

GENERAL NOTES

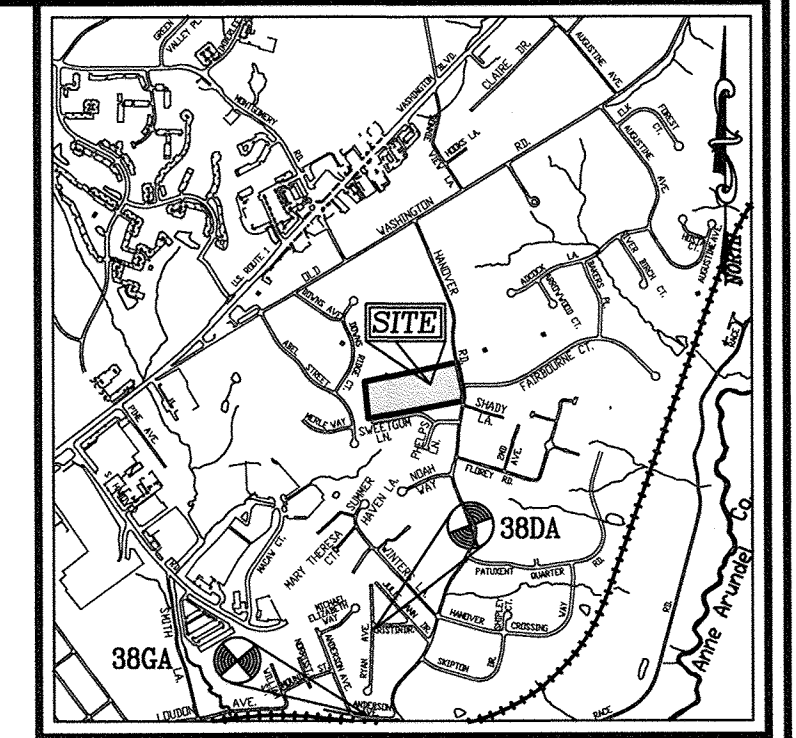
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY VOGEL ENGINEERING + TIMMONS GROUP, PERFORMED IN MARCH, 2018. OFFSITE TOPOGRAPHY ARE FROM SDP-14-012 AND HOWARD COUNTY GIS.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY VOGEL ENGINEERING + TIMMONS GROUP, DATED MARCH, 2018.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 38DA AND 38GA WERE USED FOR THIS PROJECT.
- THE SUBJECT PROPERTY IS ZONED "R-12" IN ACCORDANCE WITH THE 10/16/2013 COMPREHENSIVE ZONING PLAN AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/23/03 PER COUNCIL BILL 75-2003.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER FOR THIS PROJECT IS TO BE SERVICE CONNECTION FROM CONTRACTS NO.44-0906-D AND 14-4348-D, AND SEWER FOR THIS PROJECT IS TO BE SERVICE CONNECTION OF CONTRACTS NO. 650-S AND 14-4348-D.
- THERE ARE NO FLOODPLAINS ON THE PROPERTY.
- STEEP SLOPES OVER 20,000 SF CONTIGUOUS ARE SHOWN HEREON.
- THE FOREST CONSERVATION OBLIGATION WILL BE ADDRESSED WITH THE FINAL SUBDIVISION PLAN.
- IN A REPORT/PLAN TITLED "WETLAND, FOREST STAND DELINEATION & PRELIMINARY FOREST CONSERVATION PLAN REPORT" PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 25, 2018 AND MR. CANOLES IDENTIFIED THE ONSITE FOREST, WETLANDS AND STREAMS. MR. CANOLES NOTED 12 SPECIMEN TREES WITHIN THE SITE.
- A GEOTECHNICAL STUDY WILL BE PROPOSED IN CONJUNCTION WITH THE PRELIMINARY PLAN.
- HANOVER ROAD IS A MINOR COLLECTOR.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETERIES ON THIS PROPERTY. THERE ARE TWO EXISTING STRUCTURES ON THIS SITE TO BE REMOVED: THE HOUSE AT 6150 HANOVER ROAD (TO BE REMOVED) AND HISTORIC SITES INVENTORY AS 10-751, THE TAYLOR HOUSE, AND DATED TO THE 1870s.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIOTENTION FACILITIES (M-7) AND DRYWELL (M-5). THESE FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION 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 PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PROCESS. 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 REVISION PROCESS.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT GRANT APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME. THE FINAL PLAN SHALL INCLUDE A SEQUENCE OF CONSTRUCTION WHICH SHALL DETAIL SEDIMENT & EROSION CONTROLS AND ADDRESS THE PROJECT TEMPORARY STORMWATER MANAGEMENT REQUIREMENTS.
- WP-19-117 ALLOWS AN ALTERNATIVE COMPLIANCE TO SECTIONS 16.120(b)(4)(v), 16.121(e)(1), and 16.1202(g)(7) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE ALTERNATIVE COMPLIANCE WAS SUBMITTED TO THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING ON JUNE 11, 2019 AND APPROVED IN A LETTER DATED JUNE 20, 2019. THE CONDITIONS IN THE APPROVAL LETTER ARE AS FOLLOWS:
 - ACCESS TO OPEN SPACE LOT 24 SHALL BE PROVIDED BY THE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 13-18 AND BY THE PROPOSED PUBLIC DRAINAGE & UTILITY EASEMENT ON LOT 12. A NOTE SHALL BE ADDED TO THE SKETCH PLAN (S-19-002) AND THE FINAL PLAN INDICATING THAT HOWARD COUNTY WILL NOT BE RESPONSIBLE FOR MAINTENANCE OF THE SHARD DRIVEWAY WITHIN THE USE-IN-COMMON ACCESS EASEMENT.
 - THE MINIMUM PUBLIC ROAD FRONTAGE IS HEREBY REDUCED TO 22.9' FOR OPEN SPACE LOT 21 AND TO 35.8' FOR OPEN SPACE LOT 23, AS REQUESTED.
 - THE MINIMUM PUBLIC ROAD FRONTAGE FOR OPEN SPACE LOTS 24, 26, 27 & 28 IS HEREBY REDUCED TO ZERO, AS REQUESTED. A PRIVATE ACCESS EASEMENT SHALL BE PROVIDED FOR THESE LOTS ON THE SKETCH PLAN AND FINAL PLAN. THE EASEMENT AGREEMENTS FOR THE PROPOSED ACCESS EASEMENTS SHALL INCLUDE LANGUAGE REFERENCING ACCESS FOR MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES.
 - SIGNAGE AND/OR BOLLARDS SHALL BE INSTALLED TO DELINEATE THE ACCESS FOR OPEN SPACE LOTS 24, 26 AND 27. DETAILS SHALL BE PROVIDED ON THE FINAL ROAD CONSTRUCTION PLAN.
 - OPEN SPACE LOTS 19, 20, 22, 25 & 29 SHALL MEET THE MINIMUM PUBLIC ROAD FRONTAGE REQUIREMENTS IN ACCORDANCE WITH SECTION 16.121(e).
 - THE REMOVAL OF THE NINE SPECIMEN TREES (ST #'S 1-6, 8, 10 & 11) IS PERMITTED AS SHOWN ON THE PLAN. EXCEPT THE REMOVAL OF ONE ADDITIONAL SPECIMEN TREE IS NOT PERMITTED UNDER THIS ALTERNATIVE COMPLIANCE REQUEST.
 - THE DEVELOPER SHALL PLANT EIGHTEEN 3" MINIMUM-CALIPER NATIVE SHADE TREES ONSITE IN ADDITION TO THE REQUIRED PERIMETER LANDSCAPING TO MITIGATE THE REMOVAL OF THE NINE SPECIMEN TREES. IT IS RECOMMENDED THAT THE TREES BE PLANTED WITHIN THE OPEN SPACE LOTS TO ENSURE LONG-TERM PROTECTION. REFERENCE THE ADDITIONAL TREES ON S-19-002 AND INCLUDE PLANTING DETAILS ON ALL SUBSEQUENT SUBDIVISION AND DEVELOPMENT PLANS. THESE TREES WILL BE BROWED ALONG WITH THE REQUIRED PERIMETER LANDSCAPING AS PART OF THE FINAL SUBDIVISION PLAN.

ENVIRONMENTAL CONCEPT PLAN

GRACE MEADOWS

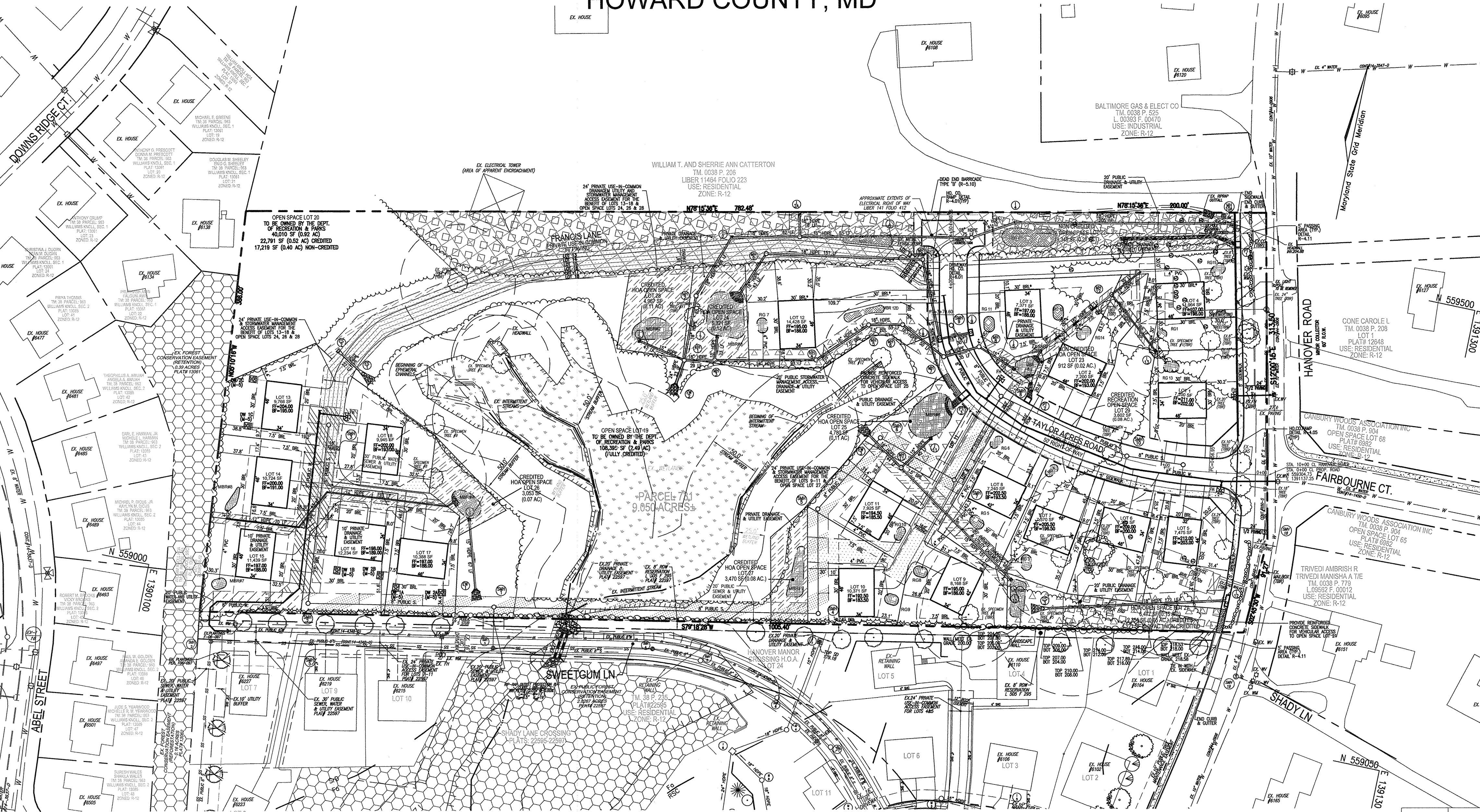
LOTS 1 - 18 AND OPEN SPACE LOTS 19 - 29
A SUBDIVISION OF TAX MAP 38 - PARCEL 731
HOWARD COUNTY, MD

BENCHMARKS
HOWARD COUNTY BENCHMARK - 38DA
N 529044.94 E 1350855.03 ELEV.: 337.61
HOWARD COUNTY BENCHMARK - 38GA
N 530494.49 E 1350872.35 ELEV.: 312.28



VICINITY MAP
SCALE: 1"=2,000'
ADC MAP COORDINATE: PAGE: 35 BLOCK: E3

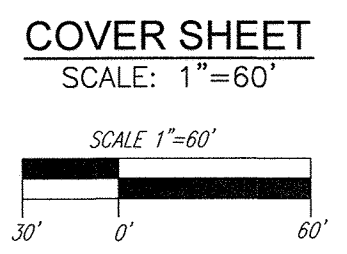
- LEGEND**
- EXISTING CURB AND GUTTER
 - CURB AND GUTTER
 - EXISTING LIGHT POLE
 - EXISTING UTILITY POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - APPROXIMATE EXTENTS OF ELECTRICAL RIGHT OF WAY LIBER 141 FOLIO 412
 - SIDEWALK
 - EXISTING TREELINE
 - TREELINE
 - STORM DRAIN
 - STORM DRAIN INLET
 - EX. FOREST CONSERVATION EASEMENT
 - EX. WETLANDS
 - EX. WETLAND BUFFER
 - EX. STREAM BUFFER
 - EX. STREAM BUFFER
 - LOT LINES
 - ACCESS EASEMENTS
 - 20' PUBLIC WATER & UTILITY EASEMENT
 - 20' PUBLIC SEWER & UTILITY EASEMENT
 - 30' PUBLIC WATER, SEWER & UTILITY EASEMENT
 - PUBLIC DRAINAGE & UTILITY EASEMENT
 - PRIVATE DRAINAGE & UTILITY EASEMENT
 - NON-CREDITED OPEN SPACE



OWNER/DEVELOPER
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ENVIRONMENTAL SITE DESIGN NARRATIVE:

- MOST OF THE ENVIRONMENTAL AREAS FOR THIS SITE ARE LOCATED IN THE CENTRAL PORTION INCLUDING AN INTERMITTENT STREAM AND NON-TIDAL WETLANDS. IN THE NORTHWEST CORNER OF THE SITE, THERE ARE STEEP SLOPES GREATER THAN 25%. THERE IS APPROXIMATELY 6.70 AC. OF FOREST ON SITE. DISTURBANCES TO ENVIRONMENTAL FEATURES AND NATURAL RESOURCES WILL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE.
- THE SITE NATURALLY SLOPES FROM NORTH-WEST TO SOUTH-EAST ON THE WEST SIDE OF THE PROPERTY AND EAST TO WEST ON THE EAST SIDE OF THE PROPERTY. THE SITE HAS BEEN DESIGNED TO MAINTAIN THE NATURAL DRAINAGE PATTERNS, WITH NO DRAMATIC CHANGES TO THE NATURAL DRAINAGE.
- THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT TO THE MAXIMUM EXTENT PRACTICABLE (MEP). THE RESULTS OF THE ENVIRONMENTAL SITE DESIGN FOR THIS PROJECT WILL REFLECT "WOODS IN GOOD CONDITION". THE ESD CONCEPT INCLUDES THE USE OF MICRO-BIOTENTION FACILITIES (M-6), RAIN GARDENS (M-7), AND DRYWELLS (M-5).
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PROPOSED SEDIMENT TRAPS, EARTH DIKES, CLEAR WATER DICES, SUPER AND STANDARD SILT FENCE PERIMETER CONTROLS. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT DURING THE FUTURE SITE DEVELOPMENT PLAN PHASE OF THE PROJECT.
- STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF MICRO-BIOTENTION FACILITIES (M-6), RAIN GARDENS (M-7), AND DRYWELLS (M-5). THE PROPOSED PRACTICES HAVE BEEN MAXIMIZED TO THE EXTENT PRACTICAL. THE CALCULATED RAINFALL TARGET (P%) FOR THIS PROJECT IS 1.60". THE TOTAL RUNOFF VOLUME (ESD) REQUIRED IS 9,891 CF. TOTAL PROVIDED = 12151 CF.
- AN ALTERNATIVE COMPLIANCE REQUEST FOR REMOVAL OF SPECIMEN TREES IS REQUIRED IN ORDER FOR THE PROPOSED DESIGN TO BE DEVELOPED. SUBMISSION OF THE ALTERNATIVE COMPLIANCE REQUEST WILL OCCUR AT THE SKETCH PLAN STAGE. SIGNIFICANT DESIGN CHANGES MAY OCCUR BASED ON THE REVIEW OF THE SKETCH PLAN AND THE ALTERNATIVE COMPLIANCE REQUEST.



SITE ANALYSIS DATA CHART

TOTAL PROJECT AREA:	9.05 AC.
TOTAL NET AREA:	8.54 AC.
AREA OF WETLANDS AND WETLAND BUFFERS:	1.84 AC.
AREA OF FLOODPLAIN:	0.00 AC.
AREA OF FOREST:	6.70 AC. (REFER TO FSD)
AREA OF MODERATE SLOPES (15% TO 24.99%):	1.00 AC.
AREA OF STEEP SLOPES (25% OR GREATER):	0.51 AC. (WITHIN BOUNDARY)
ERODIBLE SOILS:	9.05 AC.
LIMIT OF DISTURBED AREA:	6.50 AC.
PROPOSED USES FOR SITE AND STRUCTURES:	RESIDENTIAL
GREEN OPEN AREA:	7.11 AC. (OPEN AND ENVIRONMENTAL)
PROPOSED IMPERVIOUS AREA:	84,385 SF OR 1.94 AC.
PRESENT ZONING DESIGNATION:	R-12
DPZ FILE REFERENCES:	N/A

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10.2.19 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 9/30/19 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 4
ESD CONCEPT PLAN	2 OF 4
STORMWATER MANAGEMENT DRAINAGE AREA MAP	3 OF 4
STORMWATER MANAGEMENT DRAINAGE AREA NOTES AND DETAILS	4 OF 4

ENVIRONMENTAL CONCEPT PLAN

COVER SHEET

GRACE MEADOWS
LOTS 1 - 18 AND OPEN SPACE LOTS 19 - 29
A SUBDIVISION OF TAX MAP 38 - PARCEL 731

TAX MAP 38 BLOCK 09
1ST ELECTION DISTRICT

ZONED R-12
PARCEL 731
HOWARD COUNTY, MARYLAND

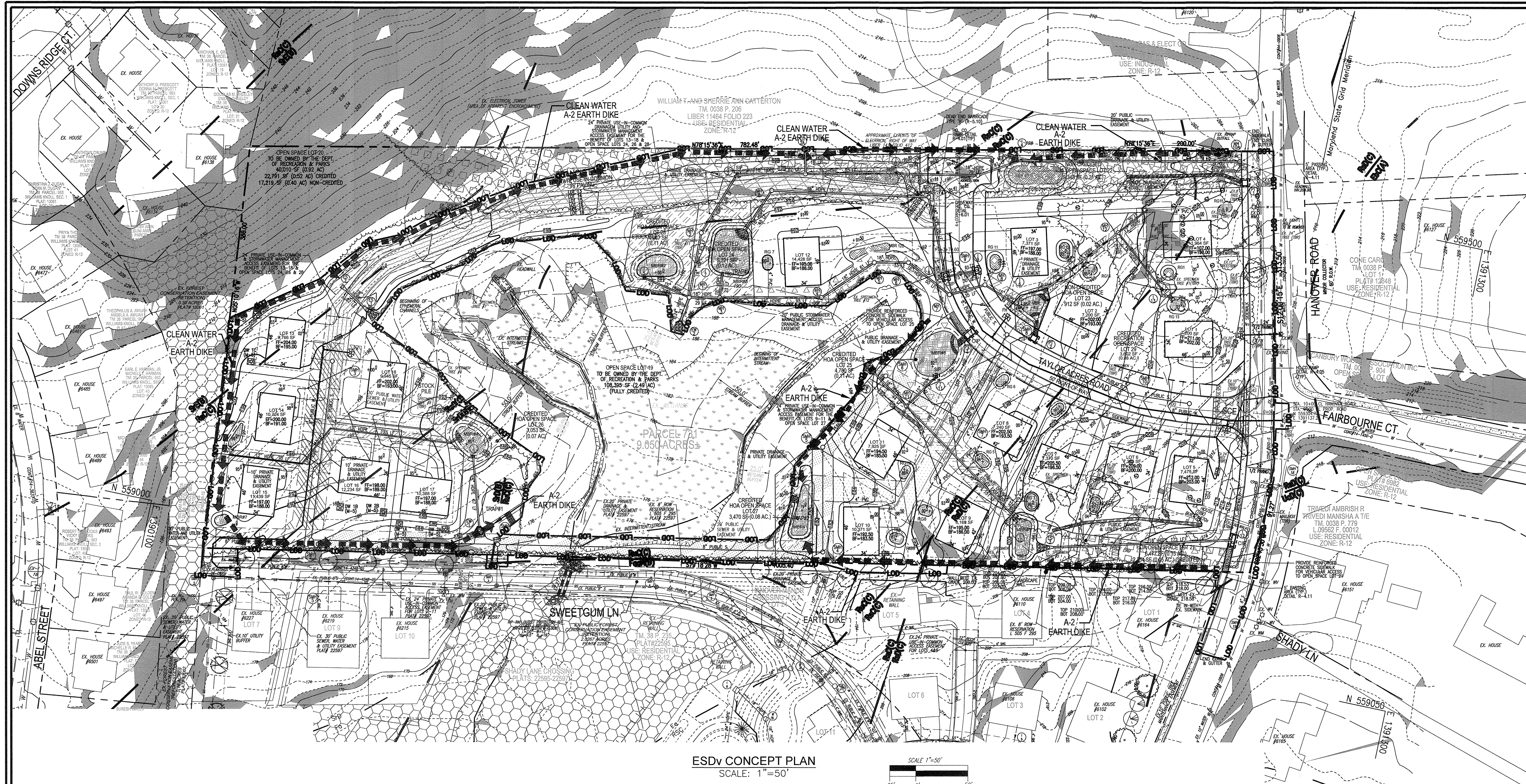
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: LAG/KC
CHECKED BY: RHV
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 40077

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE 09-27-2029

1 SHEET OF 4

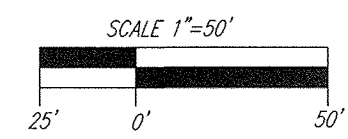
ROBERT H. VOGEL, PE No.16193



LEGEND

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
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	EXISTING SANITARY MANHOLE
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	EXISTING CLEANOUT
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	EXISTING WATER LINE
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	MICRO-BORETENTION
	PROPOSED SIDEWALK
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED STORM DRAIN
	DRAIN INLET
	EX. FOREST CONSERVATION EASEMENT
	APPROXIMATE EXTENT OF ELECTRICAL RIGHT OF WAY LIBER 141 FOLD 412
	ACCESS EASEMENTS
	20' PUBLIC WATER & UTILITY EASEMENT
	20' PUBLIC SEWER & UTILITY EASEMENT
	30' PUBLIC WATER, SEWER & UTILITY EASEMENT
	EX. WETLANDS
	EX. WETLAND BUFFER
	EX. STREAM BUFFER
	SILT FENCE
	SUPER SILT FENCE
	CURB INLET PROTECTION
	STANDARD INLET PROTECTION
	LIMIT OF DISTURBANCE
	STABILIZED CONSTRUCTION ENTRANCE
	NRCS/NCE/HSCD STEEP SLOPES (>20%)
	CLEAN DIKE SWALE
	PUBLIC DRAINAGE & UTILITY EASEMENT
	PRIVATE DRAINAGE & UTILITY EASEMENT
	NON-CREDITED OPEN SPACE

ESDv CONCEPT PLAN
SCALE: 1"=50'



OWNER/DEVELOPER
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Specimen Tree Chart

Key (X#)	Species	Size (in. dbh)	CRZ (feet radius)	Comments	Action
1	Tulip poplar	31.5	47.25		TO BE REMOVED
2	Red maple	32	48		TO BE REMOVED
3	English walnut	42.5	63.75	poor, severe trunk rot	TO BE REMOVED
4	Chestnut oak	50.5	75.75	fair, storm damage	TO BE REMOVED
5	Chestnut oak	51	76.5	fair, storm damage, trunk rot	TO BE REMOVED
6	Chestnut oak	33.5/31	50.25	twin stems at base	TO BE REMOVED
7	White oak	31	46.5		TO BE REMOVED
8	White oak	34	51	poor trunk rot	TO BE REMOVED
9	Tulip poplar	31	46.5		TO BE REMOVED
10	Black oak	37	55.5		TO BE REMOVED
11	Tulip poplar	34.5	51.75		TO BE REMOVED
12	Tulip poplar	37.5	56.25		TO BE REMOVED

MAPPED SOILS TYPES

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	Kw	STEEPSLOPE	WATER
Ts	FALLSOUTH SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES	0.24	NO	
Rnc	RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES	C	NO	0.43	YES	
Rnd	RUSSETT FINE SANDY LOAM, 10 TO 15 PERCENT SLOPES	C	NO	0.43	YES	
Ruc	RUSSETT AND BELLSHILLE SOILS, 5 TO 10 PERCENT SLOPES	C	NO	0.43	YES	
Sie	SASSAPARAS AND CROOM SOILS, 5 TO 10 PERCENT SLOPES	B	NO	0.32	YES	
Sfd	SASSAPARAS AND CROOM SOILS, 10 TO 15 PERCENT SLOPES	B	NO	0.37	YES	
Lud	URBAN LAND-CHILLUM-BELLSHILLE COMPLEX, 5 TO 15 PERCENT SLOPES	C	NO	-	NO	

NOTE:
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY.
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K: K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE: LOCATE STOCKPILE AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 9/30/19
CHIEF, DIVISION OF LAND DEVELOPMENT

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN

ESDv CONCEPT PLAN

GRACE MEADOWS
LOTS 1-18 AND OPEN SPACE LOTS 19-29
A SUBDIVISION OF TAX MAP 38 - PARCEL 731

TAX MAP 38, BLOCK 09
1ST ELECTION DISTRICT

ZONED R-12
PARCEL 731
HOWARD COUNTY, MARYLAND

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2 OF 4

DA #	PRACTICE	DA (SF)	ESDy (CF)
1	MICRO-BIoretentioN (M-5)	18267	1906
2	DRY WELL (M-5)	1564	134
3	DRY WELL (M-5)	1564	134
4	DRY WELL (M-5)	1564	134
5	MICRO-BIoretentioN (M-5)	19865	628
6	RAN GARDEN (M-7)	1952	171
7	RAN GARDEN (M-7)	1987	171
8	RAN GARDEN (M-7)	1951	171
9	MICRO-BIoretentioN (M-5)	19864	725
10	MICRO-BIoretentioN (M-5)	19747	1825
11	MICRO-BIoretentioN (M-5)	13028	508
12	RAN GARDEN (M-7)	1569	169
13	RAN GARDEN (M-7)	1377	167
14	RAN GARDEN (M-7)	2000	171
15	RAN GARDEN (M-7)	977	83
16	RAN GARDEN (M-7)	1497	189
17	MICRO-BIoretentioN (M-5)	3670	163
18	MICRO-BIoretentioN (M-5)	19595	705
19	MICRO-BIoretentioN (M-5)	10562	190
20	MICRO-BIoretentioN (M-5)	11084	880
21	RAN GARDEN (M-7)	1663	165
22	RAN GARDEN (M-7)	1967	128
23	RAN GARDEN (M-7)	1915	128
24	RAN GARDEN (M-7)	1874	153
25	RAN GARDEN (M-7)	1884	153
26	RAN GARDEN (M-7)	1877	129
27	RAN GARDEN (M-7)	1411	121
28	MICRO-BIoretentioN (M-5)	8412	417
29	MICRO-BIoretentioN (M-5)	18950	1203
30	MICRO-BIoretentioN (M-5)	7320	298

LEGEND	
	EXISTING CONTOUR
	SPOT ELEVATION
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
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	EXISTING FENCE
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	EXISTING VEGETATION (APPROXIMATE LOCATION)
	SIDEWALK
	EXISTING TREELINE
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	30' PUBLIC WATER, SEWER & UTILITY EASEMENT
	MICRO-BIoretentioN/ RAN GARDEN
	NON-ROOFTOP DISCONNECT
	APPROXIMATE EXTENT OF ELECTRICAL RIGHT OF WAY (SEE 14 FLOOR 412)
	MODERATE SLOPES (15% - 24.99%)
	STEEP SLOPE (>25%)
	DA# 14 DRAINAGE AREA
	DRAINAGE DIVIDE
	NON-CREDITED OPEN SPACE
	PUBLIC DRAINAGE & UTILITY EASEMENT
	PRIVATE DRAINAGE & UTILITY EASEMENT
	NON-CREDITED OPEN SPACE



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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION JP DATE: 10.2.19

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 9/30/19

MAPPED SOILS TYPES				
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	Kw
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RaC	RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES	C	NO	0.43
RhD	RUSSETT FINE SANDY LOAM, 10 TO 15 PERCENT SLOPES	C	NO	0.43
RuC	RUSSETT AND BELTSVILLE SOILS, 5 TO 10 PERCENT SLOPES	C	NO	0.43
SrE	SASPARUS AND CROOK SOILS, 15 TO 25 PERCENT SLOPES	B	NO	0.32
SrD	SASPARUS AND CROOK SOILS, 10 TO 15 PERCENT SLOPES	B	NO	0.37
UcD	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 5 TO 15 PERCENT SLOPES	C	NO	NO

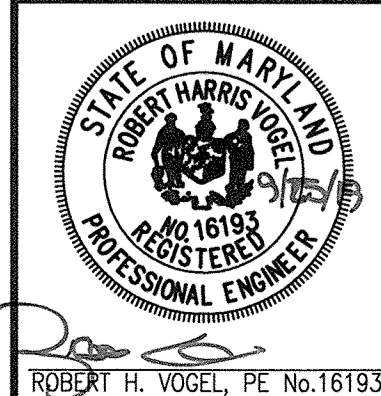
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SWM DRAINAGE AREA MAP
 SCALE: 1"=50'

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
STORMWATER MANAGEMENT
DRAINAGE AREA MAP
GRACE MEADOWS
 LOTS 1 - 18 AND OPEN SPACE LOTS 19 - 28
 A SUBDIVISION OF TAX MAP 38 - PARCEL 731
 ZONED R-12
 HOWARD COUNTY, MARYLAND

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 DRAWN BY: LAG/KG
 CHECKED BY: RHY
 DATE: SEPTEMBER 2019
 SCALE: AS SHOWN
 W.O. NO.: 40077

PROFESSIONAL CERTIFICATE
 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. 16193, EXPIRATION DATE: 09-27-2020

3 SHEET OF 4

