

NOTES

- MANUFACTURED SAND IS NOT ACCEPTABLE IN DRYWELLS.
- ALL PIPES SHOULD BE SCH 40 PVC 4" MIN.
- DRYWELLS MUST BE A MINIMUM OF 10' FROM BUILDING FOUNDATION, 30' FROM SEPTIC FIELD, 100' FROM WELL LOCATION AND SHOULD BE LOCATED TO MINIMIZE ANY BASEMENT SEEPAGE.
- MINIMUM NUMBER OF PERFORATIONS SHALL BE 5 TIMES PIPE AREA.
- TRENCH MAY NOT BE INSTALLED IN FILL.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

Lot 27, Chestnut Hill Estates, as shown on recorded plat #23117, also known as 8233 Church Lane is an existing residential lot. Church Lane Road is a dead end road. The site is zoned R-20 and a single family home is being proposed. There is an existing driveway entrance that will be deleted from an existing circle driveway from the adjoining lot previous owner. The site is currently vacant with the exception of the existing portion of a paved driveway. It is currently a stabilized grass lawn that is bordered by an established tree row on the east and rear property lines. There is a natural drainage way along the east property line that continues to a graded swale to the rear of lot 25 Chestnut Hill Estates and then drainage flows between Lots 24 and 25 via a graded ditch. The proposed house and grading does not affect the natural/existing drainage pattern. The site slopes away from the road to the rear property line at a 12 percent slope. There are no flood plains, steep slopes, stream buffers or other significant environmental features on or near the site.

There is 910 square feet of existing impervious (existing paved driveway). The proposed impervious includes 2314 square feet of rooftop (includes covered porch), 85 square feet of proposed sidewalk, and 910 square feet of proposed driveway.

The roof top cannot be disconnected by grading due to the slope of the existing site, therefore is being addressed/disconnected by roof drain drywells that will be privately owned and maintained. The proposed driveway drainage will be picked up at the defined swale in the front of the house and flow into a 6" x 4" surface drain inlet that will direct drainage into a drywell also. They are sized with a P of 1.0 inch per the attached table 5.3 and calculations. The sidewalk is being disconnected by Non-rooftop disconnect utilizing a grassed shoulder/filter strip that the sidewalk will sheet flow over.

SITE ANALYSIS DATA:

- TOTAL AREA OF SITE= 20,017 SQ. FT.± (0.459 AC.±)
- AREA OF MODERATE STEEP SLOPES (15%-24.9%)= 1776 SQ.FT.± OR 0.040 AC.±
- AREA OF STEEP SLOPES (>25%)= 697 SQ. FT.± OR 0.016 AC.±
- AREA OF HIGHLY ERODIBLE SOILS= NONE
- AREA OF WETLANDS/BUFFER= NONE
- AREA OF 100 YEAR FLOOD PLAIN= NONE
- AREA OF FOREST= NONE
- AREA OF EXISTING IMPERVIOUS= 910 SQ.FT.±
- AREA OF PROPOSED IMPERVIOUS= 3312 SQ.FT.± (0.076 AC.±)
- PROPOSED IMPERVIOUS BREAKDOWN
PROPOSED HOUSE = 2317 SQ.FT.± (INCLUDES COVERED PORCH)
PROPOSED DRIVEWAY = 910 SQ.FT.±
PROPOSED SIDEWALK = 85 SQ. FT.±
- TOTAL NET IMPERVIOUS AREA = 2402 SQ. FT.± (0.055 AC.±)
- PERCENT IMPERVIOUS = 12%
- TOTAL AREA OF DISTURBANCE= 8783 SQ. FT.±
- TOTAL AREA OF TREE REMOVAL= NONE
- WATERSHED= 02131108 (PATAPSCO RIVER)

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *Chad Johnson* 4-8-16
 Chief, Division of Land Development: *Ke J. Sullivan* 3-29-16

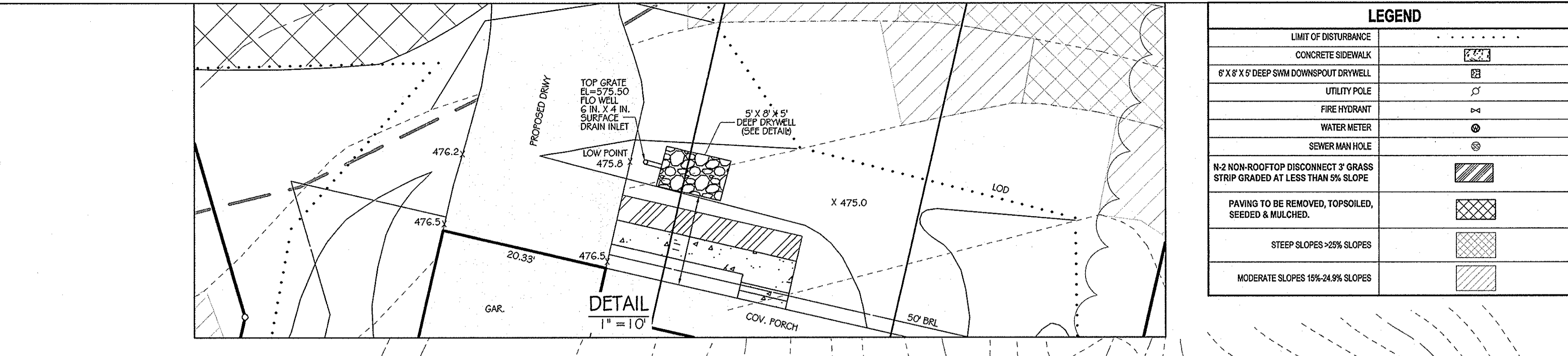
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT:

HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

ESD SUMMARY TABLE

M-5 (DW) ROOF DRAIN DRYWELL IMPERVIOUS AREA = 2318 SQ. FT. (ROOFTOP) Pe = 1 INCH ESDv REQUIRED = 184 CU. FT. ESDv PROVIDED = 192 CU. FT.	M-5 DRIVEWAY DRYWELL IMPERVIOUS AREA = 910 SQ. FT. (DRWY) Pe = 1 INCH ESDv REQUIRED = 190 CU. FT. ESDv PROVIDED = 200 CU. FT.	N-2 DISCONNECTION OF NON-ROOFTOP RUNOFF IMPERVIOUS AREA = 85 SQ. FT. (SIDEWALK) Pe = 1 INCH ESDv REQUIRED = 7 CU. FT. ESDv PROVIDED = 7 CU. FT.
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ON-SITE STORM WATER MANAGEMENT PRACTICES	IMPERVIOUS AREA TREATED	DRAINAGE AREA
(M-5) DW - ROOF DRAIN DRYWELL	2318 SQ.FT.	2318 SQ.FT.
(N-2) DISCONNECTION OF NON-ROOFTOP RUNOFF	85 SQ.FT.	85 SQ.FT.
(M-5) DW-DRIVEWAY DRAIN DRYWELL	910 SQ. FT.	910 SQ. FT.



SOILS TABLE

MAP UNIT SYMBOL	MAP UNIT NAME	K FACTOR RATING	HYDROLOGIC GROUP	HIGHLY ERODIBLE	HYDRIC
GhB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	0.28	B	NO	NO
GhC	GLENELG URBAN LAND COMPLEX, 8 TO 15 PERCENT SLOPES	0.28	B	NO	NO
GhD	GLENELG URBAN LAND UODRTHENTS COMPLEX, 0 TO 8 PERCENT SLOPES	0.43	C	YES	NO

REVISIONS

DATE	REASON
11-12-2015	COUNTY COMMENTS
12-15-2015	COUNTY COMMENTS
03-15-2016	DRWY SWM

JOHN E. LEMMERMAN
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 21096
EXP. 8-9-17

LEGEND

LIMIT OF DISTURBANCE
CONCRETE SIDEWALK	[Symbol]
6" X 8" X 8' DEEP SWIM DOWNSPOUT DRYWELL	[Symbol]
UTILITY POLE	[Symbol]
FIRE HYDRANT	[Symbol]
WATER METER	[Symbol]
SEWER MAN HOLE	[Symbol]
N-2 NON-ROOFTOP DISCONNECT 3" GRASS STRIP GRADED AT LESS THAN 5% SLOPE	[Symbol]
PAVING TO BE REMOVED, TOPSOILED, SEEDED & MULCHED.	[Symbol]
STEEP SLOPES >25% SLOPES	[Symbol]
MODERATE SLOPES 15%-24.9% SLOPES	[Symbol]

*17' FB" = NORTH - 593214.452
EAST - 1365669.045
ELEV. - 456.24

*18' DA" = NORTH - 586334.422
EAST - 1367562.226
ELEV. - 483.16

VICINITY MAP
SCALE: 1" = 200'
ADC MAP: 21 GRID NO. C-4

GENERAL NOTES:

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY RTF ASSOCIATES DATED SEPTEMBER 2014 AND SUPPLEMENTED WITH COUNTY GIS DATA. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENTS '17 FB' AND '18 DA' WERE USED FOR THIS PROJECT.
- EXISTING UTILITIES ARE BASED ON CONTRACT DRAWINGS NO. 20-W AND 10-3235 FOR WATER AND SEWER.
- ANY DAMAGE TO THE COUNTY'S RIGHT OF WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SHC ELEVATIONS ARE LOCATED AT THE PROPERTY LINE.
- FOR DRIVEWAY ENTRANCE DETAILS, REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6-06.
- ADC MAP-21 C-4
- PREVIOUS COUNTY FILE NUMBER = F-15-035
- BRL = BUILDING RESTRICTION LINE
- FIELD VERIFICATION OF SITE CONDITIONS AND NATURAL RESOURCES MAP WAS PERFORMED SEPTEMBER 2014 BY RTF ASSOCIATES, INC.
- ALL AREAS SHOWN HEREON ARE MORE OR LESS.
- GRAVITY SEWER SERVICE WILL NOT BE AVAILABLE FOR BASEMENT. EJECTOR PUMP WILL BE REQUIRED FOR BASEMENT SEWER SERVICE.
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 10/13/13 COMPREHENSIVE ZONING PLAN.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
WIDTH - 12' (10' SERVING MORE THAN ONE RESIDENCE)
SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1 - 1 1/2" MIN) GEOMETRY - MAX. 15% GRADE, MAX 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS STRUCTURE (CULVERS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING) DRAINAGE ELEMENTS - SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
- MAINTENANCE - SUFFICIENT TO INSURE ALL-WEATHER USE
- THE LOT/PARCEL IS EXEMPT FROM SECTION 16-1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION SINCE THE EXISTING LOT IS LESS THAN 40,000 S.F. IN SIZE.
- THE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE METROPOLITAN DISTRICT WHERE THE PROPOSED HOUSE WILL BE SERVED BY PUBLIC WATER AND SEWER.
- IN ACCORDANCE WITH SECTION 128.0 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 10 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS.
- NO CEMETERIES OR HISTORIC SITES ARE LOCATED ON THIS PROPERTY
- THERE ARE NO WETLANDS, WETLAND BUFFERS, STREAMS OR STREAM BUFFERS ON SITE.
- EXISTING TREES ON SITE TO REMAIN.
- LANDSCAPING IS NOT REQUIRED SINCE THIS IS AN INTERNAL LOT OF THE SUBDIVISION.
- APPROVAL OF THIS EOP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.

ENVIRONMENTAL CONCEPT PLAN FOR
INDIVIDUAL LOT - RESIDENTIAL
OF
LOT - 27
CHESTNUT HILL ESTATES
AS RECORDED ON W.A.R. PLAT # 23117
8233 CHURCH LANE ROAD
2ND ELECTION DISTRICT, HOWARD CO. MD
TAX MAP: 18, GRID: 13, PARCEL: 178
ZONING = R-20
COUNTY FILE # ECP-15-079
UTILITY CONTRACT NO 20-W AND 10-3235

TITLE REFERENCE	OWNER / DEVELOPER
HARMONY BUILDERS, INC. LIBER 16116 ~ 367 MARCH 27, 2015	HARMONY BUILDERS, INC. 4228 COLUMBIA ROAD ELLCOTT CITY, MD 21042 410-461-0833

RTF associates, Inc.
LAND SURVEYORS & PLANNERS

142 EAST MAIN STREET WESTMINSTER, MD 21157
410-946-2040 FAX: 410-288-8942 410-976-1222
EMAIL: RTF142@GMAIL.COM WWW.RTFSURVEYING.COM

CHECKED BY: *JEL* DATE: 11/10/2015
DRAWN BY: *JER* DATE: 5/04/2015
SCALE: 1" = 30'

RTF JOB#: 15-03 COUNTY FILE: ECP-15-079 SHEET: 1 OF 1
ECP-15-079