-1	38"	WHITE PINE	
T-2	27"	WHITE PINE	FAIR, SOME DAMAGE NOTED
T-3	25"	WHITE PINE	
T-4	28"	NORWAY MAPLE	
T-5	24.5"	CHINESE CHESTNUT	
T-6	24"	CHINESE CHESTNUT	FAIR, SOME DIEBACK NOTED
T-7	24.5"	PECAN	

*ST- INDICATES SPECIMEN TREE, T- INDICATES SIGNIFICANT TREE
 **SEE FOREST STAND DELINEATION PLAN FOR ADDITIONAL DETAIL

TROTTER'S RETREAT

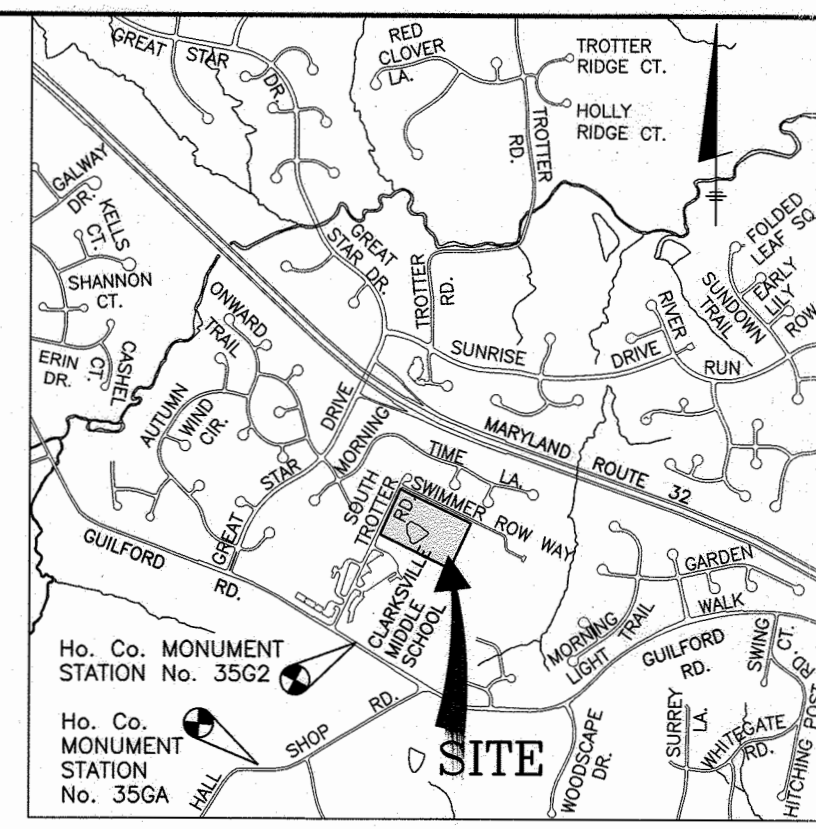
25-UNIT CONDO DEVELOPMENT

5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

LEGEND	
	EXISTING CONTOURS
	EXISTING TREELINE
	WETLAND AREAS
	PROPERTY BOUNDARY
	EXISTING SEWER
	SOILS DELINEATION
	15-19.99% SLOPES & HIGHLY ERODIBLE SOILS RESOURCE
	EX. FLOODPLAIN
	STORM DRAIN DRAINAGE DIVIDE
	EXISTING WATER



GENERAL NOTES

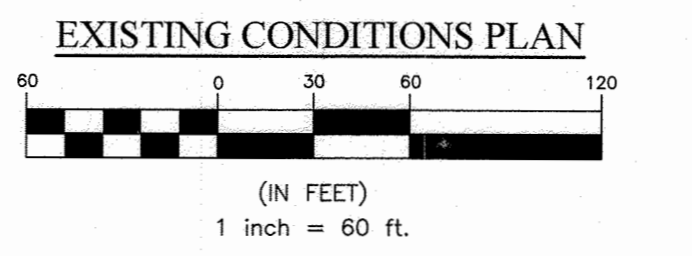
- SUBJECT PROPERTY ZONED R-20 PER THE COMPREHENSIVE ZONING PLAN EFFECTIVE 10-6-2013.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004.
- PROJECT BOUNDARY AND TOPOGRAPHY WITHIN THE SUBDIVISION AREA ARE BASED ON FIELD RUN BOUNDARY SURVEY AND TOPO PERFORMED BY BENCHMARK ENGINEERING, INC., MARCH, 2022.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
- THE FOREST CONSERVATION ACT OBLIGATION FOR THIS PROJECT WILL BE ADDRESSED USING A COMBINATION OF ON-SITE PLANTING, FOREST BANKING OR/AND A FEE-IN-LIEU PROPOSAL. THE FOREST CONSERVATION WILL BE FURTHER REVIEWED WITH THE SUBMISSION OF THE SITE DEVELOPMENT PLAN FOR THIS PROJECT.
- THERE ARE NO STEEP SLOPES (25% OR GREATER) ON THE SITE.
- A SIMPLIFIED FOREST STAND DELINEATION AND NATURAL RESOURCES REPORT HAS BEEN PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC. A PLAN AND REPORT DATED OCTOBER, 2022 HAS BEEN SUBMITTED WITH THIS ENVIRONMENTAL CONCEPT PLAN.
- DPZ FILE HISTORY: F-76-64 (PLAT 3469), BA-22-007C
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN 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, SITE DEVELOPMENT PLAN, OR GRADING AND BUILDING PERMIT STAGES. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- SOIL EXPLORATION BORINGS OR TEST PITS WILL BE NEEDED AT THE NEXT PLAN STAGE, TO CONFIRM ACCEPTABLE CONDITIONS FOR PLACEMENT OF STORMWATER MANAGEMENT FACILITIES.
- THE FOREST CONSERVATION PLAN AND ASSOCIATED FOREST STAND DELINEATION WILL BE REVIEWED FOR COMPLIANCE WITH THE FOREST CONSERVATION ACT AT THE SUBDIVISION PLAN, SITE DEVELOPMENT PLAN OR GRADING PERMIT STAGES. UNDER COUNTY LAW, ONLY A MID LICENSED FORESTER, MD LICENSED LANDSCAPE ARCHITECT OR AN ISA CERTIFIED ARBORIST WHO IS ALSO A STATE QUALIFIED PROFESSIONAL MAY PREPARE FOREST STAND DELINEATIONS, FOREST CONSERVATION PLANS OR OTHER REQUIRED COUNTY FOREST CONSERVATION PROGRAM DOCUMENTS.
- DETAILED SEDIMENT CONTROL DESIGN WILL BE PROVIDED WITH THE SITE DEVELOPMENT PLAN.
- THE POCKET PONDS SHOWN ON THE PLAN ARE NOT INTENDED TO BE PART OF THE STORMWATER MANAGEMENT FOR THE SITE, RATHER THEY ARE TO BE PART OF THE STREAM RESTORATION PROJECT.
- AN ALTERNATIVE COMPLIANCE FOR REMOVAL OF A SPECIMEN TREE WILL BE SUBMITTED WITH THE SKETCH PLAN. A DESIGN MANUAL WAIVER MAY BE REQUIRED FOR GRAVITY SEWER SERVED FOR CELLARS OF UNITS 15 AND 16, BUT THIS WILL BE FULLY EVALUATED WITH THE PRELIMINARY WATER AND SEWER PLAN SUBMISSION. A DESIGN MANUAL WAIVER MAY BE REQUIRED TO GAIN APPROVAL FOR THE PREFERRED STREET WIDTHS. IT WILL BE NECESSARY TO SEEK APPROVAL FOR 'NECESSARY DISTURBANCES' TO THE WETLANDS, AS STREAM RESTORATION WILL IMPACT THOSE AREAS.
- A CONDITIONAL USE REQUEST (BA-22-007C) FOR AGE RESTRICTED CONDOMINIUM UNITS IN R-20 ZONING WAS APPROVED JULY 25, 2022. THE DECISION IS CURRENTLY IN APPEAL.
- THE EXISTING POND WILL BE REMOVED, AND A STREAM RESTORATION PROJECT WILL REESTABLISH A NATURALIZED STREAM THROUGH THE SITE, TO CONVEY SITE OUTFALL AND THE OUTFALLS FROM SURROUNDING PROPERTIES WHICH FLOW ACROSS THIS SITE, WHERE APPROPRIATE. A 100-YEAR FLOOD ELEVATION FOR THE STREAM WILL BE COMPUTED AND ESTABLISHED.

SITE ANALYSIS DATA/TABULATION	
A) TOTAL PROJECT AREA.....	9.75 ±AC.
B) AREA OF WETLANDS AND BUFFER.....	0.24 ±AC.
C) AREA OF 100-YR. FLOODPLAIN AND BUFFER.....	0.57 ±AC.
D) AREA OF FOREST.....	0.00 ±AC.
E) AREA OF STEEP SLOPES 15% OR GREATER.....	0.25 ±AC.
F) ERODIBLE SOILS.....	0.25 ±AC.
G) AREA OF PLAN SUBMISSION.....	9.75 ±AC.
H) LIMIT OF DISTURBED AREA.....	10.76 ±AC.
I) GREEN OPEN AREA.....	6.68 AC.
J) IMPERVIOUS COVER.....	31.5%
K) PRESENT ZONING DESIGNATION.....	R-20
L) PROPOSED USES FOR THE SITE: AGE RESTRICTED CONDO UNITS	

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4.18.23
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

[Signature] 4/18/23
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE



STORMWATER MANAGEMENT PRACTICES TABLE

Facility Name	Practice Type	Public	Private	Maintenance	Misc.
MB-1	M-6		X	Owner	
MB-2	M-6		X	Owner	
MB-3	M-6		X	Owner	
MB-4	M-6		X	Owner	
MB-5	M-6		X	Owner	
MB-6	M-6		X	Owner	
MB-7	M-6		X	Owner	
MB-8	M-6		X	Owner	
MB-9	M-6		X	Owner	
MB-10	M-6		X	Owner	
26 DRYWELLS	M-5		X	Owner	
6 PERMEABLE PAVEMENT	A-2		X	Owner	

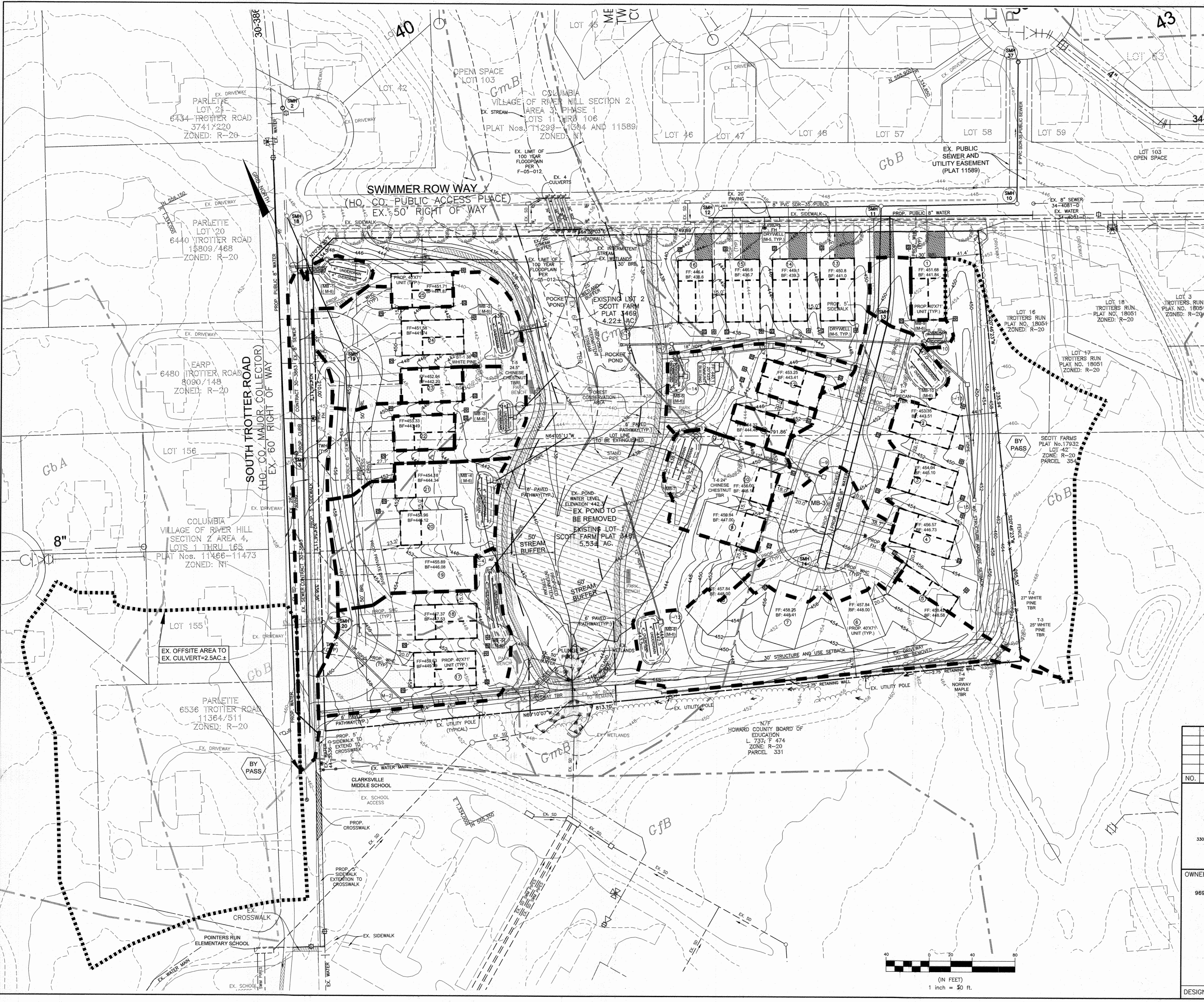
NO.	DATE	REVISION

ENGINEERS & LAND SURVEYORS & PLANNERS

3300 NORTH RIDGE ROAD & SUITE 140 • ELICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-ENGINEERING.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. 28376, Expiration Date: 03-01-2025.

OWNER/DEVELOPER: SOUTH TROTTER LLC 9693 GERWIG LANE, SUITE L COLUMBIA, MD 21046 410-792-2955	TROTTER'S RETREAT A RESUBDIVISION OF SCOTT PROPERTY, LOTS 1 AND 2 6479 & 6485 SOUTH TROTTER ROAD TAX MAP: 35 GRID: 20 PARCEL: 338 ZONED: R-20 ELECTION DISTRICT NO. 5th HOWARD COUNTY, MARYLAND ENVIRONMENTAL CONCEPT PLAN EXISTING CONDITIONS AND SURROUNDING DRAINAGE PLAN DATE: MARCH 2023 BEI PROJECT NO. 3056 SCALE: AS SHOWN SHEET 1 OF 3
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LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- WETLAND AREAS
- PROPERTY BOUNDARY
- SOILS DELINEATION
- PROPOSED UNIT
- 15-19.99% SLOPES & HIGHLY ERODIBLE SOILS
- EX. FLOODPLAIN
- PROPOSED SEWER
- PROPOSED WATER
- EXISTING WATER
- EXISTING SEWER
- STORM DRAIN DRAINAGE DIVIDE
- SWM FACILITY DRAINAGE DIVIDE
- ROOFDRAIN DRAINAGE DIVIDE
- NON-ROOFTOP DISCONNECTION
- PERMEABLE PAVEMENT
- PALUSTRINE OPEN WATER RESOURCE

PROJECT: Trotter's Retreat DATE: 3/8/2023
PRACTICES AND SIZING
 Pe: 1.72 inches

FACILITY SUMMARY TABLE

FACILITY	Drainage Area (sf)	Impenous (SF)	I (%)	Rv	ESDv (cf)	75% Ponding (cf)	Ponding Volume	Pe Treated
MB-1	24454	10243	42%	0.427	1495	1121	1214 cf	1.86
MB-2	23585	5985	25%	0.278	940	705	777 cf	1.89
MB-3	20357	2636	13%	0.167	485	364	493 cf	2.33
MB-4	10298	10298	44%	0.442	1495	1121	1141 cf	1.75
MB-5	27974	6576	24%	0.262	1048	796	891 cf	1.95
MB-6	13613	2564	19%	0.220	428	321	328 cf	1.76
MB-7	30937	15153	49%	0.491	2174	1631	1647 cf	1.74
MB-8	37621	8145	22%	0.245	1319	989	1009 cf	1.75
MB-9	5014	1966	39%	0.403	289	217	236 cf	1.87
MB-10	20085	12685	63%	0.618	1779	1334	1415 cf	1.82
						TOTAL MBR Treatment	9150 cf	
DRYWELLS:						Quantity:	54	7560 cf
Permeable Pavement Areas:						Quantity:	6	497 cf

The facilities are privately owned and maintained.
 All MBR facilities will include 25% storage below the underdrain level for recharge volume

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/12/23

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 4/13/23

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
 3300 NORTH RIDGE ROAD SUITE 140 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-CIVLENGINEERING.COM

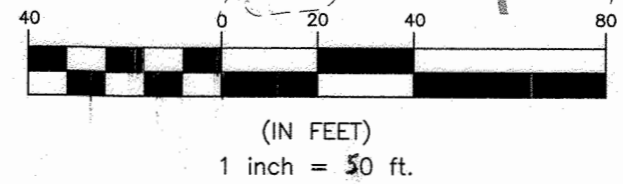
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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28376, Expiration Date: 01-01-2025.

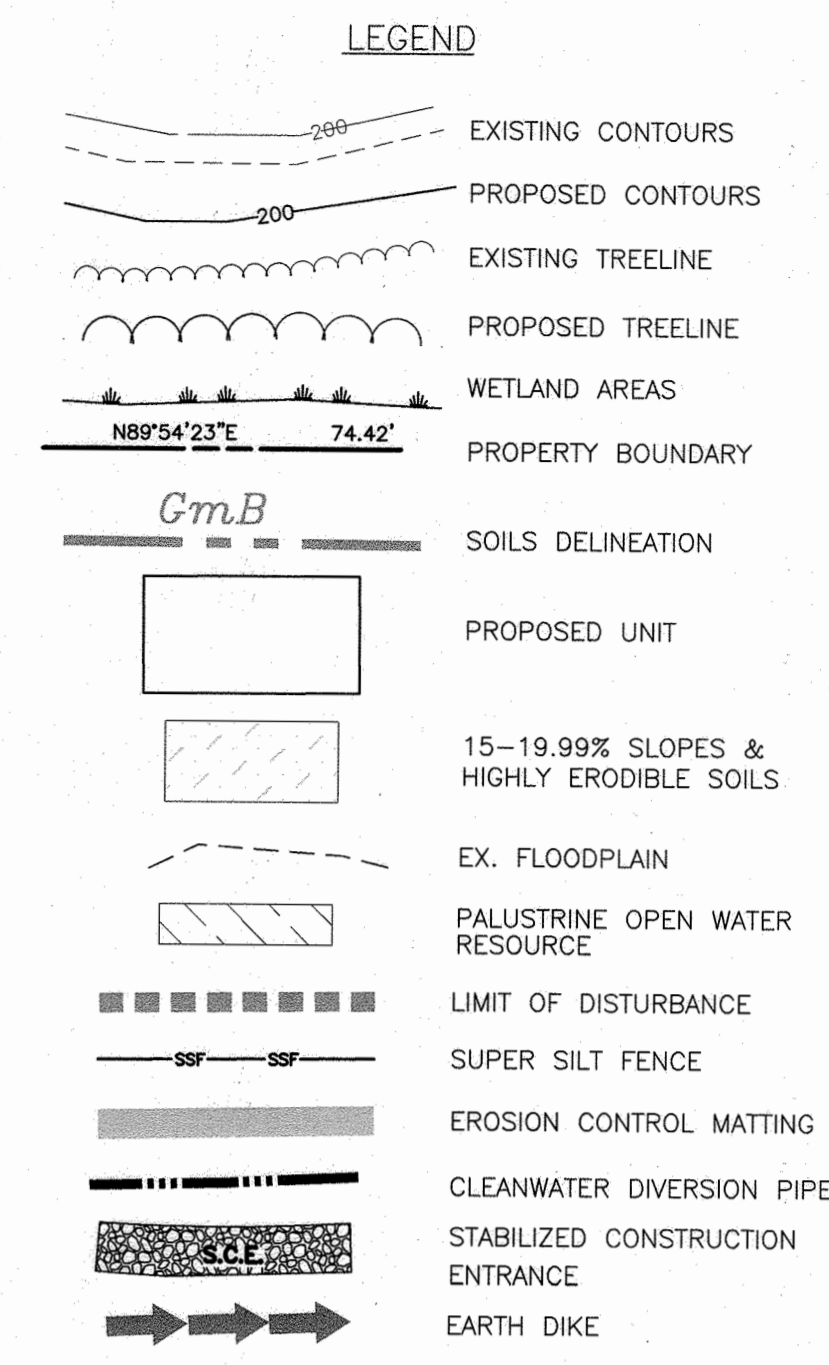
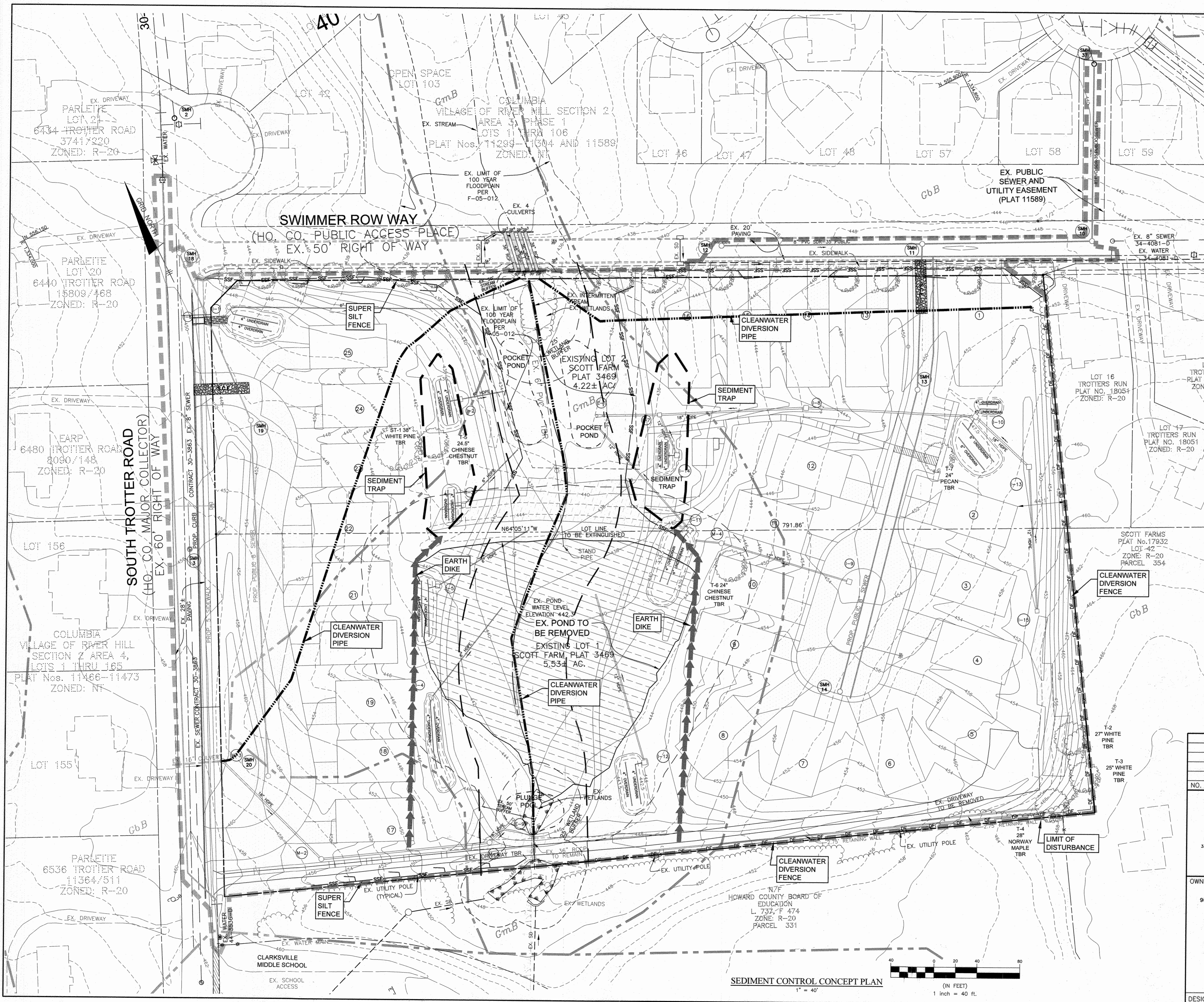
OWNER/DEVELOPER:
 SOUTH TROTTER LLC
 9693 GERWIG LANE, SUITE L
 COLUMBIA, MD 21046
 410-792-2565

TROTTER'S RETREAT
 A RESUBDIVISION OF
 SCOTT PROPERTY, LOTS 1 AND 2
 TAX MAP: 35 GRID: 20 PARCEL: 338
 ZONED: R-20
 ELECTION DISTRICT NO. 5th HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

DATE: MARCH 2023 BEI PROJECT NO. 3056
 SCALE: AS SHOWN SHEET 2 OF 3





- NOTES:**
- THIS SEDIMENT CONTROL PLAN IS CONCEPTUAL IN NATURE. THE CONSTRUCTION PLAN WILL NEED TO IMPLEMENT A MULTI-PHASE EROSION CONTROL PLAN, INTEGRATING THE STREAM RESTORATION PLAN. THE DESIGN FOR THE STREAM RESTORATION IS NOT COMPLETE.
 - CLEANWATER DIVERSION PIPES WILL NEED TO BE ADJUSTED AND RELOCATED AS SITE GRADING PROGRESSES, TO MAINTAIN POSITIVE FLOW IN WET WEATHER EVENTS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/18/23 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4/18/23 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 3300 NORTH RIDGE ROAD SUITE 140 ELICOTT CITY, MARYLAND 21043
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STATE OF MARYLAND PROFESSIONAL ENGINEER
 BEI-AAM 28376
 2023.03.16 14:22:15

OWNER/DEVELOPER:
 SOUTH TROTTER LLC
 9693 GERWIG LANE, SUITE L
 COLUMBIA, MD 21046
 410-792-2565

TROTTER'S RETREAT
 A RESUBDIVISION OF
 SCOTT PROPERTY, LOTS 1 AND 2

TAX MAP: 35 GRID: 20 PARCEL: 338
 ELECTION DISTRICT NO. 5th HOWARD COUNTY, MARYLAND

CONCEPT SEDIMENT CONTROL PLAN

DATE: MARCH 2023 BEI PROJECT NO. 3056
 SCALE: AS SHOWN SHEET 3 OF 3

SEDIMENT CONTROL CONCEPT PLAN
 1" = 40'
 (IN FEET)
 1 inch = 40 ft.