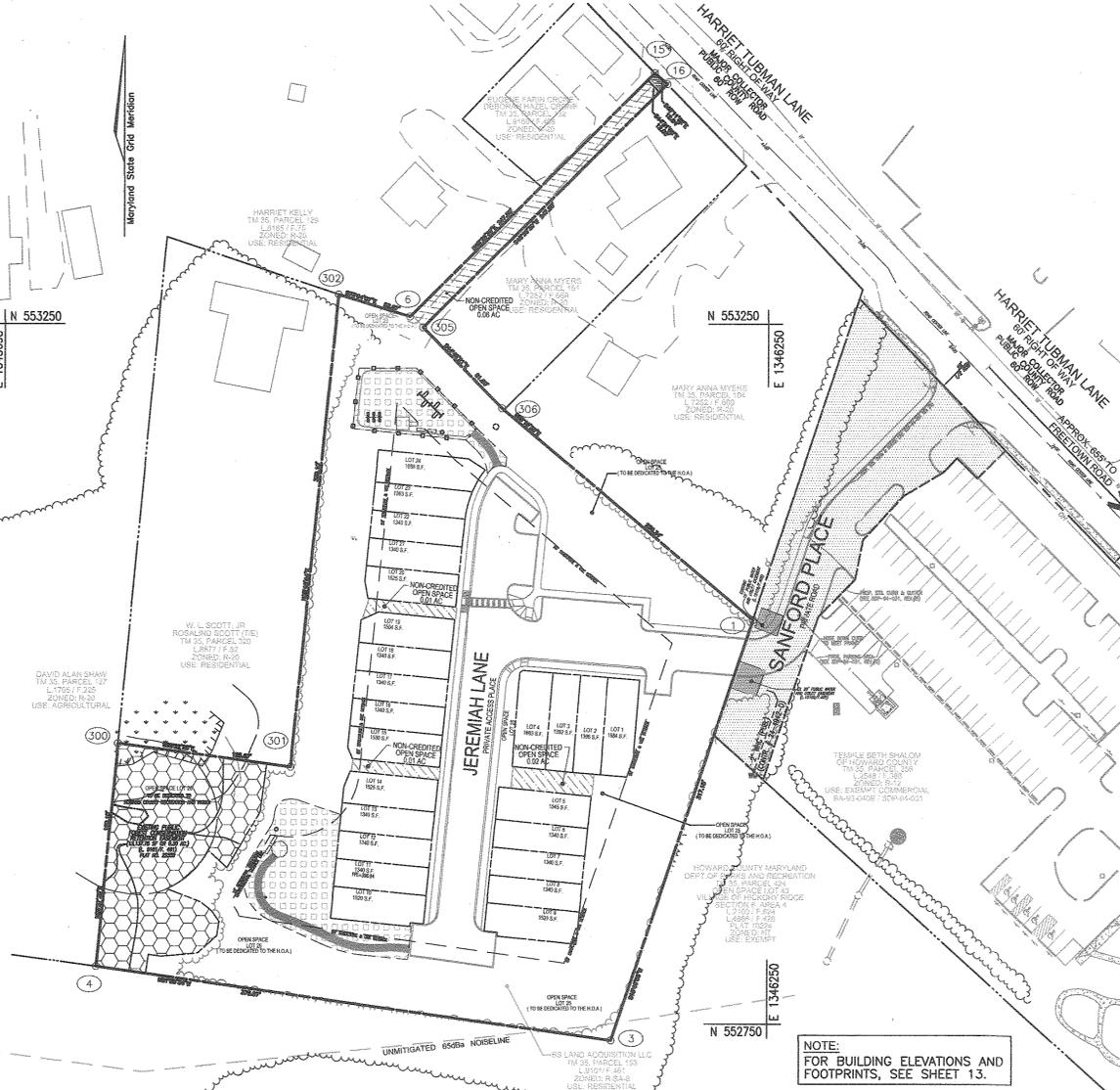


GENERAL NOTES

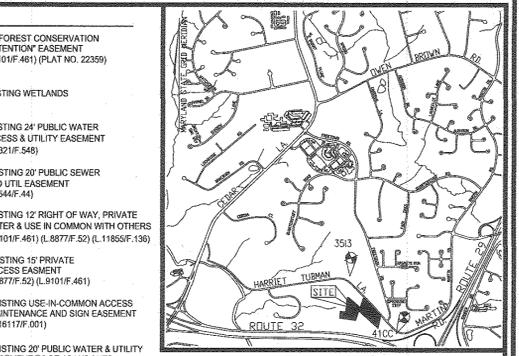
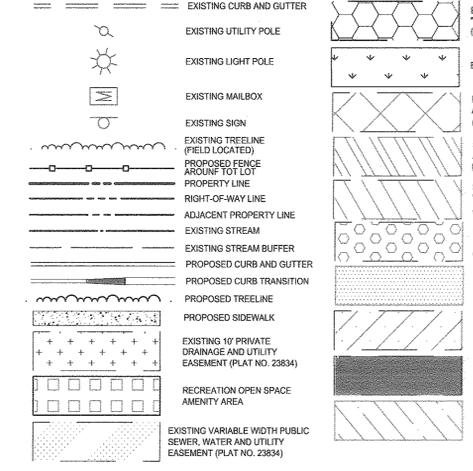
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.T.A. STANDARDS.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
MISS UTILITY: 1-800-257-7777
VERICON: 800-743-0343
BUREAU OF UTILITIES: 410-313-4900
A/R: 1-800-252-1133
B.G.E. (CONSTRUCTION SERVICES): 410-637-8713
B.G.E. (EMERGENCY): 410-685-0123
STATE HIGHWAY ADMINISTRATION: 410-531-5533
COLONIAL PIPELINE CO.: 410-795-1390
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND 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 BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS TAKEN FROM AN FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JULY, 2008.
- COORDINATES AND ELEVATIONS ARE BASED ON MARYLAND COORDINATE SYSTEM - NAD83(1983) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 3513 AND 41CC.
- THE PROPERTY LINES SHOWN HEREON IS BASED ON A FIELD-RUN BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JULY, 2008.
- ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- THE GEOTECHNICAL ENGINEER TO CONFIRM PAVING SECTION PRIOR TO CONSTRUCTION. ALL PAVING TO BE PAVING MINIMUM HOWARD COUNTY STANDARD P-2 UNLESS OTHERWISE NOTED.
- THE SUBJECT PROPERTY IS ZONED R-5A-8 IN ACCORDANCE WITH THE ZONING REGULATIONS EFFECTIVE ON OCT. 08, 2013, AND IS SUBJECT TO SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE OCT. 07, 2007 PER COUNCIL BILL 47-2007 & 48-2007. 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.
- WATER AND SEWER TO BE PUBLIC. PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 24-3265. PUBLIC SEWER AVAILABLE THROUGH CONTRACT NO. 30-3353.
- THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNER'S KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- THERE IS NO 100 YEAR FLOODPLAIN OR STEEP SLOPES AREAS ON THIS SITE.
- THE FOREST STAND DELINEATION AND LOCATION OF STREAMS, WETLANDS AND OTHER ENVIRONMENTAL FEATURES WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER, 2006, UPDATED DECEMBER 2008 AND FEBRUARY 2015.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.120 OF THE HOWARD COUNTY CODE FOR FOREST AFFORESTATION THROUGH THE ON-SITE RETENTION OF 0.30 ACRES (1,321.63SF) UNDER THE TERMS OF DEVELOPER AGREEMENT, SDP-08-083. THE REMAINING OBLIGATION OF 0.72 ACRES HAS BEEN SATISFIED THROUGH THE PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$23,522.40 (0.72 x 4,5560 x \$65) TO THE HOWARD COUNTY FOREST CONSERVATION FUND. THE FOREST CONSERVATION OBLIGATION REQUIREMENTS WERE PREVIOUSLY APPROVED UNDER SDP-08-083 (85 LANE) - MULTIPLE UNITS. THE NET TRACT AREA OF 5.0 ACRES INCLUDED ALL OF THE DEVELOPMENT OF PARCEL 153 (3.34 ACRES) AS WELL AS 1.65 ACRES OF ASSOCIATED IMPROVEMENTS ON PARCEL 256 (TEMPLE OF BETH SHALOM, SDP-04-031). THE FOREST CONSERVATION CREDIT FOR THE 1.65 AC HAS BEEN TRANSFERRED TO THIS SDP (SDP-16-002) FOR THE INTEGRATED DEVELOPMENT OF SANFORD PLACE AND THE TEMPLE BETH SHALOM.
- A NOISE STUDY WAS PREVIOUSLY PREPARED BY ROBERT H. VOGEL ENGINEERING AND APPROVED WITH SDP-08-083 DATED, SEPTEMBER 8, 2008. THE EXISTING NOISE CONTOUR LINE SHOWN 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 65 DBA NOISE EXPOSURE. THE 65 DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS 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.
- HARRIET TUBMAN LANE IS A PUBLIC ROAD COLLECTOR. PROPOSED STREETS SHALL BE PRIVATE.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS BEING PROVIDED BY THE USE OF ENVIRONMENTAL SITE DESIGN UTILIZING NON-STRUCTURAL AND MICRO-SCALE PRACTICES, INCLUDING MICRO-BIORETENTION FACILITIES TO ACCOMMODATE THE TOTAL ESC VOLUME REQUIRED. SWM FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A.
- TRASH AND RECYCLING COLLECTION TO BE PRIVATE.
- THE PROPOSED UNITS WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- NO SPECIMEN OR CHAMPION TREES WERE IDENTIFIED ON THE SITE.
- NO GRADING, REMOVAL OF PROTECTIVE COVER OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS, OR THEIR BUFFERS, FOREST CONSERVATION AREAS AND 100 YEAR FLOODPLAIN UNLESS ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED.
- ENVIRONMENTAL STUDIES AND REPORTS FOR THIS SITE WERE PREPARED FOR ROBERT H. VOGEL ENGINEERING, INC. BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER, 2014.
- THIS SITE DESIGN PROVIDES THE MINIMUM OF 2.5 PARKING SPACES FOR EACH DWELLING UNIT. SINGLE CAR GARAGES SHALL BE USED FOR PARKING PURPOSES ONLY AND SHALL NOT BE CONVERTED INTO LIVING SPACE OR STORAGE. THE HOUSES/GARAGES HAVE BEEN SITED ON THESE SITES SO THAT A SECOND CAR IS PARKED BY THE DRIVEWAY. WILL NOT BE PAVED AREA. THE PAVED AREA FROM THE GARAGE TO THE ADJACENT SIDEWALK OR STREET. THIS DESIGN REQUIRES A MINIMUM OF 18 FEET AS MEASURED FROM THE GARAGE TO THE EDGE OF THE SIDEWALK. THE ADDITIONAL 0.5 PARKING SPACE PER UNIT IS PROVIDED ON-SITE WITHIN THE 3 PAVED PARKING AREAS.
- REFUSE AND RECYCLING COLLECTION TO BE PRIVATE.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- ALL RENOVATED ROADS OR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28' SIDEWALK WIDTH OF 3-500 P.S.F.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REQUIRED SIGNING SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTOR REQUIREMENTS, METHODS AND MATERIALS SPECIFICATIONS ARE PROVIDED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST PRIOR TO CONSTRUCTION.
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL 3.01 UNLESS OTHERWISE NOTED.
- CONTRACTOR RESPONSIBLE FOR CONSTRUCTING ALL HANDICAP RAMPS AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS WHERE DRAINAGE FLOWS AWAY FROM CURB. CONTRACTOR TO REVERSE THE GUTTER PAVEMENT.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STORMWATER PIPE BEDDING IS TO BE CLASS 3.
- ALL BUILDINGS TO HAVE ROOF LEADERS WHICH EMPTY ONTO SPLASH BLOCKS. DRAINAGE FROM SPLASH BLOCKS TO BE DIRECTED TOWARD THE SIDEWALKS AND/OR PARKING AREAS WHICH LEADS TO BIORETENTION FACILITIES.
- GEOTECHNICAL REPORT PREPARED BY HILLIS-CANNES ENGINEERING ASSOCIATES, INC., DATED DECEMBER 05, 2007.
- TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP DATED FEBRUARY 6, 2008.
- EXISTING UTILITIES WITHIN PARCEL 153 HAZEN REMOVED PRIOR TO SUBMISSION OF THE ASSOCIATED FINAL PLAT ORIGINALS, IN ACCORDANCE WITH HOWARD COUNTY REGULATIONS.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERMIETTER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER AGREEMENT UNDER THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS IN THE AMOUNT OF \$28,350.00 FOR THE REQUIRED 61 SHADE TREES AND 67 EVERGREENS. FINANCIAL SURETY FOR THE REQUIRED STREET TREE PLANTINGS HAS BEEN POSTED AS PART OF THE DEVELOPER AGREEMENT IN THE AMOUNT OF \$100,000.00 FOR THE REQUIRED 27 SHADE TREES.
- EXISTING STREET TREES DAMAGED OR DESTROYED DURING THE CONSTRUCTION OF THIS PROJECT WILL BE REPLACED AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS 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).
- LONG A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL EXTERIOR LIGHTING TO COMPLY WITH THE REQUIREMENTS FOUND IN SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS. (DETAILS ON SHEET 3 AND 6).
- LIGHT TRESPASS INTO A PROPERTY IN THE R-20 ZONING DISTRICT SHALL BE LIMITED TO 0.1 FOOT CANDLES ALONG THE PROJECT BOUNDARY AND COMPLY WITH ALL ZONING REGULATIONS. NO LIGHT SHALL BE EMITTED ABOVE A HORIZONTAL PLANE THROUGH THE LOWEST PART OF THE LAMP AS CERTIFIED BY THE LIGHTING MANUFACTURER OR AS PROVIDED ON A PHOTOMETRIC TEST PLAN FOR THIS SITE. LIGHT FIXTURES WITH THE FOLLOWING CHARACTERISTICS ARE PERMITTED WITHOUT CUTOFF SHIELDS:
A. THE LAMP(S) HOUSED BY THE FIXTURE DO NOT EXCEED A TOTAL OF MORE THAN 16,000 LUMENS, FOR FREESTANDING STRUCTURES, AND 10,000 LUMENS FOR FIXTURES ATTACHED TO STRUCTURES, BASED ON THE MANUFACTURER'S LUMEN RATING FOR THE INITIAL LIGHT OUTPUT OF THE LAMP(S).
B. MORE THAN 14 FEET ABOVE GROUND LEVEL FOR FREESTANDING FIXTURES, OR 8 FEET ABOVE GROUND LEVEL FOR FIXTURES ATTACHED TO STRUCTURES.
C. FOR FIXTURES WITH SHIELDS OR OTHER DESIGN FEATURES TO DIRECT THE LIGHT, THE LIGHT IS NOT DIRECTED TOWARDS ADJACENT PROPERTIES OR PUBLIC STREETS.
D. THE SURFACE OF EITHER THE LAMP OR THE FIXTURE ENCLOSING THE LAMP, IS FROSTED OR TRANSPARENT RATHER THAN TRANSPARENT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE GAZEBO AND SEATING AREA SHALL BE AT-GRADE AND THE WALKING PATH SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL ACCESSIBILITY REGULATIONS OR GUIDELINES.
- THIS PROJECT IS SUBJECT TO A SHARED ACCESS AND MAINTENANCE AGREEMENT (L16117/F.001); RECORDED 04/07/15; BY AND BETWEEN BS LAND ACQUISITION (PARCEL 153) AND TEMPLE BETH SHALOM OF HOWARD COUNTY (PARCEL 256, SDP-94-031).
- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER TO THE FOLLOWING DESIGN MANUAL:
A. DESIGN MANUAL VOLUME III, SECTION 2.5.B.9; APPROVED 04/18/13; TO ALLOW THE SIGHT DISTANCE MEASUREMENT FROM A POINT ON THE CENTERLINE OF THE ACCESS POINT TO THE CENTERLINE OF TRAVEL TO BE REDUCED TO 10 FEET.
52. IN ACCORDANCE WITH SECTION 128.0 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 18 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
53. SECTION 127.4.E.4. OF THE ZONING REGULATIONS REQUIRES MINIMUM DISTANCES BETWEEN RESIDENTIAL BUILDINGS (EVEN IF THE BUILDINGS INCLUDE OTHER USES). THOSE DISTANCES ARE AS FOLLOWS: SIDE TO SIDE - 15 FEET; ALL OTHER FACED RELATIONSHIPS - 30 FEET.
54. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A. WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE; MODIFIED TO 9' WIDTH FOR TOWNHOUSE UNITS).
B. SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
C. GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS.
D. STRUCTURES (CULVERTS/BRIDGES) - MUST SUPPORT 25 GROSS TON LOADING (H25 LOADING).
E. DRAINAGE ELEMENTS - CAPABLE OF SATELTY PASSING 100 YEAR FLOOD, EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRAINWAY SURFACE.
F. STRUCTURE CLEARANCES - MINIMUM 12 FEET.
G. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- THE FOREST CONSERVATION EASEMENT IS REQUIRED TO FULFILL THE REQUIREMENTS OF SECTION 16.120 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, UNLESS FOREST MAINTENANCE OR THE USE OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THE EXISTING WELL AND ON-SITE SEWAGE DISPOSAL SYSTEM SHALL BE PROPERLY ABANDONED WITH DOCUMENTATION SUBMITTED TO THE HEALTH DEPARTMENT PRIOR TO HEALTH SIGNATURE OF THE RECORD PLAT.
- THIS PROJECT IS SUBJECT TO WP-16-088; APPROVED 12/30/2015; TO WAIVE SECTION 16.120(C)(4) TO ALLOW SINGLE FAMILY ATTACHED LOT TO BE LOCATED UP TO 600' FROM A PUBLIC ROAD RIGHT-OF-WAY (HARRIET TUBMAN LANE), AND SECTIONS 16.102 AND 16.144 (b), APPROVAL SUBJECT TO THE FOLLOWING CONDITIONS:
1. COMPLIANCE WITH ANY SUBDIVISION REVIEW COMMITTEE(SRC) COMMENTS BASED ON THE REVIEW AND APPROVAL OF THE ASSOCIATED FINAL SUBDIVISION PLAN (F-16-054), THE SITE DEVELOPMENT PLAN (SDP-16-002), AND THE RED-LINE REVISION WHICH IS REQUIRED TO SHOW THE ASSOCIATED AND REQUIRED IMPROVEMENTS FOR THIS DEVELOPMENT ON PARCEL 256, TEMPLE BETH SHALOM (SDP-04-031).
2. A GENERAL NOTE SHALL BE ADDED TO SDP-16-002 THAT CLEARLY STATES THAT ALL INTERNAL ROADS (SANFORD PLACE AND JEREMIAH LANE) IN THIS DEVELOPMENT ARE PRIVATELY OWNED AND THEY ARE TO BE MAINTAINED BY THE SANFORD PLACE HOMEOWNERS' ASSOCIATION (HOA), WHICH WILL PROVIDE PRIVATE TRASH COLLECTION AND SNOW REMOVAL SERVICES.
58. THE PROJECT IS SUBJECT TO 44-19-013; APPROVED 01/29/15; TO REDUCE THE REQUIRED 50' USE SETBACK TO 40' TO ACCOMMODATE PARKING SPACES, THE TURNAROUND AND DRIVEWAY TURNAROUND AREA, APPROVAL SUBJECT TO THE FOLLOWING CONDITIONS:
A. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.
B. THE GRANTED ADMINISTRATIVE ADJUSTMENT SHALL APPLY SOLELY TO THE INSTALLATION OF 2 PARKING SPACES AND A PRIVATE ROADWAY TURNAROUND ON THE PROPERTY AS DEPICTED ON THE ADMINISTRATIVE ADJUSTMENT PLAN SUBMITTED BY THE PETITIONER AND NOT TO ANY OTHER STRUCTURE, ADDITION, BUILDING OR USE.
C. THIS DECISION AND ORDER SHALL BE MAINTAINED IN THE OWNER'S PROPERTY RECORDS AND SHALL BE TRANSFERRED TO ANY SUCCEEDING OWNER OF THE PROPERTY.
59. THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER TO THE FOLLOWING DESIGN MANUAL:
A. DESIGN MANUAL VOLUME III, SECTION 2.8; APPROVED 12/16/15; TO ALLOW THE USE OF A SINGLE CROSS SLOPE FOR JEREMIAH LANE PRIVATE RANGE OF ADDRESS SIGNAGE SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF UTILITIES AT THE DEVELOPERS/OWNERS EXPENSE.
60. SIDEWALK CONSTRUCTION WITHIN AND ALONG THE FRONTAGE OF PARCEL 256 (AS SHOWN ON REDLINE REVISION #5 OF SDP-94-031, TEMPLE BETH SHALOM) SHALL BE BONDED AND UNDER THE TERMS OF A DPW DEVELOPER AGREEMENT. EXECUTION OF THE DPW DEVELOPER AGREEMENT IS REQUIRED PRIOR TO SIGNATURE APPROVAL OF SDP-16-002.
62. THE OPEN SPACE SHOWN HEREON IS HEREBY DEDICATED TO THE HOMEOWNERS ASSOCIATION FOR THE RESIDENTS OF THIS SUBDIVISION. PROTECTIVE COVENANTS GOVERNING THE MAINTENANCE OF COMMUNITY OWNED OPEN SPACE WILL BE RECORDED SIMULTANEOUSLY WITH THE RECORDEMENT OF THIS PLAN (F-16-054). THE ARTICLES OF INCORPORATION FOR THE HOMEOWNERS ASSOCIATION WERE FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON 03/21/16, RECEIPT NO. D17133273.
63. THE 65DBA NOISE CONTOUR LINE SHOWN ON THIS SITE DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65DBA NOISE EXPOSURE. THE 65DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS 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.
64. THE MODERATE INCOME HOUSING UNIT AGREEMENT (MHU) AND COVENANT FOR THE 3 REQUIRED DWELLING UNITS HAS BEEN RECORDED IN THE HOWARD COUNTY LAND RECORDS ON JUNE 22, 2016 SIMULTANEOUSLY WITH THE RECORDEMENT OF THE FINAL PLAT, F-16-054.

JOSEPH'S COURTYARD SITE DEVELOPMENT PLAN

LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256) SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)



LEGEND



VICINITY MAP
SCALE: 1"=200'
ADC MAP COORDINATE: 15-011

BENCHMARKS			
NO.	NORTHING	EASTING	ELEVATION
3513	553573.708	1346098.13	415.39
41CC	552494.272	1347082.44	400.00

3513 - (CONC. MONUMENT)
30.7' NORTH EAST OF BGE POLE #334579, ON THE NORTH SIDE OF HARRIET TUBMAN LANE.
41CC - (CONC. MONUMENT)
4.6' BACK FROM SOUTH EDGE OF MARTIN ROAD.

SITE DATA

LOCATION: CLARKSVILLE, MD; TAX MAP 35, BLOCK 24, PARCEL 153 & P/O 256
5TH ELECTION DISTRICT
PRESENT ZONING: R-5A-8 (PARCEL 153) / R-12 (PARCEL 256)
PARCEL AREA: PARCEL 153=3.34 AC. / PART OF PARCEL 256=0.15 AC. TOTAL: 3.49 AC.
(INCLUDES ONLY THE LOT WITHIN PARCEL 256 ACCESS EASEMENT)
DEED REFERENCES: L10101/F.461, 153, L2545/F.388 (P. 256)
DFZ REFERENCES: BA-589-D, BA-93-040E, BA-663-D, BA-07-008C, ZBA-071, F-07-050 (VOIDED), WP-07-076, WP-09-027, WP-10-041, WP-11-066, WP-13-012, WP-12-136, WP-13-082, WP-13-135, WP-15-027, SDP-08-083, SDP-08-083FC, 24-45-68-D, SDP-94-031, ECP-15-037, WP-15-137, KA-15-013, F-16-054
USE OF STRUCTURES: (P. 153) SINGLE FAMILY ATTACHED RESIDENTIAL (P. 256) RELIGIOUS FACILITY (BA-93-40E)

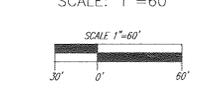
ALLOWABLE NUMBER OF UNITS: 3.34 AC. x 8 UNITS/NET AC. = 26 UNITS
OVERALL DEVELOPMENT PROPOSED UNITS: 24 UNITS
OVERALL DEVELOPMENT MHU REQUIRED - SINGLE FAMILY ATTACHED: 24 UNITS x 10% = 2.4 UNITS
OVERALL DEVELOPMENT MHU PROVIDED - SINGLE FAMILY ATTACHED: 3 UNITS

TOTAL BUILDING COVERAGE: 20,325 SF (0.47 AC. OR 14.07% OF GROSS AREA)
PAVED AREA ON SITE: 31,013 SF (0.71 AC. OR 22.18% OF GROSS AREA)
LANDSCAPE ISLANDS: (1 PER 20 SPACES) = 2 ISLANDS
AREA OF LANDSCAPE ISLANDS: 719 SF (0.02 AC. OR 0.49% OF GROSS AREA)
LIMIT OF DISTURBED AREA: 131,168 SF / 3.01 AC
WETLANDS ON SITE: 0.01 AC.
WETLAND BUFFERS ON SITE: 0.54 AC.
STREAMS AND THEIR BUFFERS ON SITE: 0.16 AC.
AREA OF ON-SITE 100 YEAR FLOODPLAIN: 0.00 AC.
AREA OF EXISTING FOREST ON SITE: 0.30 AC.
AREA OF STEEP SLOPES (15% OR GREATER): 0.00 AC.
AREA OF ERODIBLE SOILS: 0.00 AC.
AREA MANAGED BY ESDV (THIS PLAN): 3.16 AC.
IMPERVIOUS AREA: 1.6 AC.
GREEN AREA: 1.83 AC.

TOTAL AREA OF OPEN SPACE REQUIRED: 3.34 AC. x 0.25 = 0.84 AC.
TOTAL AREA OF OPEN SPACE PROVIDED (PARCEL 153): 2.55 AC.

TOTAL AREA OF RECREATIONAL OPEN SPACE PROVIDED: 16,200 SF
24 UNITS x 400 SF/UNIT = 9,600 SF
22 UNITS (NON-USABLE REAR YARD) x 300 SF/UNIT = 6,600 SF ADDITIONAL REQUIRED (UNITS 1 AND 3 HAVE USABLE REAR YARDS GREATER THAN 15')
TOTAL AREA OF RECREATIONAL OPEN SPACE PROVIDED: 17,088 SF
TOT LOT AREA= 3,577 SF
PLAY GROUND EQUIPMENT= 2,000 SF
2 BENCHES (2'x20')= 400 SF
ASPHALT PATH (15' x 3')= 459 SF
GAZEBO AREA= 6.44 SF
GAZEBO= 2,000 SF
2 BENCHES (2'x20')= 400 SF
MULCH PATH (8'89 SF x 2')= 1,778 SF

LOCATION PLAN



SCALE: 1"=60'



SHEET INDEX

DESCRIPTION	SHEET NO.
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SEDIMENT EROSION CONTROL DETAILS	8 OF 14
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PARKING TABULATION CHART

PARKING SPACES REQUIRED:	2.0 SPACES PER UNIT = 48 SPACES	0.5 SPACES/UNIT VISITOR PARKING = 12 SPACES
TOTAL PARKING SPACES REQUIRED:	60 SPACES	
SPACES PROVIDED WITHIN GARAGES:	1 x 24 UNITS	24 SPACES
SPACES PROVIDED IN DRIVEWAYS:	1 x 24 UNITS	24 SPACES
SPACES PROVIDED FOR VISITOR PARKING:	14 SPACES	
TOTAL SPACES PROVIDED:	62 SPACES	

COORDINATE TABLE

POINT	NORTH	EAST
1	553038.6757	1346238.2545
3	552791.3935	1346137.2172
4	552791.1997	1345764.9718
6	553255.5368	1345990.9070
15	553429.1837	1346167.2673
30	552950.5283	1345780.6878
301	552933.8505	1345905.2283
302	553271.2257	1345939.3704
305	553247.6695	1346000.0205
306	553189.7745	1346057.5246

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John E. Johnson 11-29-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter J. Deane 12-05-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Walter J. Deane 12-05-16
DIRECTOR DATE

OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD, 21044

OWNER (PARCEL 153)
JOSEPH'S COURTYARD, LLC
3675 PARK AVENUE, #301
ELLICOTT CITY, MD, 21043
C/O MICHAEL PFAU
(410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
TRINITY HOMES MARY LAND, LLC
3675 PARK AVENUE, #301
ELLICOTT CITY, MD, 21043
C/O MICHAEL PFAU
(410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

**REVISED SITE DEVELOPMENT PLAN
COVER SHEET**

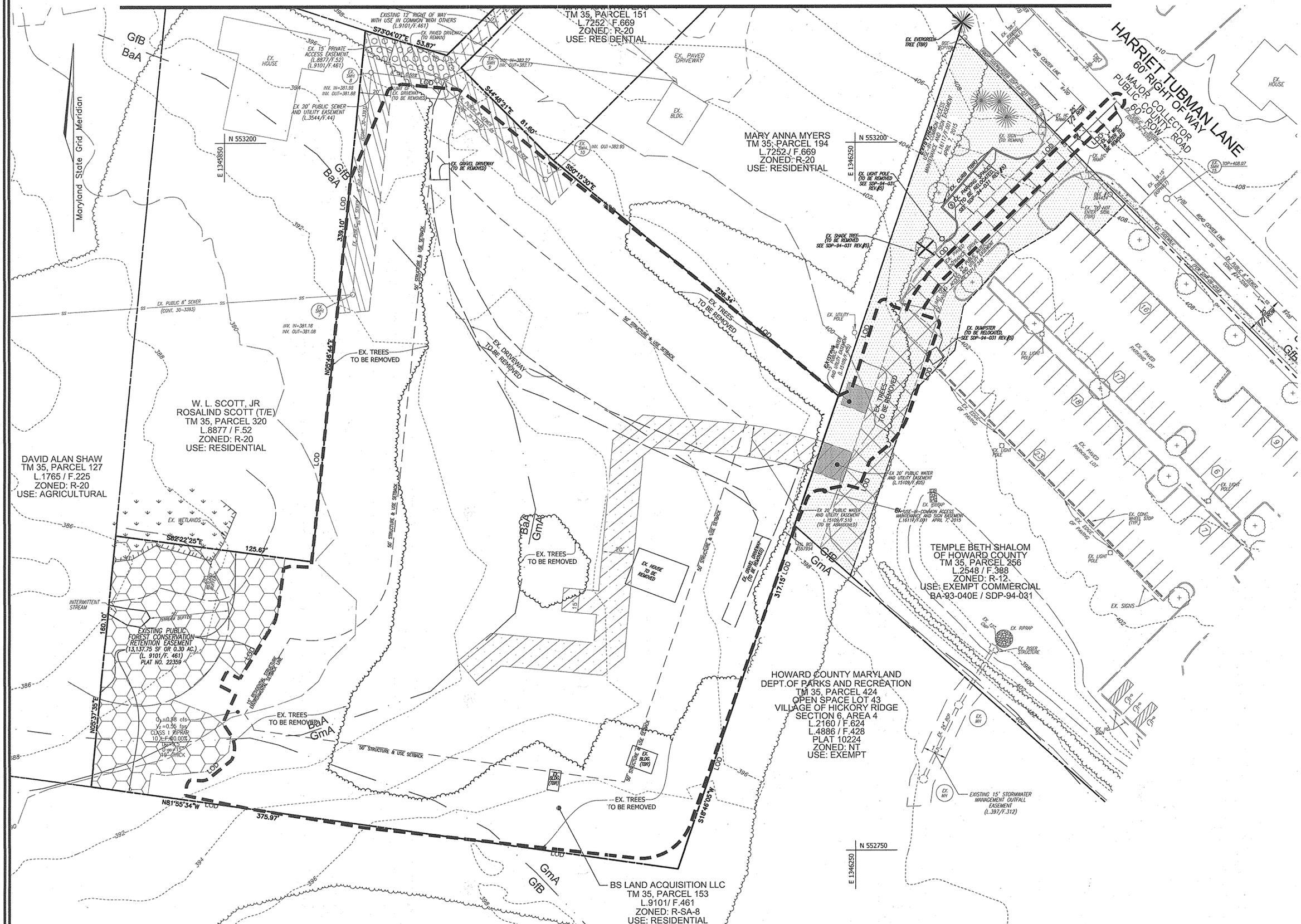
JOSEPH'S COURTYARD
LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-5A-8) PARCEL 256 (R-12) PARCEL 153: P/O 256
5TH ELECTION DISTRICT L09101F.0461L 02548F.0388

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
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE PROVISIONS OF THE STATE OF MARYLAND TITLE 10, §1813 AS AMENDED TO 10-27-2014

DESIGN BY: RHV/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHV
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

1 SHEET OF 14



LEGEND:

- 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 TREES (FIELD LOCATED)
- EXISTING TREES (TO BE REMOVED)
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING TREELINE (TO BE REMOVED)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- EX. FOREST CONSERVATION RETENTION EASEMENT (L. 9101/F. 461) PLAT NO. 22359
- EXISTING WETLANDS
- EXISTING 24' PUBLIC WATER ACCESS & UTILITY EASEMENT (L. 3321/F. 548)
- EXISTING 20' PUBLIC SEWER AND UTIL EASEMENT (L. 3544/F. 44)
- EXISTING 12' RIGHT OF WAY PRIVATE WATER W/ USE IN COMMON WITH OTHERS (L. 9101/F. 461) (L. 8877/F. 52) (L. 11655/F. 126)
- EXISTING 15' PRIVATE ACCESS EASEMENT (L. 8877/F. 52) (L. 9101/F. 461)
- EXISTING USE-IN-COMMON ACCESS, MAINTENANCE AND SIGN EASEMENT (L. 1417/F. 600)
- EX. 20' PUBLIC WATER & UTILITY EASEMENT TO BE ABANDONED (L. 15102/F. 510)
- LOD

OWNER (PARCEL 256)
 TEMPLE BETH SHALOM OF HOWARD COUNTY
 8070 HARRIET TUBMAN LANE
 COLUMBIA, MD. 21044

OWNER (PARCEL 153)
 JOSEPH'S COURTYARD, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
 TRINITY HOMES MARY LAND, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
 DEMOLITION PLAN**

JOSEPH'S COURTYARD

LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P. 256)
 SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12)
 TAX MAP 35 BLOCK 24 L.09101/F.0461/L. 02548/F. 0388 PARCEL 153: P/O 256
 5TH ELECTION DISTRICT 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

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV/GAH
 DRAWN BY: GAH/KG
 CHECKED BY: RHV
 DATE: MAY 2016
 SCALE: AS SHOWN
 W.O. NO.: 05-84

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 08-27-2018

2 SHEET OF 14

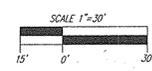
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Johnson 6-1-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP DATE

Kevin Johnson 6-28-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

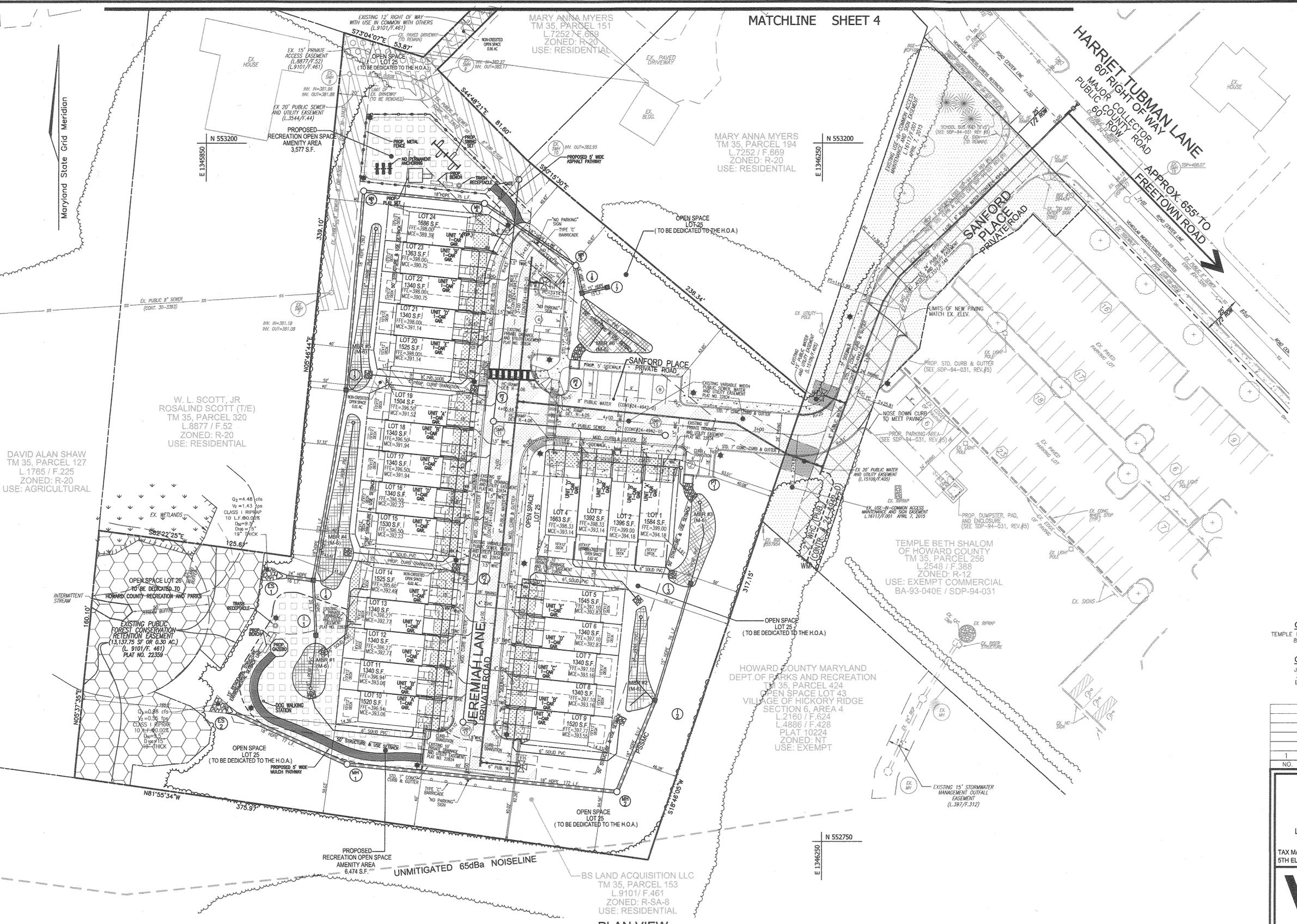
Nathan J. J... 7-6-16
 DIRECTOR DATE

DEMOLITION PLAN
 SCALE: 1" = 30'



LEGEND:

- 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 TREES (FIELD LOCATED)
- EXISTING TREELINE (FIELD LOCATED)
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- PROPOSED CURB AND GUTTER
- PROPOSED CURB TRANSITION
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- PROP. LIGHT POLE
- PROPOSED FENCE AROUND THE TOT LOT
- PROPOSED TREELINE
- PROPOSED SIDEWALK
- EX. FOREST CONSERVATION RETENTION EASEMENT (L.9101/F.461) (PLAT NO. 22359)
- EXISTING WETLANDS
- EXISTING 24' PUBLIC WATER ACCESS & UTILITY EASEMENT (L.3321/F.548)
- EXISTING 20' PUBLIC SEWER AND UTILITY EASEMENT (L.3544/F.44)
- EXISTING 12' RIGHT OF WAY, PRIVATE WATER & USE IN COMMON WITH OTHERS (L.9101/F.461) (L.8877/F.52) (L.11855/F.136)
- EXISTING 15' PRIVATE ACCESS EASEMENT (L.8877/F.52) (L.9101/F.461)
- EXISTING USE-IN-COMMON ACCESS, MAINTENANCE AND SIGN EASEMENT (L.16117/F.01)
- RECREATION OPEN SPACE AMENITY AREA
- EXISTING PUBLIC WATER AND UTILITY EASEMENT (L.15109/F.405)
- MICRO-BIORETENTION FACILITIES
- EXISTING 10' PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 23834)
- EXISTING VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT (PLAT NO. 23834)
- NON-CREDITED OPEN SPACE AREA



OWNER (PARCEL 256)
 TEMPLE BETH SHALOM OF HOWARD COUNTY
 8070 HARRIET TUBMAN LANE
 COLUMBIA, MD. 21044

OWNER (PARCEL 153)
 JOSEPH'S COURTYARD, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
 TRINITY HOMES MARY LAND, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

REVISED SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN
JOSEPH'S COURTYARD
 LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
 SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
 TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12)
 L.09101/F.0461/L. 02548/F. 0388 PARCEL 153: P/O 256
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8966

PROFESSIONAL CERTIFICATE

STATE OF MARYLAND
 ROBERT H. VOGEL
 16193
 REGISTERED PROFESSIONAL ENGINEER

DESIGN BY: RHY/GAH
 DRAWN BY: GAH/KG
 CHECKED BY: RHY
 DATE: MAY 2016
 SCALE: AS SHOWN
 W.O. NO.: 05-84

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 EXPIRES DATE 05-27-2018

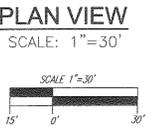
3 SHEET OF 14

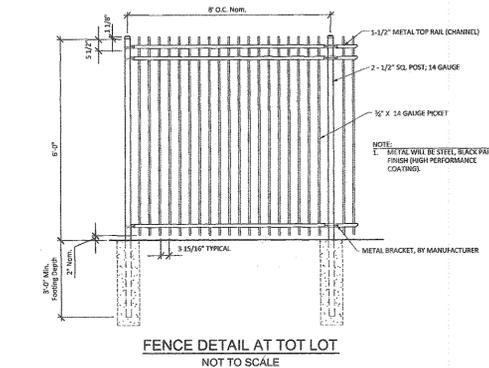
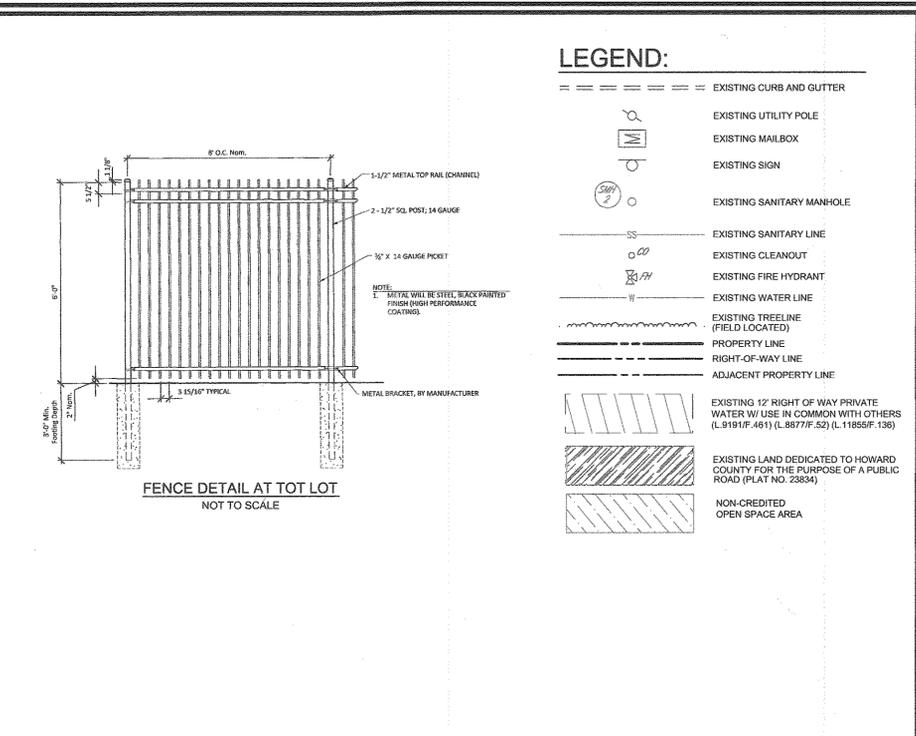
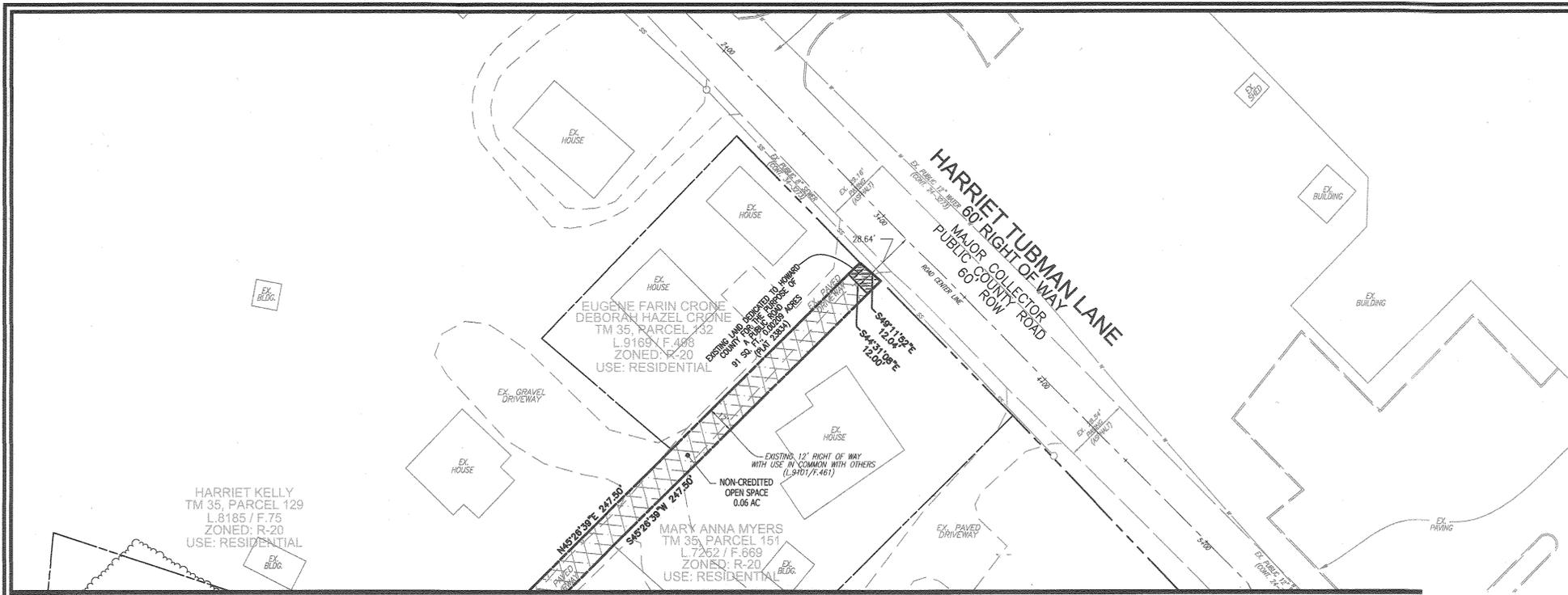
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark
 CHIEF, DEVELOPMENT ENGINEERING DIVISION **11-29-16**
 DATE

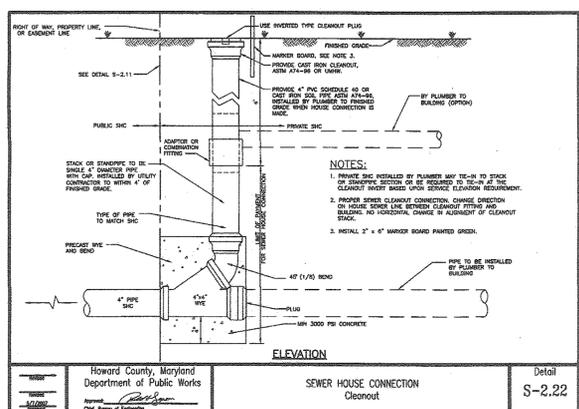
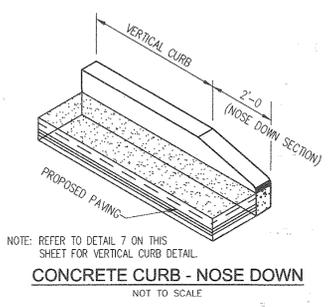
Walter J. ...
 CHIEF, DIVISION OF LAND DEVELOPMENT **12-05-16**
 DATE

Walter J. ...
 DIRECTOR **12-5-16**
 DATE

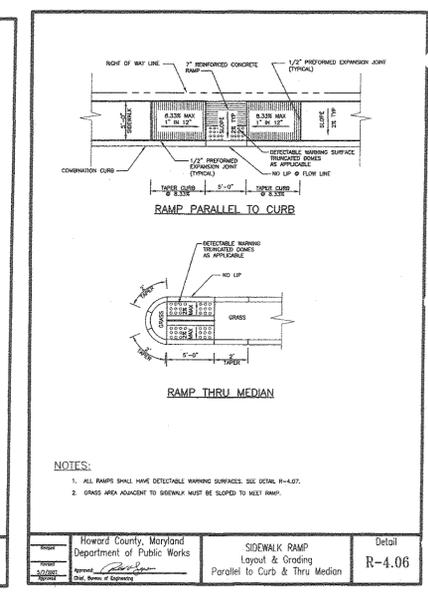
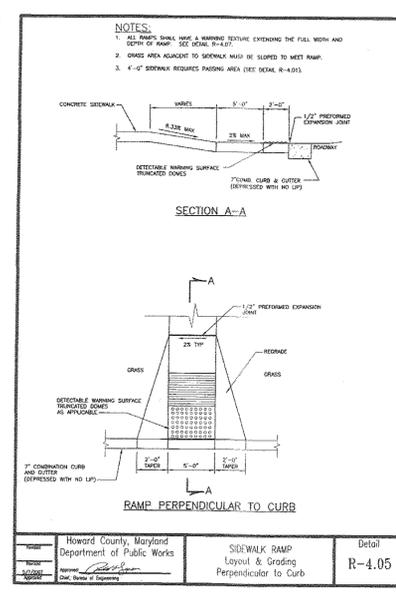
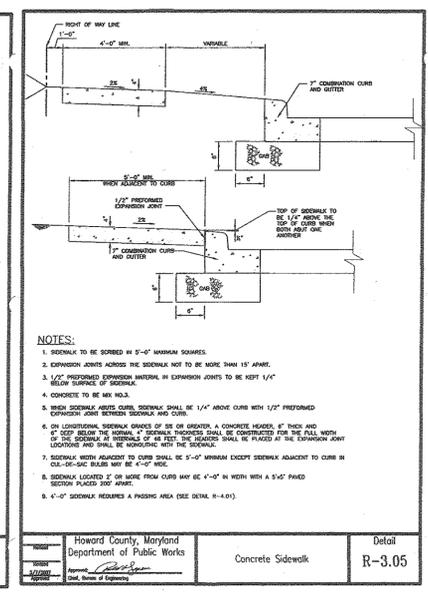
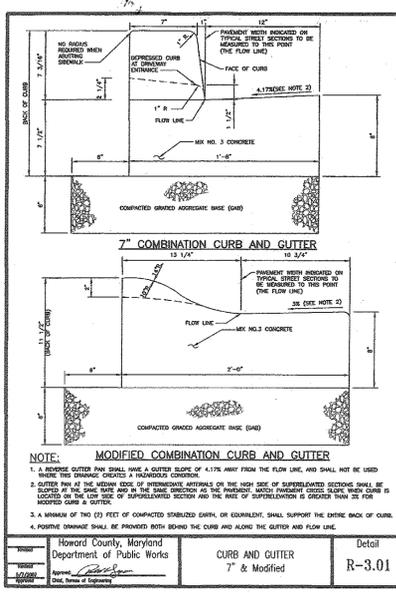
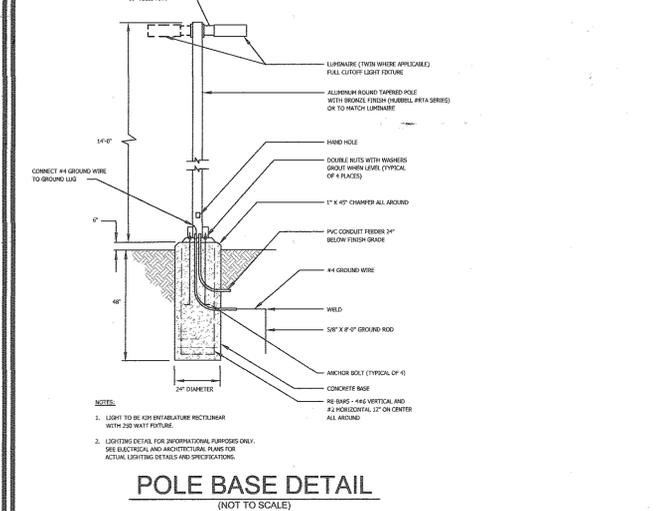




MATCHLINE SHEET 3
 PLAN VIEW
 SCALE: 1"=30'



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING ROAD (CBR)	3 TO 4.5 IN. C-7	4.5 TO 6.0 IN. C-7	6.0 TO 8.0 IN. C-7	8.0 TO 10.0 IN. C-7	10.0 TO 15.0 IN. C-7	15.0 TO 20.0 IN. C-7	20.0 TO 25.0 IN. C-7
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	5.0 MM PG 44-25 LEVEL 1 (CSA)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	5.0 MM PG 44-25 LEVEL 1 (CSA)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	5.0 MM PG 44-25 LEVEL 1 (CSA)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	5.0 MM PG 44-25 LEVEL 1 (CSA)	1.0	1.0	1.0	1.0	1.0	1.0	1.0



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

Howard County, Maryland
 Department of Public Works
 CURB AND GUTTER
 7" Modified
 Detail R-3.01

Howard County, Maryland
 Department of Public Works
 Concrete Sidewalk
 Detail R-3.05

Howard County, Maryland
 Department of Public Works
 SIDEWALK RAMP
 Layout & Grading
 Perpendicular to Curb
 Detail R-4.05

Howard County, Maryland
 Department of Public Works
 SIDEWALK RAMP
 Layout & Grading
 Parallel to Curb & Thru Median
 Detail R-4.06

OWNER (PARCEL 256)
 BETH SHALOM OF HOWARD COUNTY
 8070 HARRIET TUBMAN LANE
 COLUMBIA, MD 21044

OWNER (PARCEL 153)
 JOSEPH'S COURTYARD, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD 21043
 C/O MICHAEL PFAU
 (410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
 TRINITY HOMES MARY LAND, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD 21043
 C/O MICHAEL PFAU
 (410) 480-0023

REVISED PLAN TO ACCOMMODATE BUILDER HOUSE MODEL 10/28/16

NO. REVISION DATE

REVISED SITE DEVELOPMENT PLAN
 SITE LAYOUT PLAN
 JOSEPH'S COURTYARD
 LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P-256)
 SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
 TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12) / PARCEL 153: P/O 256
 5TH ELECTION DISTRICT L.09101/F.0461/L.02548/F.0388 HOWARD COUNTY, MARYLAND

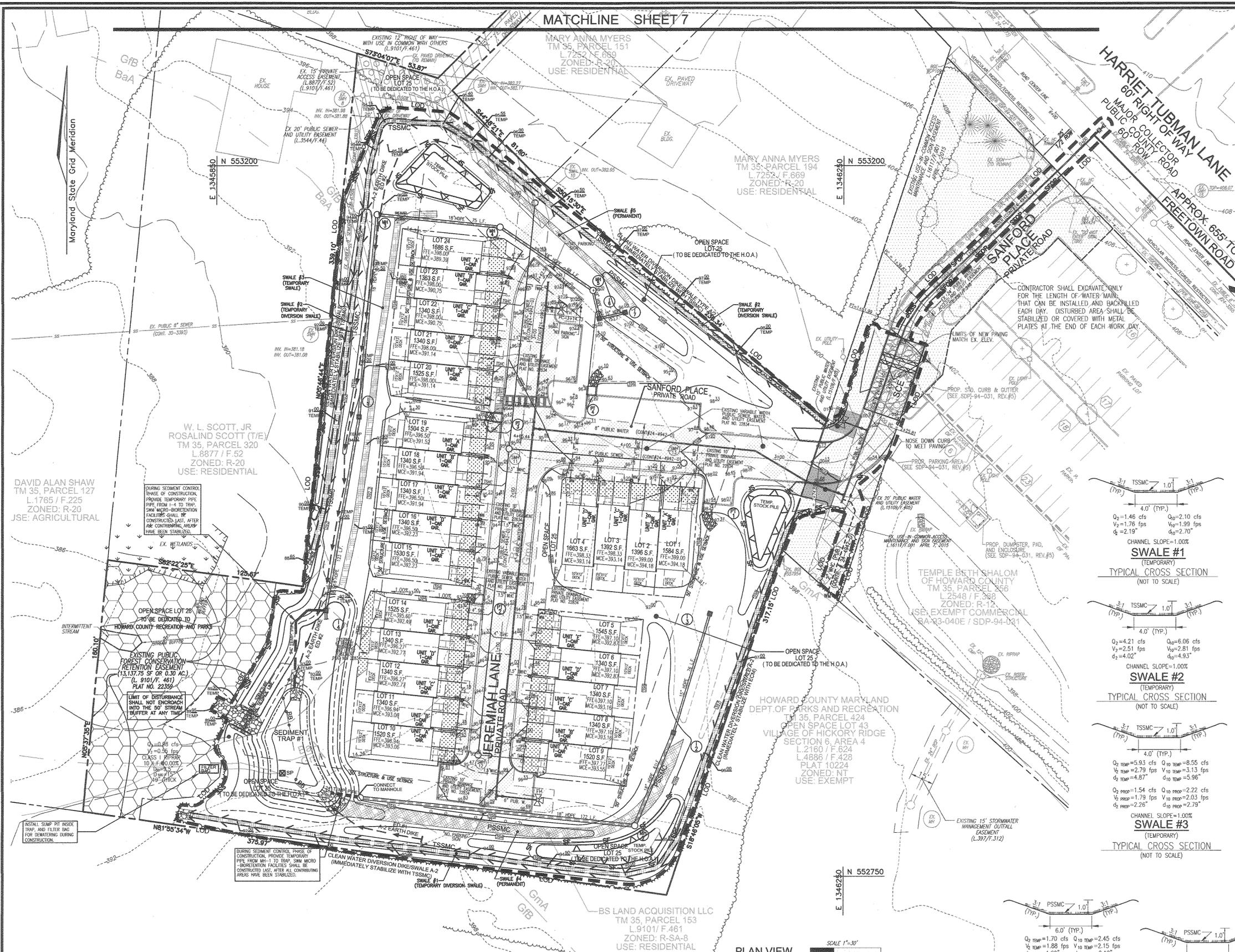
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
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DESIGN BY: RHW/GAH
 DRAWN BY: GAH/KG
 CHECKED BY: RHW
 DATE: MAY 2016
 SCALE: AS SHOWN
 W.O. NO.: 05-84

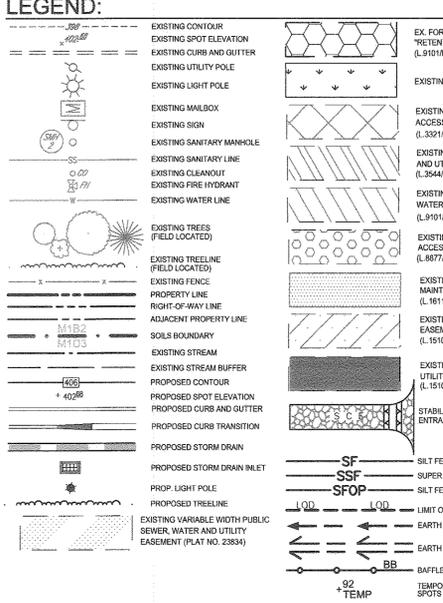
4 SHEET OF 14

MATCHLINE SHEET 7

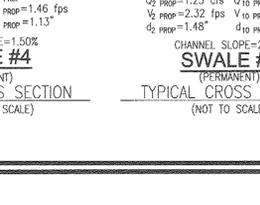
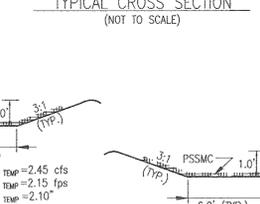
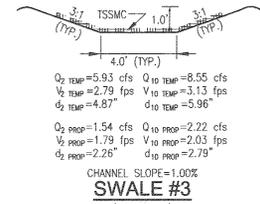
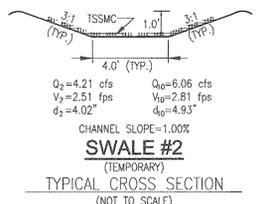
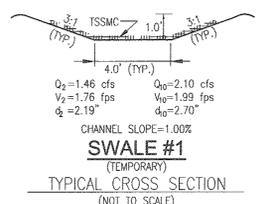


DETAIL G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 1	ACRES	ST-II
DRAINAGE AREA - INITIAL	2.60	
DRAINAGE AREA - INTERIM	2.60	
DRAINAGE AREA - FINAL	2.60	
TOTAL STORAGE REQUIRED	9,360	CF
TOTAL STORAGE PROVIDED	11,263	CF
WET STORAGE REQUIRED	4,680	CF
WET STORAGE PROVIDED	4,944	CF
DRY STORAGE REQUIRED	4,680	CF
DRY STORAGE PROVIDED	6,319	CF
EXISTING GROUND ELEVATION AT OUTLET (NET STORAGE ELEVATION)	389.00	FT
TRAP BOTTOM ELEVATION	386.00	FT
TRAP BOTTOM DIMENSIONS	43 X 20	FT X FT
WEIR LENGTH	15	FT
WEIR CREST (DRY STORAGE) ELEVATION	391.00	FT
CLEANOUT ELEVATION	387.50	FT
TOP OF EMBANKMENT ELEVATION	392.00	FT
SIDE SLOPE	3:1	H:V BARO
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	10	FT
OUTLET PROTECTION - DEPTH	19	IN



CONTRACTOR SHALL EXCAVATE ONLY FOR THE LENGTH OF WATER MAIN THAT CAN BE INSTALLED AND BACKFILLED EACH DAY. DISTURBED AREA SHALL BE STABILIZED OR COVERED WITH METAL PLATES AT THE END OF EACH WORK DAY.



OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD 21044

OWNER (PARCEL 153)
JOSEPH'S COURTYARD, LLC
3675 PARK AVENUE #301
ELLICOTT CITY, MD 21043
C/O MICHAEL PFAU
(410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
TRINITY HOMES MARY LAND, LLC
3675 PARK AVENUE #301
ELLICOTT CITY, MD 21043
C/O MICHAEL PFAU
(410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

REVISED SITE DEVELOPMENT PLAN
GRADING, SEDIMENT AND EROSION CONTROL PLAN
STAGE 1
JOSEPH'S COURTYARD
LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
TAX MAP 35 BLOCK 24 ZONED: L9101/F.0461/L.0254/F.0388 PARCEL 153: P/IO 256
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8991

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 16193 EXPIRES 09-27-2018

DESIGN BY: RHV/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHV
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

5 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
11.29.16
DATE

12.5.16
DATE

12.5.16
DATE

OWNER/DEVELOPER CERTIFICATION:
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Michael Pfau
11/1/16
DATE

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A FEASIBLE AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert H. Vogel
11/1/16
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts
11/1/16
DATE

MATCHLINE SHEET 7



LEGEND:

- EX. FOREST CONSERVATION RETENTION EASEMENT (L.9101/F.461) (PLAT NO. 22359)
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREES (FIELD LOCATED)
- EXISTING TREE LINE (FIELD LOCATED)
- PROPOSED FENCE AROUND THE LOT
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- SOILS BOUNDARY
- EXISTING STREAM
- EXISTING STREAM BUFFER
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CURB AND GUTTER
- PROPOSED CURB TRANSITION
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- PROP. LIGHT POLE
- PROPOSED TREE LINE
- EXISTING 10' PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 22354)
- EXISTING VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT (PLAT NO. 22354)

NOTE:
 ALL BUILDINGS TO HAVE ROOF LEADERS WHICH ARE:
 1. PIPED UNDERGROUND TO A MICRO-BIORETENTION AREA.
 2. EMPTIED ONTO SPLASH BLOCKS. DRAINAGE FROM SPLASH BLOCKS TO BE DIRECTED TOWARD THE SWALES AND/OR PARKING LOT AREAS, WHICH DRAIN TO MICRO-BIORETENTION FACILITIES.

OWNER (PARCEL 256)
 TEMPLE BETH SHALOM OF HOWARD COUNTY
 8070 HARRIET TUBMAN LANE
 COLUMBIA, MD. 21044

OWNER (PARCEL 153)
 JOSEPH'S COURTYARD, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
 TRINITY HOMES MARY LAND, LLC.
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

REVISED SITE DEVELOPMENT PLAN
GRADING, SEDIMENT AND EROSION CONTROL PLAN
STAGE 2
JOSEPH'S COURTYARD
 LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
 SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
 TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12) PARCEL 153: P/O 256
 5TH ELECTION DISTRICT L.09101/F.0461/L.02548/F.0388 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8951

PROFESSIONAL CERTIFICATE

STATE OF MARYLAND
 ROBERT H. VOGEL
 16193
 REGISTERED PROFESSIONAL ENGINEER

DESIGN BY: RHW/GAH
 DRAWN BY: GAH/KG
 CHECKED BY: RHW
 DATE: MAY 2016
 SCALE: AS SHOWN
 W.O. NO.: 05-84

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 EXPIRES DATE: 05-28-2018

6 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Pank 11-29-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Natalie Jones 12-5-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Natalie Jones 12-5-16
 DIRECTOR DATE

OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING RESPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Michael Pfa 11/16
 OWNER/DEVELOPER SIGNATURE DATE

Michael Pfa
 PRINTED NAME & TITLE

DESIGN CERTIFICATION:
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert H. Vogel 10/31/16
 DESIGNER'S SIGNATURE DATE

ROBERT H. VOGEL 18193
 PRINTED NAME P.E. R.L.S. OR R.L.A. (circle one)

NOTE:
 SEE SHEET 5 FOR SEDIMENT TRAP DATA

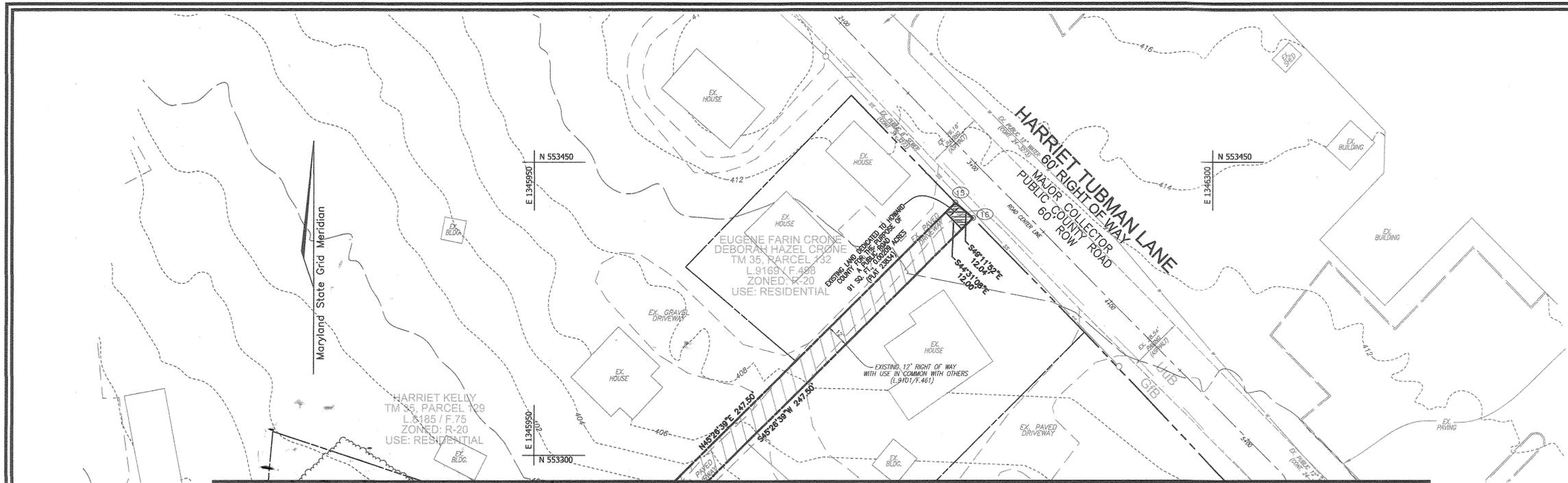
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John C. Roberts 11/11/16
 HOWARD S.C.D. DATE

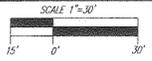
MAPPED SOILS TYPES - HOWARD COUNTY SOIL MAP #16

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRC	PERCENT SAND	K FACTOR	PERCENT CLAY	EROSION POTENTIAL
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.37	NO	NO
GbE	GLASSBORO - URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A	NO	NO	0.28	NO	NO
GmA	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C	NO	NO	0.43	NO	NO

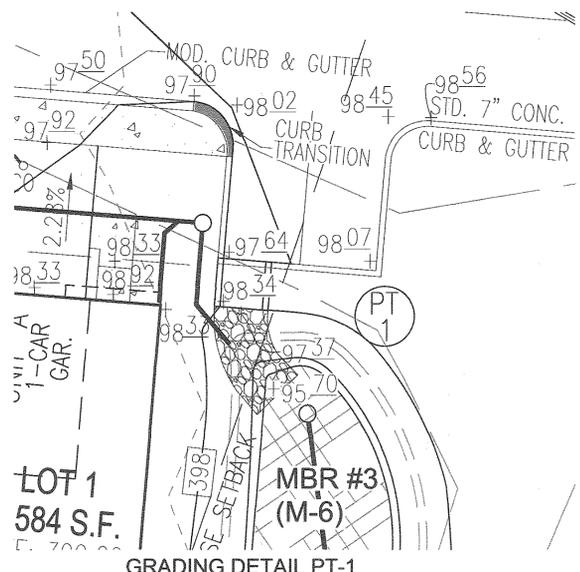
NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT



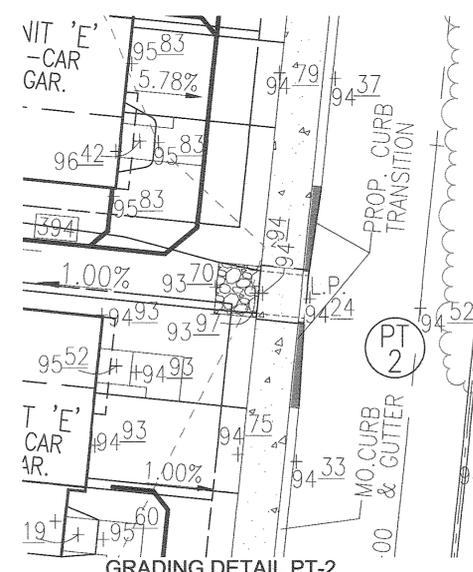
MATCHLINE SHEET 5 & 6 PLAN VIEW
SCALE: 1"=30'



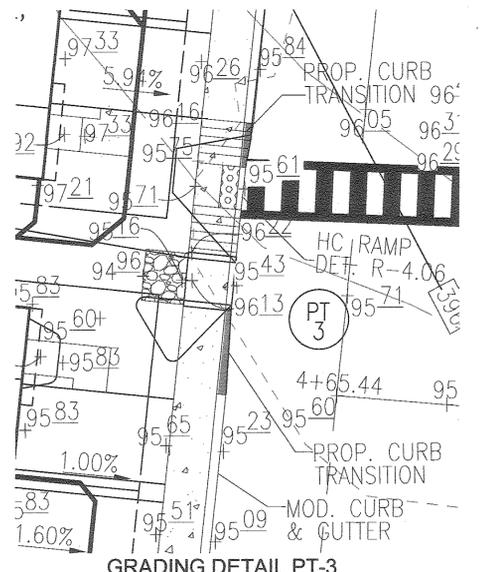
- LEGEND:**
- EXISTING CURB AND GUTTER
 - EXISTING UTILITY POLE
 - ☀ EXISTING LIGHT POLE
 - ✉ EXISTING MAILBOX
 - ⊙ EXISTING SIGN
 - ⊙ EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - ⊙ EXISTING CLEANOUT
 - ⊙ EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING TREES (FIELD LOCATED)
 - EXISTING TREE LINE (FIELD LOCATED)
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING STREAM
 - EXISTING STREAM BUFFER
 - ▨ EXISTING 12' RIGHT OF WAY PRIVATE WATER W/ USE IN COMMON WITH OTHERS (L.9191/F.481) (L.8877/F.52) (L.11855/F.136)
 - ▨ EXISTING LAND DEDICATED TO HOWARD COUNTY FOR THE PURPOSE OF A PUBLIC ROAD (PLAT NO. 23834)
 - ▨ NON-CREDITED OPEN SPACE AREA



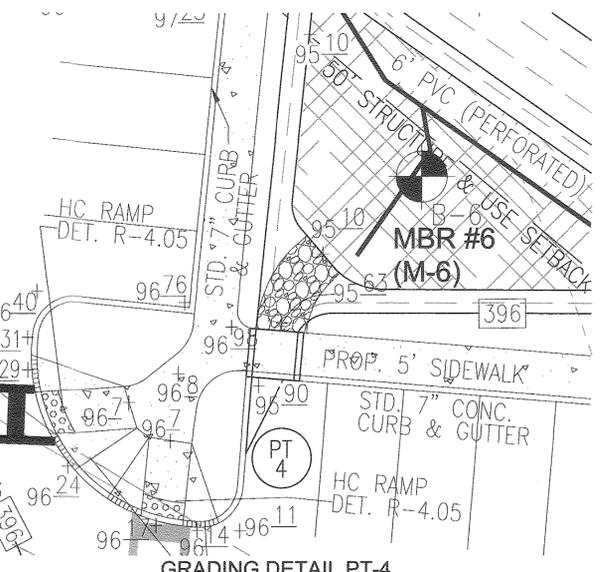
GRADING DETAIL PT-1
SCALE: 1"=10'



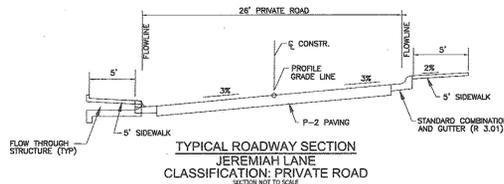
GRADING DETAIL PT-2
SCALE: 1"=10'



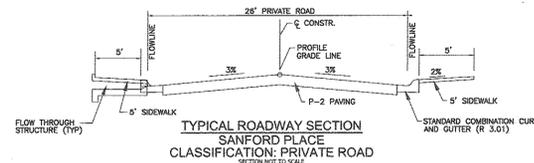
GRADING DETAIL PT-3
SCALE: 1"=10'



GRADING DETAIL PT-4
SCALE: 1"=10'

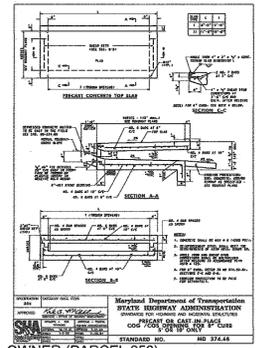


TYPICAL ROADWAY SECTION
JEREMIAH LANE
CLASSIFICATION: PRIVATE ROAD
SECTION NOT TO SCALE



TYPICAL ROADWAY SECTION
SANFORD PLACE
CLASSIFICATION: PRIVATE ROAD
SECTION NOT TO SCALE

* WHERE MODIFIED CURBING IS PROPOSED, IT SHALL TRANSITION TO STANDARD COMBINATION CURB AND GUTTER (R 3.01) AT ALL INLETS.



OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD. 21044

OWNER (PARCEL 153)
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NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

**REVISED SITE DEVELOPMENT PLAN
GRADING PLAN**

JOSEPH'S COURTYARD

LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P-256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12) PARCEL 153: P/O 256
5TH ELECTION DISTRICT L.09101/F.0461/L. 02548/F. 0388 HOWARD COUNTY, MARYLAND

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ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.6961



PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHW
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 06-29-2018

7 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. Smith
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11-23-16

Kathleen O'Connell
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 12-05-16

Walter J. Smith
DIRECTOR
DATE: 12-5-16

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION: THE PROCESS OF PREPARING THE SOIL TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CONDITIONS WHERE PRACTICE APPLIES: WHEN VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

- CRITERIA:**
- SOIL PREPARATION: CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT SUCH AS DISKS, ROLLERS, OR TROWELS. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR OVERGRAZED BUT LEFT TO SETTLE. DISKS, ROLLERS, OR TROWELS SHOULD BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - INTEGRATING LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER EQUIPMENT.
 - PERMANENT STABILIZATION: A SOIL TEST IS REQUIRED FOR ALL AREAS DISTURBED BY 5 ACRES OR MORE. THE SOIL TEST IS REQUIRED TO DETERMINE THE PERCENTAGE OF PERMANENT ESTABLISHMENT AREA. SOIL TESTS SHOULD BE RUN AT 200 POUNDS PER ACRE (PPA).
 - SOIL TESTS SHOULD BE RUN AT 200 POUNDS PER ACRE (PPA).
 - SOIL TESTS SHOULD BE RUN AT 200 POUNDS PER ACRE (PPA).

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE: TO STABILIZE DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CONDITIONS WHERE PRACTICE APPLIES: TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

- CRITERIA:**
- SEEDING: SEEDS MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUIVABLE. SEEDS MUST BE TESTED IN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF APPLICATION. SEEDS MUST BE TESTED IN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF APPLICATION. SEEDS MUST BE TESTED IN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF APPLICATION.
 - MULCHING: MULCH SHALL BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE MULCH IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE MULCH IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE MULCH IS FROZEN.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED AREAS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR LESS.

- CRITERIA:**
- SEED MIXTURES: SEED MIXTURES MUST BE ONE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. EITHER SELECTED MIXTURES OR APPLICATION RATIONES.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.
 - PERMANENT STABILIZATION: PERMANENT STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE: TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

- CRITERIA:**
- SEED MIXTURES: SEED MIXTURES MUST BE ONE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND ENTER THE TIME ON THE CHART.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.
 - TEMPORARY STABILIZATION: TEMPORARY STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

TEMPORARY SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTH (IN)	SEEDING DEPTHS		FELDER RATE (10-20-20)	LIME RATE
				10-20-20	1000 SF		
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE: TO STABILIZE DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

- CRITERIA:**
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TEMPORARY SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTH (IN)	SEEDING DEPTHS		FELDER RATE (10-20-20)	LIME RATE
				10-20-20	1000 SF		
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

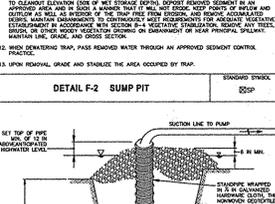
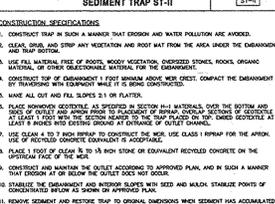
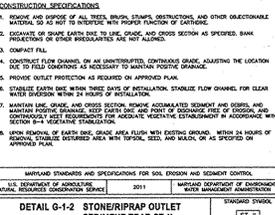
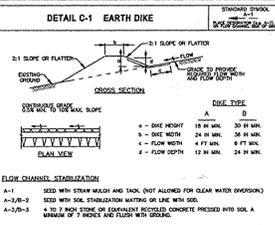
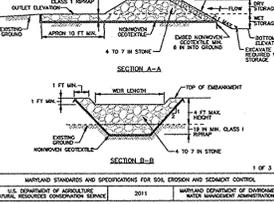
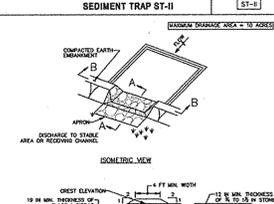
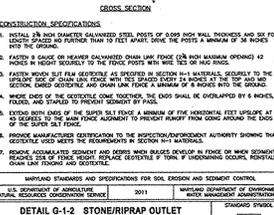
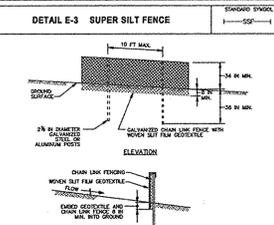
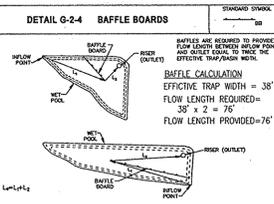
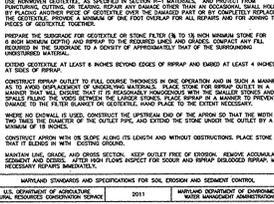
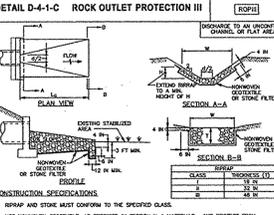
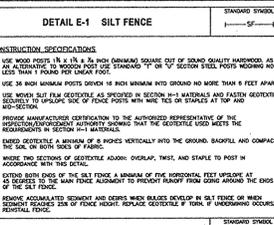
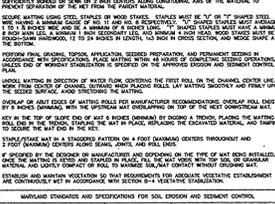
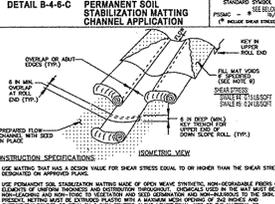
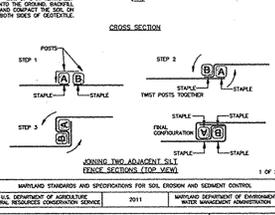
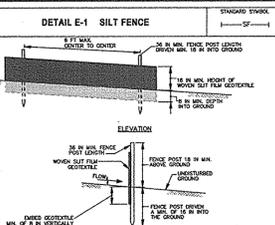
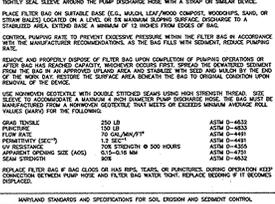
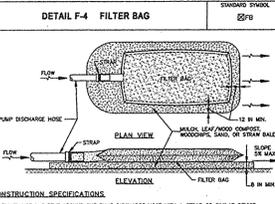
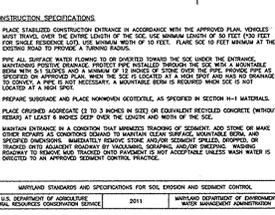
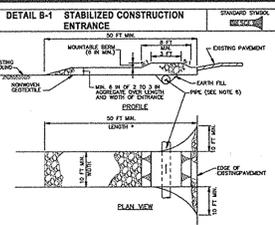
DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED AREAS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR LESS.

- CRITERIA:**
- SEED MIXTURES: SEED MIXTURES MUST BE ONE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. EITHER SELECTED MIXTURES OR APPLICATION RATIONES.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.
 - PERMANENT STABILIZATION: PERMANENT STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

PERMANENT SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTHS	N	P	K	LIME RATE
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC



B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE: TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

- CRITERIA:**
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 - TEMPORARY STABILIZATION: TEMPORARY STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

TEMPORARY SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTH (IN)	SEEDING DEPTHS		FELDER RATE (10-20-20)	LIME RATE
				10-20-20	1000 SF		
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE: TO STABILIZE DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

- CRITERIA:**
- SEEDING: SEEDS MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUIVABLE. SEEDS MUST BE TESTED IN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF APPLICATION.
 - MULCHING: MULCH SHALL BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE MULCH IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE MULCH IS FROZEN.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.

TEMPORARY SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTH (IN)	SEEDING DEPTHS		FELDER RATE (10-20-20)	LIME RATE
				10-20-20	1000 SF		
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED AREAS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR LESS.

- CRITERIA:**
- SEED MIXTURES: SEED MIXTURES MUST BE ONE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. EITHER SELECTED MIXTURES OR APPLICATION RATIONES.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.
 - PERMANENT STABILIZATION: PERMANENT STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

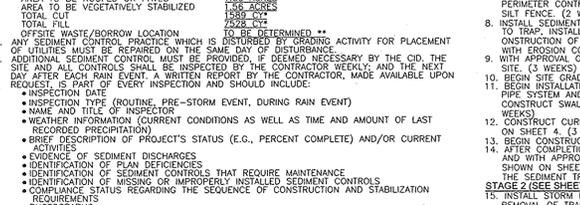
PERMANENT SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTHS	N	P	K	LIME RATE
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE DISTURBED AREAS HAVE BEEN IDENTIFIED AND THE EARTH DISTURBANCE PLAN HAS BEEN NOTICED TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 - BEFORE THE START OF ANY CONSTRUCTION.
 - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL STRUCTURES.
 - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF AN AREA.
- PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES. CONSTRUCTION INSPECTION DIVISION (CID) MUST BE NOTIFIED PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE CONFORMANT WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.



B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE: TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

- CRITERIA:**
- SEED MIXTURES: SEED MIXTURES MUST BE ONE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND ENTER THE TIME ON THE CHART.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.
 - TEMPORARY STABILIZATION: TEMPORARY STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

TEMPORARY SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTH (IN)	SEEDING DEPTHS		FELDER RATE (10-20-20)	LIME RATE
				10-20-20	1000 SF		
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE: TO STABILIZE DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

- CRITERIA:**
- SEEDING: SEEDS MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUIVABLE. SEEDS MUST BE TESTED IN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF APPLICATION.
 - MULCHING: MULCH SHALL BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE MULCH IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE MULCH IS FROZEN.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.

TEMPORARY SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTH (IN)	SEEDING DEPTHS		FELDER RATE (10-20-20)	LIME RATE
				10-20-20	1000 SF		
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED AREAS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR LESS.

- CRITERIA:**
- SEED MIXTURES: SEED MIXTURES MUST BE ONE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. EITHER SELECTED MIXTURES OR APPLICATION RATIONES.
 - APPLICATOR: APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED. APPLICATOR MUST BE TRAINED AND LICENSED.
 - PERMANENT STABILIZATION: PERMANENT STABILIZATION MUST BE ESTABLISHED WITHIN 6 MONTHS OF THE END OF CONSTRUCTION.

PERMANENT SEEDING SUMMARY

NO	COOL SEASON	APPLICATION RATE (LB/A)	SEEDING DEPTHS	N	P	K	LIME RATE
1	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
2	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC
3	Annual Ryegrass (Lolium perenne)	40	1.0	0.5	1/2 to 3/4	2 TONS/AC	2 TONS/AC

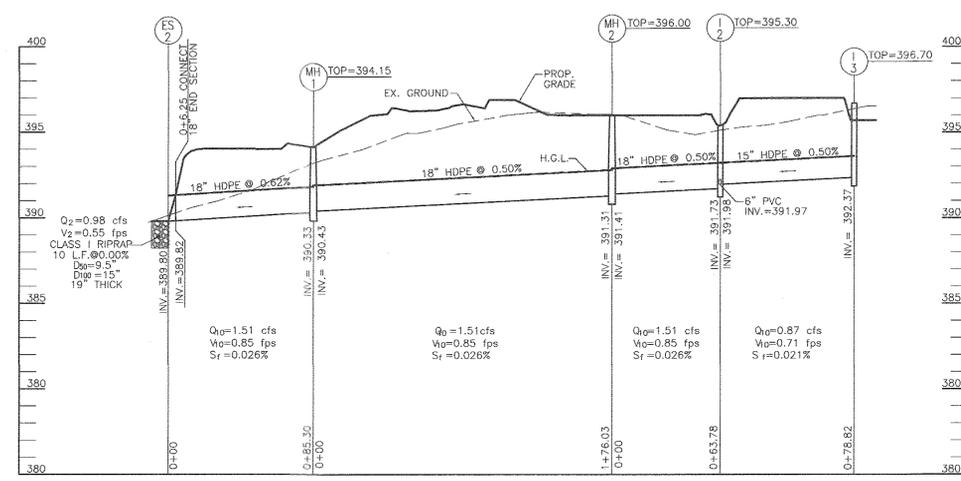


STRUCTURE SCHEDULE

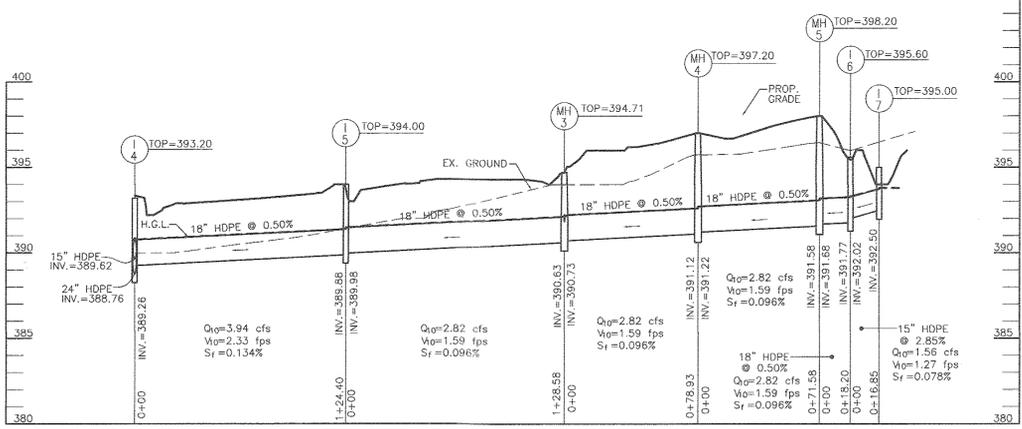
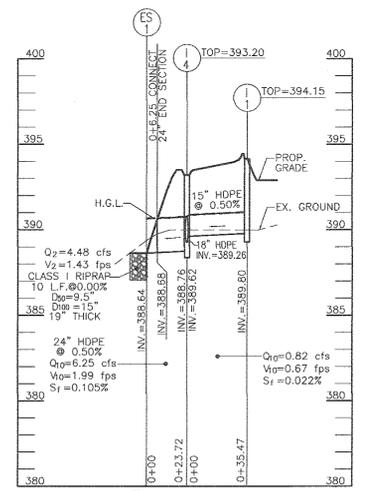
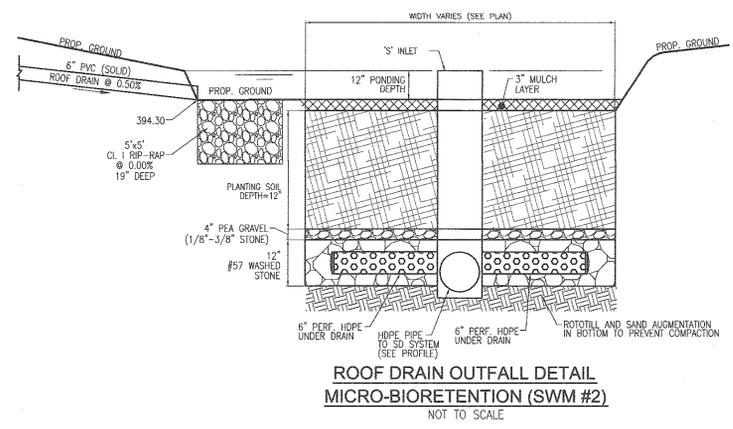
STR #	STRUCTURE	NORTHING	EASTING	TOP	INV. IN #1	INV. IN #2	INV. IN #3	INV. OUT	REMARKS/DETAIL #
ES-1	24" CONC. END SECTION	N 552,920.82	E 1,345,902.53	-	388.64	-	-	-	HO. CO. DET. D-5.41
ES-2	18" CONC. END SECTION	N 552,832.48	E 1,345,869.86	-	389.80	-	-	-	HO. CO. DET. D-5.41
I-1	YARD INLET	N 552,883.06	E 1,345,921.42	-	-	-	-	389.80	HO. CO. DET. D-4.14
I-2	YARD INLET	N 552,841.1	E 1,346,141.55	395.30	391.98	391.97	-	391.73	HO. CO. DET. D-4.14
I-3	YARD INLET	N 552,916.42	E 1,346,164.8	396.70	-	-	-	392.37	HO. CO. DET. D-4.14
I-4	YARD INLET	N 552,918.5	E 1,345,919.84	393.20	389.26	389.62	-	388.76	HO. CO. DET. D-4.14
I-5	YARD INLET	N 553,041.11	E 1,345,940.83	394.00	389.98	-	-	389.88	HO. CO. DET. D-4.14
I-6	YARD INLET	N 553,103.49	E 1,346,094.06	395.60	392.02	-	-	391.77	HO. CO. DET. D-4.14
I-7	YARD INLET	N 553,107.28	E 1,346,110.48	395.00	-	-	-	392.50	HO. CO. DET. D-4.14
MH-1	STD. PRECAST MANHOLE	N 552,799.94	E 1,345,941.9	394.15	390.43	-	-	390.33	HO. CO. DET. G-5.12
MH-2	STD. PRECAST MANHOLE	N 552,782.22	E 1,346,117.03	396.00	391.41	-	-	391.31	HO. CO. DET. G-5.12
MH-3	STD. PRECAST MANHOLE	N 553,169.17	E 1,345,952.21	394.71	390.73	-	-	390.63	HO. CO. DET. G-5.12
MH-4	STD. PRECAST MANHOLE	N 553,161.23	E 1,346,030.74	397.20	391.22	-	-	391.12	HO. CO. DET. G-5.12
MH-5	STD. PRECAST MANHOLE	N 553,121.25	E 1,346,090.12	398.20	391.68	-	-	391.58	HO. CO. DET. G-5.12
PT-1	PASS-THRU INLET	N 552,986.53	E 1,346,163.33	398.30	-	-	-	-	DET. MD.374.68, 6.00' L x 5.67' W
PT-2	PASS-THRU INLET	N 552,925.41	E 1,346,020.63	394.84	-	-	-	-	DET. MD.374.68, 6.00' L x 5.67' W
PT-3	PASS-THRU INLET	N 553,040.42	E 1,346,032.27	396.03	-	-	-	-	DET. MD.374.68, 6.00' L x 5.67' W
PT-4	PASS-THRU INLET	N 553054.77	E 1,346,089.13	396.56	-	-	-	-	DET. MD.374.68, 6.00' L x 5.67' W

PIPE SCHEDULE

SIZE	TYPE	LENGTH
6"	SOLID PVC	1230
6"	PERFORATED PVC	448
15"	HDPE	95.67
18"	HDPE	746.8
24"	HDPE	23.72



- LEGEND:**
- EXISTING CURB AND GUTTER
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEAVOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING TREES (FIELD LOCATED)
 - EXISTING TREELINE (FIELD LOCATED)
 - PROPOSED FENCE AROUND THE LOT
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING STREAM
 - EXISTING STREAM BUFFER
 - PROPOSED CURB AND GUTTER
 - PROPOSED CURB TRANSITION
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - PROPOSED TREELINE
 - PROPOSED SIDEWALK
 - EX. FOREST CONSERVATION "RETENTION" EASEMENT (L.9101F.461) (PLAT NO. 2259)
 - EXISTING WETLANDS
 - EXISTING 24" PUBLIC WATER ACCESS & UTILITY EASEMENT (L.331F.548)
 - EXISTING 20" PUBLIC SEWER AND UTILITY EASEMENT (L.3844F.44)
 - EXISTING 12" RIGHT OF WAY, PRIVATE WATER & USE IN COMMON WITH OTHERS (L.9101F.461) (L.887F.52) (L.11855F.198)
 - EXISTING 15" PRIVATE ACCESS EASEMENT (L.887F.52) (L.9101F.461)
 - EXISTING USE-IN-COMMON ACCESS MAINTENANCE AND SIGN EASEMENT (L.911F.001)
 - RECREATION OPEN SPACE AMENITY AREA
 - EXISTING 20" PUBLIC WATER & UTILITY EASEMENT TO BE ABANDONED (L.15109F.510)
 - EXISTING PUBLIC WATER AND UTILITY EASEMENT (L.15109F.405)
 - MICRO-BIOTENTION FACILITIES
 - EXISTING 10" PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 23834)
 - DRAINAGE DIVIDE FOR STORM DRAIN
 - DRAINAGE AREA DESIGNATION
 - EXISTING VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT (PLAT NO. 23834)



OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD. 21044

OWNER (PARCEL 153)
JOSEPH'S COURTYARD, LLC
3675 PARK AVENUE #301
ELLCOTT CITY, MD. 21043
C/O MICHAEL PFAU
(410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
TRINITY HOMES MARY LAND, LLC.
3675 PARK AVENUE #301
ELLCOTT CITY, MD. 21043
C/O MICHAEL PFAU
(410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

**REVISED SITE DEVELOPMENT PLAN
STORM DRAIN DRAINAGE AREA MAP,
PROFILES AND SCHEDULES
JOSEPH'S COURTYARD**

LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)

TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) PARCEL 256 (R-12) PARCEL 153: P/O 256
5TH ELECTION DISTRICT L.09101F.0461.02548F.0388 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410-461-7666
FAX: 410-461-1896

PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHW
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

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, EXPIRES ON 05-27-2018

9 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Cantelmo
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11-29-16

Kevin LaLonde
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 12-05-16

Neil M. Jolani
DIRECTOR
DATE: 12-5-16



MAPPED SOILS TYPES - HOWARD COUNTY SOIL MAP #16

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	PERCENT	K FACTOR	PERCENT	PERCENT	PERCENT
B/A	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.37	NO	NO	NO
GB	CLAYSTONE - URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A	NO	NO	0.28	NO	NO	NO
GBA	GLENNVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C	NO	NO	0.43	NO	NO	NO

TAKEN FROM: USDA - WEB SOIL SURVEY, HOWARD COUNTY

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11-29-16

Kristen ...
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 12-05-16

Val ...
DIRECTOR
DATE: 12-05-16

TEST PIT DATA TABLE

BORING #	EXISTING GROUND ELEVATION	DEPTH TO WATER	ELEVATION AT WATER TABLE	MICRO-BIO RETENTION #	ELEVATION AT MBR BOTTOM
B-1	396.56	11'	385.56	3	391.62
B-2	395.03	10'	385.03	2	391.92
B-3	390.38	7'	382.38	1	392.07
B-4	390.62	7'	388.62	4	388.12
B-5	392.77	6.5'	386.27	5	389.92
B-6	395.80	9'	386.8	6	391.02

PROJECT BS LAND DESIGNER RHY/GAH DATE: 9/28/15 REV. ROBERT H. VOGEL ENGINEERING, INC.

DRAINAGE AREA #	AREA TREATED	FACILITY NUMBER	PERFORABLE PAYMENT	BIO RETENTION	LANDSCAPE INFILTRATION	GREEN ROOF	BIO SWALE	GRAVEL TRENCH	X	X	ESDv
1	6795	1	0	830	0	0	0	0	0	0	830
2	7897	2	0	939	0	0	0	0	0	0	939
3	11040	3	0	1414	0	0	0	0	0	0	1414
4	33336	4	0	2538	0	0	0	0	0	0	2538
5	17623	5	0	1294	0	0	0	0	0	0	1294
6	9689	6	0	928	0	0	0	0	0	0	928

ESDv REQUIRED: 7802 CF
STORAGE: 75% OF ESD TREATED

PROJECT: BS LAND

TOTAL AREA: 9316 AC
TARGET P: 3.72 IN
IMPERVIOUS: 88.88 PERCENT
SITE REV: 0.40
APPROX SITE ESDv: 7802 CF

DRAINAGE AREA	IMPERVIOUS AREA	GRASS AREA	TOTAL AREA	PERCENT IMPERVIOUS	RV	ESDv MIN	ESDv MAX	TARGET
1	8010	2789	6795	58.98	0.58	329	856	565
2	4010	3887	7897	50.78	0.51	334	868	574
3	6576	4464	11040	59.57	0.59	539	1402	927
4	21353	11983	33336	64.05	0.63	1740	4525	2993
5	9370	8253	17623	53.17	0.53	776	2018	1335
6	7510	2179	9689	77.51	0.75	604	1569	1038

TOTAL AREA: 86394 SF
1.98 AC
7434 CF

LEGEND:

- 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 TREES (FIELD LOCATED)
- EXISTING TREELINE (FIELD LOCATED)
- PROPOSED FENCE AROUND THE TOT LOT
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- PROPOSED CURB AND GUTTER
- PROPOSED CURB TRANSITION
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- PROPOSED TREELINE
- PROPOSED SIDEWALK
- EX. FOREST CONSERVATION "RETENTION" EASEMENT (L.9101/F.461) (PLAT NO. 22359)
- EXISTING WETLANDS
- EXISTING 24" PUBLIC WATER ACCESS & UTILITY EASEMENT (L.9321/F.549)
- EXISTING 20" PUBLIC SEWER AND UTILITY EASEMENT (L.3544/F.44)
- EXISTING 12" RIGHT OF WAY, PRIVATE WATER & USE IN COMMON WITH OTHERS (L.9101/F.461) (L.8877/F.52) (L.11853/F.138)
- EXISTING 15" PRIVATE ACCESS EASEMENT (L.8877/F.52) (L.9101/F.461)
- EXISTING USE-IN-COMMON ACCESS MAINTENANCE AND SIGN EASEMENT (L.16117/F.501)
- RECREATION OPEN SPACE AMENITY AREA
- EXISTING 20" PUBLIC WATER & UTILITY EASEMENT TO BE ABANDONED (L.15108/F.510)
- EXISTING PUBLIC WATER AND UTILITY EASEMENT (L.15108/F.405)
- MICRO-BIORETENTION FACILITIES
- EXISTING 16" PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 23834)
- DRAINAGE DIVIDE FOR SWM
- DRAINAGE AREA DESIGNATION
- EXISTING VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT (PLAT NO. 23834)

Table B.4.1 Materials Specifications for Micro-Bioretenation, Rain Gardens & Landscape Infiltration

Material	Specification	Ratio	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60-67%) & compost (35-40%) or sandy loam (50%), coarse sand (50%) & compost (50%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2914)	n/a	aged 6 months, minimums no pine or wood chips
Pea gravel (depth)	abraded hardwood	n/a	aged 6 months, minimums no pine or wood chips
Pea gravel (depth)	per gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	n/a
Curtain drain	nonmetallic stone, washed cobbles	stone: 3" to 5"	n/a
Geotextile	NO. 27 OR NO. 6 AGGREGATE (SEE A.3.4.2)	n/a	PE Type 1 geotextiles
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 27 OR NO. 6 AGGREGATE (SEE A.3.4.2)	n/a
Underdrain piping	F 78, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	4" to 6" perforated pipe, 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipe; not necessary underdrain pipe, perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Placed in place concrete (if required)	MSEA Mix No. 3, F-3500 per (28 days, normal weight, air-entrained, conforming to ASTM C-1151-00)	n/a	28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standard requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include reinforcing steel (ASTM A-618) and vertical loading (14-10 or 14-20); allowable horizontal loading (based on soil permeability) and analysis of potential cracking
Sand	AASHTO M-6 or ASTM-C-33	0.075 to 0.04"	Sand substitutions such as DuneSand and Ceyrone (AASHTO) #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

MICRO-BIORETENTION DATA CHART

MBR Facility	Ponding Depth (ft)	Ponding Elevation (ELEV. A)	Top of Mulch (ELEV. B)	Bottom of Mulch (ELEV. C)	Depth of Plant Mix (ELEV. D)	Bottom of Plant Mix (ELEV. E)	Bottom of Pea Gravel (ELEV. F)	Depth of Stone (ELEV. G)	Invert of Underdrain (ELEV. H)	Bottom of Stone (ELEV. I)
#1	1.00	396.15	396.15	394.90	1.50	393.40	393.07	1.00	392.32	392.07
#2	1.00	395.30	394.30	394.05	1.00	393.05	392.72	1.00	391.97	391.72
#3	1.00	395.70	395.45	395.20	1.50	393.70	393.37	2.00	393.37	393.07
#4	1.00	393.20	392.20	391.95	1.50	390.45	390.12	2.00	389.87	389.12
#5	1.00	394.00	393.00	392.75	1.50	391.25	390.92	1.00	390.17	389.92
#6	0.50	395.60	395.10	394.85	1.50	393.35	393.02	2.00	392.77	391.02

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY HINDER OR PREVENT THE PERFORMANCE OF THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMOUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOxious WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05. THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
• ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2914). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-67%) AND COMPOST (35% TO 40%) OR SANDY LOAM (50%), COARSE SAND (50%) AND COMPOST (50%).
• SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).
• PH RANGE - 5.5 TO 7.0. AMMONIUM NITROGEN, LIME, IRON SULFATE PLUS SULFUR MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
• PERCENTAGE OF SAND - AT LEAST 50% OF THE SOIL SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

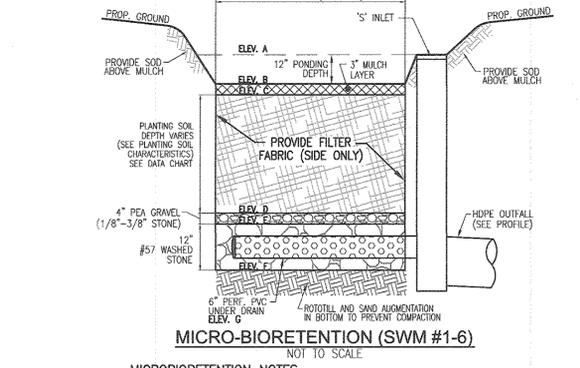
3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL WHEN POSSIBLE. USE EXCAVATION HOES TO REMOVE ORION. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH NARROW TRACKS. THE USE OF EQUIPMENT WITH NARROW TRACKS, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL BE SIGNIFICANT IF DESIGN FAILURE. COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLow, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE PREPARING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.2.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SUBSIDERED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED HARDWOOD MULCH MUST BE ALLED 16 TO 19 MONTHS FOR ACCEPTANCE. ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/6TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STAKES DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND WATER COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE INSTALLED ON THE OUTSIDE OF THE TREE ONLY. GRASS AND LEGUME SEED SHOULD BE DRILLED IN TO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NUTRIENT GRASS GROUND COVER PLANTING SPECIFICATIONS. THE TOPSOIL SPECIFICATIONS SHOULD ENOUGH ORGANIC MATTER TO ADEQUATELY SUPPLEMENT THE NUTRIENT CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS, OR AT A MINIMUM, NUTRIENT AND FERTILIZER IF WORKS FOR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET OF SURFACE AREA.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
• PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 750, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE).
• PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 4" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4x4) GALVANIZED HARDWARE CLOTH.
• GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
• THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
• A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO MONITOR OR CHECK HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED HARDWOOD MULCH MUST BE ALLED 16 TO 19 MONTHS FOR ACCEPTANCE. ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/6TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STAKES DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND WATER COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE INSTALLED ON THE OUTSIDE OF THE TREE ONLY. GRASS AND LEGUME SEED SHOULD BE DRILLED IN TO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NUTRIENT GRASS GROUND COVER PLANTING SPECIFICATIONS. THE TOPSOIL SPECIFICATIONS SHOULD ENOUGH ORGANIC MATTER TO ADEQUATELY SUPPLEMENT THE NUTRIENT CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS, OR AT A MINIMUM, NUTRIENT AND FERTILIZER IF WORKS FOR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET OF SURFACE AREA.

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



MICRO-BIORETENTION NOTES:

- ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
- WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL. PRUNING ACCEPTABLE REPLACEMENT PLANT MATERIAL. TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STEMS AND WIRES.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STEMS AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD

OWNER (PARCEL 153)
JOSEPH'S COURTYARD, LLC
3675 PARK AVENUE #301
ELLIOTT CITY, MD 21043
C/O MICHAEL PFAU
(410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
TRINITY HOWES MARY LAND, LLC
3675 PARK AVENUE #301
ELLIOTT CITY, MD 21043
C/O MICHAEL PFAU
(410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

REVISED SITE DEVELOPMENT PLAN
STORM WATER MANAGEMENT
DRAINAGE AREA MAP, NOTES AND DETAILS

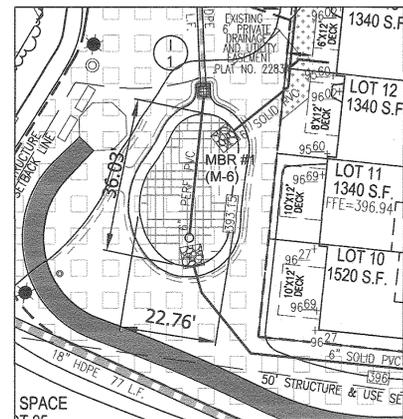
JOSEPH'S COURTYARD
LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
TAX MAP 35 BLOCK 24 ZONED: R-9101/F.0461L 02548/F.0388 PARCEL 153: P/O 256 5TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIOTT CITY, MD 21043
TEL: 410-461-7666
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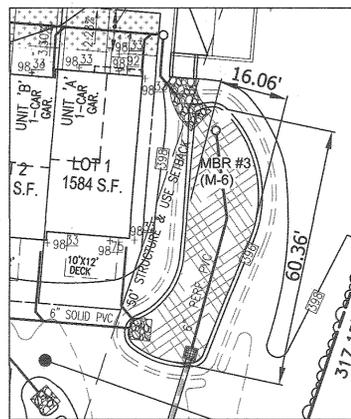
DESIGN BY: RHY/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHY
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: OS-84

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 EXPIRES ON 10-27-2018

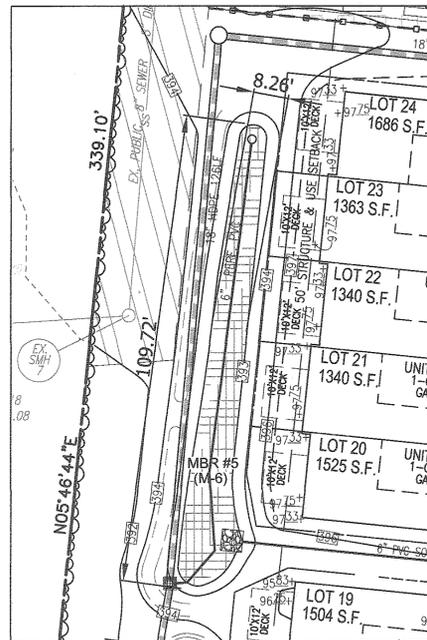
10 SHEET OF 14



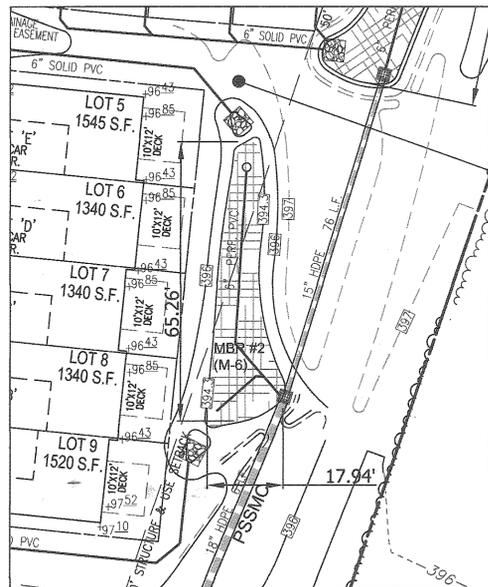
PLAN VIEW MBR #1
SCALE: 1"=20'



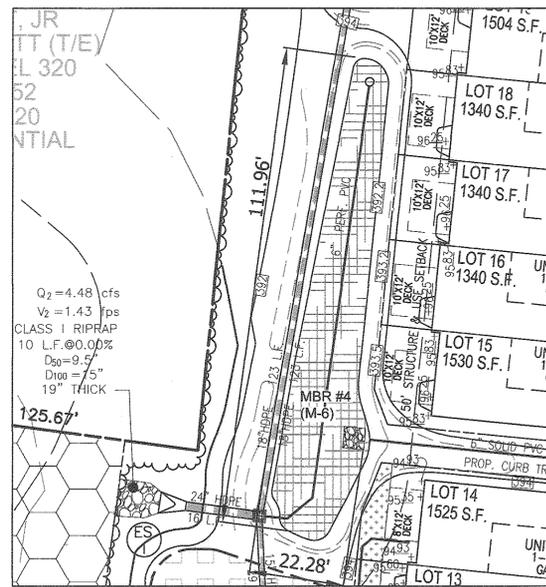
PLAN VIEW MBR #3
SCALE: 1"=20'



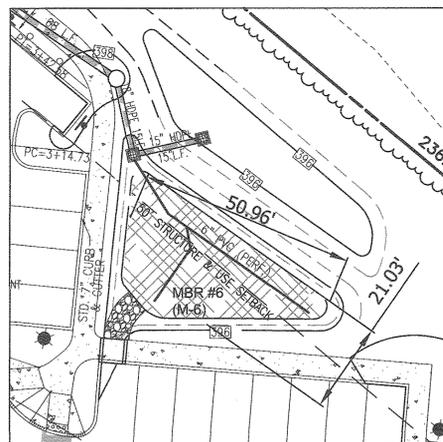
PLAN VIEW MBR #5
SCALE: 1"=20'



PLAN VIEW MBR #2
SCALE: 1"=20'



PLAN VIEW MBR #4
SCALE: 1"=20'



PLAN VIEW MBR #6
SCALE: 1"=20'

LEGEND:

	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING TREELINE (FIELD LOCATED)
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	PROPOSED CURB AND GUTTER
	PROPOSED CURB TRANSITION
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROP. LIGHT POLE
	PROPOSED SIDEWALK
	EXISTING 20' PUBLIC SEWER DRAINAGE AND UTILITY EASEMENT (L3544F-A4)
	EXISTING 10' PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 23834)
	RECREATION OPEN SPACE AMENITY AREA

OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
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1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16
NO.	REVISION	DATE

**REVISED SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT DETAILS AND
MICRO-BIORETENTION PLANTING PLANS**
JOSEPH'S COURTYARD
LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P-256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12) PARCEL 153: P/O 256
5TH ELECTION DISTRICT L.09101/F.0461/L.02548/F.0388 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
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ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8991

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 06-27-2018

DESIGN BY: RHV/GAH
DRAWN BY: GAH/KC
CHECKED BY: RHV
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

11 SHEET OF 14

"MICRO-BIORETENTION" PLANTING SCHEDULE NOTES:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
5. SEE SHEET 10 FOR TYPICAL PLANTING SPECIFICATIONS AND DETAILS.
6. MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (.0229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDv SUMMARY.

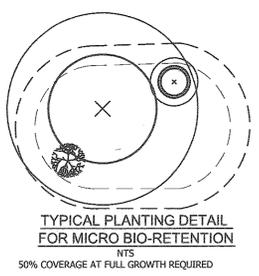
SEE SHEET 10 FOR MICRO-BIORETENTION
DETAIL AND CONSTRUCTION ELEVATIONS.

MICRO-BIORETENTION PLANTING SCHEDULE

QTY	BOTANICAL NAME/Common Name	SIZE	REMARKS
20	LINDERA BENZOIN SPICEBUSH	5 GALLON	CONT
40	ILEX GLABRA INKBERRY	3 GALLON	CONT
40	VIBURNUM TRILOBUM AMERICAN HIGHBUSH CRANBERRY	3 GALLON	CONT

SF X 75% X .0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED

MBR FACILITY	SURFACE AREA	REQUIRED PLANTINGS	PLANTINGS
MBR #1	673 SF	12	2 SPICEBUSH 5 INKBERRY 5 AMERICAN HIGHBUSH CRANBERRY
MBR #2	704 SF	12	2 SPICEBUSH 5 INKBERRY 5 AMERICAN HIGHBUSH CRANBERRY
MBR #3	866 SF	15	3 SPICEBUSH 6 INKBERRY 6 AMERICAN HIGHBUSH CRANBERRY
MBR #4	1554 SF	27	7 SPICEBUSH 10 INKBERRY 10 AMERICAN HIGHBUSH CRANBERRY
MBR #5	971 SF	17	3 SPICEBUSH 7 INKBERRY 7 AMERICAN HIGHBUSH CRANBERRY
MBR #6	959 SF	17	3 SPICEBUSH 7 INKBERRY 7 AMERICAN HIGHBUSH CRANBERRY

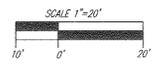


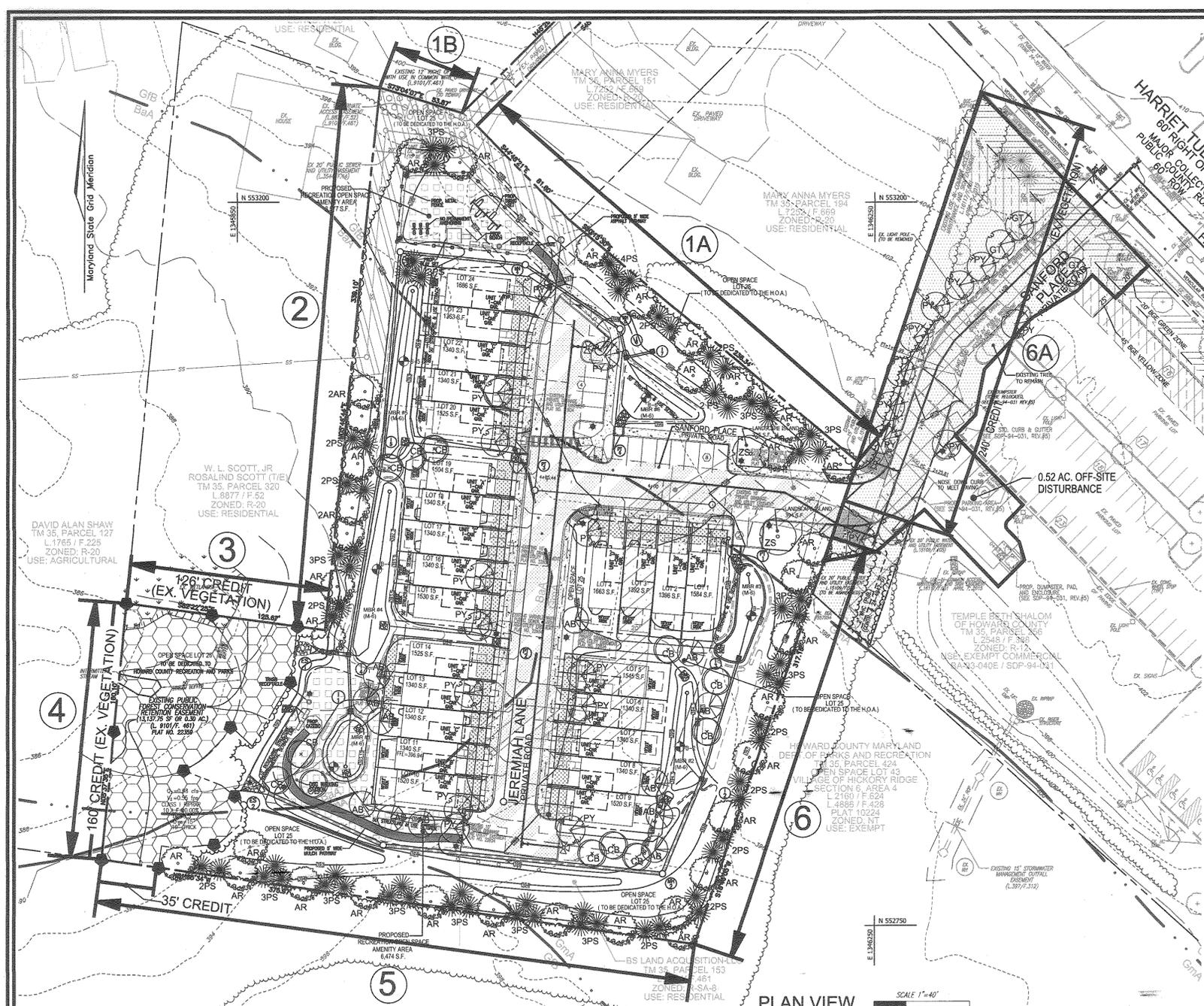
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Cook 11-29-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kathleen Deane 12-5-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Valerie J. Quinn 12-5-16
DIRECTOR DATE

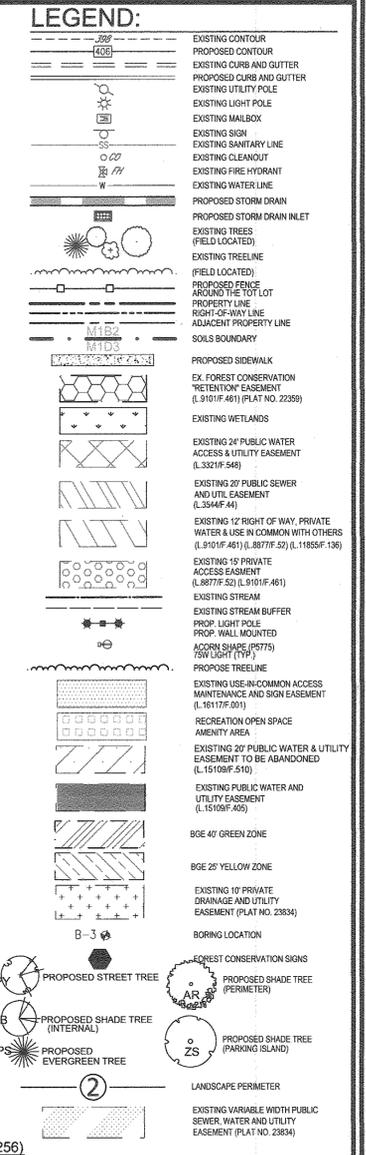




- ### FOREST RETENTION AREAS AND NOTES
- FORESTED STREAM AND WETLAND BUFFERS ARE RETAINED IN OPEN SPACE LOTS.
 - NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
 - EXISTING AREAS ADJACENT TO FLOODPLAINS AND STEEP SLOPES ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
 - CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES. RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
 - THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

- ### GENERAL NOTES:
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE REVIEWED PER THIS SUBMISSION.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$28,350.00 FOR THE REQUIRED 61 SHADE TREES AND 67 EVERGREEN TREES.
 - FINANCIAL SURETY FOR THE REQUIRED STREET TREE HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$8,100.00 FOR THE REQUIRED 27 SHADE TREES.
 - THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERRMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUING COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 - NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
 - AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS LISTED HERETO AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. ANY SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVIEWING ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
 - THERE IS NO 100YR FLOODPLAIN ON SITE.
 - THERE ARE NO STEEP SLOPES ON SITE.
 - WETLANDS ARE LOCATED ON SITE IN ACCORDANCE WITH DELINEATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 12, 2006.
 - NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURE SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, AND FOREST CONSERVATION EASEMENT AREAS.

- ### SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION
- PRECONSTRUCTION MEETING: GITE WORK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
 - STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
 - INSTALL TREE PROTECTION FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
 - PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN. TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
 - TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS AND PERIMETER PROPERTIES						TOTAL
	1A	1B	2	3	4	5	
PERIMETER/FRONTAGE DESIGNATION	C	C	C	C	C	C	C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	317	54	339	126	376	270	240
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	126 LF	160 LF	35 LF	240 LF
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No	No	No
NUMBER OF PLANTS REQUIRED							
SHADE TREES	1:40 8	1:40 2	1:40 9	1:40 0	1:40 9	1:40 7	1:40 3
EVERGREEN TREES	1:20 16	1:20 3	1:20 17	1:20 0	1:20 17	1:20 14	1:20 0
SHRUBS							
NUMBER OF PLANTS PROVIDED							
SHADE TREES	8	2	7	0	0	11	0
EVERGREEN TREES	16	3	12	0	0	22	0
OTHER TREES (2:1 SUBSTITUTION)							
SHRUBS (10:1 SUBSTITUTION)							
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED							

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of parking spaces	14
Number of trees required	2
Number of trees provided	2
Shade Trees	2
Other Trees (2:1 Substitution)	0

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

Number of dwelling units	24
Number of trees required (1:1 DU SFA; 1:3 DU APTS)	24
Number of trees provided	24
Other Trees (2:1 Substitution)	-

Forest Conservation Worksheet 2.2

Net Tract Area	A = 5.00
Total Tract Area	B = 5.00
Deductions	C = 0.00
Net Tract Area	C = 5.00

Net Tract Area	A = 5.00
Conservation Threshold (Net Tract Area x 15%)	D = 0.75
Conservation Threshold (Net Tract Area x 20%)	E = 1.00
Existing Forest Cover	F = 0.57
Assessment of Forest Above Conservation Threshold	G = 0.00
Break Even Point	H = 0.57
Forest Clearing Permitted Without Mitigation	I = 0.00
Proposed Forest Clearing	J = 0.27
Total Area of Forest to be Cleared	K = 0.27
Total Area of Forest to be Retained	L = 0.00
Restoration for Clearing Above the Conservation Threshold	M = 0.54
Restoration for Clearing Below the Conservation Threshold	N = 0.00
Credit for Retention above the Conservation Threshold	O = 0.00
Total Restoration Required	P = 0.54
Total Abatement Required	Q = 0.18
Total Requirement	R = 0.72

NOTES:

- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST AFFORESTATION THROUGH THE ON-SITE RETENTION OF 0.30 ACRES (131.26 SF) UNDER THE TERMS OF DEVELOPER AGREEMENT, SDP-08-083. THE REMAINING OBLIGATION OF 0.72 ACRES HAS BEEN SATISFIED THROUGH THE PAYMENT OF A FEE-IN-LIEU BY THE AMOUNT OF \$23,522.40 (0.72 x \$32650 x \$0.75) TO THE HOWARD COUNTY FOREST CONSERVATION FUND.
- THE FOREST CONSERVATION OBLIGATION REQUIREMENTS WERE PREVIOUSLY APPROVED UNDER SDP-08-083 (BS LAND - MULTIPLE UNITS) OF THE NET TRACT AREA OF 5.0 ACRES INCLUDED ALL OF THE DEVELOPMENT OF PARCEL 153 (3.34 ACRES) AS WELL AS 1.66 ACRES OF ASSOCIATED IMPROVEMENTS ON PARCEL 256 (TEMPLE OF BETH SHALOM, SDP-04-031). THE FOREST CONSERVATION CREDIT FOR THE 1.66 ACRES HAS BEEN TRANSFERRED TO THIS SDP (SDP-16-002) FOR THE INTEGRATED DEVELOPMENT OF SANFORD PLACE AND THE TEMPLE BETH SHALOM.

JOHN CANOLES
DNR QUALIFIED PROFESSIONAL

OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD. 21044

OWNER (PARCEL 153)
JOSEPH'S COURTYARD, LLC
3675 PARK AVENUE #301
ELLIOTT CITY, MD. 21043
C/O MICHAEL PFAU
(410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
TRINITY HOMES MARYLAND, LLC
3675 PARK AVENUE #301
ELLIOTT CITY, MD. 21043
C/O MICHAEL PFAU
(410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

REVISED SITE DEVELOPMENT PLAN

FOREST CONSERVATION AND LANDSCAPE PLAN

JOSEPH'S COURTYARD

LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)

TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12)
L09101F.0461L.02548F.0388 PARCEL 153: P/O 256
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.9961

DESIGN BY: RHW/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHW
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

12 SHEET OF 14

PLAN VIEW SCALE: 1"=40'

STREET TREE SCHEDULE

ROAD FRONTAGE	1095 LF
TREES REQUIRED	28
TREES PROVIDED	*28

*27 NEW SHADE TREES AND 1 EXISTING SHADE TREE TO REMAIN

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AR	35	ACER RUBRUM	2 1/2"-3" CAL.	B & B
ZS	2	OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
PY	24	ZELKOVA SERRATA	1 1/2"-2" CAL.	B & B
GT	3	VILLAGE GREEN	1 1/2"-2" CAL.	B & B
PS	67	PRUNUS YEDOENSIS/ YOSHINO CHERRY	6'-8" HT.	B & B
AB	12	GLEDITSIA TRIACANTHOS INERMIS IMPERIAL/ IMPERIAL THORNLESS HONEY LOCUST	2 1/2"-3" CAL.	B & B
CB	12	CARPINUS BETULUS 'FASTIGIATA'/ FASTIGIATE EUROPEAN HORNBEEAM	1 1/2"-2" CAL.	B & B

*There is one existing Shade Tree to remain which will count towards total of 89 shade trees provided.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL CONFORM TO THE MOST CURRENT ANR SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

DEVELOPER'S/BUILDER'S CERTIFICATE

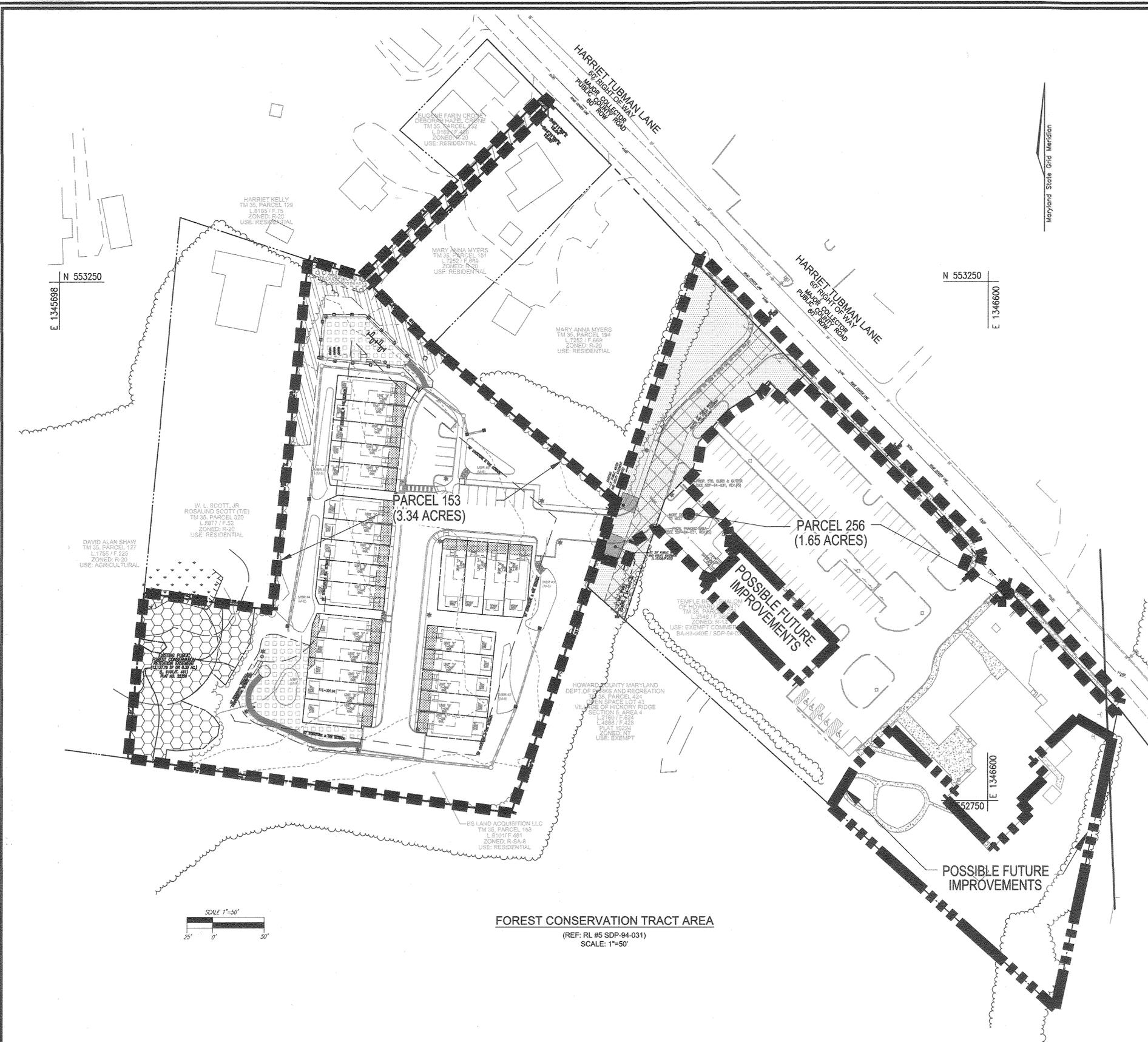
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND THE LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

11-29-16
DATE

12-5-16
DATE

12-5-16
DATE



LEGEND

EXISTING CURB AND GUTTER	EXISTING UTILITY POLE	EXISTING WETLANDS
EXISTING LIGHT POLE	EXISTING MAILBOX	EXISTING 24' PUBLIC WATER ACCESS & UTILITY EASEMENT (L-3321F-548)
EXISTING SIGN	EXISTING SIGN (FIELD LOCATED)	EXISTING 20' PUBLIC SEWER AND UTILITY EASEMENT (L-3544F-44)
EXISTING TREETRINE (FIELD LOCATED)	PROPOSED FENCE AROUND LOT	EXISTING 12' RIGHT OF WAY, PRIVATE WATER & USE IN COMMON WITH OTHERS (L-9101F-461) (L-8877F-52) (L-11855F-136)
PROPOSED FENCE AROUND LOT	PROPERTY LINE	EXISTING 15' PRIVATE ACCESS EASEMENT (L-8877F-52) (L-9101F-461)
RIGHT-OF-WAY LINE	ADJACENT PROPERTY LINE	EXISTING USE-IN-COMMON ACCESS MAINTENANCE AND SIGN EASEMENT (L-16117F-001)
EXISTING STREAM	EXISTING STREAM BUFFER	EXISTING 10' PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 23834)
PROPOSED CURB AND GUTTER	PROPOSED CURB TRANSITION	EXISTING 20' PUBLIC WATER & UTILITY EASEMENT TO BE ABANDONED (L-15108F-510)
PROPOSED TREETRINE	PROPOSED SIDEWALK	EXISTING PUBLIC WATER AND UTILITY EASEMENT (L-15108F-493)
EXISTING 10' PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT NO. 23834)	RECREATION OPEN SPACE AMENITY AREA	
EXISTING VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT (PLAT NO. 23834)		

NOTES

- FURTHER DEVELOPMENT OF THE REMAINDER OF PARCEL 256 WILL BE SUBJECT TO THE REQUIREMENTS OF SECTION 16.1200 HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT
- THE FOREST CONSERVATION OBLIGATION FOR THIS INTEGRATED SITE DESIGN WITH A NET TRACT AREA TOTALING 5.0 AC. INCLUDES ALL OF PARCEL 153 (3.34 AC.) AND A PORTION OF PARCEL 256 (1.65 AC.) WAS ADDRESSED UNDER SDP-08-083 AND HAS BEEN TRANSFERRED TO THIS SDP-16-002.

OWNER (PARCEL 256)
 TEMPLE BETH SHALOM OF HOWARD COUNTY
 8070 HARRIET TUBMAN LANE
 COLUMBIA, MD. 21044

OWNER (PARCEL 153)
 JOSEPH'S COURTYARD, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

OWNER/DEVELOPER (PARCEL 153)
 TRINITY HOMES MARY LAND, LLC
 3675 PARK AVENUE #301
 ELLICOTT CITY, MD. 21043
 C/O MICHAEL PFAU
 (410) 480-0023

NO.	REVISION	DATE
1	REVISE PLAN TO ACCOMMODATE BUILDER HOUSE MODEL	10/28/16

REVISED SITE DEVELOPMENT PLAN
FOREST CONSERVATION TRACT AREA
JOSEPH'S COURTYARD
 LOTS 1-24 AND OPEN SPACE LOTS 25 AND 26 - USE IN COMMON ACCESS (P.256)
 SINGLE FAMILY ATTACHED AND RELIGIOUS FACILITY (BA-93-40E)
 TAX MAP 35 BLOCK 24 ZONED: PARCEL 153 (R-SA-8) / PARCEL 256 (R-12) PARCEL 153: P/O 256
 5TH ELECTION DISTRICT L-09101F-0461/L-02548F-0388 HOWARD COUNTY, MARYLAND

ROBERT H. VOGL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8991

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad P. Smith
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11-29-16

Michael J. Taylor
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 12-05-16

Michael J. Taylor
 DIRECTOR
 DATE: 12-05-16

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND THE LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael J. Taylor
 DEVELOPER/BUILDER
 DATE: 11/16

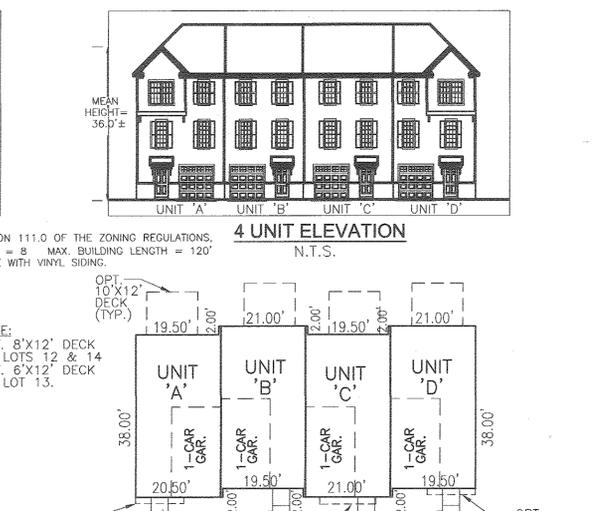
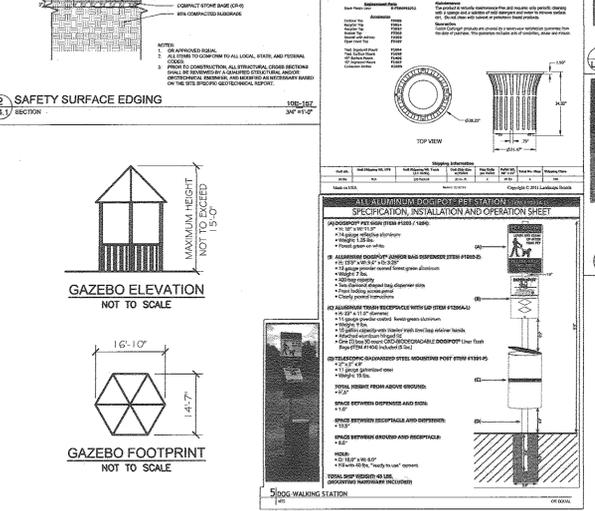
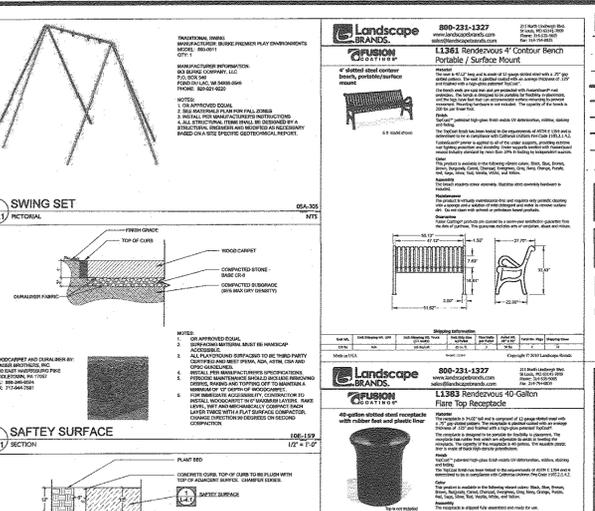
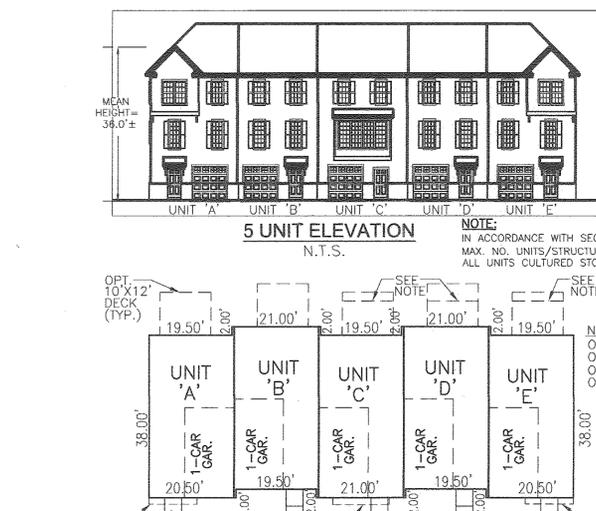
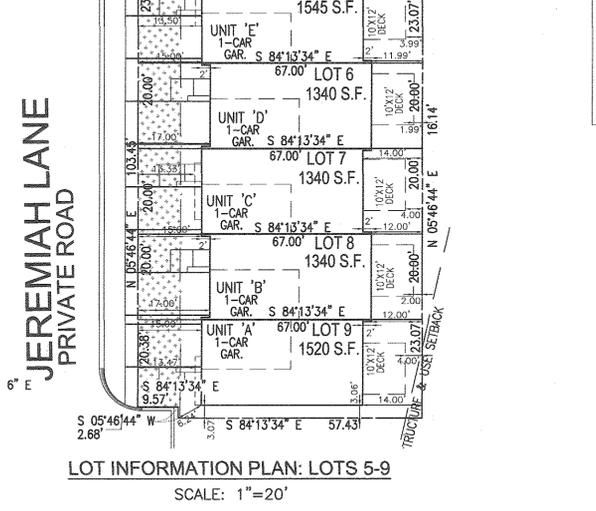
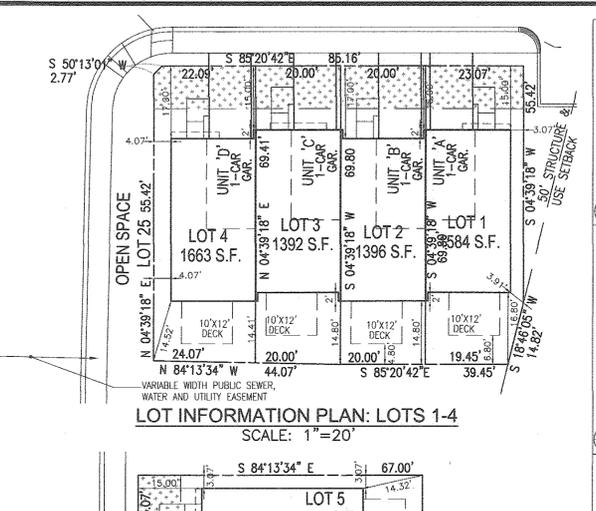
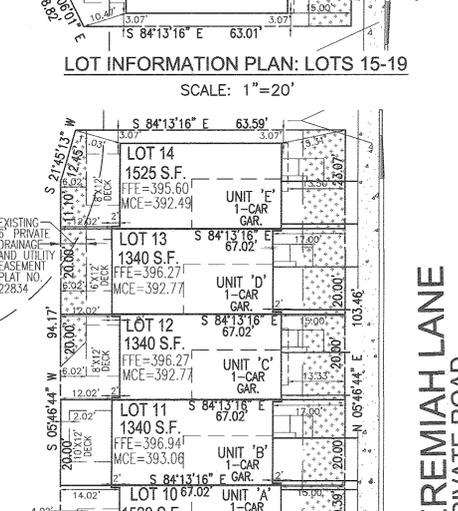
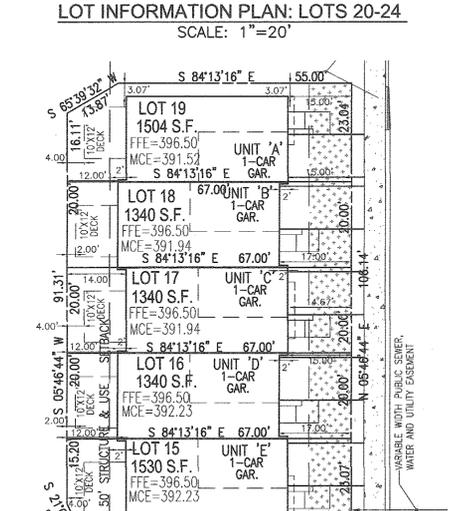
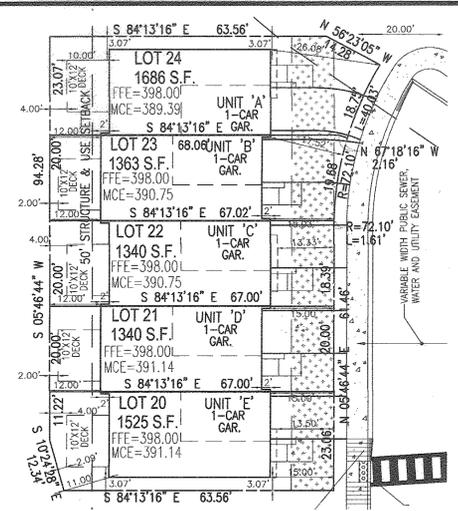
PROFESSIONAL CERTIFICATE

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 06-27-2018.

DESIGN BY: RHV/GAH
 DRAWN BY: GAH/KG
 CHECKED BY: RHV
 DATE: MAY 2016
 SCALE: AS SHOWN
 W.O. NO.: 05-84

Robert H. Vogel
 ROBERT H. VOGL, PE No. 16193
 PROFESSIONAL ENGINEER

13 SHEET OF 14

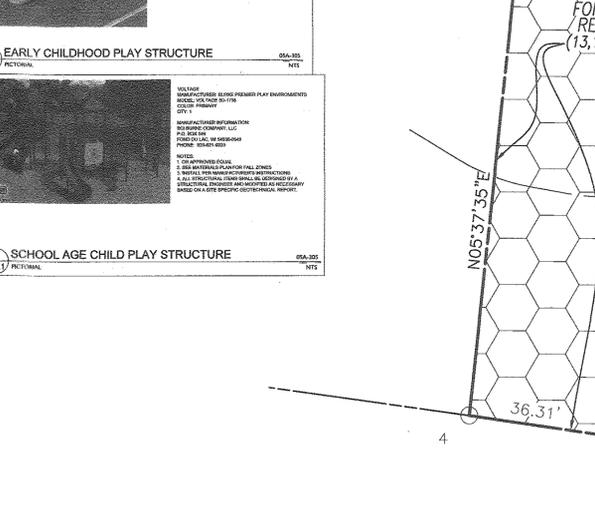


FOREST CONSERVATION EASEMENT COURSE TABLE

LINE	RADIUS	LENGTH	BEARING	LENGTH
L1			S 07°37'35" W	35.00'
L2			S 30°49'41" W	46.36'
L3			N 47°20'35" W	18.24'
L4	65.11'	41.27'	S 47°34'28" W	40.58'
L5			S 68°40'20" E	25.83'
L6			S 51°44'36" E	10.48'
L7			S 34°48'52" E	9.21'
L8			S 08°56'51" W	10.20'
L9			S 48°25'31" W	18.63'
L10			S 84°49'59" W	26.42'
L11			N 81°55'34" W	9.25'
L12			S 08°04'26" W	13.70'

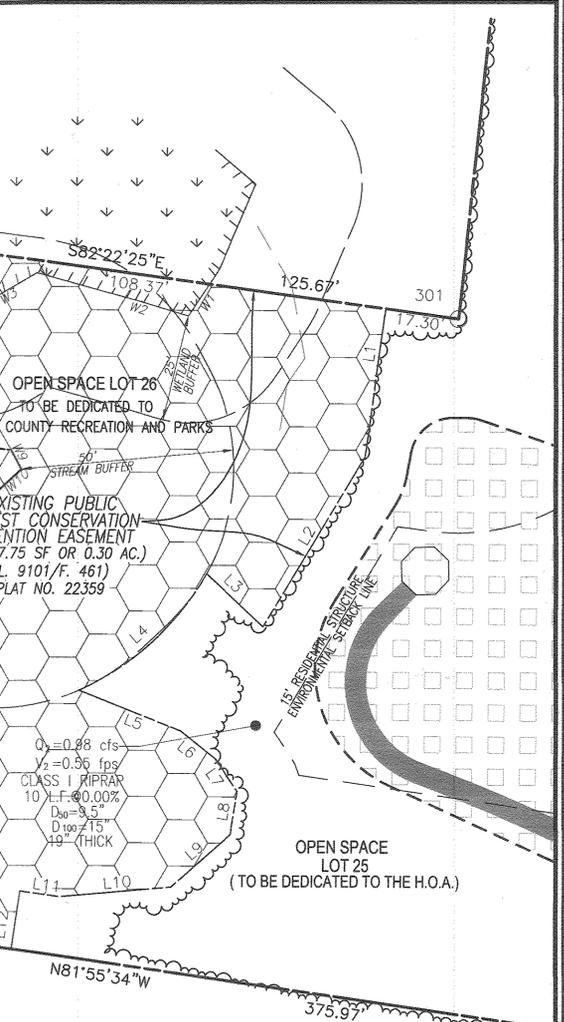
LEGEND:

- EXISTING TREELINE (FIELD LOCATED)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING STREAM
- EXISTING STREAM BUFFER
- PROPOSED TREELINE
- EX FOREST CONSERVATION "RETENTION" EASEMENT (L9101/F.461)
- EXISTING WETLANDS
- EXISTING VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT (PLAT NO. 23834)



LOT COVERAGE MATRIX

LOT NO.	LOT AREA	BASIC BLDG AREA	% BLDG COVERAGE
1	1,584 S.F.	760 S.F.	47.98
2	1,396 S.F.	760 S.F.	54.44
3	1,392 S.F.	760 S.F.	54.60
4	1,663 S.F.	760 S.F.	45.70
5	1,545 S.F.	760 S.F.	49.19
6	1,340 S.F.	760 S.F.	56.72
7	1,340 S.F.	760 S.F.	56.72
8	1,340 S.F.	760 S.F.	56.72
9	1,520 S.F.	760 S.F.	50.00
10	1,520 S.F.	760 S.F.	50.00
11	1,340 S.F.	760 S.F.	56.72
12	1,340 S.F.	760 S.F.	56.72
13	1,340 S.F.	760 S.F.	56.72
14	1,525 S.F.	760 S.F.	49.84
15	1,530 S.F.	760 S.F.	49.67
16	1,340 S.F.	760 S.F.	56.72
17	1,340 S.F.	760 S.F.	56.72
18	1,340 S.F.	760 S.F.	56.72
19	1,504 S.F.	760 S.F.	50.53
20	1,525 S.F.	760 S.F.	49.84
21	1,340 S.F.	760 S.F.	56.72
22	1,340 S.F.	760 S.F.	56.72
23	1,363 S.F.	760 S.F.	55.76
24	1,686 S.F.	760 S.F.	45.08



OWNER (PARCEL 256)
TEMPLE BETH SHALOM OF HOWARD COUNTY
8070 HARRIET TUBMAN LANE
COLUMBIA, MD. 21044

OWNER (PARCEL 153)
JOSEPH'S COURTYARD, LLC
3675 PARK AVENUE #301
ELLICOTT CITY, MD. 21043
C/O MICHAEL PFAU
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OWNER/DEVELOPER (PARCEL 153)
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ELLICOTT CITY, MD. 21043
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NO.	REVISION	DATE
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SITE LAYOUT PLAN
JOSEPH'S COURTYARD
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8407 MAIN STREET
ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.6961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/GAH
DRAWN BY: GAH/KG
CHECKED BY: RHW
DATE: MAY 2016
SCALE: AS SHOWN
W.O. NO.: 05-84

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 EXPIRES 09-27-2018

14 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Olaf P. ... 11-29-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION

K. ... 12-05-16
CHIEF, DIVISION OF LAND DEVELOPMENT

M. ... 12-5-16
DIRECTOR