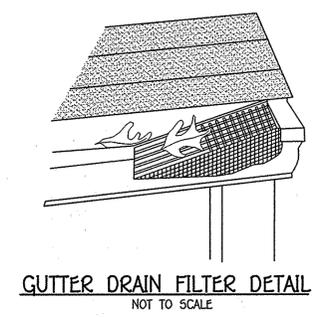
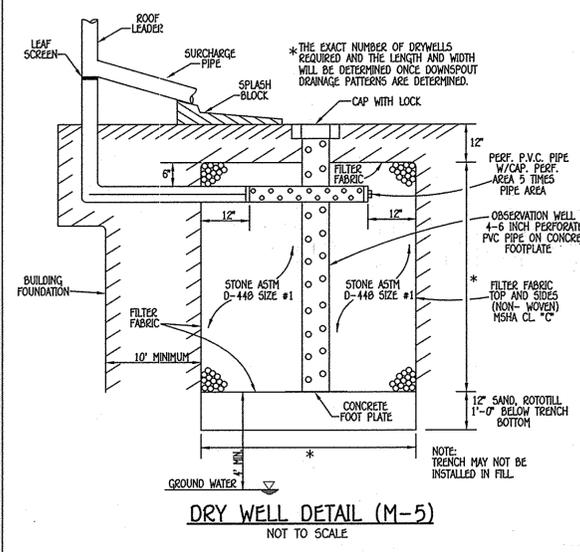


SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ENVIRONMENTAL CONCEPT PLAN

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
Gfb	Gladstone - Urban land complex, 0 to 8 percent slopes	A	0.2B

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESDV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS
SITE	651	665	DRY WELLS (M-5) & GRASS SWALE (M-8)
TOTAL	651	665	

GROSS AREA = 1.003 ACRES
 LOD = 0.45 ACRES
 RCN = 30
 TARGET Pe = 1.4"



STORMWATER MANAGEMENT NOTES

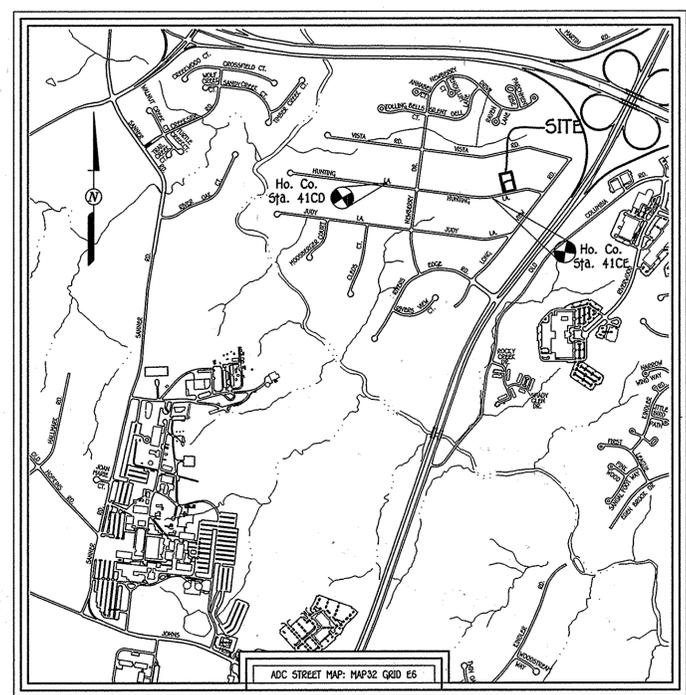
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

DRY WELL CHART					
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
FRONT	1,000 SQ. FT.	111 C.F.	264 C.F.	100%*	11' x 12' x 5'
REAR	1,000 SQ. FT.	111 C.F.	242 C.F.	100%*	12' x 12' x 5'

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

ENVIRONMENTAL CONCEPT PLAN HOLIDAY HILLS LOTS 117 AND 118

TAX MAP No. 41 GRID No. 6 PARCEL NO. 174
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCHMARK INFORMATION	
B.M.#1 - HOWARD COUNTY CONTROL STATION #41CD - HORIZONTAL - (NAD '83) (LOCATED ON THE NORTH SIDE OF HUNTING LANE WEST OF NEWBERRY DRIVE) N 950,546.6950 E 1,344,396.3950 ELEVATION = 347.74 - VERTICAL - (NAVD '88)	
B.M.#2 - HOWARD COUNTY CONTROL STATION #41CE - HORIZONTAL - (NAD '83) (LOCATED ON THE SOUTH SIDE OF HUNTING LANE) N 5501,340.9790 E 1,345,992.2830 ELEVATION = 371.34 - VERTICAL - (NAVD '88)	

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED 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 ENSURE 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 A 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.

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---+---	EXISTING 2' CONTOURS	---	PROPOSED CONTOUR
---+---	EXISTING 10' CONTOURS	---	SPOT ELEVATION
Gfb	SOILS LINES AND TYPE	---	LIMITS OF DISTURBANCE
---	EXISTING TREELINE	---	DRAINAGE AREA DIVIDE
○	INDIVIDUAL TREES & SHRUBS	---	SILT FENCE
---	EXISTING FENCE LINE	---	EROSION CONTROL MATTING
---	EXISTING & PROPOSED PAVING	---	STABILIZES CONSTRUCTION ENTRANCE

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.
- BOUNDARY SHOWN HEREON IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. DATED APRIL 2015. TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN APRIL 2015 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVAL INTERPOLATED FOR 2' CONTOUR INTERVAL.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT NOS. 41CB AND 41CC WERE USED FOR THIS PROJECT.
- PREVIOUS DPZ FILE NUMBERS: N/A.
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009.
- NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED.
- THIS PROPERTY IS LOCATED INSIDE THE METROPOLITAN DISTRICT. LOTS TO BE SERVED PUBLIC WATER AND PRIVATE SEWER, CONTRACT #34-4550.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THE SUBJECT PROPERTY IS ZONED R-20 (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN).
- NO 100 YEAR FLOODPLAIN, WETLANDS, STREAMS AND/OR THEIR BUFFERS, NOR STEEP SLOPES EXIST ON-SITE.
- NO FOREST STANDS EXIST ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED APRIL 2015.
- LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT UNDER F-15-099.
- FOREST CONSERVATION REQUIREMENTS FOR THIS PROPOSED RESUBDIVISION WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT UNDER F-15-099.
- A SOIL BORING WILL BE REQUIRED FOR THIS PROJECT SINCE DRYWELLS ARE BEING UTILIZED.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT SUBDIVISION, FOREST CONSERVATION, OR SITE DEVELOPMENT PLANS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE LOCATION, DRIVEWAY LOCATION, GRADING, TREE CLEARING, AND/OR OTHER REQUIREMENTS AS THE DEVELOPMENT PLAN PROGRESSES THROUGH THE PLAN REVIEW PROCESS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS AND THE FOREST CONSERVATION REQUIREMENTS.
- APPROVAL OF THIS ECP BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT PROVIDE APPROVAL OF THE SHOWN SEDIMENT CONTROLS.
- A STRUCTURE EXISTS ON THE PROPERTY, KNOWN AS 10614 HUNTING LANE, WHICH IS TO REMAIN.
- SOILS SHOWN HEREON ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP #23.

DESIGN NARRATIVE

- Introduction:**
 This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes I and II (effective October 2000, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of 'Woods in Good Condition' will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.
- General Site Conditions:**
 10614 Hunting Lane is zoned R-20 and is located on Tax Map 41, Parcel No.174 of the Howard County, Maryland Tax Map Database System. The property was previously recorded as Lot 10 under Plat Book 5, Folio 78 in February 1997. The site has an existing house on an open lot (not forested) with some residual trees. A site plan was created prior to Forest Conservation regulations, it is anticipated that a tree-in-lieu will be requested for the new lot. The proposed house will be served by public water and sewer as will the existing house which is current on private well and septic. The runoff from the lot is mostly from southeast to northwest to the rear corner of the new lot. Drywells and a grass swale will be utilized to treat majority rooftop and driveway runoff. Per the 2004 Web Soil Survey, soils on-site consist of "Gfb", Gladstone - Urban land complex, Type A soil.
- Natural Resource Protection:**
 Environmentally sensitive features such as wetlands, streams, their buffers, steep slopes, and floodplain do not exist on-site.
 - Maintenance of Natural Flow Patterns:**
 Nature flow patterns will be maintained. Existing and proposed runoff flows mostly toward the northwest portion of the site with a portion of proposed Lot 117 flowing to southeast most portion of the property.
 - Reduction of Impervious Areas through better site design, alternative surfaces and Nonstructural Practices:**
 A single driveway is proposed to provide access to the proposed house. The design will make use of a grass swale to treat majority of runoff from the new driveway.
 - Integration of Erosion and Sediment Controls into Stormwater Strategy:**
 Silt fence will be utilized to provide erosion and sediment control.
 - Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP):**
 The full required ESD volume is being provided.
 - Request for a Design Manual Waiver:**
 No waivers are required.

SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 1.003 AC.*
- LIMIT OF DISTURBED AREA = 19,628 SQ.FT. OR 0.45 AC.*
- PRESENT ZONING DESIGNATION = R-20
(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: N/A
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC*
- TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC*
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.*
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.*
- TOTAL AREA OF EXISTING FOREST = 0.00 AC*
- TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC*
- TOTAL AREA OF LOTS / BUILDABLE PARCELS = 1.003 AC*
- TOTAL GREEN OPEN AREA = 0.81 AC*
- TOTAL IMPERVIOUS AREA = 0.19 AC*
- TOTAL AREA OF ERODIBLE SOILS = 0.00 AC.*
- TOTAL AREA OF ROAD DEDICATION = 0.00 AC.*

Material	Specification	Size	Notes
Fill/pipe	see Appendix A, Table A.4	n/a	pipe/lines are site-specific
Filtering soil (12" to 4" deep)	loamy sand 60-65% compost 35-40% or sandy loam 30% course sand 30% compost 40%		USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel diaphragm	pea gravel ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curbin drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berm)	ASHTO M-43	No. 57 or No. Aggregates (3/8" to 3/4")	
Underdrain piping	F 750, Type PS 2B or ASHTO M-278	4" to 6" rigid schedule 40 PVC or 50835	Slotted or perforated pipe; 3/8" pert. @ 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
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using precast approved sites or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308.2/89; vertical loading 1H-10 or H-202; allowable horizontal loading based on soil pressure; and analysis of potential cracking
Sand	ASHTO-M-6 or ASTM-C-33	0.075" to 0.04"	Sand substitutions such as Diabase and Gneiss (ASHTO) #10 are not acceptable. No calcium silicate or dolomite sand substitutions are acceptable. No "rock dust" can be used for sand.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PkE
 ELKLOTT CITY, MARYLAND 21042
 (410) 461 - 2295

PROFESSIONAL CERTIFICATION
 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. 38386, EXPIRATION DATE: 01/12/2016.

Stephanie Lutz 7/6/15
 Signature of Professional Engineer DATE

OWNER/DEVELOPER
 MG RENOVATIONS, LLC
 ATTN: JIM GREENFIELD
 6420 AUTUMN SKY WAY
 COLUMBIA, MARYLAND 21044-4204
 410-730-3939

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>K. Stalder</i> Chief, Division of Land Development	7-10-15 Date
<i>M. J. Ehr</i> Chief, Development Engineering Division	7-20-15 Date
PROJECT: HOLIDAY HILLS, LOTS 117 & 118	SECTION: -
PARCEL NO.: 174	
PLAT PB 5 / F 78	BLOCK NO. 6
ZONE R-20	TAX/ZONE 41
ELEC. DIST. FIFTH	CENSUS TR. 605102

TITLE SHEET

HOLIDAY HILLS,
 LOTS 117 AND 118,
 10614 HUNTING LANE
 ZONED R-20
 TAX MAP No. 41 GRID No. 6 PARCEL No. 174
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: JULY, 2015
 SHEET 1 OF 2

ECP-15-073

