

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	0.24
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.24

NOTES:
 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE; NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY, SOILS GRID 12, SUB-GRID 205.
 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.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- SOIL BOUNDARY
- EXISTING STREAM
- 100' STREAM BUFFER
- EXISTING SPECIMEN TREE APPROVED FOR REMOVAL IF NECESSARY
- EXISTING WELL
- FUTURE WELL LOCATION
- WALK OUT BASEMENT
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- EROSION CONTROL MATTING
- EXISTING DRAINAGE DIVIDE

NEARBY MAPS

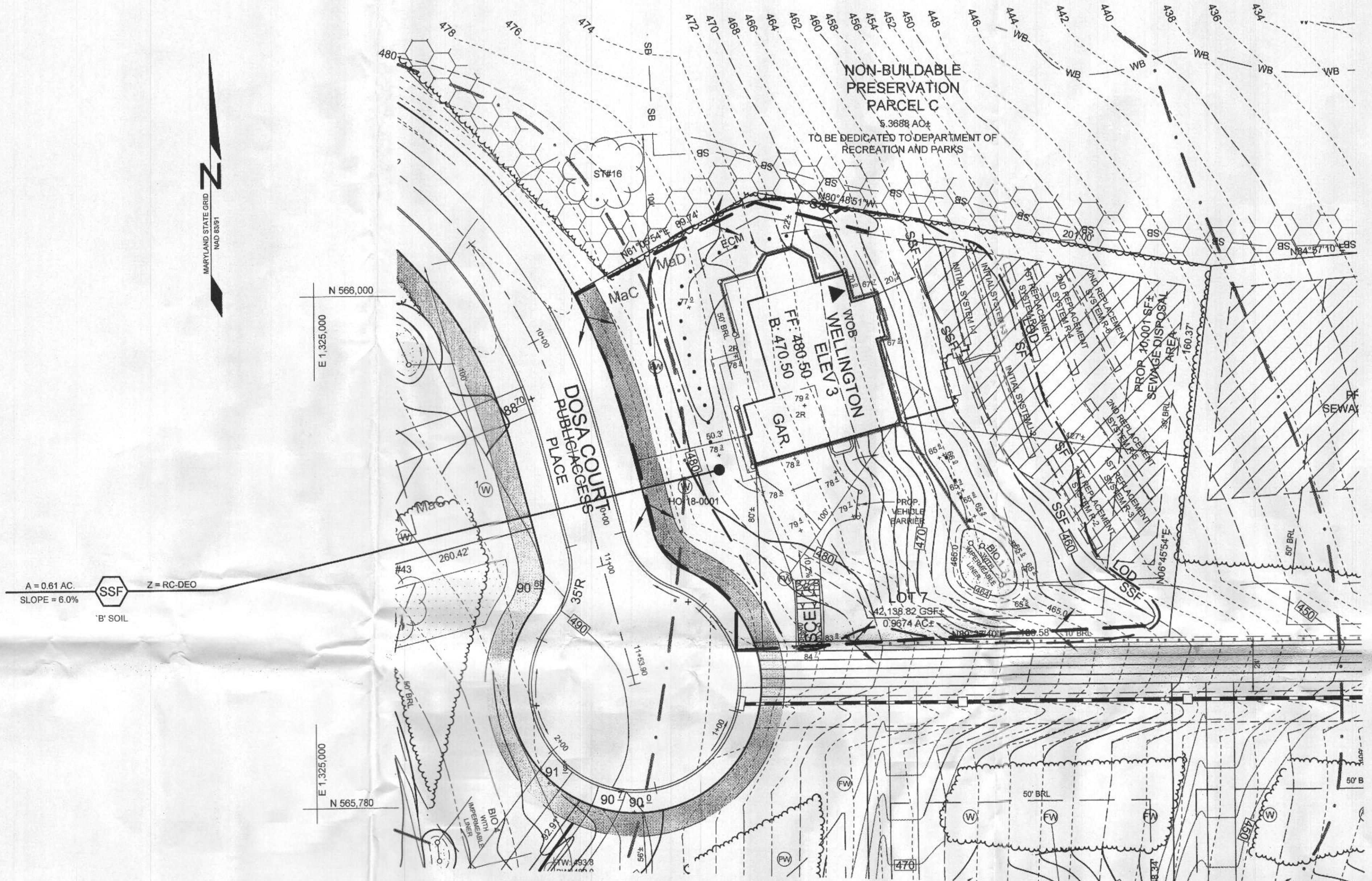
HOWARD COUNTY, MARYLAND ADC MAP 14 5C
 VICINITY MAP
 SCALE: 1"=200'

BENCHMARKS

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
28HC	965,351.762	1,332,102.463	552.207	S SIDE OF ROUTE 32, 0.2 MILES W OF EXIT 20 SIGN, +/- 320' E OF GUARD RAIL
34BA	963,852.491	1,324,672.167	450.048	2.6' N OF EDGE OF PAVEMENT OF ROUTE 32, 13.3' SE OF EXIT 20 SIGN

GENERAL NOTES

- SUBJECT PROPERTY ZONED RC-DEO PER 1006/13 COMPREHENSIVE ZONING PLAN.
- PROPERTY ADDRESS: 5625 DOSA COURT, CLARKSVILLE 21029
- TOTAL AREA OF PROPERTY = 0.9674 AC.
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWER AREA OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE (COMAR 26.04.03). 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 SEWER AREA. RECORDATION OF A MODIFIED SEWER AREA SHALL NOT BE NECESSARY.
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY ADCOCK & ASSOCIATES, LLC ON SEPTEMBER 16, 2014.
- THE TOPOGRAPHY SHOWN HEREON HAS BEEN FIELD RUN BY ADCOCK & ASSOCIATES, LLC. ON SEPTEMBER 16, 2014. THE EXISTING TOPOGRAPHY SHOWN OUTSIDE THE SITE IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2004.
- REFERENCE: RECORDED PLAT NO. 25051
- PREVIOUS HOWARD COUNTY FILE NUMBERS: RECORDED PLAT NO. 5471, F-83-114, ECP-15-032, WP-16-017, WP-17-060, SP-16-008, PB 431, WP-18-127, RECORDED PLAT NO. 25051, F-18-094.
- THE SOILS SHOWN HAVE BEEN TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, WEB SOIL SURVEY WEBSITE: HOWARD COUNTY SOILS GRID 12, SUB-GRID 205.
- A WETLAND AND STREAM STUDY HAS BEEN PREPARED BY ECO SCIENCE PROFESSIONALS INC. IN NOVEMBER 2014.
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWER DISPOSAL AREAS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWER DISPOSAL AREAS HAVE BEEN FIELD LOCATED.
- 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 THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- GEOTECHNICAL INFORMATION HAS BEEN TAKEN FROM THE US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, WEB SOIL SURVEY WEBSITE AND FIELD INVESTIGATIONS. IF FUTURE INVESTIGATIONS SHOW UNSATISFACTORY SOIL CONDITIONS FOR ANY OF THE STORMWATER MANAGEMENT TREATMENTS SHOWN, EITHER UNDERDRAINS WILL BE PROVIDED OR A DIFFERENT PRACTICE WILL BE SUBSTITUTED.
- STORMWATER MANAGEMENT OBLIGATIONS FOR THIS SITE WILL BE MET ONE BIORETENTION FACILITY (M-6).
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NUMBERS 28HC AND 34BA WERE USED FOR THIS PROJECT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, UNLESS ALTERNATIVE COMPLIANCE HAVE BEEN APPROVED OR ACTIVITIES HAVE BEEN DETERMINED ESSENTIAL BY THE DEPARTMENT OF PLANNING AND ZONING.
- FOREST CONSERVATION OBLIGATIONS HAVE BEEN FULFILLED UNDER F-18-019.
- ALL SWALES TO HAVE EROSION CONTROL MATTING.
- ANY VEGETATION WITHIN AND NEAR TO WELL ZONES OR SEWER DISPOSAL AREAS POTENTIALLY COULD BE DAMAGED OR DESTROYED DURING INSTALLATION OF WELLS OR SEPTIC SYSTEMS. ALL SPECIMEN TREES WITHIN OR NEAR SDA OR WELL ZONES HAVE BEEN DESIGNATED FOR REMOVAL AND APPROVED FOR REMOVAL UNDER SP-16-008 AND WP-17-060.
- BIORETENTION FACILITY 1 IS TO BE WRAPPED IN IMPERMEABLE LINER.
- DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF AN USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:
 - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ON RESIDENCE)
 - SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM)
 - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING)
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
 - DRIVEWAY ENTRANCES TO BE PER HOWARD COUNTY STANDARD DETAIL R-8.05 FOR DRIVEWAY LOTS, 1, 2, AND THE USE IN COMMON DRIVEWAY FOR LOTS 3, 4, 5, 6, 7 AND 8, AND BUILDABLE PRESERVATION PARCEL A.



PLAN VIEW
SCALE: 1"=30'

SHEET INDEX

SHEET NO.	DESCRIPTION
1	SEDIMENT AND EROSION CONTROL PLAN
2	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
3	STORMWATER MANAGEMENT PLAN, NOTES, AND DETAILS

OWNER
 WILLIAMSBURG GROUP
 5485 HARPERS FARM ROAD, SUITE 200
 COLUMBIA, MARYLAND 21044
 410.997.8800

DEVELOPER
 DOSA CLARKSVILLE, LLC
 5920 WINDLE BOAT DRIVE UNIT #206
 CLARKSVILLE MD, 21029
 301.370.8866

SEDIMENT AND EROSION CONTROL PLAN
THE WOODLANDS
 5625 DOSA COURT, LOT 7

TAX MAP 28 GRID 23
 5TH ELECTION DISTRICT
 PARCEL 15
 HOWARD COUNTY, MARYLAND

SILL ENGINEERING GROUP, LLC
 16005 Frederick Road, 2nd Floor
 Woodbine, Maryland 21797
 Phone: 410.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development

DESIGN BY: PS
 DRAWN BY: JC
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: APRIL 12, 2021
 PROJECT #: 20-003
 SHEET #: 1 of 3

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

Alexander Bristow
 HOWARD SCD

04/12/21
 DATE

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.

Paul M. Sill
 SIGNATURE OF ENGINEER
 PAUL M. SILL, P.E.

4/12/21
 DATE

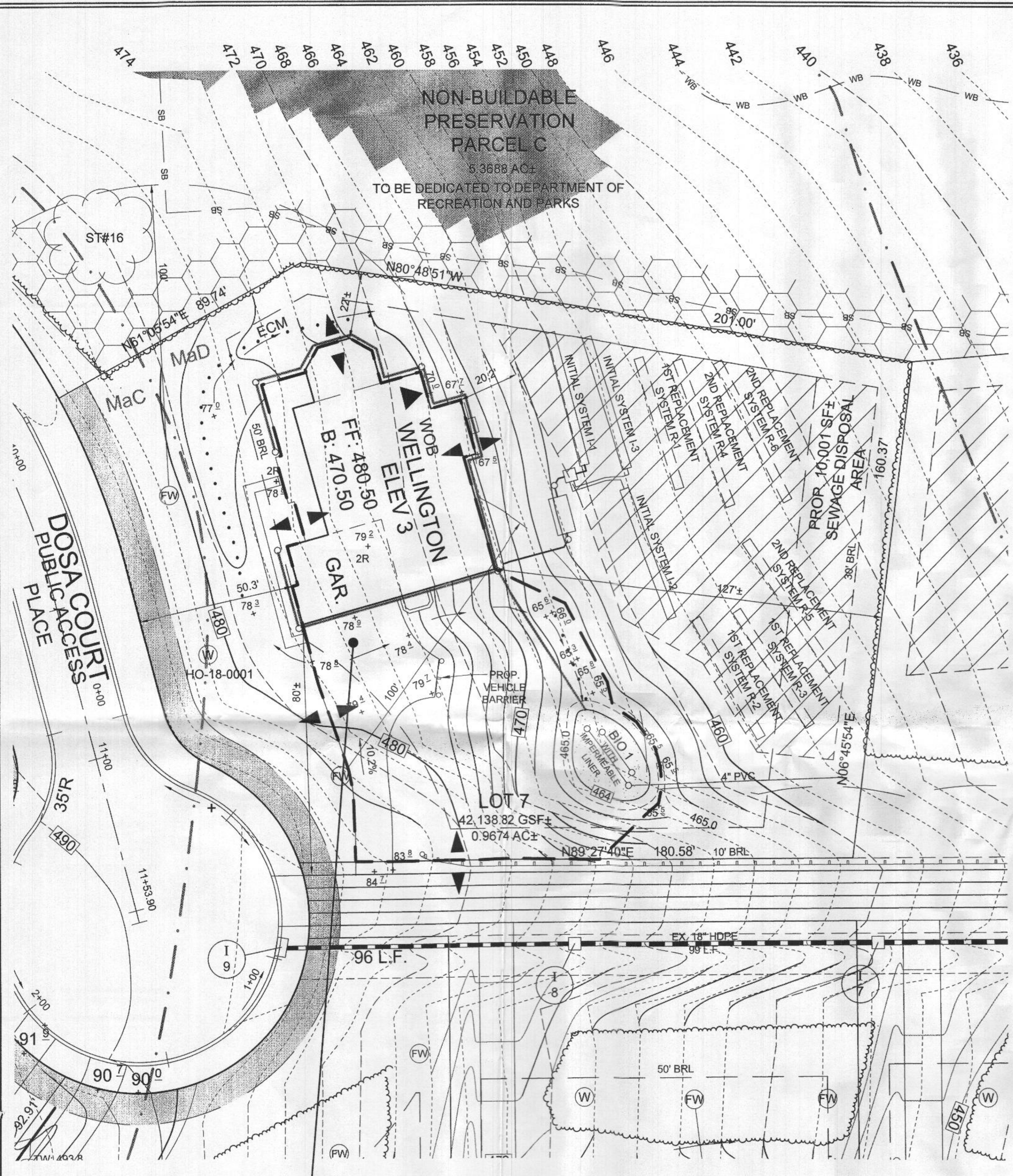
DEVELOPER'S CERTIFICATE

I 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.

Maeb Momy
 SIGNATURE OF DEVELOPER

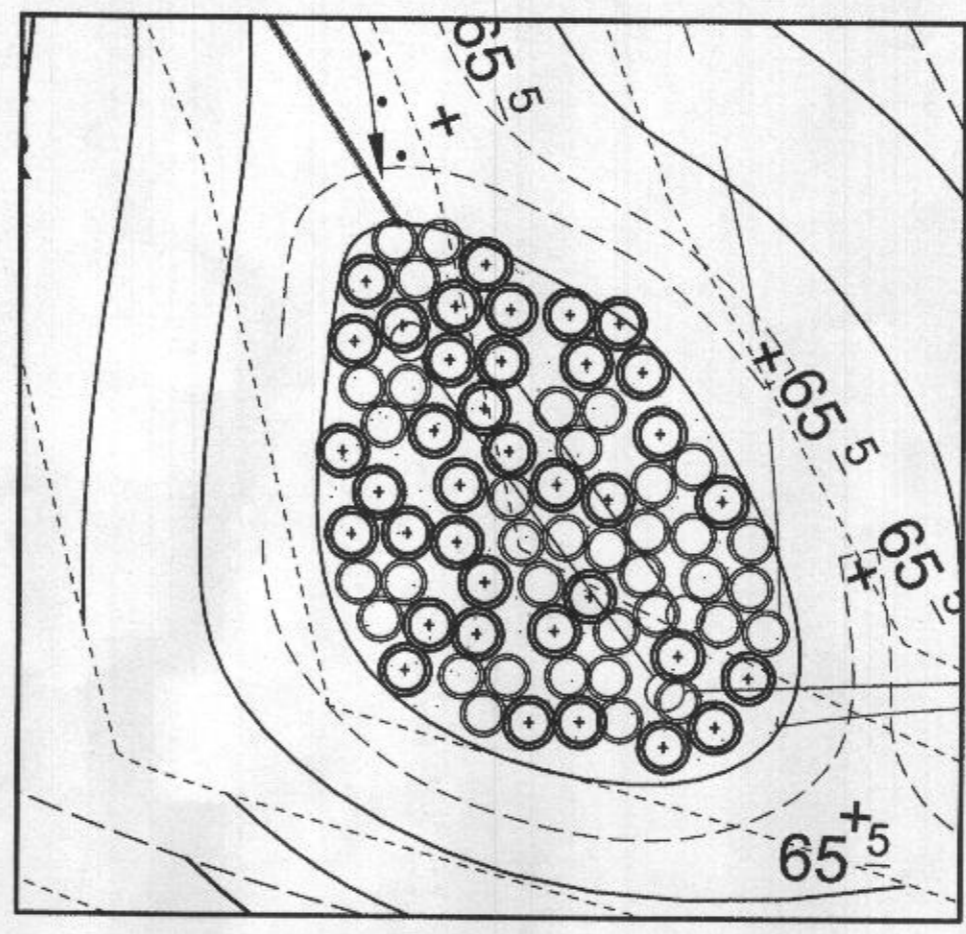
4/12/21
 DATE

NO.	DESCRIPTION	DATE



STORMWATER MANAGEMENT DRAINAGE AREA MAP
SCALE: 1"=20'

A: 0.2871 AC
P_e: 1.0"
Z: RR, DEO
P: 100%
1A
1" SOIL
BIO RETENTION 1



BIORETENTION FACILITY 1
LANDSCAPE PLAN
SCALE: 1"=10'

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED MICRO-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 WRRES. MATERIAL 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.

M-6 MICRO-BIORETENTION PLANT LIST						
HERBACEOUS SPECIES						
LEGEND	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QTY.
⊙	ECHINCEA	PURPLE CONE FLOWER	2' O.C.	1 GAL.		37
○	RUDBECKIA	BLACK EYED SUSAN	2' O.C.	1 GAL.		37

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.

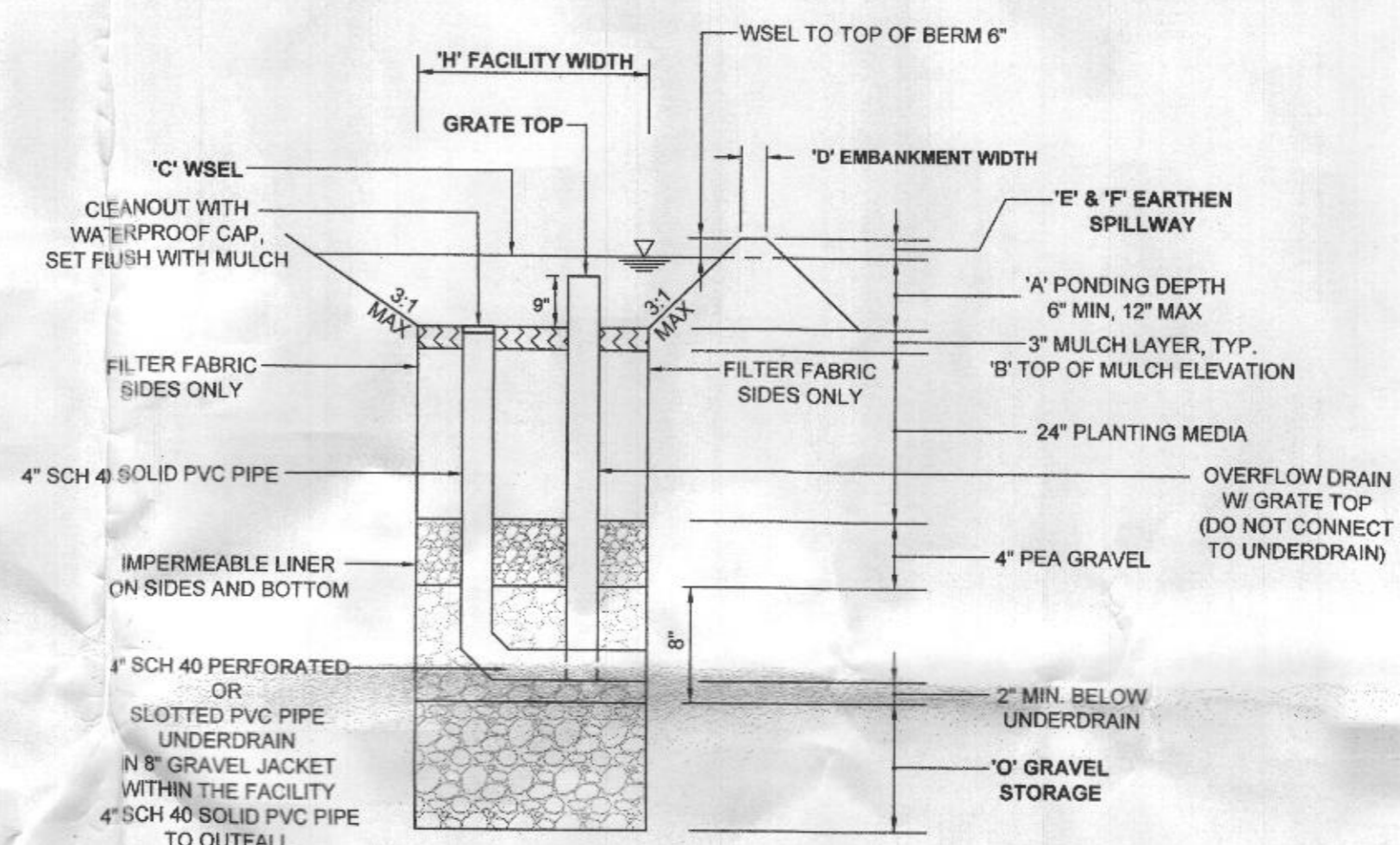
BIORETENTION ELEVATIONS AND DIMENSIONS

DESCRIPTION	BIO 1
'A' PONDING DEPTH	1.0'
'B' TOP OF MULCH	464.0
'C' WSEL	465.0
'D' EMBANKMENT WIDTH	2.0'
'E' SPILLWAY WIDTH	2.0'
'F' SPILLWAY LENGTH	10.0'
'G' FACILITY LENGTH	34'
'H' FACILITY WIDTH	22'
'I' PERF. UNDERDRAIN PIPE DIMENSION	10.0'
'J' UNDERDRAIN PIPE INVERT	460.92
'K' SOLID UNDERDRAIN DIMENSION	68"
'L' OUTFALL INVERT	456
'M' PERF. OVERFLOW PIPE DIMENSION	14"
'N' OVERFLOW PIPE INVERT	460.92
'O' GRAVEL STORAGE DEPTH	N/A*
'P' BOTTOM ELEVATION OF FACILITY	460.76
'Q' GRADE % OF OUTFALL PIPE	7.2

* IMPERMEABLE LINER, NO STORAGE

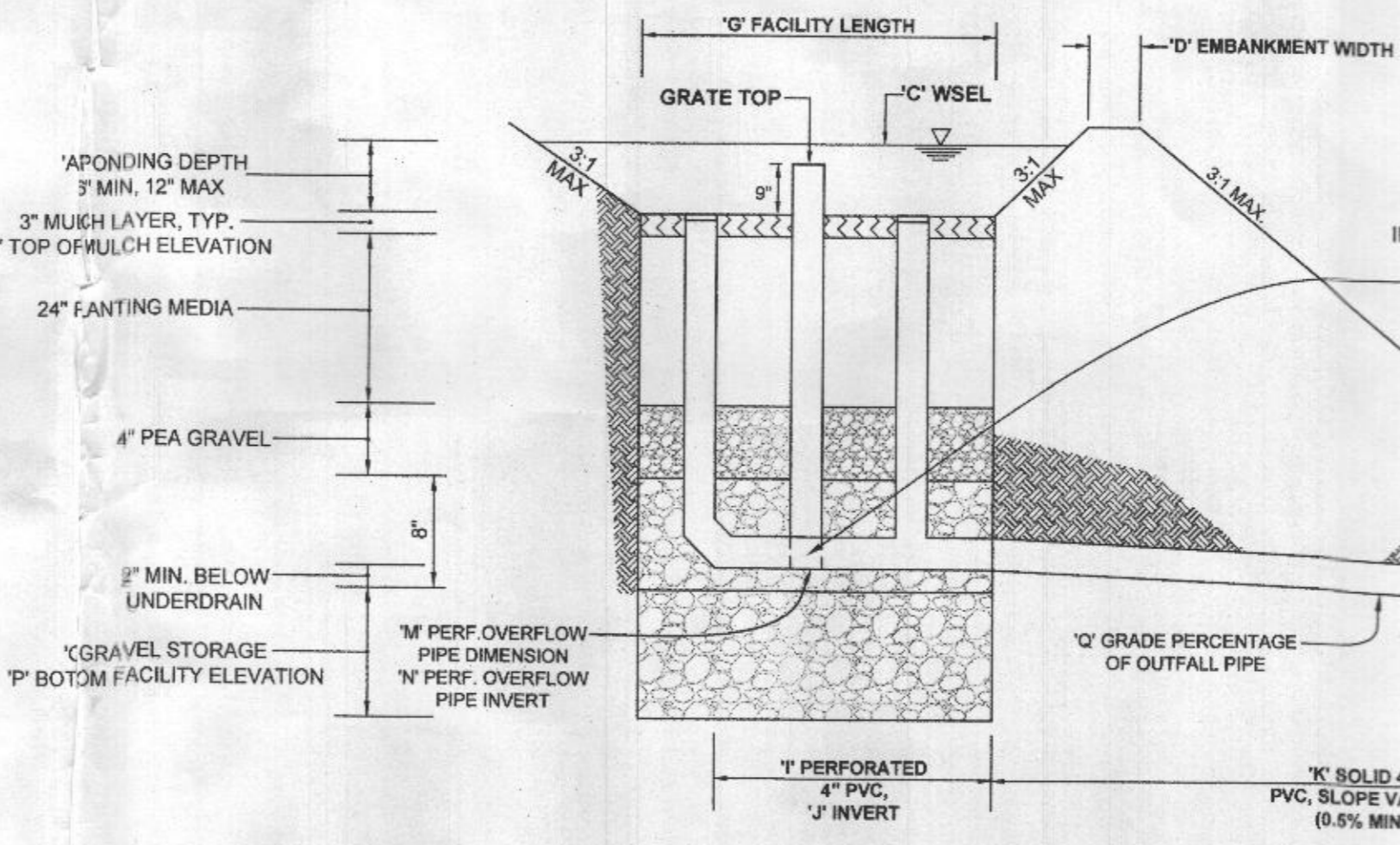
MATERIALS SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN & LANDSCAPE INFILTRATION

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" TO 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)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM, NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN (IF REQUIRED)	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 8 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" PERF. @ 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.
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MX NO.3; F _c = 3500 PSI @ 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 PREVIOUSLY APPROVED STATE 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 309 R98; VERTICAL LOADING (H-10 OR H-20) ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING.
SAND	AASHTO M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO #10) ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.



BIORETENTION FACILITY TYPICAL SECTION
NOT TO SCALE

- NOTES:
- FOR ADDITIONAL INFORMATION, SEE THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II.
- SEE CHART, THIS SHEET, FOR ELEVATIONS AND DISTANCES.
- BIO 1 TO HAVE AN IMPERMEABLE LINER.



BIORETENTION FACILITY TYPICAL PROFILE
NOT TO SCALE

OWNER: WILLIAMSBURG GROUP, 5485 HARPERS FARM ROAD, SUITE 200, COLUMBIA, MARYLAND 21044, 410.997.8800
DEVELOPER: DOSA CLARKSVILLE LLC, 5900 WHALE BOAT DRIVE UNIT #206, CLARKSVILLE, MD, 21029, 301.370.6866

STORMWATER MANAGEMENT PLAN, NOTES, AND DETAILS THE WOODLANDS
5625 DOSA COURT, LOT 7

TAX MAP 28 GRID 23
5TH ELECTION DISTRICT
PARCEL 15
HOWARD COUNTY, MARYLAND

DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 12, 2021
PROJECT #: 20-003
SHEET #: 3 of 3

SILL ENGINEERING GROUP, LLC
16005 Frederick Road, 2nd Floor
Woodbine, Maryland 21797
Phone: 410.325.5076
Fax: 410.696.3022
Email: info@sillengineering.com
Civil Engineering for Land Development

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. 20025, EXPIRATION DATE: JUNE 20, 2021.

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

ENGINEERS 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.
Date: 4/12/21

DEVELOPER'S CERTIFICATE
"I HEREBY 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: [Signature]
Date: 4/12/21