



HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

3430 Courthouse Drive

Ellicott City, Maryland 21043

410-313-2350

Voice/Relay

Valdis Lazdins, Director

FAX 410-313-3467

September 4, 2018

Guerdy and Angela Volcy  
10865 Braeburn Road  
Columbia, MD 21044

RE: WP-19-011 Braeburn – Lot 13

Dear Mr. and Mrs. Volcy:

The Director of the Department of Planning and Zoning considered your request for an alternative compliance from the Howard County Subdivision and Land Development Regulations.

As of the date of this letter, the Planning Director **approved** your request for an alternative compliance of **Section 16.155(a)(2)(ii)** of the Subdivision & Land Development Regulations, which states that a site development plan, approved by the Department of Planning & Zoning, is required for the development of single-family detached residential lots and deeded parcels within the planned service area for both public water and sewer, except that lots in recorded subdivisions created before February 7, 1976 are exempt from site development plan requirements unless more than 5,000 square feet of disturbance is proposed and the lots have not been reconfigured or merged through the recordation of a plat recorded on or after February 7, 1976.

**Approval is subject to the following conditions:**

1. The alternative compliance plan exhibit shall serve as the substitute for a site development plan for the new residential dwelling. No disturbance is permitted beyond the proposed limit of disturbance (LOD) as shown on the plan exhibit.
2. Revise the plan exhibit per the attached comments from the Division of Land Development and submit a 24" X 36" original signed and sealed mylar with standard SDP signature blocks to DPZ within 45 days for signature and retention (**on or before October 19, 2018**). The associated building permit will not be released until the mylar receives signature approval. Please schedule an appointment with Carol Stirn at 410-313-2350 to submit the original mylar plan exhibit drawing.
3. The original, signed Forest Conservation Declaration of Intent for a single lot clearing less than 20,000 square feet of forest needs be submitted concurrent with the mylar plan exhibit. The mylar exhibit will not be accepted without this notarized document.
4. The petitioner shall comply with all applicable County and State regulations and obtain all necessary permits from the Department of Inspections, Licenses and Permits.
5. Compliance with the attached DED comments dated August 10, 2018 regarding the approved Simplified ECP, plan submission and the required Declaration of Covenants for this lot.
6. Compliance with the attached Health Department Note.

**Our decision was made based on the following:**

**Extraordinary Hardships or Practical Difficulties:**

Requiring a site development plan in accordance with Section 16.155(a)(2)(ii) of the Howard County Subdivision and Land Development Regulations will create an extraordinary hardship for the property owners. The site development plan process, requiring a full environmental concept plan review, as well as a site development plan review will add several months to the redevelopment plan process and cost the applicant a large sum of money in consultant and processing fees. The mylar plan exhibit will serve as a suitable substitute for a site development plan, depicting the location of structures, paved areas, grading, drainage, on-site utilities, environmental features and other improvements related to the redevelopment.

**Not Detrimental to the Public Interest/ Will not nullify the intent or purpose of the regulations:**

Approval of this alternative compliance request would not be detrimental to the public interest or nullify the intent of the regulations. The Lot size is 1.168± acres and utilizes private water and sewer which is consistent with lots in the western portion of the County that are outside of the planned service area. The redevelopment and grading are controlled and contained within the subject property. This lot has been previously developed and the redevelopment has been limited to the upgraded house and accompanying improvements such as the driveway, septic system and stormwater management features. The proposed redevelopment has been designed to maintain natural and existing drainage patterns and will not cause any negative affect to the neighboring lots. This alternative compliance request is for the replacement of the existing house. The existing pool, patio and wood decking are to remain.

Indicate this alternative compliance petition file number, request, section of the regulations, action, conditions of approval, and date on all related plats, and site development plans, and building permits. This alternative compliance approval will remain valid as stated in the condition of approval.

If you have any questions, please contact Justin Schleicher at (410) 313-2350 or email at [jschleicher@howardcountymd.gov](mailto:jschleicher@howardcountymd.gov).

Sincerely,



Kent Sheubrooks, Chief  
Division of Land Development

KS/JS

cc: Research  
DED  
Real Estate Services  
Sill Engineering

# EXHIBIT TO ACCOMPANY ALTERNATIVE COMPLIANCE REQUEST BRAEBURN LOT 13 HOWARD COUNTY, MARYLAND

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
C <sub>0</sub>	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
G <sub>1</sub> B	GLADSTONE URBAN LAND COMPLEX, 0 TO 3 PERCENT SLOPES	A	0.28
G <sub>2</sub> B	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B	0.24
M <sub>1</sub> F	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.32

- NOTES:  
1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.  
2) 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.

BENCHMARKS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
3511	557,110.407	1,344,893.66	400.083	41' SOUTHWEST OF CROSS BUTTON, 39' NORTHWEST OF ED OF SIDEWALK RAMP
3512	555,100.7812	1,342,733.0529	329.758	10.5' WEST OF CEDAR LANE, 31.67' NORTHEAST OF SOUTHERN DW, HSE #6636

- GENERAL NOTES CONTINUED:  
23. THE PROPOSED IMPROVEMENTS WILL NOT RESULT IN THE CLEARING OF 20,000 SQUARE FEET OF FOREST AND THEREFORE THIS PROJECT WILL BE EXEMPT FROM THE REQUIREMENTS OF THE FOREST CONSERVATION ACT, INCLUDING THE REGULATIONS RELATED TO SPECIMEN TREE PROTECTION. A DECLARATION OF INTENT HAS BEEN FILED WITH THE DEPARTMENT OF PLANNING AND ZONING ON OCTOBER 15, 2018.  
24. LANDSCAPING IS NOT REQUIRED FOR THE LOT LINES INTERNAL TO THE BRAEBURN SUBDIVISION. EXISTING VEGETATION WILL BE USED TO SATISFY THE LANDSCAPE OBLIGATION FOR THE REAR PROPERTY LINE.  
25. IN ACCORDANCE WITH SECTION 128.0A.1 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR CLOSED MY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.  
26. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.  
27. AN ALTERNATIVE COMPLIANCE REQUEST (M-P-19-011) OF SECTION 16.155(a)(2)(i) OF THE SUBDIVISION & LAND DEVELOPMENT REGULATIONS, WHICH STATES THAT A SITE DEVELOPMENT PLAN, APPROVED BY THE DEPARTMENT OF PLANNING & ZONING IS REQUIRED FOR THE DEVELOPMENT OF SINGLE-FAMILY DETACHED RESIDENTIAL LOTS AND DEDED PARCELS WITHIN THE PLANNED SERVICE AREA FOR BOTH PUBLIC WATER AND SEWER, EXCEPT THAT LOTS IN RECORDED SUBDIVISIONS CREATED BEFORE FEBRUARY 7, 1976 ARE EXEMPT FROM SITE DEVELOPMENT PLAN REQUIREMENTS UNLESS 5,000 SQUARE FEET OF DISTURBANCE IS PROPOSED AND THE LOTS HAVE BEEN RECONFIGURED OR MERGED THROUGH THE RECORDED OF A PLAT RECORDED ON OR AFTER FEBRUARY 7, 1976 WAS APPROVED ON SEPTEMBER 4, 2018 SUBJECT TO THE FOLLOWING CONDITIONS:  
• THE ALTERNATIVE COMPLIANCE EXHIBIT SHALL SERVE AS THE SUBSTITUTE FOR A SITE DEVELOPMENT PLAN FOR THE NEW RESIDENTIAL DWELLING. NO DISTURBANCE IS PERMITTED BEYOND THE PROPOSED LIMIT OF DISTURBANCE (LOD) AS SHOWN ON THE PLAN EXHIBIT.  
• REVISED THE PLAN EXHIBIT PER THE ATTACHED COMMENTS FROM THE DIVISION OF LAND DEVELOPMENT AND SUBMIT A 24" X 36" ORIGINAL SIGNED AND SEALED MYLAR WITH STANDARD SDP SIGNATURE BLOCKS TO DPZ WITHIN 45 DAYS FOR SIGNATURE AND RETENTION (ON OR BEFORE OCTOBER 19, 2018). THE ASSOCIATED BUILDING PERMIT WILL NOT BE RELEASED UNTIL THE MYLAR RECEIVES SIGNATURE APPROVAL.  
• THE ORIGINAL, SIGNED FOREST CONSERVATION DECLARATION OF INTENTION FOR A SINGLE LOT CLEARING LESS THAN 20,000 SQUARE FEET OF FOREST NEEDS TO BE SUBMITTED CONCURRENTLY WITH THE MYLAR PLAN EXHIBIT. THE MYLAR WILL NOT BE ACCEPTED WITHOUT THIS NOTARIZED THIS NOTARIZED DOCUMENT.  
• THE PETITION SHALL COMPLY WITH ALL APPLICABLE COUNTY AND STATE REGULATIONS AND OBTAIN ALL NECESSARY PERMITS FROM THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS COMPLIANCE WITH THE ATTACHED COMMENTS DATED AUGUST 10, 2018 REGARDING THE APPROVED SIMPLIFIED ECP, PLAN SUBMISSION AND REQUIRED DECLARATION OF COVENANTS FOR THIS LOT.  
• COMPLIANCE WITH HEALTH DEPARTMENT NOTE: "ALL STORMWATER DEVICES MUST MEET WELL & SEPTIC SETBACKS ON OSDS PLAN."  
28. THE DEPARTMENT OF PLANNING AND ZONING HAS DETERMINED THE DISTURBANCE WITHIN THE STEEP SLOPES FOR THE PROPOSED SEPTIC SYSTEM AND STORMWATER MANAGEMENT UNDERDRAIN TO BE NECESSARY DISTURBANCE.  
29. LIMIT OF DISTURBANCE = 20,989 SQ. FT.  
30. LIMIT OF CLEARING = 4,167 SQ. FT.  
31. PREVIOUS COUNTY FILE NUMBERS: P.B. & P.N. 80, WP-19-011

## STORMWATER MANAGEMENT NOTES & DESIGN NARRATIVE

- BELOW IS A LIST TO DESCRIBE THE STORMWATER MANAGEMENT REQUIREMENTS AND ACHIEVEMENTS FOR THE SITE PER THE 2009 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II, AS AMENDED BY THE STORMWATER MANAGEMENT ACT OF 2007.
- ENVIRONMENTALLY SENSITIVE AREAS HAVE BEEN AVOIDED WHERE POSSIBLE. THE SITE WAS DESIGNED TO DISTURB AREAS OF STEEP SLOPES AND FORESTS ONLY WHEN NECESSARY. THE LIMIT OF DISTURBANCE AND ALL DEVELOPMENT ACTIVITY IS OVER 140' AWAY FROM THE 100 YEAR FLOODPLAIN ON-SITE. NO STREAMS OR WETLANDS EXIST ON-SITE.
  - TO THE GREATEST EXTENT PRACTICABLE THE NATURAL FLOW PATTERNS OF THE SITE HAVE BEEN MAINTAINED.
  - IMPERVIOUS AREAS HAVE BEEN REDUCED BY POSITIONING THE BUILDING AS CLOSE TO THE STREET AS THE SETBACKS AND GRADES ALLOW.
  - A STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCES ARE USED AS SEDIMENT AND EROSION CONTROL.
  - THE STORMWATER MANAGEMENT OBLIGATIONS FOR LOT 13 WILL BE MET BY THE USE OF A MICRO-BIORETENTION (M-6) FACILITY, PERMEABLE PAVING (A-2) AND ONE (1) RAIN BARREL (M-1).

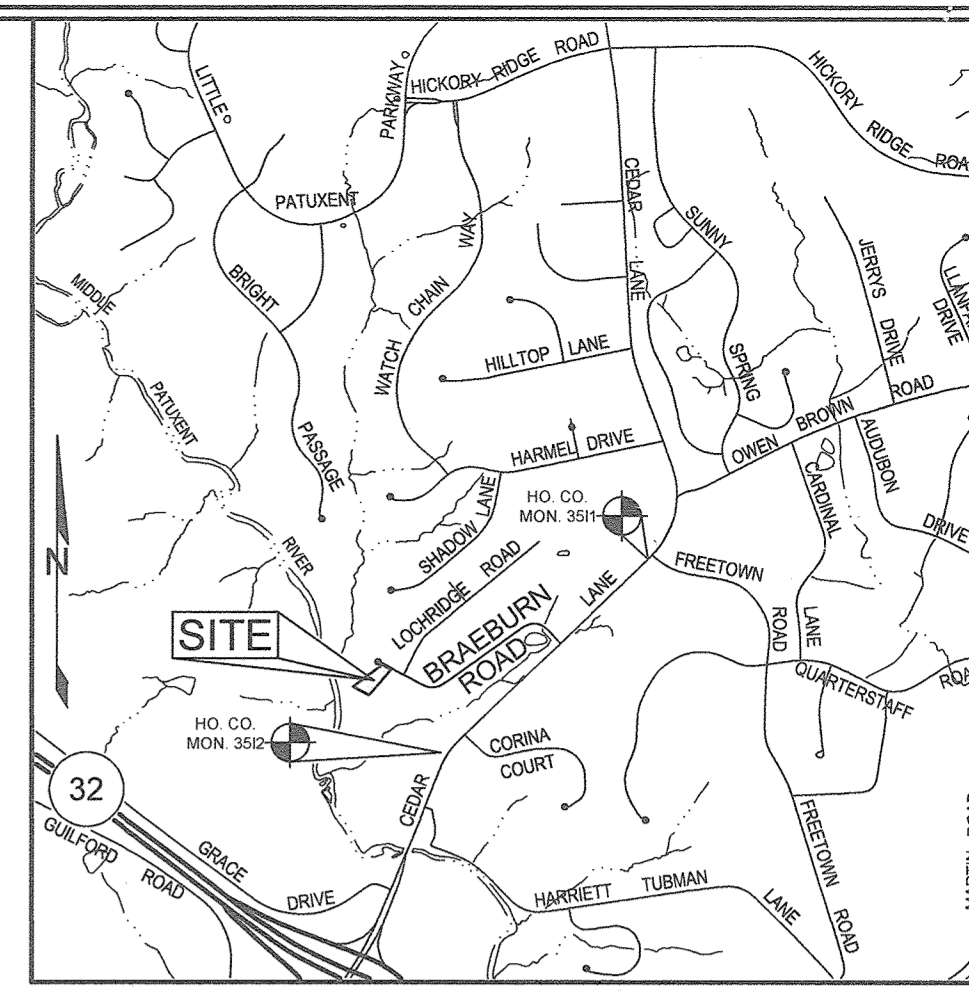
## SITE ANALYSIS DATA SHEET

ENVIRONMENTAL AREA	SIZE OR USE
TOTAL PROJECT AREA	1.1680 AC ±
ROW TO BE DEDICATED	N/A
PROPOSED PROJECT AREA	1.1680 AC ±
ZONING DESIGNATION	R-20
NUMBER OF UNITS ALLOWED	1
NUMBER OF UNITS PROPOSED	1
LIMIT OF DISTURBANCE	0.4814 AC ±
GREEN OPEN AREA (LAWNS)	0.3723 AC ±
PROPOSED IMPERVIOUS AREA	0.1051 AC ±
PROPOSED SITE USES	RESIDENTIAL
REQUIRED PARKING SPACES	2.5 SPACES
PROVIDED PARKING SPACES	2.5 SPACES
WETLANDS	0 AC ±
FLOODPLAINS	0.0027 AC ±
FLOODPLAIN BUFFERS	0.0440 AC ±
EXISTING FOREST	0.5810 AC ±
FOREST TO BE CLEARED	0.0987 AC ±
FOREST TO REMAIN	0.4823 AC ±
SLOPES GREATER THAN 15%	0.3115 AC ±
SLOPES GREATER THAN 25%	0.2710 AC ±
HIGHLY ERODIBLE SOILS	0.0572 AC ± (1)
PREVIOUS COUNTY FILE NO.S:	P.B. & P.N. 80, WP-19-011

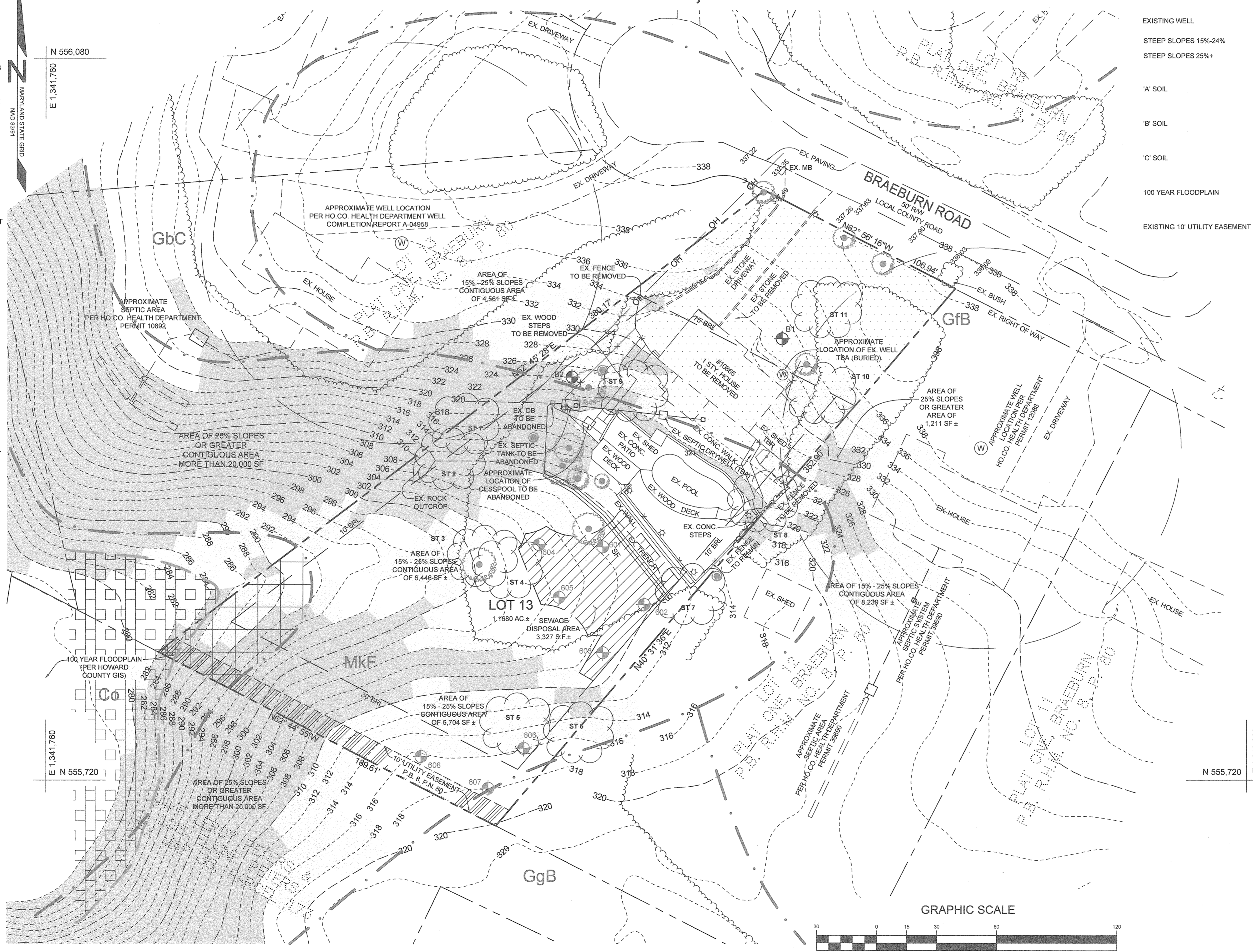
- NOTES:  
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Madeline J. Williams* 11-21-18  
DATE  
*David Clark* 11-14-18  
DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Keith de la Hoya* 11-21-18  
DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT

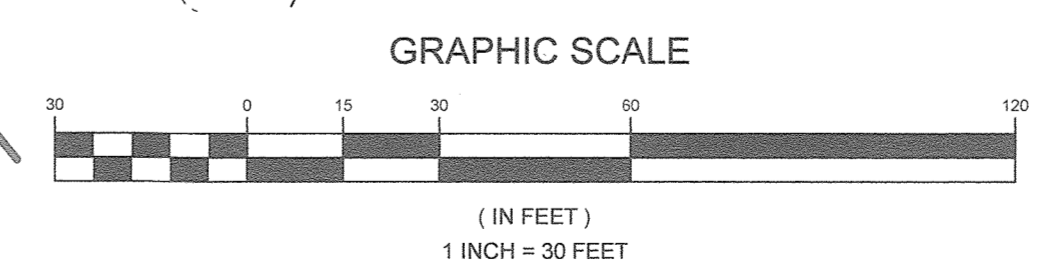
LEGEND	
EXISTING CONTOUR	--- 382
EXISTING SPOT ELEVATION	300.0
EXISTING TREELINE	-----
SOIL BOUNDARY	-----
PASSED PERCOLATION TEST LOCATION	103
SWM BORING LOCATION	B1
EXISTING TREE	(Symbol)
EXISTING SPECIMEN TREE	ST 1
EXISTING WELL	(Symbol)
STEEP SLOPES 15%-24%	(Symbol)
STEEP SLOPES 25%+	(Symbol)
'A' SOIL	(Symbol)
'B' SOIL	(Symbol)
'C' SOIL	(Symbol)
100 YEAR FLOODPLAIN	(Symbol)
EXISTING 10' UTILITY EASEMENT	(Symbol)



HOWARD COUNTY, MARYLAND ADC# MAP 32, GRID C-4  
VICINITY MAP  
SCALE: 1"=200'



PLAN VIEW  
SCALE: 1"=30'



## GENERAL NOTES

- SUBJECT PROPERTY ZONED R-20 PER 1006/13 COMPREHENSIVE ZONING PLAN.
- TOTAL AREA OF PROPERTY: 1.1680 AC ±.
- REFERENCE: PLAT: BRAEBURN, P.B. & P.N. 80 DEED: LIBER 4044, FOLIO 548.
- PROPERTY ADDRESS: 10865 BRAEBURN ROAD, COLUMBIA, MD 21044.
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY SHANBERGER & LANE IN MARCH 2016.
- THE TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY SHANBERGER & LANE, IN MARCH 2016, OFFSITE TOPOGRAPHY IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2011.
- THE SOILS SHOWN HAVE BEEN TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, WEB SOIL SURVEY.
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWAGE AREA, AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). FOR LOTS CREATED PRIOR TO MARCH 1972 IT PROVIDES AT LEAST ENOUGH AREA TO ACCOMMODATE AN INITIAL AND REPLACEMENT SEPTIC SYSTEM WITH A BAT UNIT AS REQUIRED BY THE HOWARD COUNTY HEALTH DEPARTMENT. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE AREAS. RECORDED OF A MODIFIED SEWAGE AREAS SHALL NOT BE NECESSARY. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THERE IS AN EXISTING HOUSE (CIRCA 1964) THAT IS LOCATED ON-SITE AND SHALL BE RAZED.
- THE EXISTING WELL AND SEPTIC SYSTEM ARE TO BE ABANDONED.
- THIS SITE WILL UTILIZE A BAT/PSD SYSTEM AND THEREFORE THE SEPTIC SYSTEM REQUIREMENTS HAVE BEEN REDUCED TO AN INITIAL AND ONE REPLACEMENT SYSTEM.
- A VARIANCE BY MOE HAS BEEN APPROVED TO ALLOW THE SEPTIC TANK/PUMP TO BE WITHIN STEEP SLOPES.
- THE PROPOSED MICRO-BIORETENTION FACILITY LOCATED WITHIN THE 100' WELL RADIUS IS TO BE LINED AND SETBACK FROM ANY WELL AND/OR PROPOSED WELL LOCATION BY AT LEAST 30 FEET.
- THE PROPOSED RAIN BARREL LOCATED AT THE REAR CORNER OF THE HOUSE IS TO A 205 GALLON BUSHMAN RAIN WATER HARVESTING TANK OR EQUIVALENT. SEE DETAIL ON SHEET 3.
- A FIELD REVIEW PERFORMED BY ECO-SCIENCE PROFESSIONALS IN JUNE, 2018 HAS CONFIRMED THAT NO WETLAND, STREAMS OR BUFFERS ARE PRESENT ON THE PROPERTY.
- THERE ARE NO CEMETERIES WITHIN THE PROJECT BOUNDARY.
- EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRIVENWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:  
1) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE).  
2) SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM).  
3) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;  
4) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);  
5) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.  
6) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.  
21. TBA= TO BE ABANDONED  
22. TREN= TO BE REMOVED  
SEE GENERAL NOTES CONTINUED, (THIS SHEET).

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	EXISTING CONDITION PLAN
2	GRADING, LAYOUT, SEDIMENT AND EROSION CONTROL AND STORMWATER MANAGEMENT PLAN
3	STORMWATER MANAGEMENT DETAILS AND ESD DRAINAGE AREA MAP

EXISTING CONDITIONS PLAN  
**BRAEBURN**  
LOT 13  
10865 BRAEBURN DRIVE  
TAX MAP 35 GRID 17 5TH ELECTION DISTRICT  
ZONED: R-20 PARCEL 228  
HOWARD COUNTY, MARYLAND

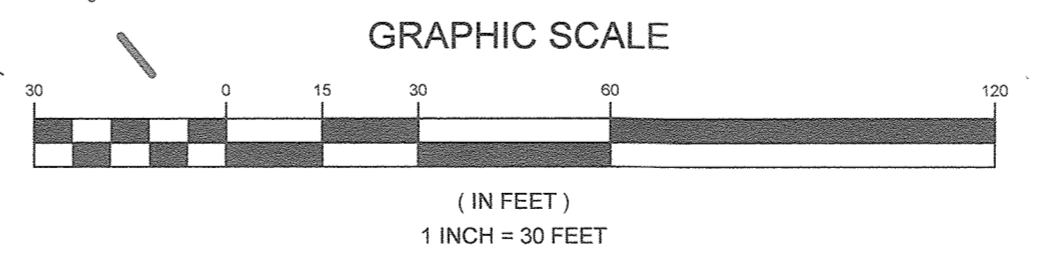
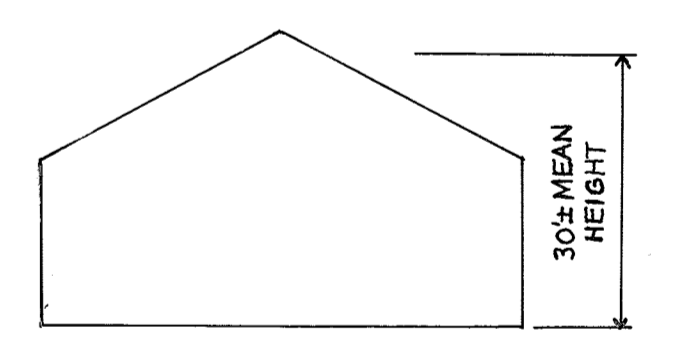
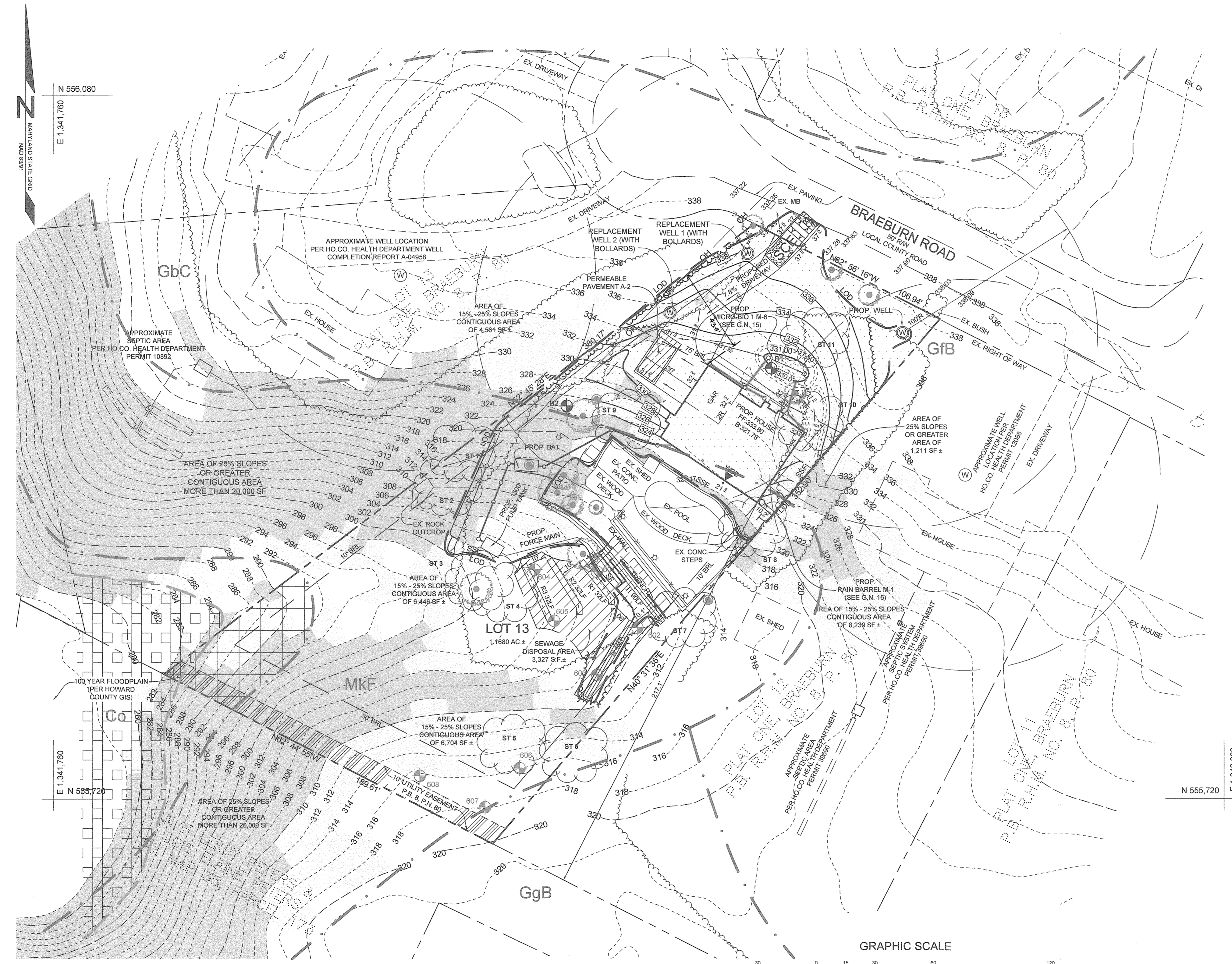
	<b>SILL ENGINEERING, LLC</b> 11130 Dovedale Court, Suite 200 Marriottsville, Maryland 21104 Phone: 410.325.5076 Fax: 410.696.2022 Email: info@sillengineering.com Civil Engineering for Land Development	DESIGN BY: PS DRAWN BY: AEA CHECKED BY: PS SCALE: AS SHOWN DATE: OCTOBER 30, 2018 PROJECT #: 18-501 SHEET #: 1 of 3
	<b>OWNER</b> ANGELA CRUMP VOLCY & GUERDY VOLCY PSC 78 BOX 12 APO AF 96398 C/O DAVID PASTVA 703-342-2012 <b>BUILDER</b> CRAFTMARK HOMES C/O DAVID PASTVA 1355 BEVERLY ROAD, SUITE 330 McLEAN, VA 22101 703-342-2012	PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2019.

STORMWATER MANAGEMENT PRACTICES				
LOT	ADDRESS	MICRO-BIORETENTION M-6 (NUMBER)	PERVIOUS PAVEMENT A-2 (AREA)	RAIN BARREL M-1 (NUMBER)
13	10865 BRAEBURN ROAD	1	DRIVEWAY	1

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.37
GbB	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A	0.28
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MkF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.32

NOTES:  
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LEGEND	
EXISTING CONTOUR	
PROPOSED CONTOUR	
PROPOSED SPOT ELEVATION	
DIRECTION OF FLOW	
EXISTING TREELINE	
PROPOSED TREELINE	
EXISTING TREE	
SOIL BOUNDARY	
PROPOSED ROOF LEADER (4" PVC TYP. WITH DOWNSPOUT)	
PROPOSED BIORETENTION FACILITY (M-5)	
PROPOSED DRYWELL	
SILT FENCE	
SILT FENCE	
LIMIT OF DISTURBANCE	
PROPOSED DRAINAGE AREA	
STABILIZED CONSTRUCTION ENTRANCE	
PASSED PERCOLATION TEST LOCATION	
PROPOSED WELL	
STEEP SLOPES 15%-24%	
STEEP SLOPES 25%+	
'A' SOIL	
'B' SOIL	
'C' SOIL	
100 YEAR FLOODPLAIN	
EXISTING 10' UTILITY EASEMENT	
EXISTING SPECIMEN TREE	



PLAN VIEW  
SCALE: 1"=30'

GRADING, LAYOUT, SEDIMENT & EROSION CONTROL AND STORMWATER MANAGEMENT PLAN  
**BRAEBURN**  
 LOT 13  
 10865 BRAEBURN DRIVE  
 ZONED: R-20  
 TAX MAP 35 GRID 17  
 5TH ELECTION DISTRICT  
 PARCEL 228  
 HOWARD COUNTY, MARYLAND

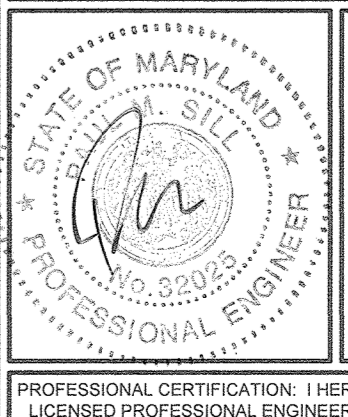
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DIRECTOR  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT

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

ENGINEER'S CERTIFICATE  
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF ENGINEER  
 PAUL M. SILL, P.E.

DEVELOPER'S CERTIFICATE  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF DEVELOPER  
 DATE

OWNER  
 ANGELA CRUMP VOLCY & GUERDY VOLCY  
 PSC 78 BOX 12  
 APO AP 96308  
 C/O DAVID PASTVA 703-342-2012  
**BUILDER**  
 CRAFTMARK HOMES  
 C/O DAVID PASTVA  
 1355 BEVERLY ROAD, SUITE 330  
 McLEAN, VA 22101  
 703-342-2012

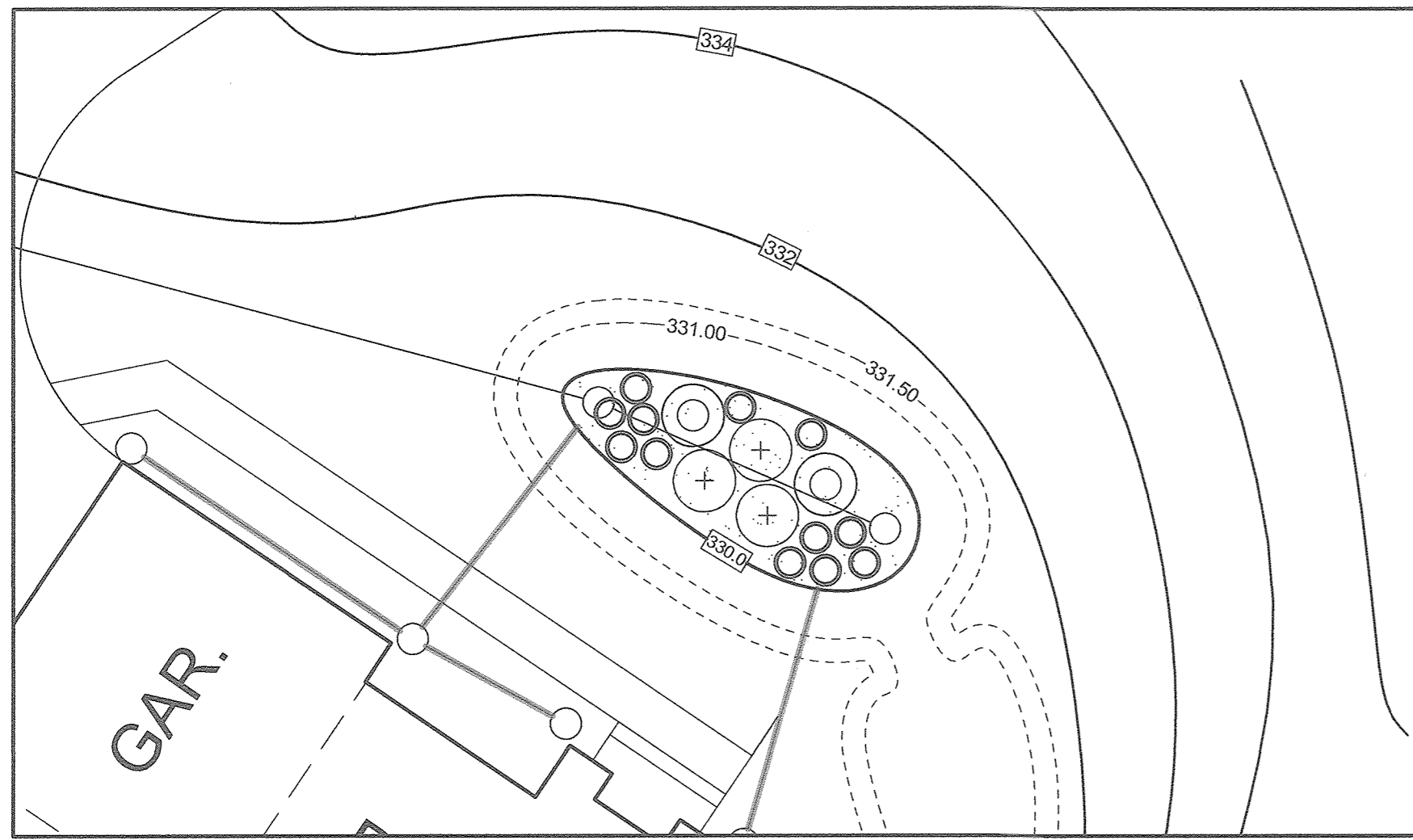


SILL ENGINEERING GROUP, LLC  
 11130 Dovedale Court, Suite 200  
 Marriottsville, Maryland 21104  
 Phone: 410.325.5076  
 Fax: 410.696.2022  
 Email: info@sillengineering.com  
 Civil Engineering for Land Development

DESIGN BY: PS  
 DRAWN BY: AEA  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: OCTOBER 30, 2018  
 PROJECT #: 18-001  
 SHEET #: 2 of 3

PROFESSIONAL CERTIFICATION: 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. 33023, EXPIRATION DATE: JUNE 20, 2019

WP-19-011



LANDSCAPING PLAN - M-6 MICRO-BIORETENTION FACILITY  
SCALE: 1=10'

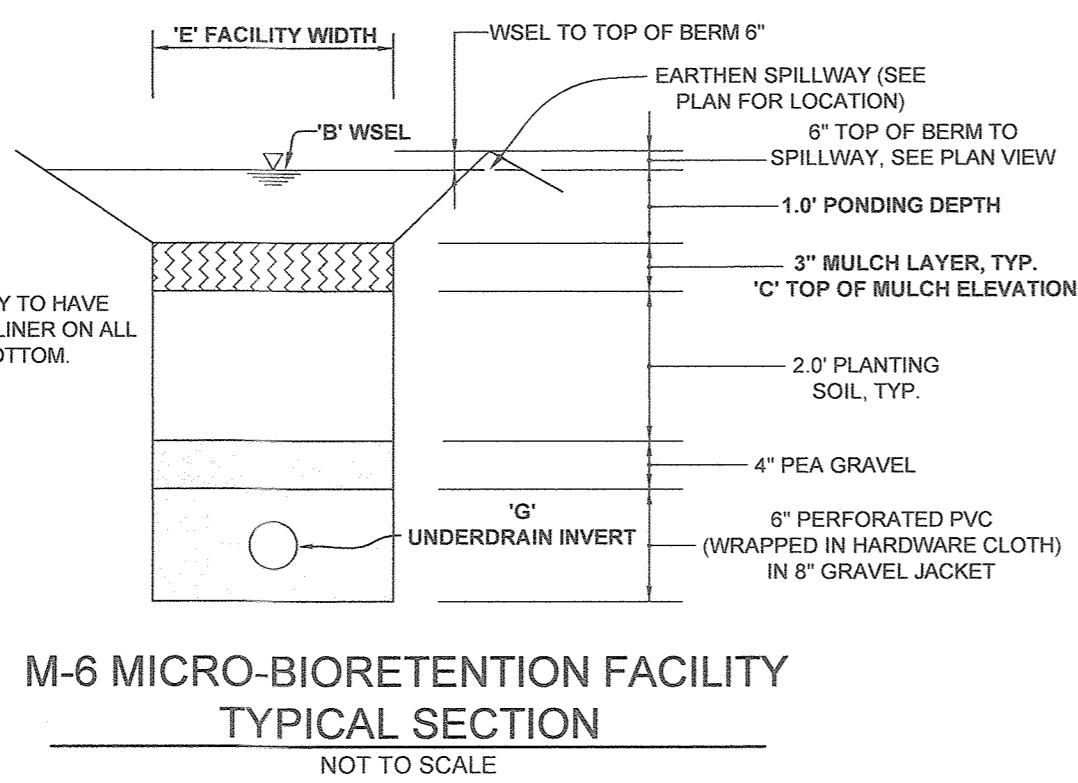
M-6 MICRO-BIORETENTION PLANT LIST						
SHRUBS						
LEGEND	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QTY. BIO 1
+	ILEX VERTICILLATA	WINTERBERRY	AS SHOWN* (MIN. 4' O.C.)	24"-36" HT.	ONE MALE	3
HERBACEOUS SPECIES						
LEGEND	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QTY. BIO 1
○	RUDEBECKIA LACINIATA	TALL CONEFLOWER BLACKEYED SUSAN	AS SHOWN* (MIN. 2' O.C.)	1 GAL.		12
○	EUPATORIUM DUBIUM	JOE-PYE WEED LITTLE JOE (DWARF)	AS SHOWN* (MIN. 4' O.C.)	1 GAL.		2

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.  
\*INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER AREA  
BIO 1 - BIORETENTION AREA = 197 S.F. OR 0.0045 AC.  
PROVIDED: 3 SHRUBS AND 14 HERBACEOUS SPECIES

MATERIALS SPECIFICATIONS FOR M-6 MICRO-BIORETENTION FACILITIES			
MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANT LIST THIS SHEET	N/A	PLANTINGS ARE SITE-SPECIFIC. SEE PLANT LIST THIS SHEET
PLANTING SOIL (2'-4" DEEP)	LOAMY SAND (60% - 65%) & COMPOST (35%-40%) OR SANDY LOAM (30%), COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM-D-2974)		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
MULCH	SHREDED HARDWOOD		
PEA GRAVEL DIAPHRAGM AND CURTAIN DRAIN, IF REQUIRED	PEA GRAVEL: ASTM-D-448	PEA GRAVEL: NO. 8 OR NO. 9 (1/8" TO 3/8")	
	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE	N/A		PE TYPE 1 NONWOVEN
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	SLOTTED OR PERFORATED PIPE, 3/8" PERFOR @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH.

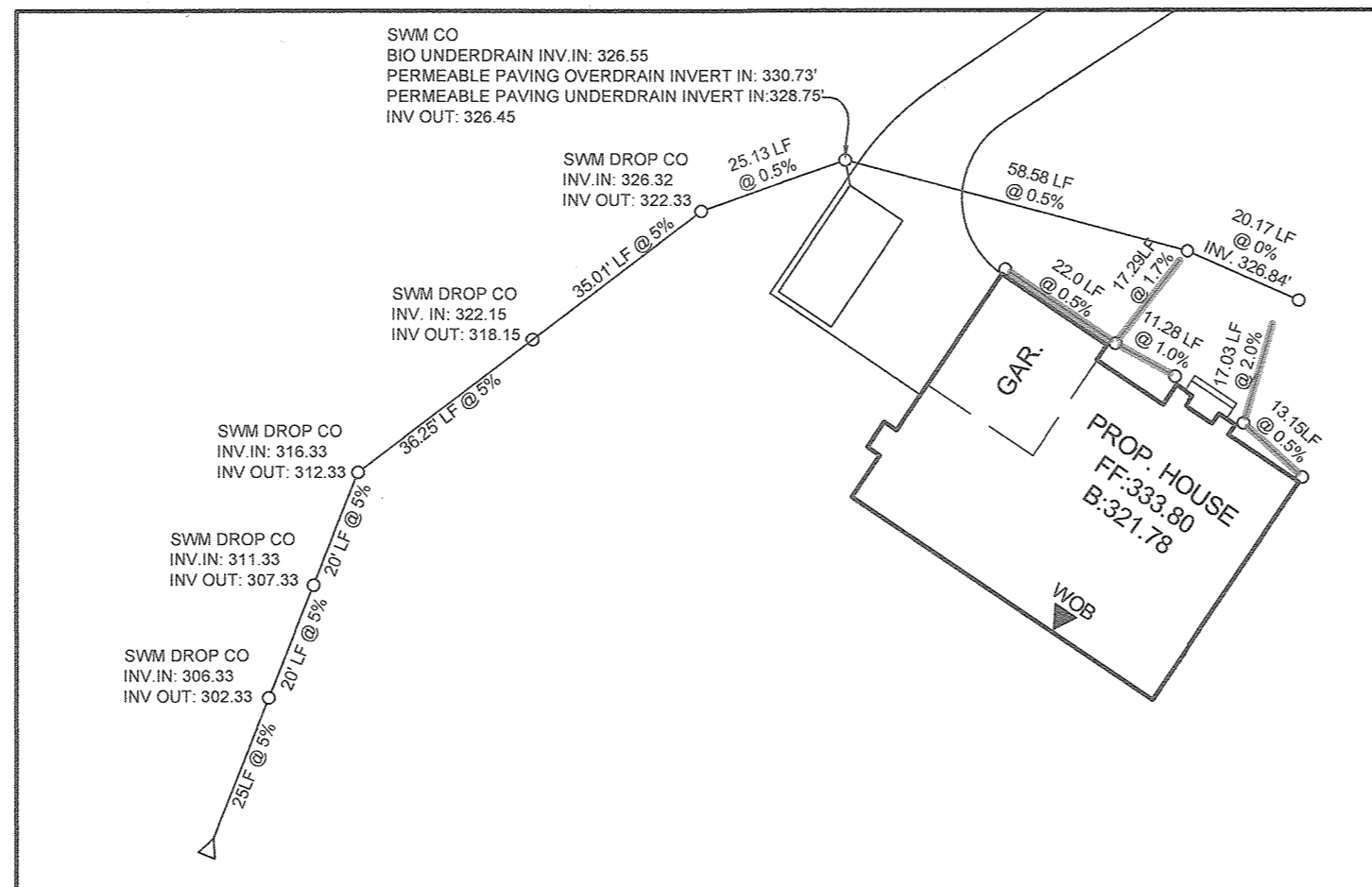
M-6 MICRO-BIORETENTION ELEVATIONS & DIMENSIONS

DESCRIPTION	BIO 1
'A' PONDING DEPTH	1.0'
'B' WSEL	331.00'
'C' TOP OF MULCH	330.00'
'D' FACILITY LENGTH	25'
'E' FACILITY WIDTH	10'
'F' PERF. UNDERDRAIN DIMENSION	20.17"
'G' UNDERDRAIN INVERT	326.84'
'H' SOLID UNDERDRAIN DIMENSION	220.0"
'T' OUTFALL INVERT	301.00'

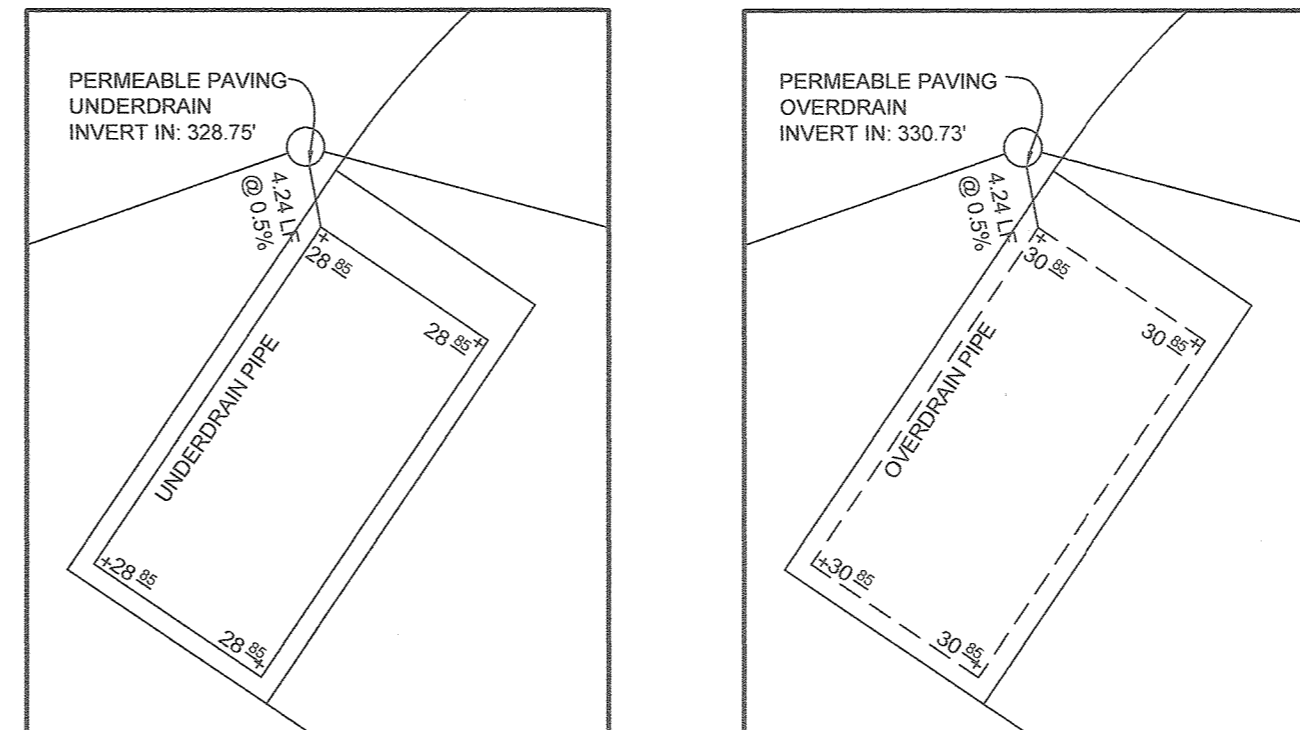


M-6 MICRO-BIORETENTION FACILITY TYPICAL PROFILE  
NOT TO SCALE

NOTE: M-6 MICRO-BIORETENTION FACILITY IS TO BE LINED WITH IMPERVIOUS LINER BECAUSE IT IS LOCATED WITHIN THE 100' WELL RADIUS.

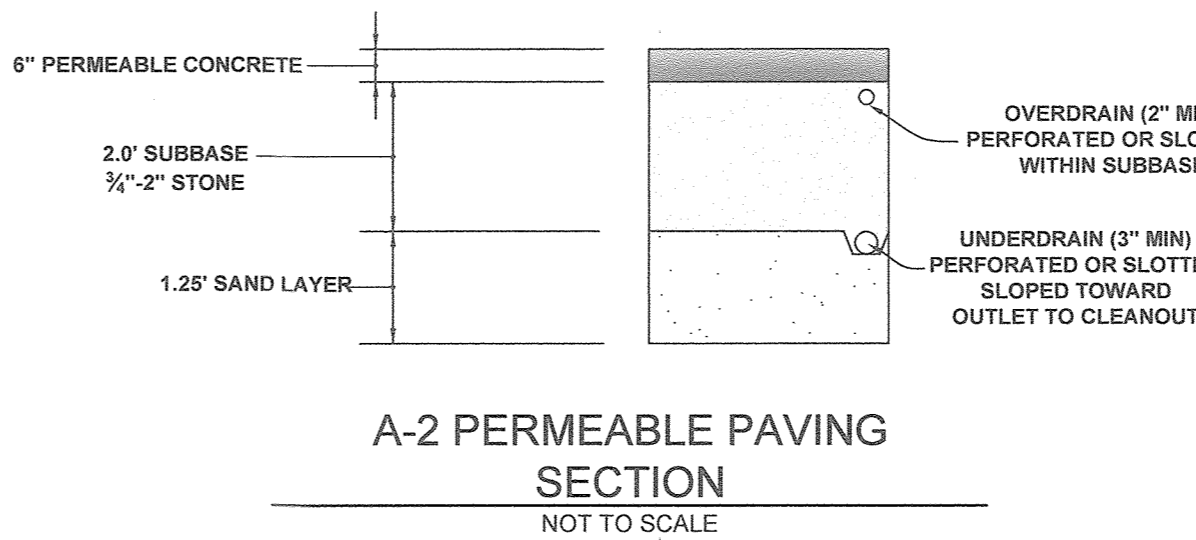


UNDERDRAIN AND STORMWATER MANAGEMENT CLEANOUT DETAIL  
SCALE: 1=30'

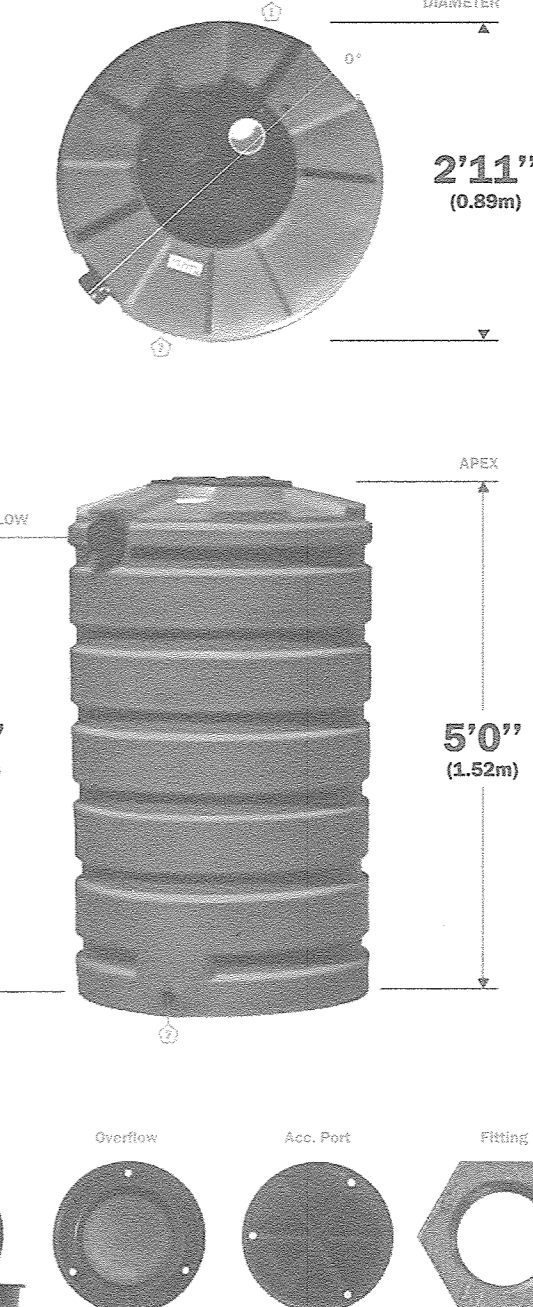


PERMEABLE PAVING UNDERDRAIN DETAIL  
SCALE: 1=10'

PERMEABLE PAVING OVERDRAIN DETAIL  
SCALE: 1=10'



A-2 PERMEABLE PAVING SECTION  
NOT TO SCALE



BUSHMAN 205 GALLON RAINWATER HARVESTING TANK DETAIL  
NOT TO SCALE

NOTE: EQUIVALENT TANK CAN BE USED. MUST HAVE A MINIMUM OF 205 GALLONS OF STORAGE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Valerie J. Jones* 11-21-18  
 DIRECTOR DATE  
*Cheryl A. Jones* 11-14-18  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Kevin D. Jones* 11-21-18  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER  
 ANGELA CRUMP VOLCY & GUERDY VOLCY  
 PSC 78 BOX 12  
 APO AP 96399  
 443-210-1415  
 BUILDER  
 CRAFTMARK HOMES  
 C/O DAVID PASTVA  
 1355 BEVERLY ROAD, SUITE 330  
 McLEAN, VA 22101  
 703-342-2012

STORMWATER MANAGEMENT DETAILS AND ESD DRAINAGE AREA MAP  
 BRAEBURN LOT 13  
 10865 BRAEBURN DRIVE ZONED: R-20 PARCEL 228  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TAX MAP 35 GRID 17  
 5TH ELECTION DISTRICT

DESIGN BY: PS  
 DRAWN BY: AEA  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: OCTOBER 9, 2018  
 PROJECT #: 18-001  
 SHEET #: 3 OF 3

PROFESSIONAL CERTIFICATION: 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. 32025, EXPIRATION DATE: JUNE 20, 2019

WP-19-011

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

- THE OWNER SHALL SWEEP AND VACUUM TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT, WASHING SYSTEMS AND COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- DRAINAGE PIPES, INLETS, STONE EDGE DRAINS, AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED OUT AT REGULAR INTERVALS.
- TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND DIRT AND GRIT INTO THE POROUS SURFACES, LEADING TO CLOGGING AND PREMATURE FAILURE. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.
- DEICERS SHOULD BE USED IN MODERATION. WHEN USED, DEICERS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR GRAS. PRETREATED SALT. SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED FOR RAINWATER HARVESTING (M-1)

- ACCESS SHALL BE PROVIDED FOR CLEANING, INSPECTION, AND MAINTENANCE IN ALL CISTERNS. A DRAIN PLUG SHALL ALSO BE PROVIDED TO ALLOW THE SYSTEM TO BE COMPLETELY EMPTIED IF NEEDED.
- LEAF SCREENS, GUTTERS AND DOWNSPOUTS SHOULD BE CLEANED TO PREVENT CLOGGING. BUILT-UP DEBRIS CAN ALSO FOSTER BACTERIAL GROWTH IN GUTTERS AND DOWNSPOUTS.
- STORAGE TANK LIDS AND MOSQUITO SCREENS SHOULD BE INSPECTED AND CLEANED.
- DAMAGED COMPONENTS SHOULD BE REPLACED AS NEEDED.
- TO AVOID FREEZING OF COMPONENTS, ABOVE GROUND SYSTEMS SHOULD BE DISCONNECTED, DRAINED AND CLEANED AT THE START OF THE WINTER SEASON.
- UNDERGROUND SYSTEM CONNECTIONS SHOULD BE CHECKED FOR FROZEN LINES AND ICE BLOCKAGES DURING WINTER.
- INDOOR SYSTEMS MAY REQUIRE MORE SPECIFIC MAINTENANCE.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES (M-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER 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 AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD OR DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES 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.

LEGEND

