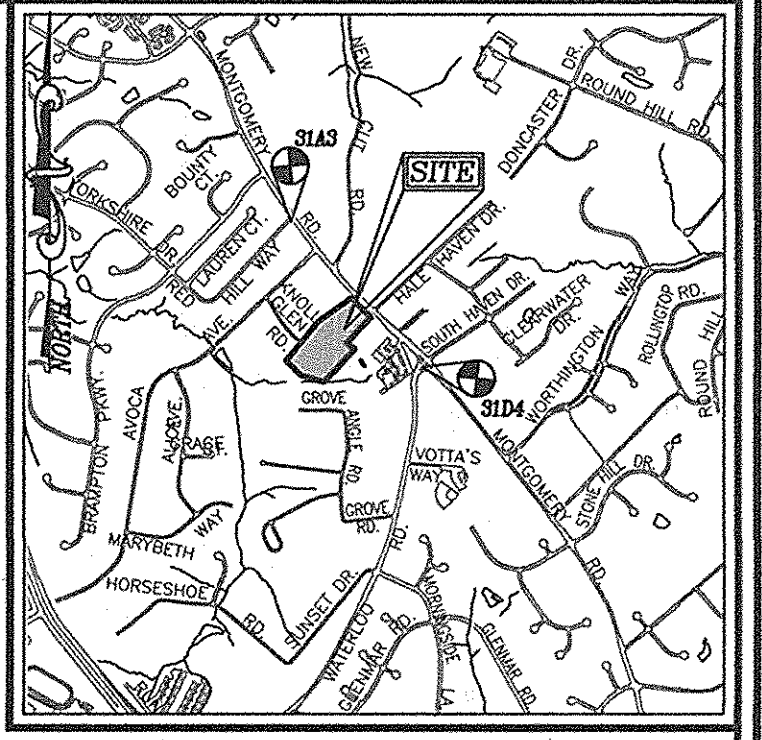


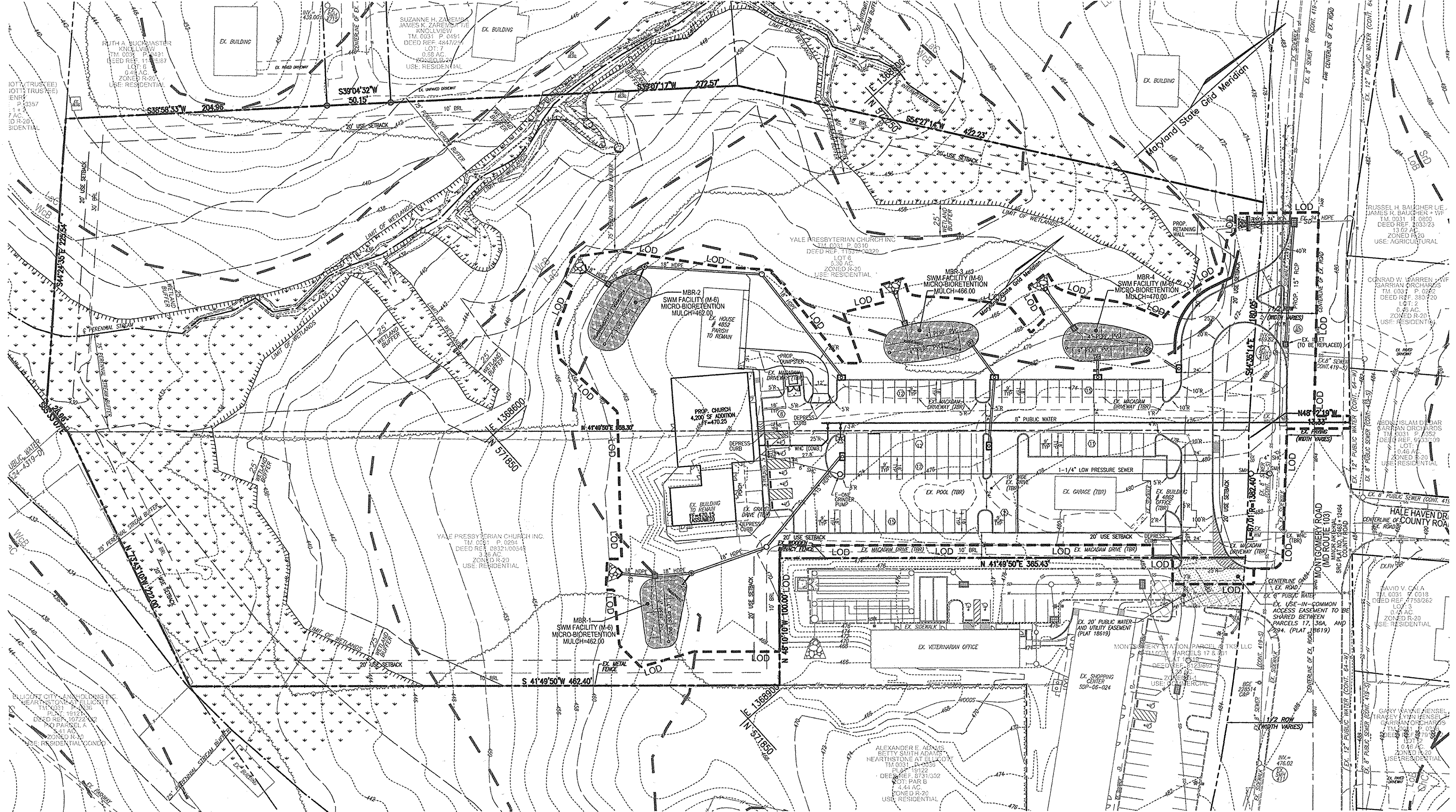
ENVIRONMENTAL CONCEPT PLAN YALE PRESBYTERIAN CHURCH 4852 AND 4862 MONTGOMERY ROAD PARCEL 294, L. 8321/F. 546: PARCEL 310, L. 1153/F. 329 RELIGIOUS FACILITY

SITE DATA
 LOCATION: ELLICOTT CITY, MD.; TAX MAP 31, BLOCK 7, PARCEL 294 AND 310
 2ND ELECTION DISTRICT
 PRESENT ZONING: R-20
 PARCEL AREA: 8.56 AC.
 DPZ REFERENCES: PLAT 22168, BA 12-012 C
 USE OF STRUCTURES: RELIGIOUS FACILITY
 TOTAL BUILDING COVERAGE: 8,592 SF (4,200 SF NEW ADDITION / REMAINDER EXISTING)
 =0.197 AC. OR 2.30% OF GROSS AREA
 PAVED PARKING LOT/AREA ON SITE: 52,050 SF (1.19 AC. OR 13.96% OF GROSS AREA)
 AREA OF LANDSCAPE ISLAND: 1278 SF (0.03 AC. OR 0.34% OF GROSS AREA)
 LIMIT OF DISTURBED AREA (DEVELOPMENT AREA FOR FULL BUILD-OUT): 129,532 SF/2.97 AC
 WETLANDS ON SITE: 1.54 AC.
 WETLAND BUFFERS ON SITE: 2.78 AC.
 STREAMS AND THEIR BUFFERS ON SITE: 2.39 AC.
 AREA OF ON-SITE 100 YEAR FLOODPLAIN: 0.00 AC.
 AREA OF EXISTING FOREST ON SITE: 3.20 AC.
 AREA OF STEEP SLOPES (GREATER THAN 20,000 SF CONTIGUOUS): 0.00 AC.
 AREA OF ERODIBLE SOILS: 2.40 AC.
 AREA MANAGED BY ESDV (FULL BUILD-OUT) 2.97 AC.
 *IMPERVIOUS AREA: 1.39 AC.
 *GREEN AREA: 1.58 AC.

BENCHMARKS
 HOWARD COUNTY STATION 31A3
 N 573217.88 E 1368237.66
 ELEVATION 486.96
 HOWARD COUNTY STATION 31D4
 N 587380.459 E 1,352,603.488
 ELEVATION 494.50



VICINITY MAP
 SCALE: 1"=2,000'
 ADC MAP : 16 F-2



LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE
	EXISTING FENCE
	CENTERLINE OF EXISTING STREAM
	PROPOSED DECODING
	PEDESTRIAN LIGHTING
	PROPOSED PARKING LOT LIGHTING
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED SIDEWALK
	PROPOSED TREE LINE
	PROPOSED CURB
	UNDEVELOPABLE AREA
	EXISTING 20' PUBLIC WATER AND UTILITY EASEMENT (PLAT 18619)
	EXISTING 30' PRIVATE USE-IN-COMMON
	BORING LOCATIONS
	TEST PIT LOCATIONS
	LIMIT OF DISTURBANCE/DEVELOPMENT AREA

SHEET INDEX

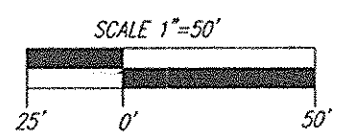
DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 3
GRADING, SEDIMENT, AND EROSION CONTROL PLAN AND SOILS MAP	2 OF 3
SWM DRAINAGE AREA MAP: SWM NOTES AND DETAILS	3 OF 3

OWNER/DEVELOPER
 YALE PRESBYTERIAN CHURCH INC.
 C/O PASTOR WOO YONG JUNG
 4862 MONTGOMERY ROAD
 ELLICOTT CITY, MD 21043
 PHONE: (301) 490-7032

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1899 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHICAL SURVEY BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 2012, AND HOWARD COUNTY GIS.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 2012.
- 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. 31AB AND 31D4 WERE USED FOR THIS PROJECT.
- THIS SUBJECT PROPERTY IS ZONED "R-20" IN ACCORDANCE WITH THE 10/06/13 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
- PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 64-W.
- PUBLIC SEWER AVAILABLE THROUGH CONTRACT NO. 419-S.
- THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS BEING PROVIDED BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO-BIORETENTION FACILITIES (M-6) TO ACCOMMODATE THE TOTAL ESD VOLUME REQUIRED. SWM FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED.
- THERE ARE NO SPECIMEN TREES LOCATED ON THE SUBJECT PROPERTY.
- NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY.
- FOREST STAND DELINEATION PLAN WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED AUGUST 21, 2013.
- WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED AUGUST 21, 2013. IMPACTS TO THE WETLAND BUFFER RESULTING FROM DRIVENY CONSTRUCTION WAS DETERMINED TO BE A NECESSARY DISTURBANCE BY THE DEPARTMENT OF PLANNING AND ZONING.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, WITHOUT OBTAINING NECESSARY WAIVERS AND PERMITS.
- PROPOSED INGRESS AND EGRESS LOCATION TO MD ROUTE 103 WAS REQUESTED BY MSHA (TO BE LOCATED AS FAR FROM THE EXISTING DRIVEWAY AS POSSIBLE). THE SECOND ACCESS WAS A CONDITION OF APPROVAL OF BA-12-012 C. THE MSHA ROUTE 103 ACCESS WAS CONFIGURED TO AVOID THE WETLAND BUFFER TO THE GREATEST EXTENT POSSIBLE.
- THERE IS NO 100-YR FLOODPLAIN WITHIN THE LIMITS OF THIS SITE.
- APPROVAL OF THIS 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 SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES 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 REVIEW PROCESS.
- REFERENCE GEOTECHNICAL REPORT PREPARED BY ECS MID-ATLANTIC, LLC DATED DECEMBER 13, 2013 FOR SUBSURFACE EXPLORATION TESTING AT BORINGS B-1 THROUGH B-4.

LAYOUT PLAN
 SCALE: 1"=50'



ENVIRONMENTAL SITE DESIGN NARRATIVE

- THIS PLAN PROPOSES THE DEVELOPMENT FOR THE CONDITIONAL USE OF A STRUCTURE USED PRIMARILY FOR RELIGIOUS ACTIVITIES. REFERENCE BA-12-012C, FILED PURSUANT TO SECTION 131.14.40 OF THE HOWARD COUNTY ZONING REGULATIONS, APPROVED SEPTEMBER 06, 2012.
- THERE ARE NO DISTURBANCES TO ENVIRONMENTAL FEATURES INCLUDING STREAMS, STREAM BUFFERS, WETLANDS, AND A MINIMAL NECESSARY DISTURBANCE TO WETLAND BUFFERS FOR THE CONSTRUCTION OF THE ENTRANCE DRIVE. THERE IS NO DFRM 100-YEAR FLOODPLAIN OR CONTIGUOUS STEEP SLOPES > 20,000 SF ON SITE. THERE IS SOME DISTURBANCE TO EXISTING WOODED RESOURCES PRESENT ON SITE, WHICH ARE NOT CONSIDERED FOREST STAND AND ARE ADDRESSED BY THE FOREST CONSERVATION PLAN.
- THE SITE SLOPES NATURALLY FROM EAST TO WEST AND THE SITE IS GRADED TO MAINTAIN THESE NATURAL FLOW PATTERNS.
- ENVIRONMENTAL SITE DESIGN (ESD) IS PROVIDED TO THE MAXIMUM EXTENT PRACTICABLE (MEP) BY THE REDUCTION OF IMPERVIOUS SURFACES THROUGH BETTER SITE DESIGN, AND FOUR (4) MICRO-BIORETENTION FACILITIES (M-6). THE MBR (M-6) WILL DISCHARGE INDEPENDENTLY TO THE ENVIRONMENTAL BUFFERS AT THE NORTH AND WEST SIDE OF THE SITE. THE PROPOSED ESD PRACTICES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PERIMETER CONTROLS, SILT FENCE, SUPER SILT FENCE, AND INLET PROTECTION. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- AS STATED IN #4 ABOVE, STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF FOUR (4) MICRO BIORRETENTION FACILITIES (M-6).
- A WAIVER REQUEST FOR NECESSARY DISTURBANCE TO THE WETLAND BUFFER WILL BE SUBMITTED UNDER SEPERATE COVER.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 5.5.16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 38 DATE

Chief, Division of Land Development 4-14-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE

ENVIRONMENTAL CONCEPT PLAN
COVER SHEET

YALE PRESBYTERIAN CHURCH
 4852 AND 4862 MONTGOMERY ROAD
 (PARCEL 294 - L. 8321/F. 546; PARCEL 310 - L. 1153/F. 329)
 RELIGIOUS FACILITY
 ZONED: R-20

TAX MAP 31, BLOCK 7, 2ND ELECTION DISTRICT PARCELS: 294 AND 310 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

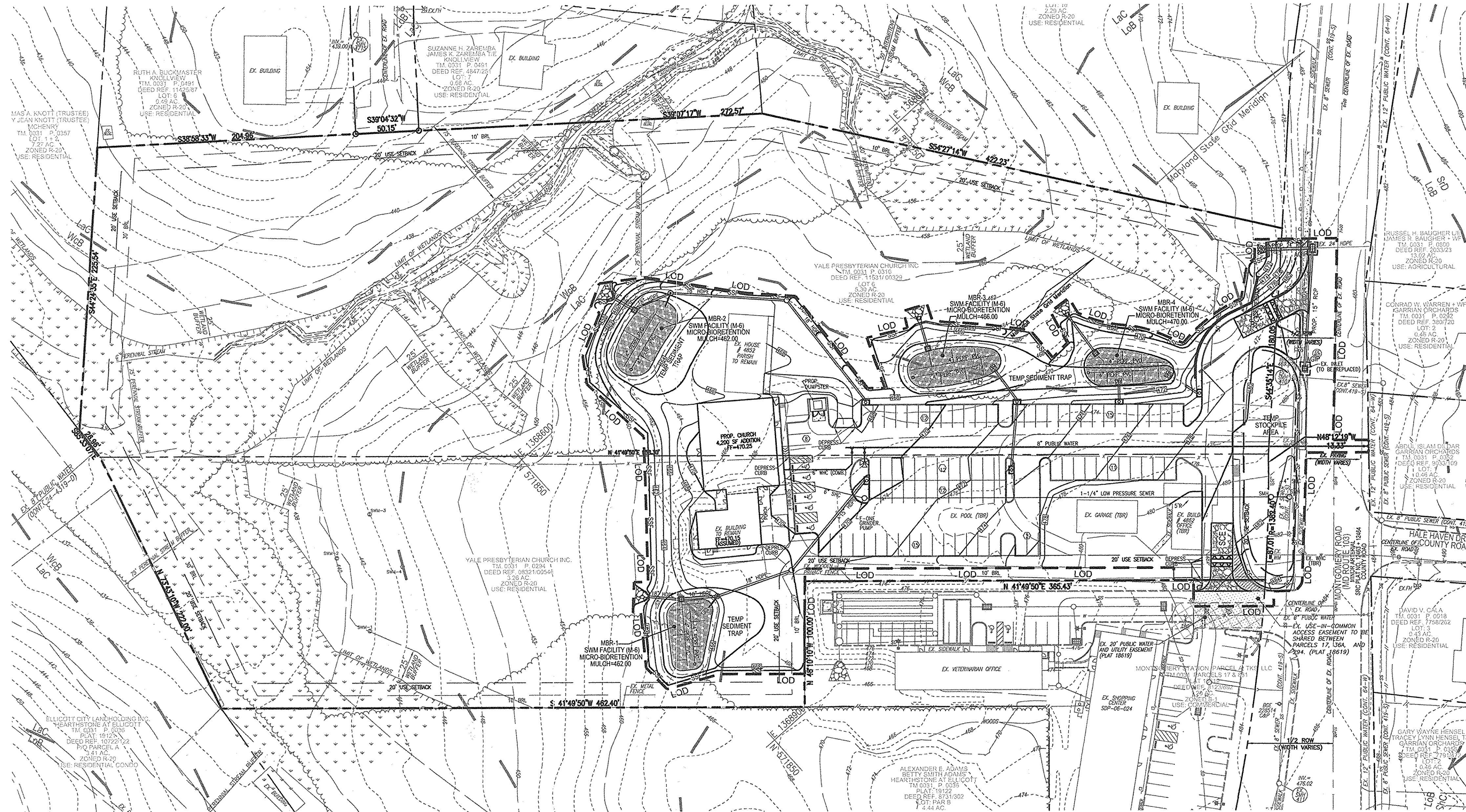
DESIGN BY: GAH
 DRAWN BY: GAH
 CHECKED BY: RHY
 DATE: FEBRUARY 2013
 SCALE: AS SHOWN
 W.O. NO.: 05-43

PROFESSIONAL CERTIFICATE

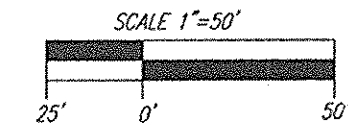
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 07-07-2018

1 SHEET OF 3

ECP-15-064



GRADING PLAN AND SOILS MAP
SCALE: 1"=50'



LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE
	EXISTING FENCE
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS
	CENTERLINE OF EXISTING STREAM
	PROPOSED DECORATIVE PEDESTRIAN LIGHTING
	PROPOSED PARKING LOT LIGHTING
	PROPOSED STORMDRAIN
	PROPOSED STORMDRAIN INLET
	PROPOSED SIDEWALK
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED SPOT ELEVATION
	PROPOSED TREE LINE
	PROPOSED CURB
	EXISTING 5' PUBLIC UTILITY EASEMENT (PLAT 15/35)
	EXISTING 20' PRIVATE DRIVEWAY & UTILITY EASEMENT (PLAT 22168)
	EXISTING 30' PRIVATE USE-IN-COMMON ACCESS EASEMENT TO BENEFIT PARCELS A & B (PLAT 22168)
	PROPOSED 20' PUBLIC WATER & UTILITY EASEMENT
	EXISTING STEEP SLOPES
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	AT GRADE INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE

HSCD NOTE:
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 PHASING AND ADDRESS THE PROJECT TEMPORARY STORMWATER MANAGEMENT REQUIREMENTS.

PROJECT: Yale Presbyterian **STORMWATER MANAGEMENT PRACTICE BREAKOUT**
DESIGNER: gah **ROBERT H. VOGEL ENGINEERING, INC.**
DATE: 02/12/16

ENVIRONMENTAL SITE DESIGN PRACTICE										
DRAINAGE AREA #	AREA TREATED	FACILITY NUMBER	PERMEABLE PAVEMENT	ADD UNDER PAVE	SHEETFLOW TO BUFFER (N-3)	LANDSCAPE INFILTRATION (M-3)	GRAVEL TRENCH (M-5)	CISTERN (M-1)	MICRO BIO RETENTION (M-7)	TOTAL ESDv VOLUME
1	23620	MBR #1	0	0	0	0	0	0	2184	2184
2	26469	MBR #2	0	0	0	0	0	0	2520	2520
3	19378	MBR #3	0	0	0	0	0	0	2517	2517
4	25847	MBR #4	0	0	0	0	0	0	2266	2266
TOTALS:			0	0	0	0	0	0	9487	9487

SITE ESDv REQ'd: 9365 CF +/-
*Micro-bioretenctions utilized in each subarea at the rate of 75%.
TOTAL ESDv PROVIDED (CF): 9,487
TOTAL AREA 95314 SF
2.19 AC

Yale Presbyterian Computation Summary by Subarea

DA	% IMPERV	Rv	DA	ESDv REQ	MINIMUM M	MAXIMUM VOLUME	VOLUME PROVIDED *	ESDv FACILITY TYPE	AREA SF	PERV AREA	IMP AREA
1A	38.43	0.40	0.33					SUBAREA MBR#1	14265	8783	5482
1B	86.16	0.83	0.21					SUBAREA MBR#1	9355	1295	8060
MBR-1	57.33	0.57	0.54	2005	1114	2897	2184	MICRO-BIORETENTION (M-7)	23620	10078	13542
2A	28.23	0.30	0.25					SUBAREA MBR#2	11015	7905	3110
2B	81.22	0.78	0.35					SUBAREA MBR#2	15454	2903	12551
MBR-2	59.17	0.58	0.61	2313	1285	3341	2520	MICRO-BIORETENTION (M-7)	26469	10808	15661
3A	72.83	0.71	0.32					SUBAREA MBR#3	13948	3789	10159
3B	82.06	0.79	0.12					SUBAREA MBR#3	5430	974	4456
MBR-3	75.42	0.73	0.44	2118	1177	3060	2517	MICRO-BIORETENTION (M-7)	19378	4763	14615
4A	43.35	0.44	0.33					SUBAREA MBR#4	14351	8130	6221
4B	57.14	0.56	0.26					SUBAREA MBR#4	11496	4927	6569
MBR-4	49.48	0.50	0.59	1921	1067	2774	2266	MICRO-BIORETENTION (M-7)	25847	13057	12790
Bypass	14.76	0.18	0.86				0		34232	29180	5052
TOTAL ESDv BY SUBAREA									9365	9487	61660
									2.97	1.56	1.42

*Micro-bioretenctions utilized in each subarea at the rate of 75%.

OWNER/DEVELOPER
YALE PRESBYTERIAN CHURCH INC.
C/O PASTOR WOO YONG JUNG
4862 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
PHONE: (301) 490-7032

ENVIRONMENTAL CONCEPT PLAN
GRADING, SEDIMENT, AND EROSION CONTROL PLAN, AND SOILS MAP
YALE PRESBYTERIAN CHURCH
4852 AND 4862 MONTGOMERY ROAD
(PARCEL 294 - L1821IF 546) PARCEL 110 - L1531IF 325)
RELIGIOUS FACILITY
ZONED: R-20
PARCELS: 294 AND 310
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
DESIGN BY: GAH
DRAWN BY: GAH
CHECKED BY: RHW
DATE: FEBRUARY 2013
SCALE: AS SHOWN
W.O. NO.: 05-43
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: 08-27-2014.
2 SHEET OF 3

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 5-5-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 2-14-16
CHIEF, DIVISION OF LAND DEVELOPMENT

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRC	HYDRC	HYDRC	K FACTOR	PROB	EROD
L0B LEODE- MONTALTO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	C	NO	NO	NO	0.30	NO	NO
L0C LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES	C	NO	NO	NO	0.28	YES	NO
W0B WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES, STONEY	C/D	YES	YES	YES	0.43	NO	YES

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

