

GENERAL NOTES

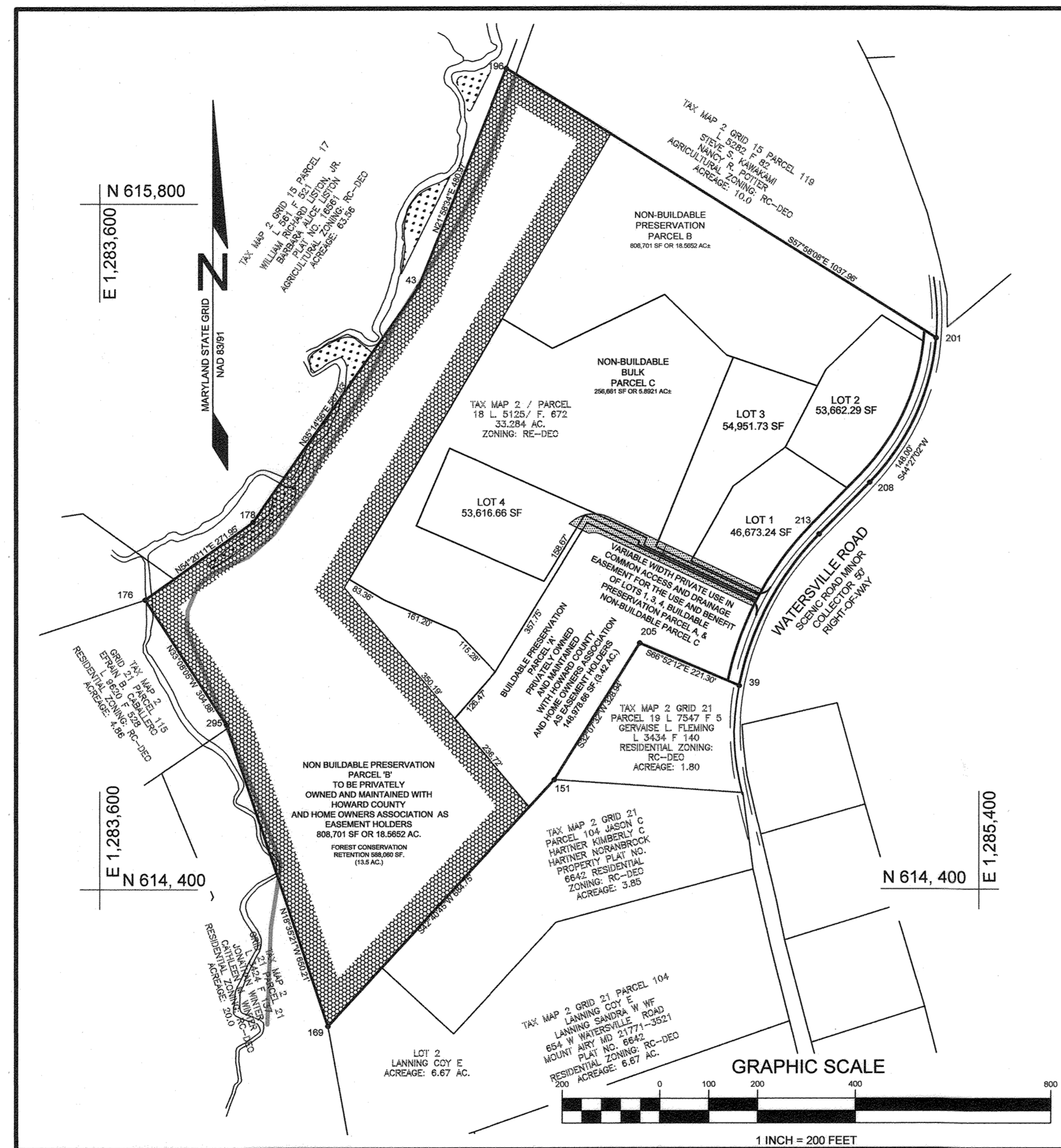
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1860 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- STREET LIGHT IS NOT REQUIRED FOR USE IN COMMON ACCESS DRIVE. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED JULY 2006.
- 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. 02HA AND 02HB WERE USED FOR THIS PROJECT.
- WATER AND SEWER FOR THIS PROJECT WILL BE PROVIDED UNDER PRIVATE SEPTIC AND PRIVATE WELL SYSTEM.
- STORM WATER MANAGEMENT IS PROVIDED BY MICRO-BIORETENTIONS TO PROVIDE WQV AND REV FOR THE USE IN COMMON DRIVE AND LOTS 2-4. LOT 1 SHALL UTILIZE A MICRO-BIORETENTION FACILITY, DRYWELLS AND NON-ROOFTOP DISCONNECTION.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION 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.
- THE 100-YR FLOODPLAIN DRAINAGE AND UTILITY EASEMENT SHOWN ON-SITE IS BASED ON A "OBVIOUSLY NOT CRITICAL FLOODPLAIN" STUDY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JANUARY 11, 2008.
- STREAMS AND WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PERFORMED BY ECO-SCIENCE PROFESSIONAL, DATED DECEMBER 2007.
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC CONCEPT INC, DATED MARCH, 2007.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING INC., DATED APRIL 2007.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS.

MISS UTILITY	1-800-257-7777
BELL ATLANTIC TELEPHONE CO.	410-954-6281
HOWARD COUNTY BUREAU OF UTILITIES:	410-313-2366
VERIZON CABLE LOCATION DIVISION:	410-393-3553
B.G.A.E. CO. CONTRACTOR SERVICES:	410-850-4620
B.G.A.E. CO. UNDERGROUND DAMAGE CONTROL:	410-787-4620
STATE HIGHWAY ADMINISTRATION:	410-531-5533
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE RECORDED AT THE CONTRACTORS EXPENSE.
- IN ACCORDANCE WITH SECTION 12B 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 ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
 - SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
 - GEOMETRY - MAXIMUM 14% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
 - STRUCTURES (CULVERTS/ BRIDGES) - MUST SUPPORT 25 GROSS TON LOADING (H2S LOADING)
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS OTHERWISE HAVE BEEN APPROVED.
- DEED REFERENCE: L 5125F.572
- FOREST STAND DELINEATION PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED DECEMBER 2007.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT FOR THIS SUBDIVISION HAVE BEEN FULFILLED THROUGH THE CREATION OF A FOREST CONSERVATION RETENTION EASEMENT ON NON-BUILDABLE PRESERVATION PARCEL 'B' IN THE AMOUNT OF 8117.512 TO BE POSTED AS PART OF THE DEVELOPERS AGREEMENT. THE DEVELOPERS AGREEMENT WILL BE EXECUTED WITH THE FINAL PLAT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/ CEMETERY LOCATIONS ON SITE.
- THE EXISTING HOUSE TRAILER LOCATED ON BUILDABLE PARCEL 'A' IS TO REMAIN AS A NON-LIVING SPACE AND/OR STORAGE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT.
- THE SUBJECT PROPERTY IS ZONED "RC-DEO" IN ACCORDANCE WITH THE 22/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003.
- ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1/4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE RUBBER SLEEVE (1/2 GAUGE-3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- DPZ REFERENCE: SP-08-011.
- WATERSVILLE ROAD IS A SCENIC ROAD.
- REFUSE COLLECTION, SNOW REMOVAL, AND MAINTENANCE FOR LOT 1 & LOTS 3-4 WILL OCCUR AT THE INTERSECTION OF THE USE-IN-COMMON ACCESS EASEMENT AND THE RIGHT-OF-WAY FOR WATERSVILLE ROAD.
- THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCRoACHMENT INTO THE PRIVATE SEWAGE EASEMENT.
- ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
- ALL WELLS TO BE DRILLED PRIOR TO SUBMITTAL OF FINAL PLAT FOR SIGNATURE.
- A GROUND WATER APPROPRIATION PERMIT MUST BE ISSUED PRIOR TO RECORD PLAT SUBMISSION AND/OR PRIOR TO DRILLING WELLS.
- IT IS THE DEVELOPERS RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS UP THE HEALTH DEPARTMENT SIGNATURE OF THE RECORD PLAT. IF A WELL SUCCESS RATE IS ACCOMPLISHED AT VARIOUS LOCATIONS WITHIN THE SITE, THE DEVELOPER SHALL HAVE THE OPTION TO REQUEST RELIEF FROM DRILLING THE REMAINING WELLS PRIOR TO PLAT RECORDATION.
- 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 SEWER EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- THE MICRO-BIORETENTION FACILITIES SHOWN ON THESE PLANS TO MAINTAIN 25' DISTANCE FROM SEPTIC EASEMENT & 100' FROM WELL BOX, OR 50' FROM WELL BOX WITH AN IMPERMEABLE LINER.
- NON BUILDABLE PRESERVATION PARCEL 'B' AND BUILDABLE PRESERVATION PARCEL 'A' TO BE PRIVATELY OWNED AND MAINTAINED WITH HOWARD COUNTY AND THE HOME OWNERS ASSOCIATION AS EASEMENT HOLDERS. NON-BUILDABLE BULK PARCEL C TO BE PRIVATELY OWNED. PRESERVATION PARCEL 'B' TO BE ESTABLISHED MAINLY FOR ENVIRONMENTAL PROTECTION OF THE STREAM, FLOODPLAIN, AND FOREST CONSERVATION AREAS. PRESERVATION PARCEL 'A' INCLUDES THE EXISTING HOUSE AND ACCOMMODATE HORSES. NON-BUILDABLE BULK PARCEL C TO BE ESTABLISHED FOR FUTURE POTENTIAL DEVELOPMENT.
- STREET TREES ARE REQUIRED FOR THIS SUBDIVISION ALONG WATERSVILLE ROAD IN ACCORDANCE WITH SECTION 16.124(6)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL.
- STREET TREES ARE NOT REQUIRED FOR THE USE-IN-COMMON DRIVE.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.

GENERAL NOTES CONTINUED:

- THE ARTICLES OF INCORPORATION AND HOME OWNERS ASSOCIATION DOCUMENTS WILL BE RECORDED CONCURRENTLY WITH THE RECORDING OF THE FINAL PLAT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPING (19 SHADE TREES) IN THE AMOUNT OF \$5,700.00 HAS BEEN POSTED UNDER THE DEVELOPERS AGREEMENT.
- STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(6)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$8,400.00 TO BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THE REQUIRED 28 PUBLIC STREET TREES.
- THE MAINTENANCE AGREEMENT FOR THE PRIVATE USE IN COMMON ACCESS EASEMENTS AND THE PRIVATE USE-IN-COMMON ACCESS AND DRAINAGE EASEMENT SHALL BE RECORDED CONCURRENT WITH THIS PLAT IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

FINAL ROAD CONSTRUCTION PLAN HAY MEADOW OVERLOOK LOTS 1-4 & BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C HOWARD COUNTY, MARYLAND



PLAN VIEW
SCALE: 1"=200'

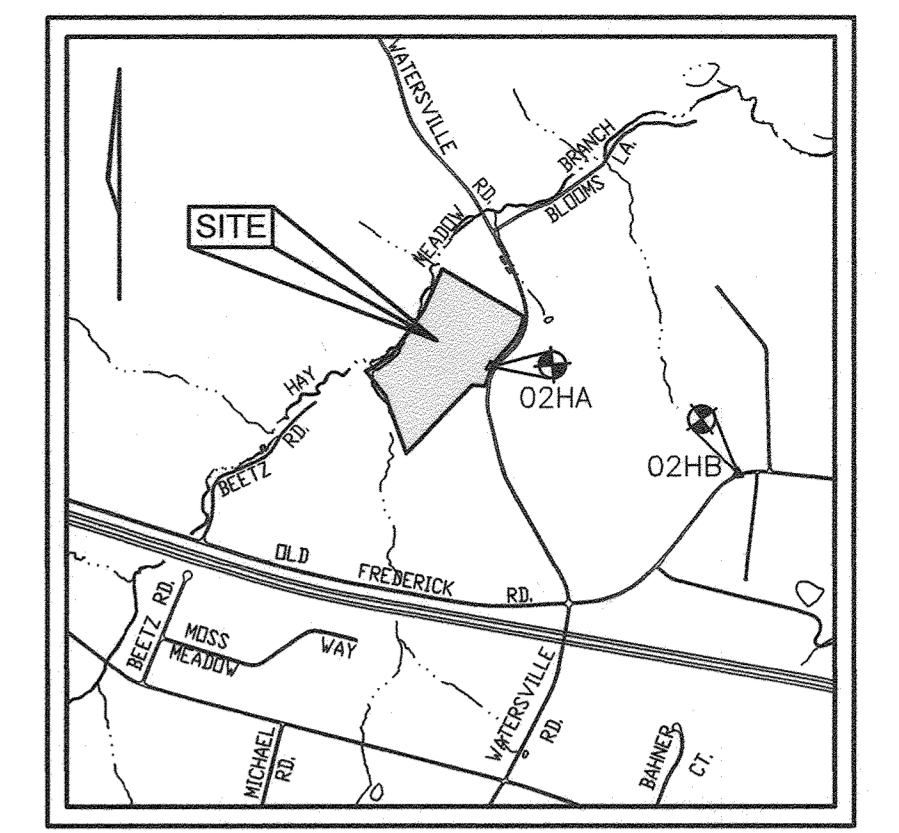
SITE DATA

LOCATION: TAX MAP 2, GRID 15, & 21, PARCEL 18
4TH ELECTION DISTRICT
EXISTING ZONING: RC-DEO, AS PER THE 02-02-04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATION AMENDMENTS EFFECTIVE 07-28-06.
GROSS AREA OF PROJECT: 33.15 AC
AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 1.1 AC
NET AREA OF PROJECT: 26.27 AC
AREA OF PROPOSED BUILDABLE LOTS (LOT 1 TO 4 & BUILDABLE PARCEL 'A'): 8,188 AC
AREA OF OPEN SPACE REQUIRED: 0 AC
AREA OF PROPOSED NON-BUILDABLE PRESERVATION PARCEL 'A': 2.69 AC
AREA OF PROPOSED NON-BUILDABLE PRESERVATION PARCEL 'B': 21.80 AC
AREA OF PROPOSED RIGHT-OF-WAY DEDICATION: 0.48 AC
NUMBER OF LOTS/ PARCELS PROPOSED:
(4 BUILDABLE LOTS, 1 BUILDABLE PRESERVATION PARCEL, 1 NON-BUILDABLE PRESERVATION PARCEL, AND 1 NON-BUILDABLE BULK PARCEL)

PROFESSIONAL CERTIFICATION
I hereby certify that the red line markings shown hereon were prepared or approved by me and that I am a duly licensed Professional Land Surveyor under the laws of the State of Maryland, License No. 11049, expires 2/10/23.
M. Najib Rosman 10/3/22 DATE
(FOR LOT 2 ONLY)

LEGEND

- VARIABLE WIDTH PRIVATE USE-IN-COMMON ACCESS & DRAINAGE EASEMENT FOR LOTS 1, 3 & 4, PARCEL A AND CREDITED FOREST RETENTION AREA
- NON-CREDITED FOREST RETENTION AREA-1.17 AC
- PUBLIC SITE DISTANCE EASEMENT
- 100 YR FLOOD PLAIN
- PROP. SWM EASEMENT
- EX. WETLAND



VICINITY MAP
SCALE: 1"= 2000'
ADC COORDINATES 3 B6

DENSITY TABULATION CHART	
TOTAL GROSS AREA OF SUBDIVISION	33.15 ACRES
AREA OF 100 YEAR FLOODPLAIN	1.1 ACRES
AREA OF 25% SLOPES (OUTSIDE FLOODPLAIN)	5.78 ACRES
NET TRACT AREA	26.27 ACRES
NUMBER OF RESIDENTIAL UNITS ALLOWED BY RIGHT	33,154/25 GROSS ACRES = 7
NUMBER OF RESIDENTIAL UNITS PROPOSED	5 (4 NEW AND 1 EXISTING)
NUMBER OF CEO UNITS REQUIRED	0
SENDING PARCEL INFORMATION	N/A

BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	TYPE
02HA	N 554251.6	E 772542.8	736.063	
02HB	N 553162.4	E 775155.2	737.120	

MINIMUM LOT SIZE CHART			
LOT NO.	GROSS AREA	MINIMUM LOT SIZE	PIPESTEM AREA
3	54,952 SQ. FT.	54,328.46 SQ. FT.	623.27 SQ. FT.
4	53,617 SQ. FT.	50,872.00 SQ. FT.	2,745.00 SQ. FT.

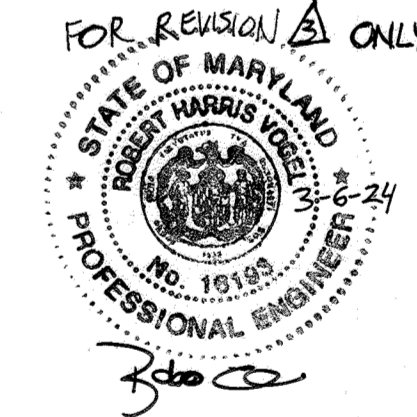
SHEET INDEX		
DESCRIPTION	SHEET NO.	
COVER SHEET	1 OF 10	
ROAD CONSTRUCTION PLAN, ROAD PROFILES, MOT PLAN AND DETAILS	2 OF 10	
GRADING, SEDIMENT AND EROSION CONTROL PLAN	3 OF 10	
GRADING, SEDIMENT AND EROSION CONTROL PLAN	4 OF 10	
SEDIMENT AND EROSION CONTROL DETAILS	5 OF 10	
DRAINAGE AREA MAP AND STORMWATER MANAGEMENT DATA	6 OF 10	
BIORETENTION PLAN AND DETAILS	7 OF 10	
LANDSCAPE, FOREST CONSERVATION PLAN AND DETAILS	8 OF 10	
LANDSCAPE, FOREST CONSERVATION PLAN AND DETAILS	9 OF 10	
PLAT PLANS	10 OF 10	

STORMWATER MANAGEMENT PRACTICES

LOT #	ADDRESS	MICRO-BIO (QUANTITY)	PEYWELLS (QUANTITY)	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-Z (Y/N))
1	540 WATERSVILLE ROAD	1	3	Y
2	530 WATERSVILLE ROAD	1	0	N
3	548 WATERSVILLE ROAD	2	0	N
4	572 WATERSVILLE ROAD	3	0	N

COORDINATE LIST

POINT	NORTH	EAST
39	614815.05394	1284909.52883
43	615629.54957	1284252.71740
151	614823.41200	1284531.08990
169	614120.01000	1284086.90290
176	614991.99800	1283692.97860
178	615150.15180	1283913.92780
188	616075.57450	1284432.70710
201	615525.95197	1285312.65926
205	614801.98948	1284708.01324
208	615230.08773	1285177.03987
213	615124.43772	1285073.42721
295	614736.29305	1283859.62902



OWNER/DEVELOPER

DORSEY CONTRACTORS, INC
MR. PHILLIP H. DORSEY, PRESIDENT
13090 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21784

COVER SHEET
REVISED HAY MEADOW OVERLOOK
LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C
WATERSVILLE ROAD
TAX MAP 2 GRID 15.21 PARCEL 18
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

	DESIGN BY: PS
	DRAWN BY: NM
	CHECKED BY: PS
	SCALE: AS SHOWN
	DATE: JUNE 20, 2019
	PROJECT #: 17-087
	SHEET #: 1 of 10
	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, 2020.

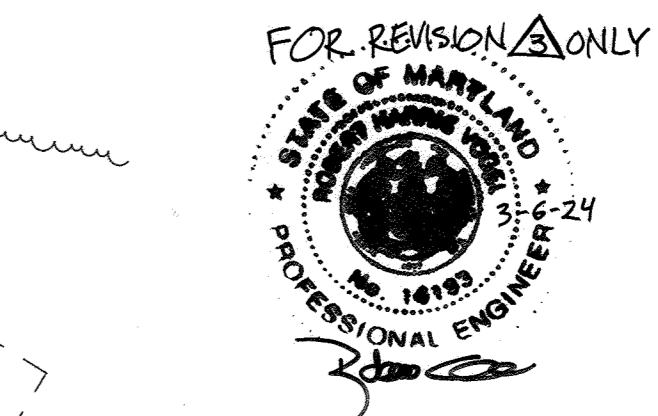
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 1-23-20	 CHIEF, BUREAU OF HIGHWAYS DATE: 12/30/2019
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 1-9-20	

NO.	DESCRIPTION	DATE
1	REVISE HOUSE TYPE, GRADING AND SWM ON LOT 1	3-6-24
2	UPDATED HOUSE TYPE, GRADING, SWM	6/5/22
1	REVISED LOT LINES AND EASEMENTS, NEW SHEET	7/24/18



LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE
- PROPOSED TREELINE
- EX. FENCE
- EX. UTILITY POLE
- WELL AREA
- SEPTIC AREA
- PROP. 38' PRIVATE USE-IN-COMMON ACCESS & DRAINAGE EASEMENT FOR LOTS 1, 3 & 4
- FOREST RETENTION AREA
- PUBLIC SITE DISTANCE EASEMENT
- 100 YR FLOOD PLAIN
- PROP. SWM EASEMENT
- STEEP SLOPES
- MODERATE SLOPES
- BORING
- RAIN GARDEN
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING SHEAR STRESS MAX: 5.3028
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- SOILS
- FLOODPLAIN CROSS-SECTION
- STREET TREES
- PROPOSED WELL



PROFESSIONAL CERTIFICATION
 I hereby certify that the red line marks shown herein were prepared or approved by me, and that I am a duly licensed professional Land Surveyor under the laws of the State of Maryland, License No. 16193, Expires 2/10/23.
 M. Najibzoshan 10/13/22
 (FOR LOT 2 ONLY)

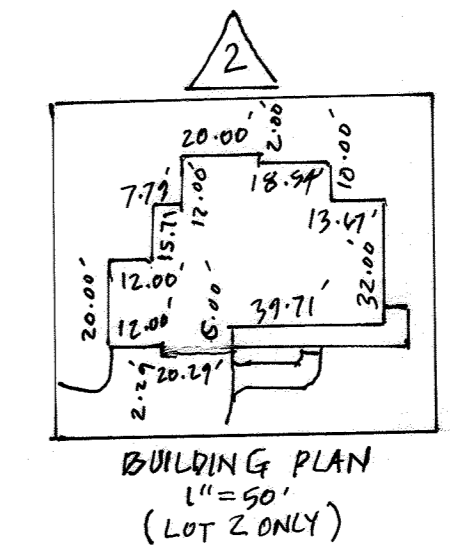
SOIL TABLE

SYMBOL	NAME / DESCRIPTION	GROUP
Brd	BRINKLOW CHANNERY LOAM, 15 TO 25 PERCENT SLOPES	B
Bf	BRINKLOW-BLOCKTOWN CHANNERY LOAMS, 25 TO 65 PERCENT SLOPES	B
Cc	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C
CgB	GLENELO LOAM, 3 TO 8 PERCENT SLOPES	B
MRF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B
ObS	OCOQUAN LOAM, 3 TO 8 PERCENT SLOPES	B
OcC	OCOQUAN LOAM, 8 TO 15 PERCENT SLOPES	B

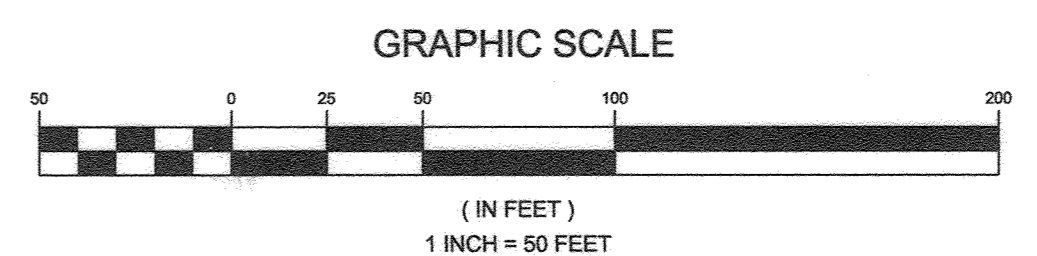
NOTE:
 GRADING FOR THE HOUSES AND THEIR INDIVIDUAL DRIVEWAYS SHOWN FOR INFORMATIONAL PURPOSES ONLY. A SEPARATE PLAN WILL BE SUBMITTED FOR THEIR CONSTRUCTION. ONLY THE GRADINGS FOR THE USE IN COMMON DRIVEWAY, BIORETENTION FACILITY 1, AND ACCESS TO BIORETENTION FACILITY 1 IS PROPOSED UNDER THIS PLAN.

AT THE TIME OF BUILDING PERMIT SUBMISSION, IF PROPOSED BIORETENTION FACILITIES FOR EACH LOT DO NOT MATCH THOSE SHOWN ON THIS PLAN, THEN A STANDARD PLAN REVISION TO THIS PLAN WILL BE REQUIRED.

OWNER/DEVELOPER
 DORSEY CONTRACTORS, INC.
 MR. PHILLIP H. DORSEY, PRESIDENT
 13090 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784



MATCHLINE SHEET 4
 FOR SWALE TYPICAL SECTION, SEE SHEET 2. DESIGN TO BE CONFIRMED AT BUILDING PERMIT STAGE.
PLAN VIEW
 SCALE: 1"=50'



REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE HOUSE TYPE, GRADING AND SWIM ON LOT 1	3-6-24
2	UPDATED HOUSE TYPE, LEADING, SWM	6/5/22
1	REVISED LOT LINES AND EASEMENTS, NEW SHEET	7/24/18

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 J. M. ... 1-23-20
 CHIEF, DIVISION OF LAND DEVELOPMENT
 ... 1-9-20
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 ... 12/30/2019
 CHIEF, BUREAU OF HIGHWAYS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 ... 12/18/19
 HOWARD SCD

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."
 ... 6/20/19
 SIGNATURE OF DEVELOPER

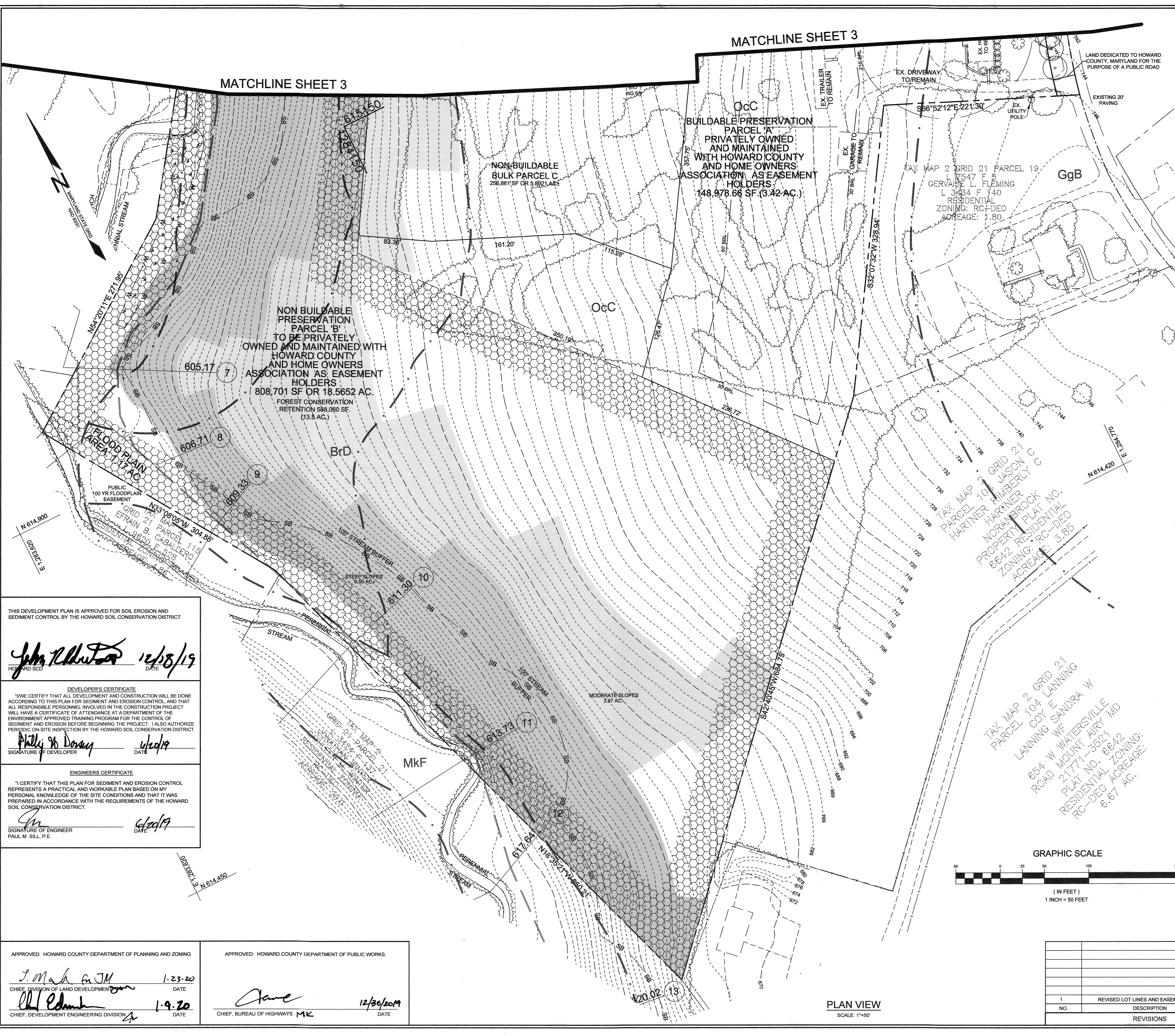
ENGINEERS CERTIFICATE
 "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 ... 6/20/19
 SIGNATURE OF ENGINEER
 PAUL M. SILL, P.E.

REVISED GRADING, SEDIMENT & EROSION CONTROL PLAN
HAY MEADOW OVERLOOK
 LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C
 WATERSVILLE ROAD
 TAX MAP 2 GRID 15.21 PARCEL 18
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SILL ENGINEERING GROUP, LLC
 1130 Dovecote, Suite 200
 Harrosville, Maryland 21104
 Phone: 443.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development

DESIGN BY: PS
 DRAWN BY: MM
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: JUNE 20, 2019
 PROJECT #: 17-087
 SHEET #: 3 of 20

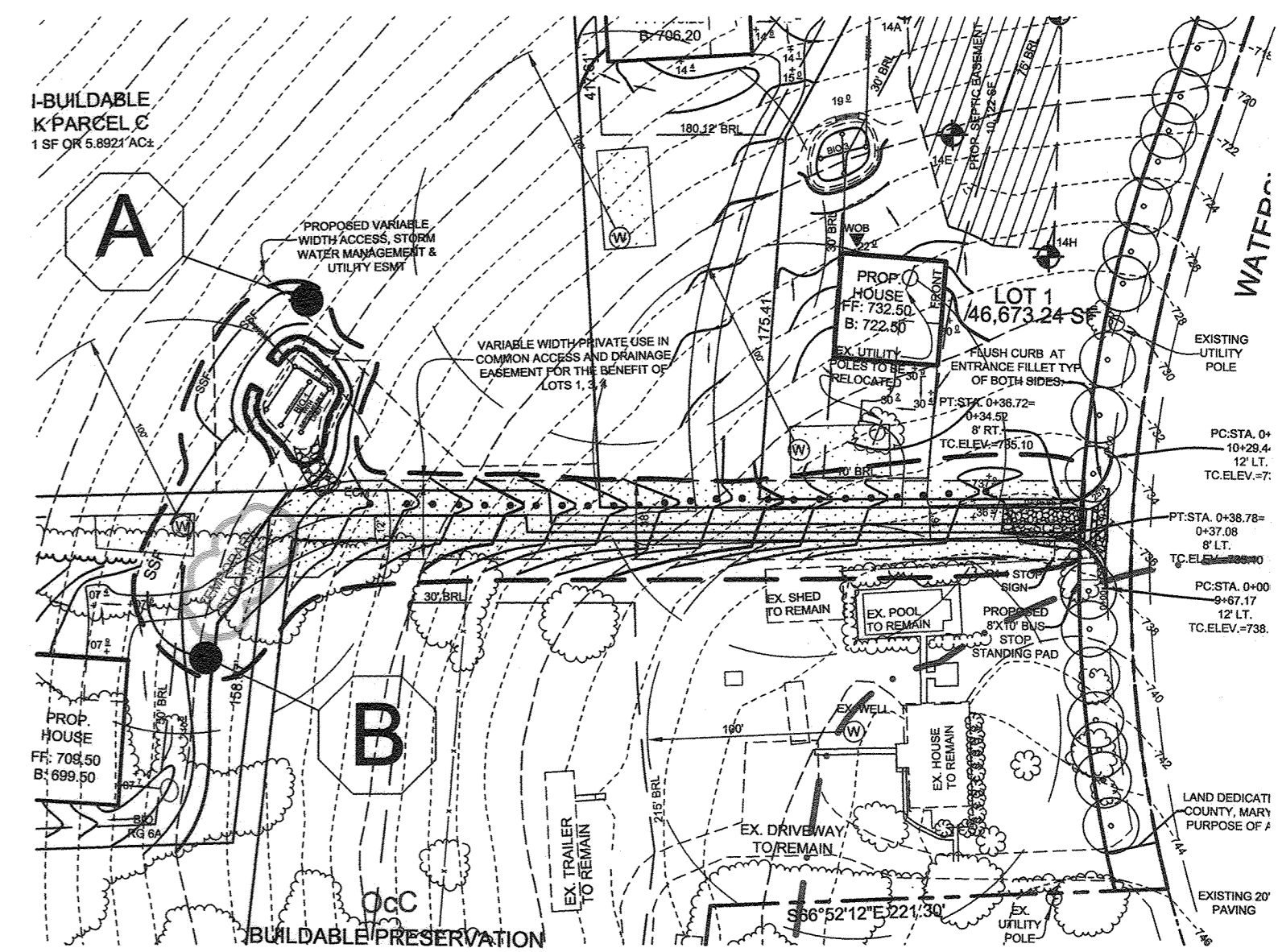
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2020



MATCHLINE SHEET 3

MATCHLINE SHEET 3

SOIL TABLE		
SYMBOL	NAME / DESCRIPTION	GROUP
B/D	BRINKLOW CHANNERY LOAM, 15 TO 25 PERCENT SLOPES	B
B/F	BRINKLOW BLOCKTOWN CHANNERY LOAMS, 25 TO 65 PERCENT SLOPES	B
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GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B
MkF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B
OoB	OCCOQUAN LOAM, 3 TO 8 PERCENT SLOPES	B
OoC	OCCOQUAN LOAM, 8 TO 15 PERCENT SLOPES	B



SEDIMENT CONTROL DRAINAGE AREA MAP
SCALE: 1"=50'

SSF TABLE		
SYMBOL	LENGTH OF THE SLOPE	SLOPE PERCENTAGE
A	387 FT	7.7%
B	316 FT	10.4%

OWNER/DEVELOPER

DORSEY CONTRACTORS, INC
MR. PHILLIP H. DORSEY, PRESIDENT
13080 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21784

REVISED GRADING, SEDIMENT & EROSION CONTROL PLAN HAY MEADOW OVERLOOK

LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C
WATERSVILLE ROAD

TAX MAP 2 GRID 15.21 4TH ELECTION DISTRICT PARCEL 18 HOWARD COUNTY, MARYLAND

STATE OF MARYLAND
PHILLIP M. SILL
PROFESSIONAL ENGINEER
NO. 32025

SILL ENGINEERING GROUP, LLC
11130 Dovedale, Suite 200
Marristown, Maryland 21104
Phone: 443.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

DESIGN BY: PS
DRAWN BY: NM
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JUNE 20, 2019
PROJECT #: 17-057
SHEET #: 4 of 12

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, 2020

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

John K. Hutson 12/18/19
HOWARD SCD DATE

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."

Phillip H. Dorsey 4/20/19
SIGNATURE OF DEVELOPER DATE

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."

Paul M. Sill, P.E. 6/20/19
SIGNATURE OF ENGINEER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

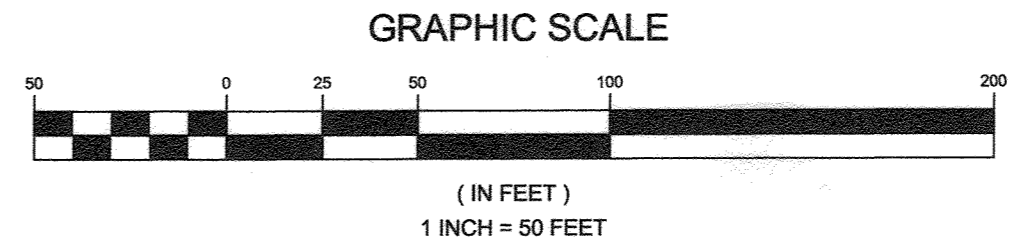
J. Mark Fu JM 1-23-20
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Edmund 1-9-20
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

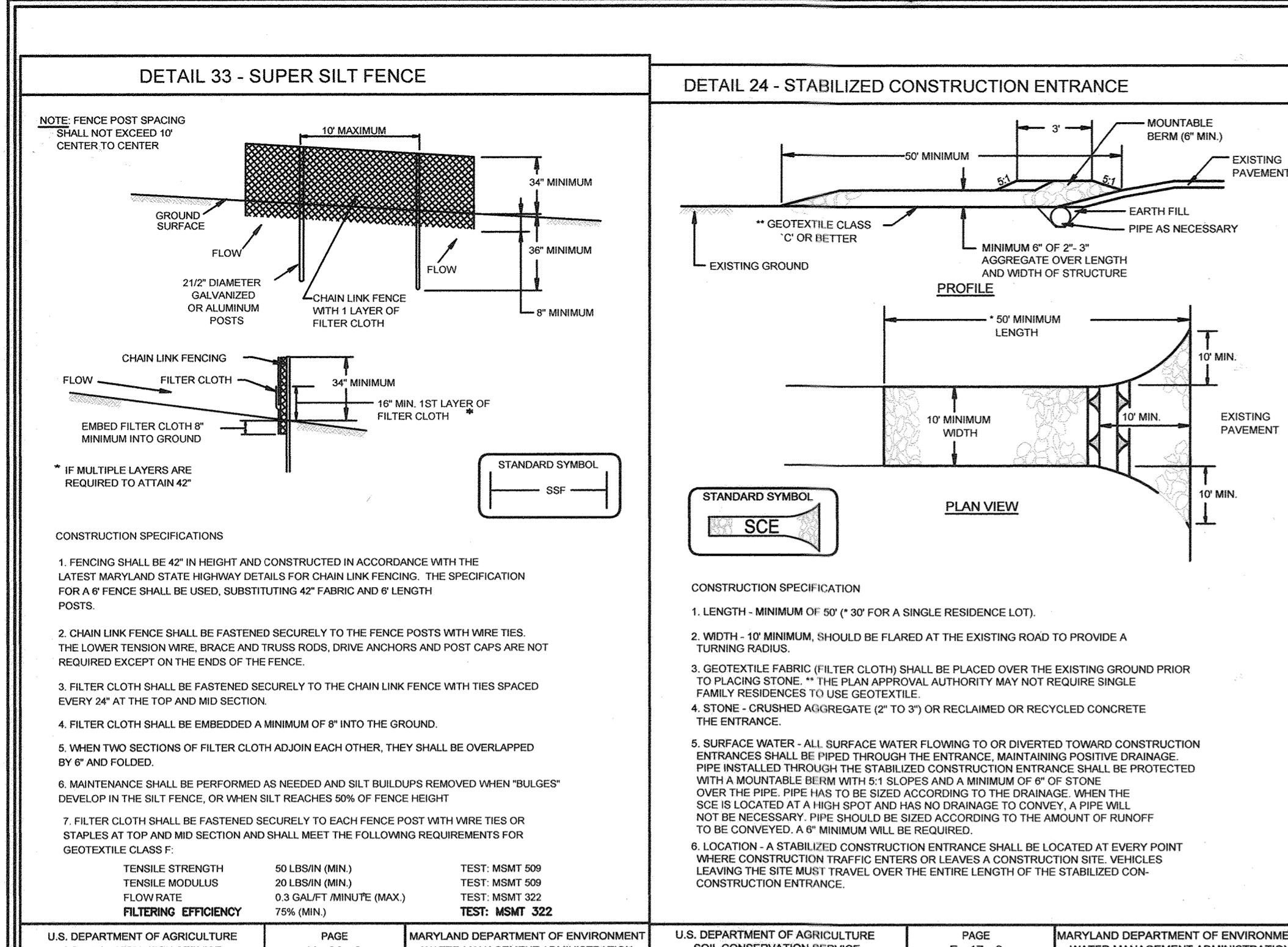
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James 12/30/2019
CHIEF, BUREAU OF HIGHWAYS MK DATE

PLAN VIEW
SCALE: 1"=50'



NO.	DESCRIPTION	DATE
1	REVISED LOT LINES AND EASEMENTS, <i>MIN SHEET</i>	7/24/18



CONSTRUCTION SPECIFICATIONS

- FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND LENGTH POINTS.
- CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. TURNING RAILS, BRACKETS, AND TRUSS RODS, CORNER ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH THIS SPACED EVERY 24" AT THE TOP AND MID SECTION.
- FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 6" INTO THE GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NECESSARY AND ALL BUILDS DEVELOPED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS AND PROPERTIES:

TENSILE STRENGTH	50 LBS/IN (MIN)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL/FT MINUTE (MAX)	TEST: MSMT 502
FILTRATION EFFICIENCY	75% (MIN)	TEST: MSMT 522

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PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED: APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING. APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
- ACCEPTABLE: APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND APPLY 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING FOR THE PERIODS: MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 31. SEED WITH 60 LBS PER ACRE (14 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE FOR THE PERIOD MAY 1 THRU JULY 31. SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WEEPING LOVEGRASS DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28. PROTECT SITE BY OPTION (1) 2 TONS PER ACRE WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL-ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 100 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. REMOVE MULCH IMMEDIATELY USING MULCH ANCHORS. MULCHING TOOL OR 216 GALLONS PER ACRE (8 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT MULCH OR HIGHER. USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.



CONSTRUCTION SPECIFICATION

- LENGTH - MINIMUM OF 50' (30' FOR A SINGLE RESIDENCE LOT).
- WIDTH - 10" MINIMUM, SHOULD BE FLEARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE LAYER OF GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BEAM WITH 6:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SOIL IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 1/2" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE / SOIL CONSERVATION SERVICE | PAGE 17 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT / WATER MANAGEMENT ADMINISTRATION

TABLE B.1: TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE		RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE
	LB/AC	LB/1000 FT ²	
COOL-SEASON GRASSES			
ANNUAL RYEGRASS (LULIUM PERENNIS SSP. MULTIFLORUM)	40	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
BARLEY (HORDEUM VULGARE)	96	2.2	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
OATS (AVEENA SATIVA)	72	1.7	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
WHEAT (TRITICUM AESTIVUM)	120	2.8	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
CEREAL RYE (SECALE CEREALE)	112	2.8	MARCH 15 TO MAY 31; AUG 1 TO OCT 31
WARM-SEASON GRASSES			
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	JUN 1 TO JUL 31
PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	JUN 1 TO JUL 31

FERTILIZER RATE: (10-20-20), 436 LB/AC (10LB/1000SF) LIME RATE: 2 TONS/AC (90LB/1000SF)

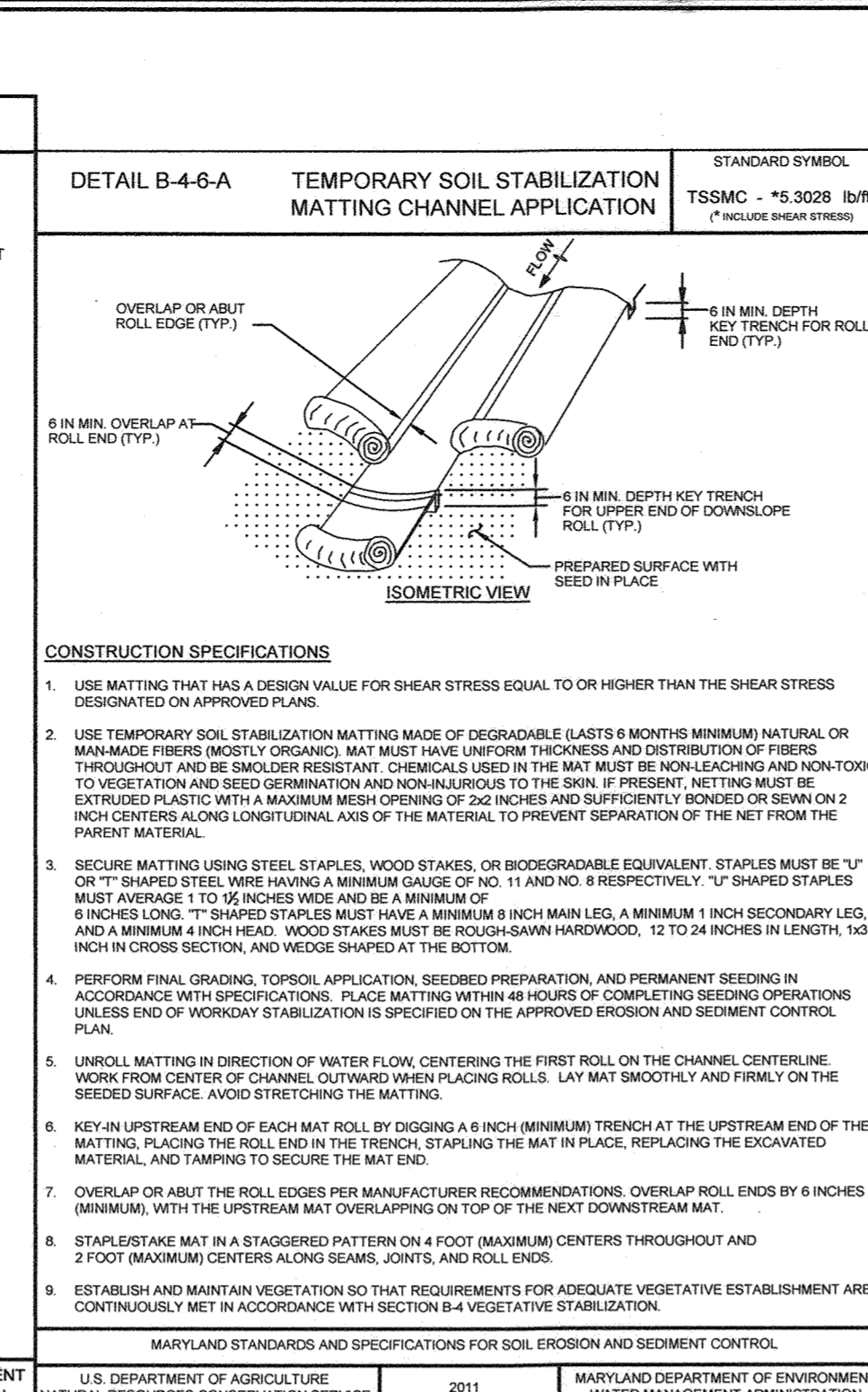
NOTES:

- SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY. AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDING. WHEN PLANTED ALONE, WHEN PLANTED WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDING GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP. UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
- FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
- THE PLANTING DATES LISTED ABOVE ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING | **DATE:** 1-23-20

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS | **DATE:** 1-9-20

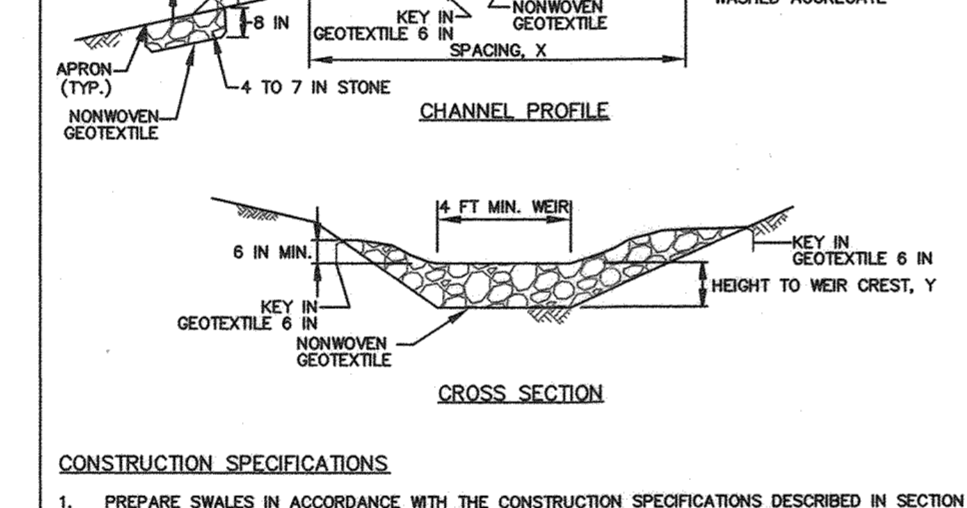
APPROVED: HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION | **DATE:** 12/30/2019



CONSTRUCTION SPECIFICATIONS

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS) MINIMUM NATURAL OR MANMADE FIBERS (MOSTLY ORGANIC) BUT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE EMOULDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND NON-DANGEROUS TO ANIMALS. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 3/32 INCHES AND SUFFICIENTLY BONDED TO THE 2-3 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENTS. STAPLES MUST BE 1/2" OR 3/8" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE (NO. 11 AND NO. 10 RESPECTIVELY), 3" SHAPED STAPLES MUST AVERAGE 1 1/2" INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. 1" SHAPED STAPLES MUST HAVE A MINIMUM 1/2" INCH MAIN LEG, A MINIMUM 1/2" INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAPLES MUST BE KOLU-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1/2 INCH IN CROSS SECTION, AND WEEDS SHARP AT THE POINT.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS REQUIRED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL. CONTINUE WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDBED SURFACE. AVOID STRETCHING THE MATTING.
- KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH MINIMUM TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL EDGE IN THE TRENCH. LEAVE A MINIMUM OF 6 INCHES BETWEEN THE ROLLS AND TAMPING TO SECURE THE MAT EDGE.
- OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER'S RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES MINIMUM. WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON A FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG BEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE / SOIL CONSERVATION SERVICE | PAGE 18 - 22 - 2A | MARYLAND DEPARTMENT OF ENVIRONMENT / WATER MANAGEMENT ADMINISTRATION



CONSTRUCTION SPECIFICATIONS

- PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION 2.2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WASHED 1/2 TO 7/8 INCH STONE OR EQUIVALENT ROCK AND CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORCE THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LEAVE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (5% TO 15 INCH).
- SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE DEPTH OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

U.S. DEPARTMENT OF AGRICULTURE / SOIL CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT / WATER MANAGEMENT ADMINISTRATION

TABLE B.2: TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE		RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE
	LB/AC	LB/1000 FT ²	
COOL-SEASON GRASSES			
ANNUAL RYEGRASS (LULIUM PERENNIS SSP. MULTIFLORUM)	40	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
BARLEY (HORDEUM VULGARE)	96	2.2	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
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PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	JUN 1 TO JUL 31

FERTILIZER RATE: (10-20-20), 436 LB/AC (10LB/1000SF) LIME RATE: 2 TONS/AC (90LB/1000SF)

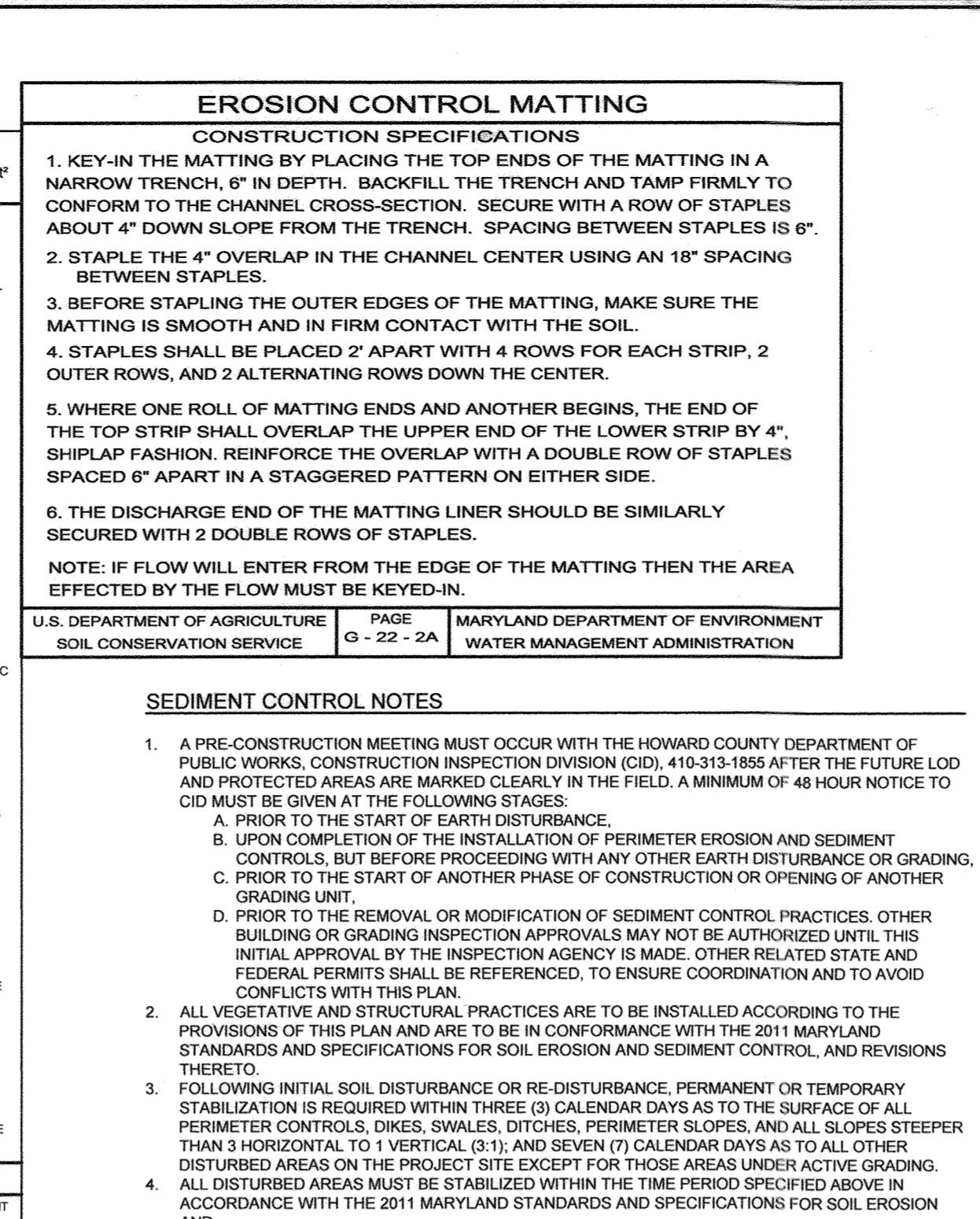
NOTES:

- SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY. AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDING. WHEN PLANTED ALONE, WHEN PLANTED WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDING GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP. UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
- FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING | **DATE:** 1-23-20

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS | **DATE:** 1-9-20

APPROVED: HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION | **DATE:** 12/30/2019

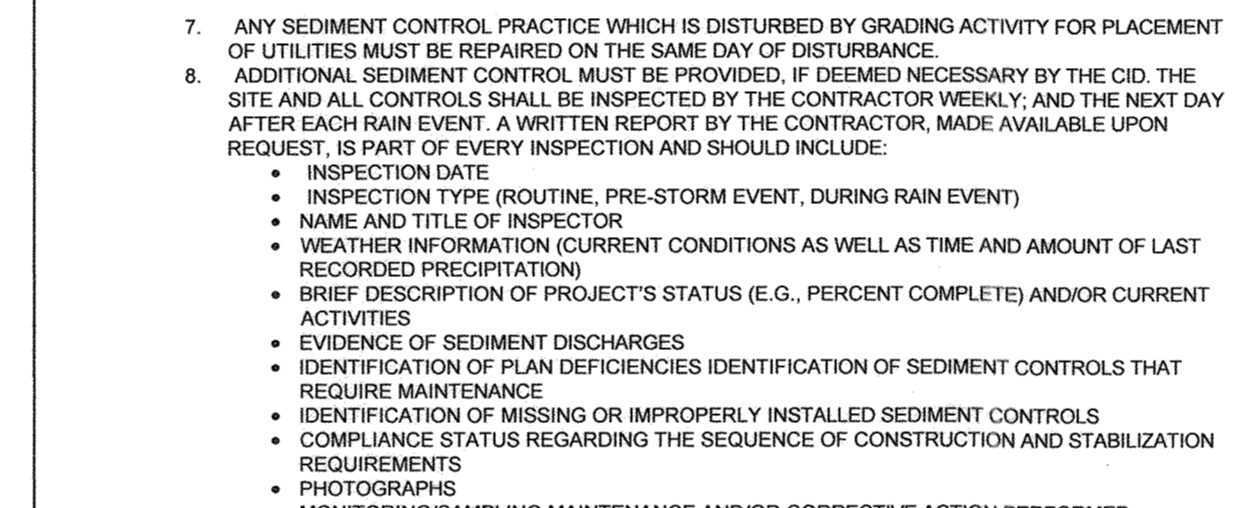


CONSTRUCTION SPECIFICATIONS

- KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A CHANNEL TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
- STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
- BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
- STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP. 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
- WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4". SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
- THE DISCHARGE END OF THE MATTING LINE SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYPED-IN.

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CONSTRUCTION SPECIFICATIONS

- PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION 2.2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.
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- SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE DEPTH OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

U.S. DEPARTMENT OF AGRICULTURE / SOIL CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT / WATER MANAGEMENT ADMINISTRATION

TABLE B.2: TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE		RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE
	LB/AC	LB/1000 FT ²	
COOL-SEASON GRASSES			
ANNUAL RYEGRASS (LULIUM PERENNIS SSP. MULTIFLORUM)	40	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30
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WARM-SEASON GRASSES			
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	JUN 1 TO JUL 31
PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	JUN 1 TO JUL 31

FERTILIZER RATE: (10-20-20), 436 LB/AC (10LB/1000SF) LIME RATE: 2 TONS/AC (90LB/1000SF)

NOTES:

- SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY. AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDING. WHEN PLANTED ALONE, WHEN PLANTED WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDING GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP. UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
- FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
- THE PLANTING DATES LISTED ABOVE ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING | **DATE:** 1-23-20

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS | **DATE:** 1-9-20

APPROVED: HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION | **DATE:** 12/30/2019

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

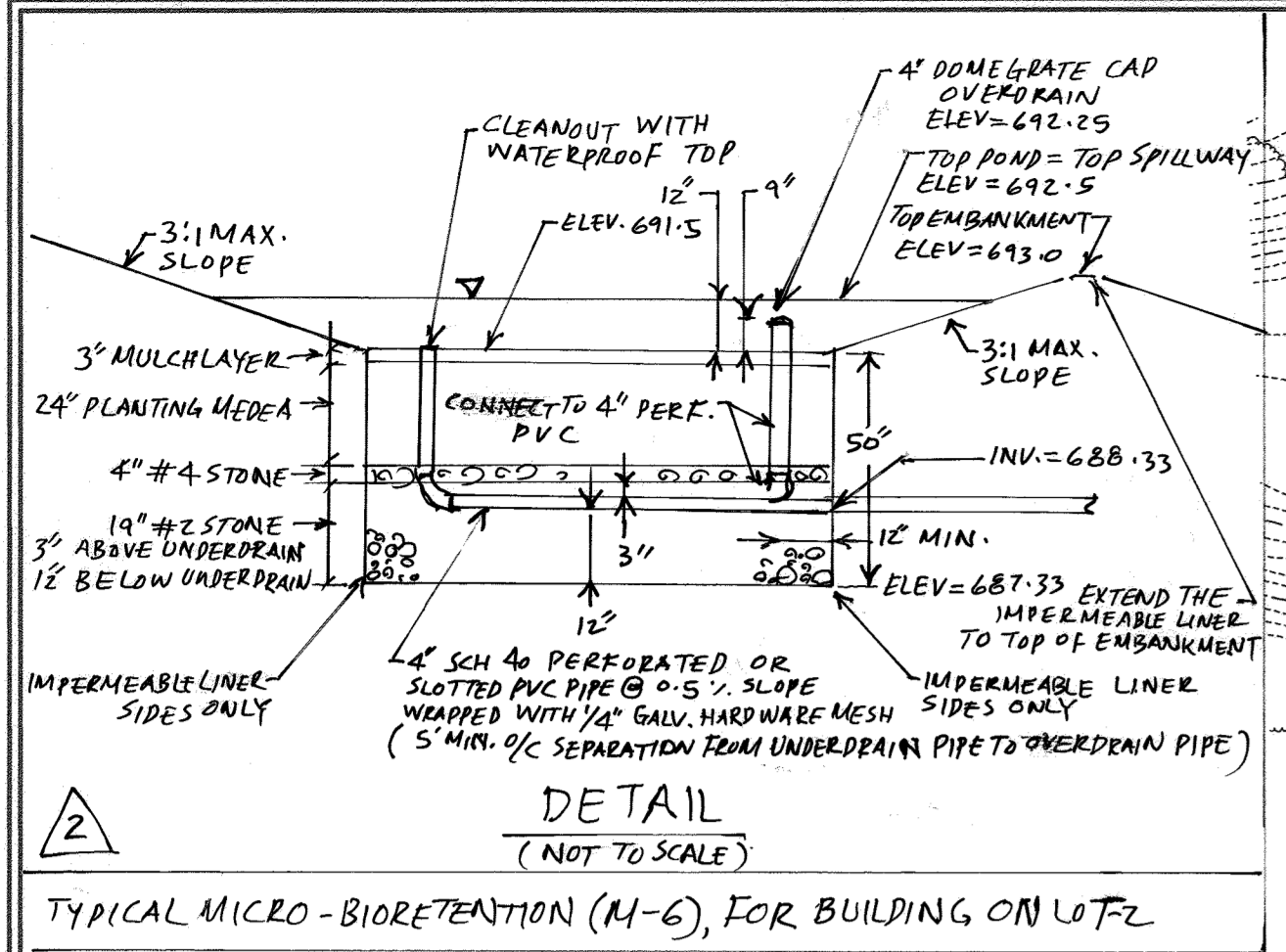
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE

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

CRITERIA

- GENERAL USE
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUNDED ON TABLE B.3.
 - ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.
 - THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 - FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 1 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
- TURFGRASS MIXTURES
 - FOR TURFGRASS MIXTURES MAY BE DESIRED IN LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - BE SELECTED ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - INTENSIVE MANAGEMENT, IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CERTIFIED KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE. FOR USE IN FULL SUN TURF AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE IN FULL SUN TO PARTIAL SHAD. RECOMMENDED CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
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STORMWATER MANAGEMENT SUMMARY (LOT-Z ONLY)

LOT SWM PRACTICE CODE	DA	ESW REQUIRED	ESV PROVIDED
2	MBR-4	M-C 15,463.5 E± 649 C.E±	1,233 C.F.

* SWM has been treated using ESW practices to the maximum extent possible. All impervious areas have been treated.

STORM WATER MANAGEMENT BORING DATA

STORMWATER MANAGEMENT PRACTICE	PERCOLATION TEST #	DEPTH
RAIN GARDEN RG 7A	9J	10' DEEP, HARD BOTTOM
RAIN GARDEN RG 7B	9H	11' DEEP, HARD BOTTOM
RAIN GARDEN RG 7C	9F	11' DEEP, NO ROCK OR GROUND WATER
RAIN GARDEN RG 8A	12E	11' DEEP, NO ROCK OR GROUND WATER
RAIN GARDEN RG 8B	103	10' DEEP, NO ROCK OR GROUND WATER
RAIN GARDEN RG 8C	8E	7.5' DEEP, NO ROCK OR GROUND WATER
SAND FILTER	6E	7' DEEP, NO ROCK OR GROUND WATER
SAND FILTER	5G	8' DEEP, HARD BOTTOM
SAND FILTER	105	10.5' DEEP, NO ROCK OR GROUND WATER
SAND FILTER	107	11' DEEP, NO ROCK OR GROUND WATER
SAND FILTER	5H	13' DEEP, NO ROCK OR GROUND WATER
RAIN GARDEN RG 1A MBR-4	141	18' DEEP, HARD BOTTOM
RAIN GARDEN RG 1B MBR-4	11F	14' DEEP, NO ROCK OR GROUND WATER

BASED ON A TYPICAL MICRO-BIORETENTION DETAIL, THE DEPTH OF THE SYSTEM IS 4'. THEREFORE IT IS DESIRABLE TO CHECK TO A DEPTH OF 8' FOR ROCK AND/OR GROUNDWATER. THE SHALLOWEST "HARD BOTTOM" IS TEST 5J WHICH REVEALED A "HARD BOTTOM" AT 10'. THIS IS SUFFICIENTLY BELOW THE 4' BUFFER BETWEEN ROCK AND/OR GROUNDWATER AND THE BOTTOM OF THE RAIN GARDEN. IN CONSIDERATION OF THESE TEST RESULTS IT IS OUR PROFESSIONAL OPINION THAT THE RAIN GARDEN AND SAND FILTER WILL FUNCTION EFFECTIVELY AS DESIGNED.

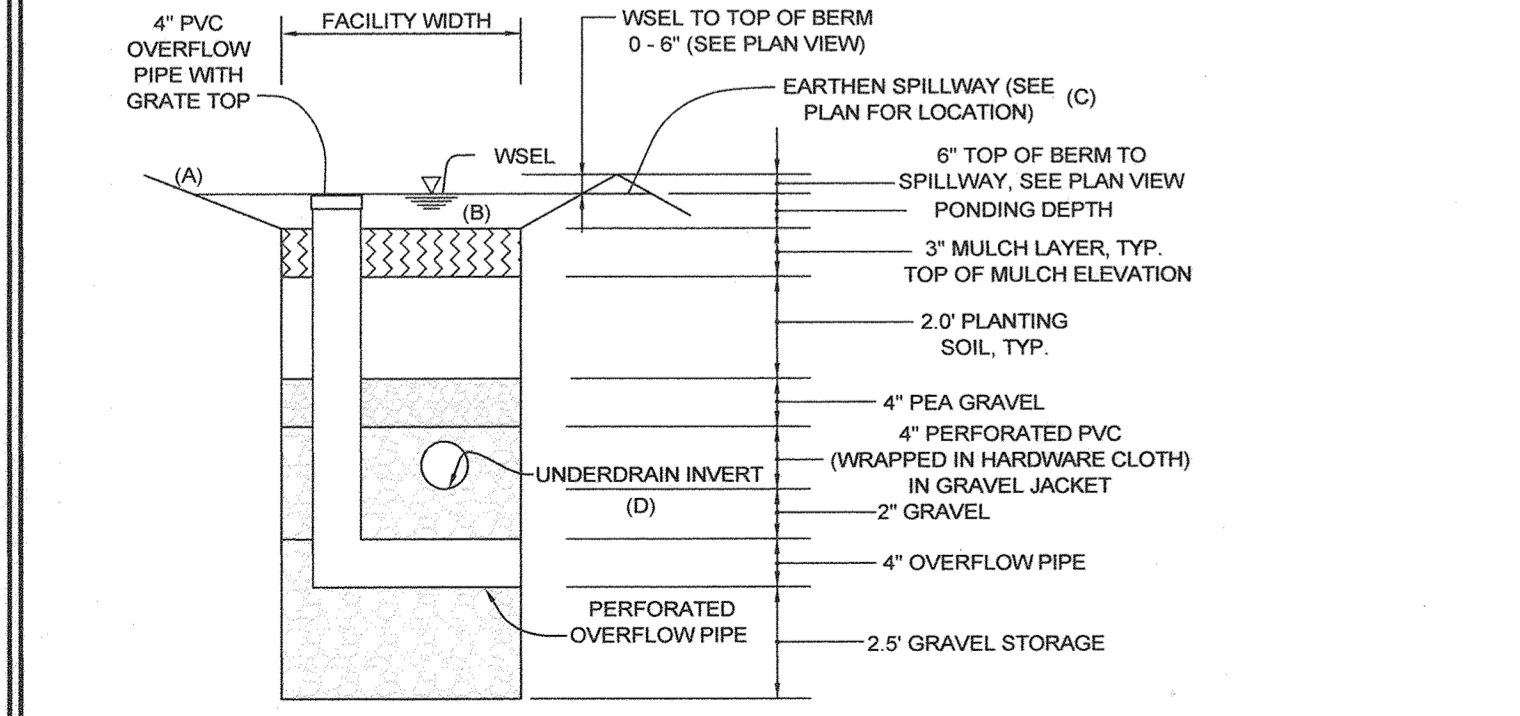
MICRO-BIORETENTION FACILITY PLANT LIST

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
2	ILEX GLABRA	INK BERRY	2'-3' HT.
6	LOBELEA CARDINALIS	CARDINAL FLOWER LOBELIA	1 GAL. CONTAINER
4	DRYOPTERIS SP.	WOOD FERN	1 GAL. CONTAINER
3	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER

MICRO-BIORETENTION ELEVATIONS

MICRO-BIORETENTION	LOCATION	A	B	C	D	OUT-FALL
1A	LOT 2A	704.0	700.0	704.0	690.4	690.0
1B	LOT 2A	694.0	690.0	694.0	680.4	680.0
1C	LOT 2A	694.0	690.0	694.0	680.4	680.0
1D	LOT 2A	700.0	699.0	700.0	695.4	695.0
6A	LOT 4	705.0	705.0	705.0	703.4	703.0
6B	LOT 4	698.0	697.0	698.0	695.4	695.0
6C	LOT 4	694.0	693.0	694.0	691.4	691.0

FINAL ELEVATIONS WILL BE PROVIDED WITH ASSOCIATED BUILDING PERMIT PLANS. MICRO-BIORETENTION FACILITIES WITHIN 100' OF WELL BOXES MUST HAVE AN IMPERMEABLE LINER. FINANCIAL SURETY FOR THE REQUIRED MICRO-BIORETENTION FACILITIES IN THE AMOUNT OF \$6,600 EACH WILL BE POSTED AS A PART OF THE DEVELOPER'S AGREEMENT.



BIORETENTION FACILITY TYPICAL SECTION
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
 Chief, Division of Land Development
 Chief, Bureau of Highways
 DATE: 1.23.20
 DATE: 12/30/2019



LEGEND

MICRO-BIORETENTION FACILITY	○	PROPERTY LINE	---
SOILS	■	EXISTING CONTOUR	---○---
FLOODPLAIN CROSS-SECTION	②	PROPOSED CONTOUR	---○---
DRAINAGE DIVIDE	---	EXISTING TREELINE	---
PUBLIC SITE DISTANCE EASEMENT	---	PROPOSED TREELINE	---
100 YR FLOOD PLAIN	---	EX. FENCE	---
STEEP SLOPES	---	EX. UTILITY POLE	---
MODERATE SLOPES	---	WELL AREA	---
STREET TREES	○	SEPTIC AREA	---
		PROP. 38' PRIVATE USE-IN-COMMON ACCESS & DRAINAGE EASEMENT FOR LOTS 1, 3 & 4	---
		FOREST RETENTION AREA	---
		PROP. SWM EASEMENT	---

SOIL TABLE

SYMBOL	NAME / DESCRIPTION	GROUP
B/D	BRINKLOW CHANNERY LOAM, 15 TO 25 PERCENT SLOPES	B
B/F	BRINKLOW-BLOCKTOWN CHANNERY LOAMS, 25 TO 65 PERCENT SLOPES	B
Cc	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	B
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B
MfF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B
OcB	OCCOQUAN LOAM, 3 TO 8 PERCENT SLOPES	B
OcC	OCCOQUAN LOAM, 8 TO 15 PERCENT SLOPES	B

DRAINAGE AREA TABULATION

NO.	AREA	RCN	% IMP.	SOIL	ZONE
A	0.78 AC	68	20%	B	RC-DED

SWALE

SWALE	A
Q1(CFS)	0.48
V1(FPS)	2.34
d	0.09'
S(%)	8.0
n	0.030
Q10	2.14
V10	4.21
d	0.21'

PROFESSIONAL CERTIFICATION
 I hereby certify that the red line markups shown hereon were prepared or approved by me, and that I am a duly licensed Professional Land Surveyor under the laws of the State of Maryland, License # 11049, Expires 2/10/23.
 M. Najib Roshan
 DATE: 10/3/22
 (FOR LOT 2 ONLY)

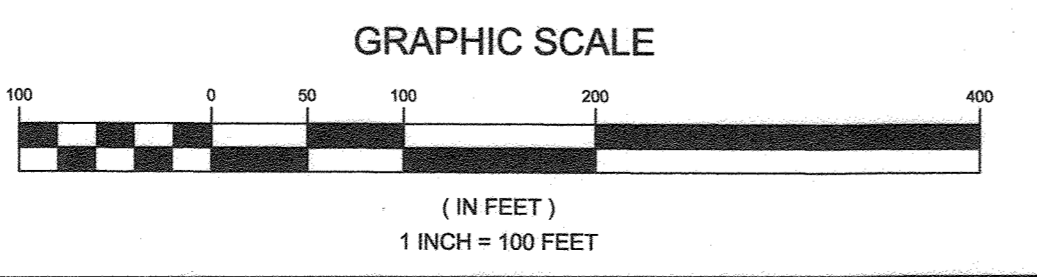
AT THE TIME OF BUILDING PERMIT SUBMISSION, IF PROPOSED BIORETENTION FACILITIES FOR EACH LOT DO NOT MATCH THOSE SHOWN ON THIS PLAN, THEN A STANDARD PLAN REVISION TO THIS PLAN WILL BE REQUIRED

OWNER/DEVELOPER
 DORSEY CONTRACTORS, INC.
 MR. PHILLIP H. DORSEY, PRESIDENT
 13090 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

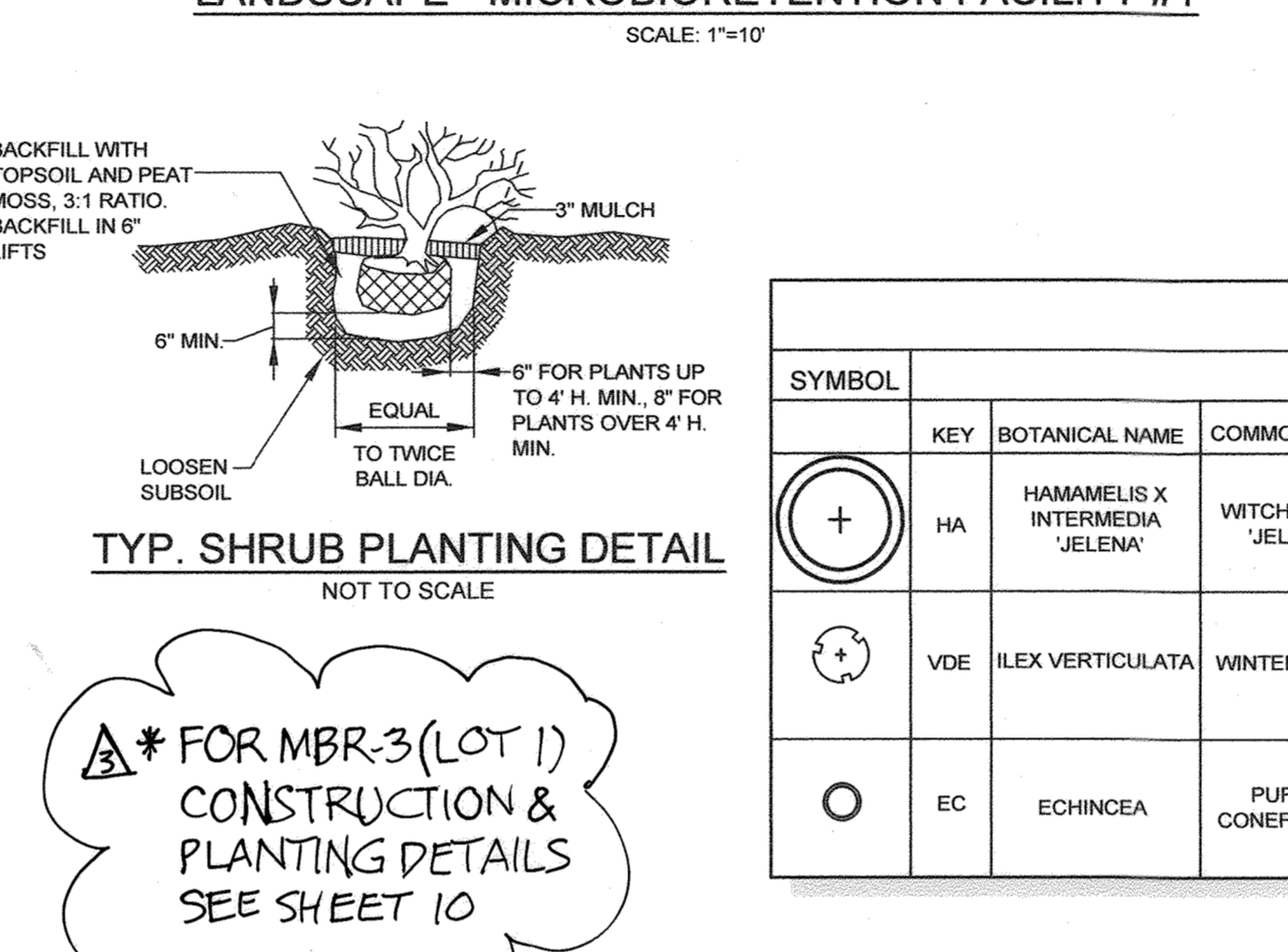
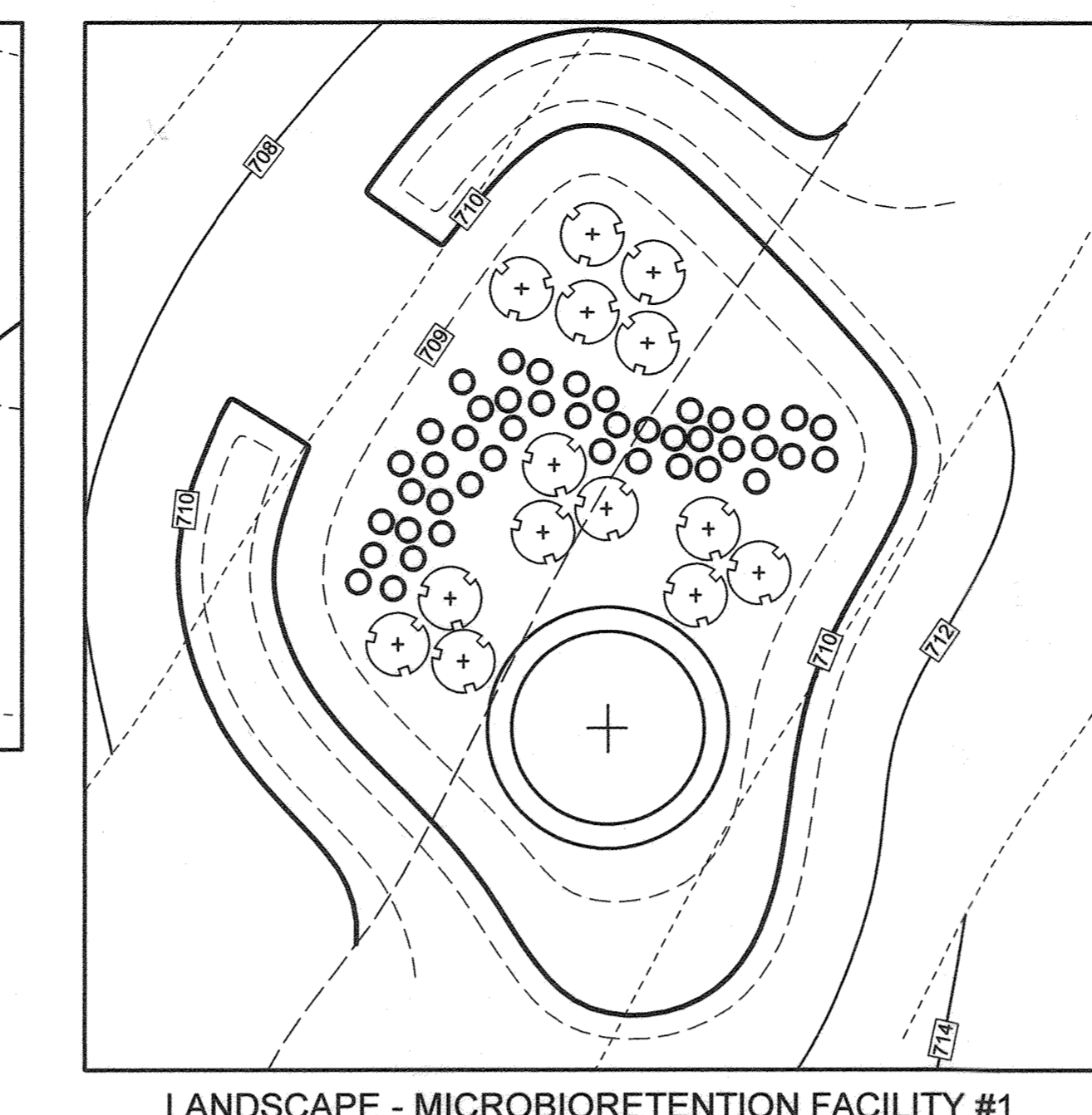
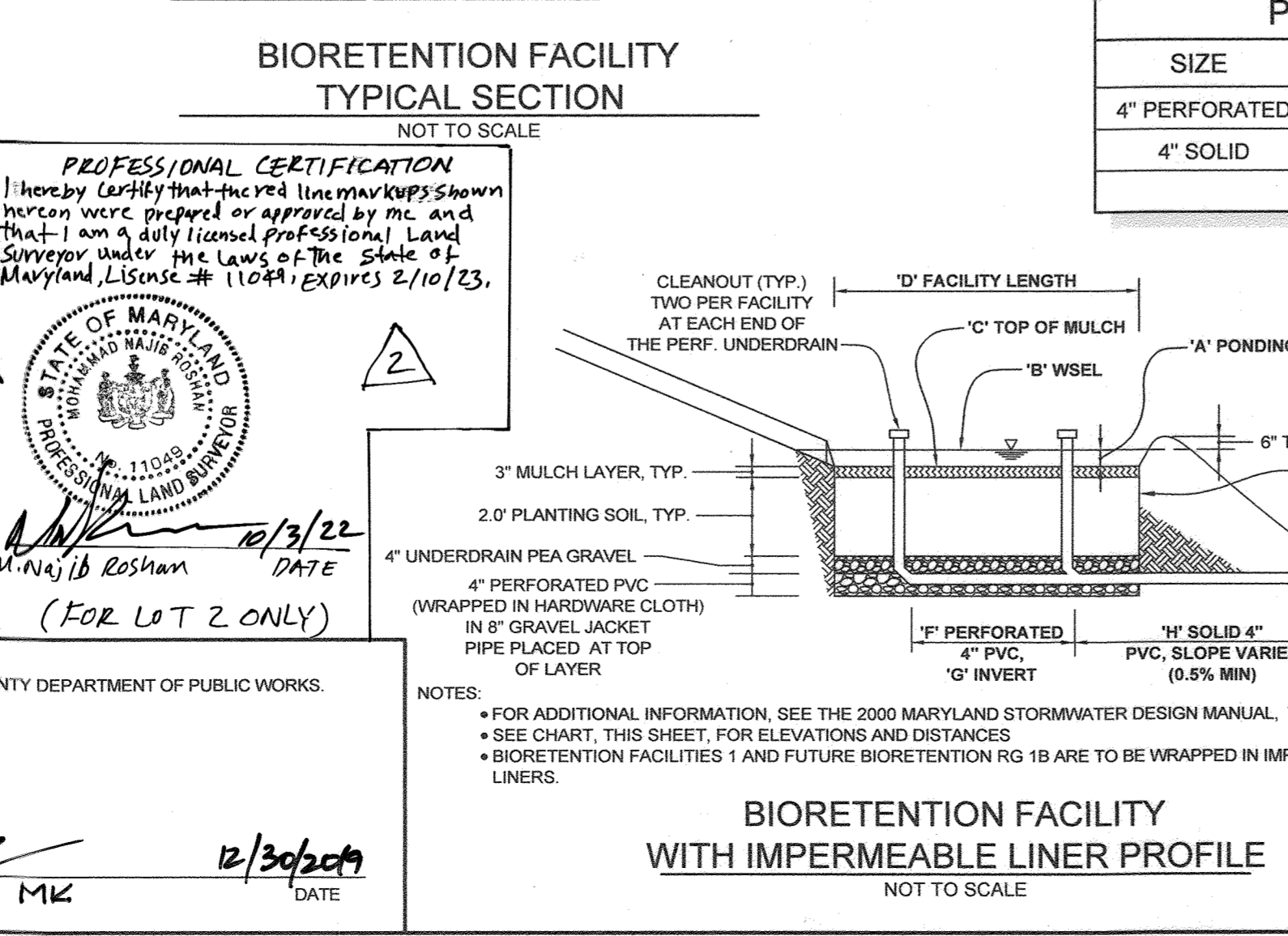
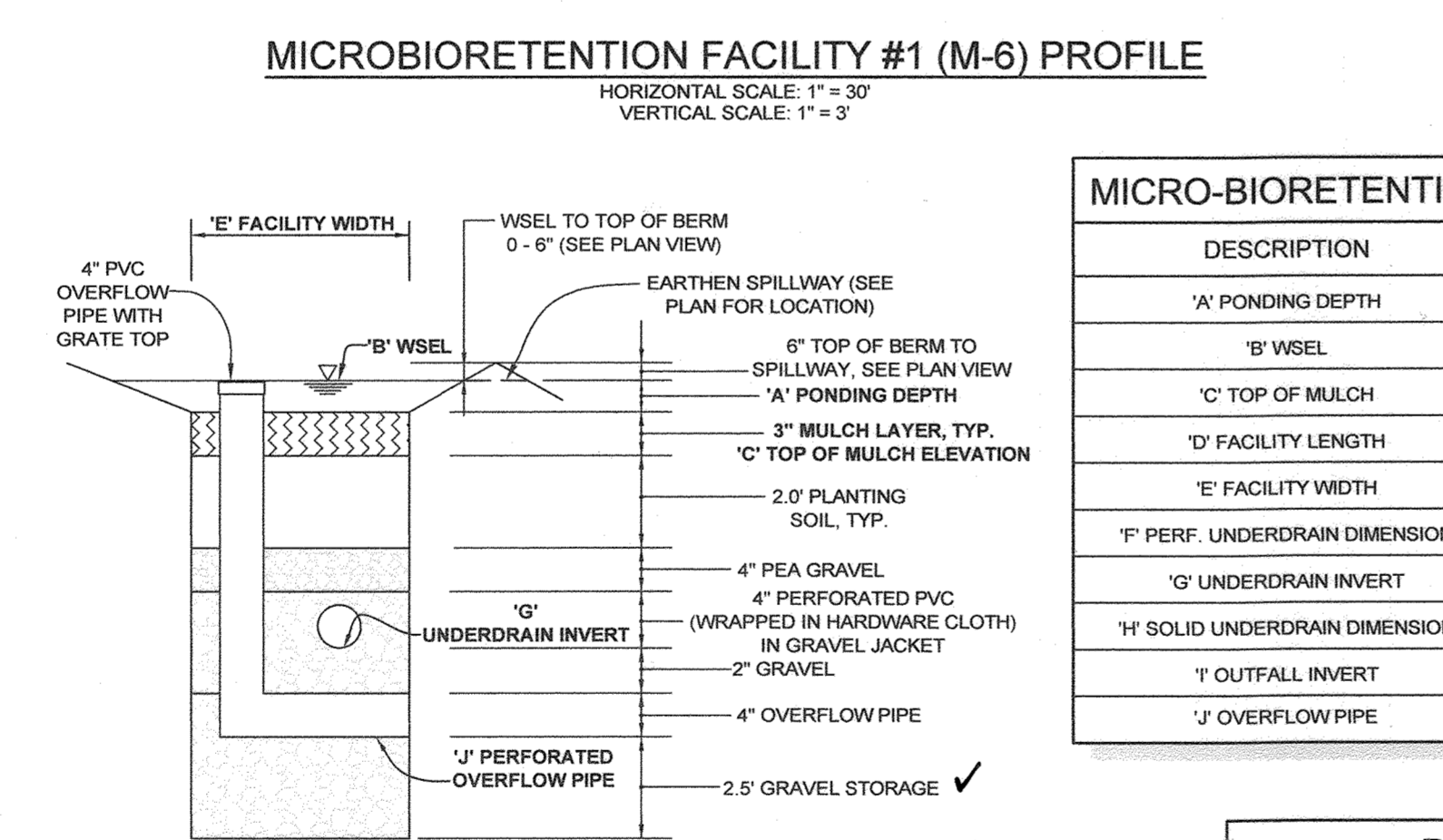
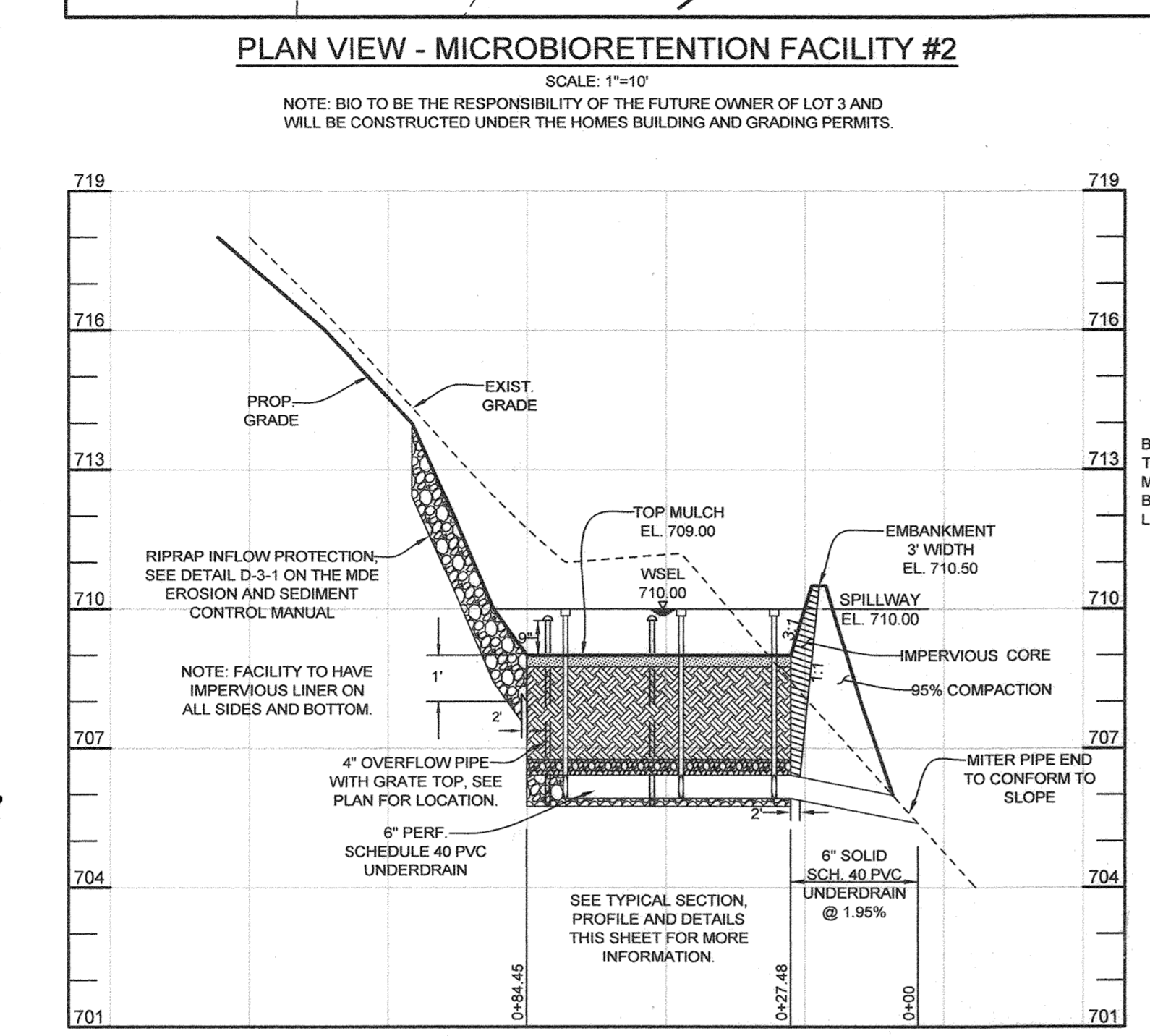
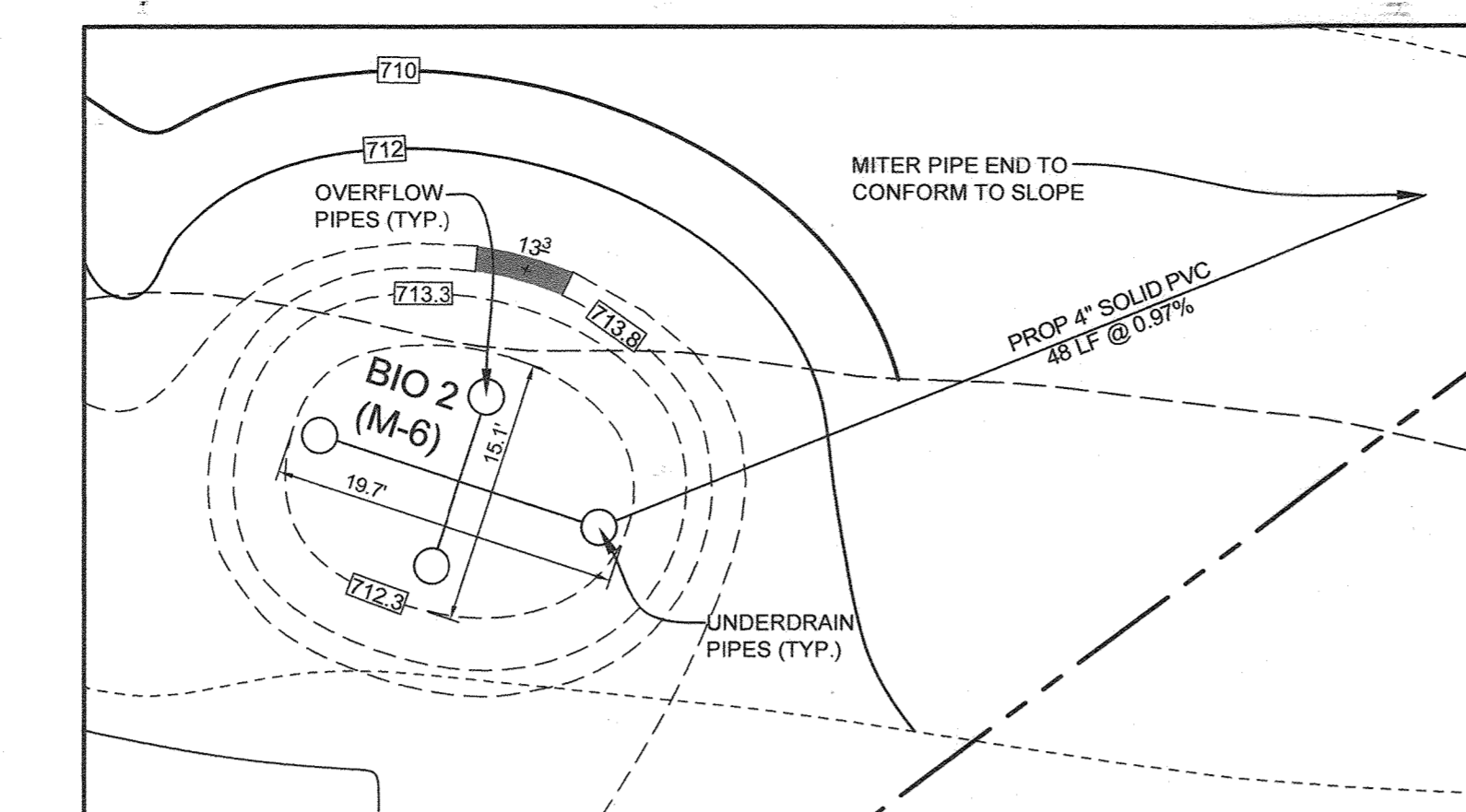
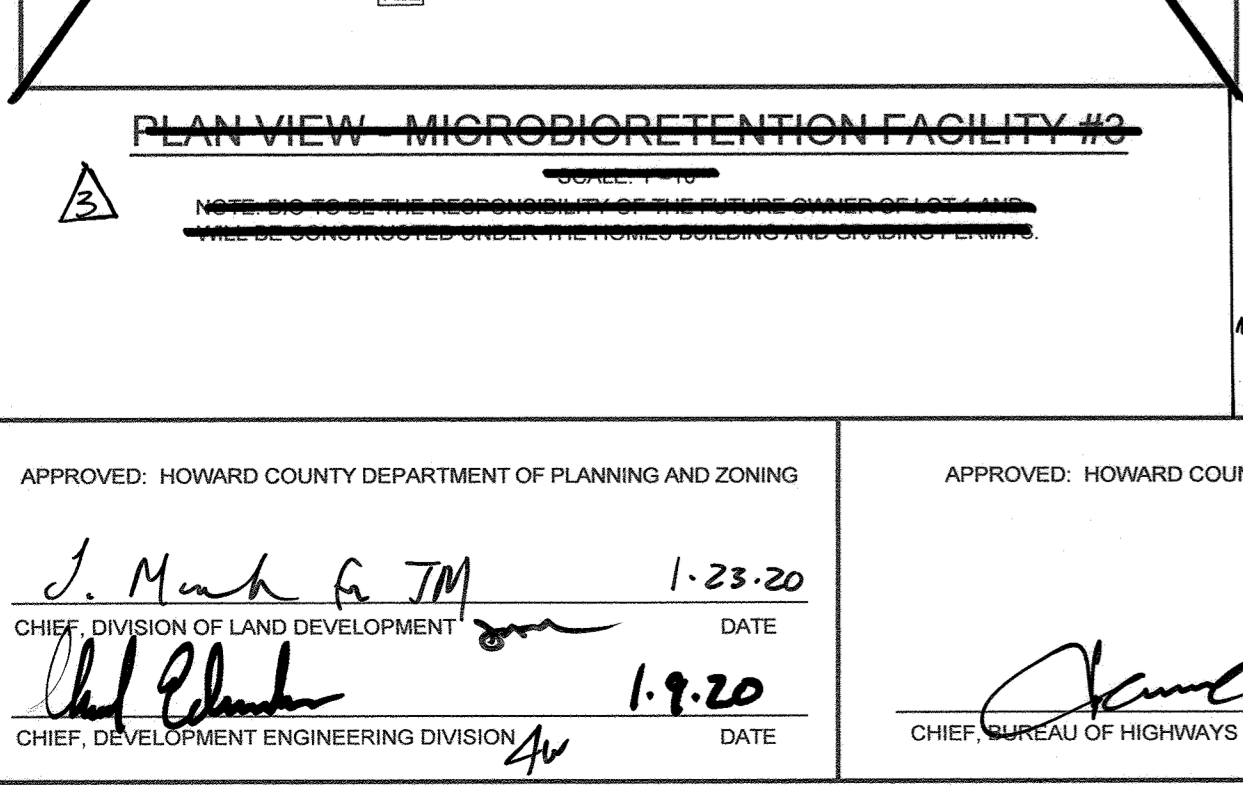
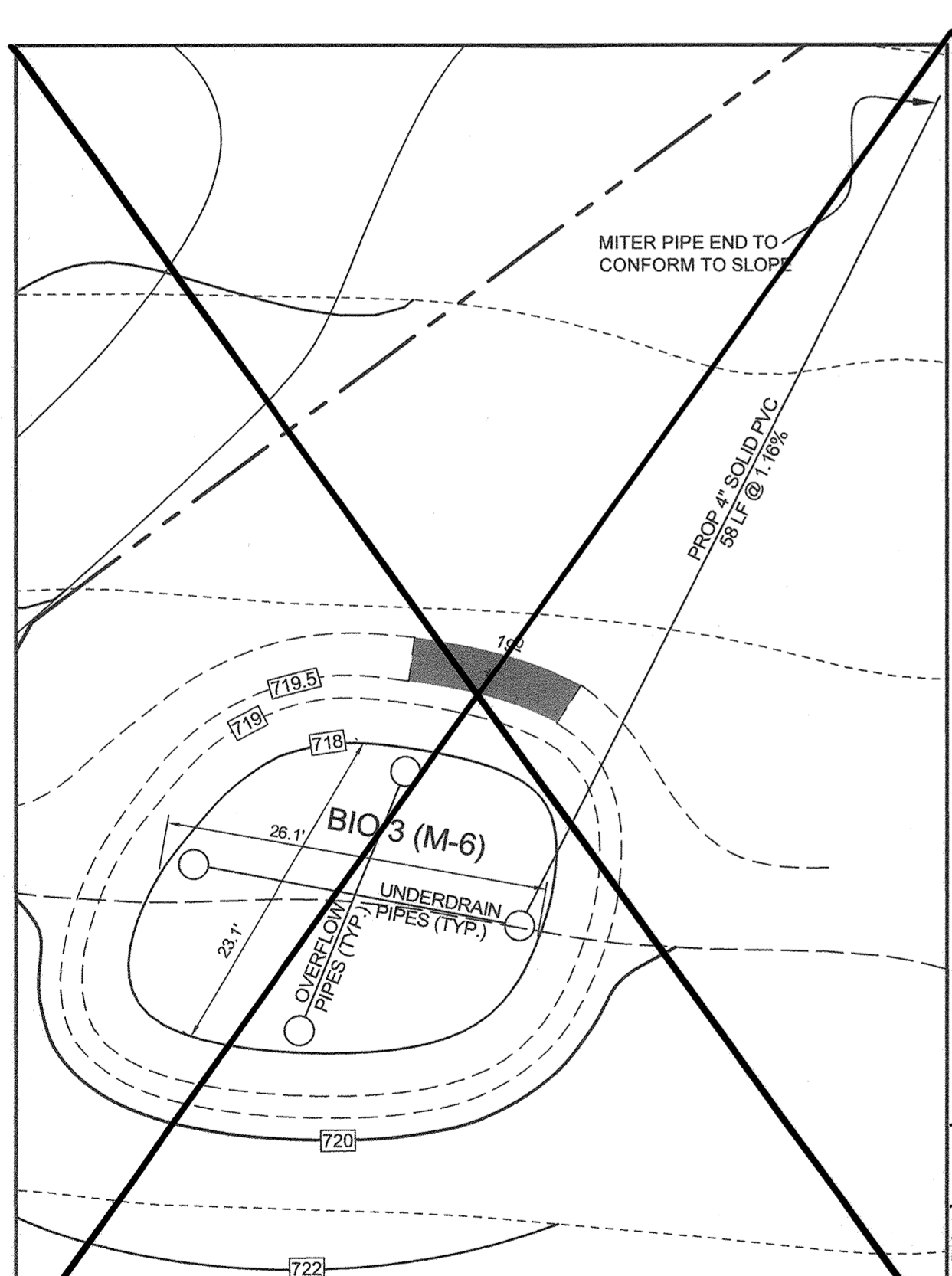
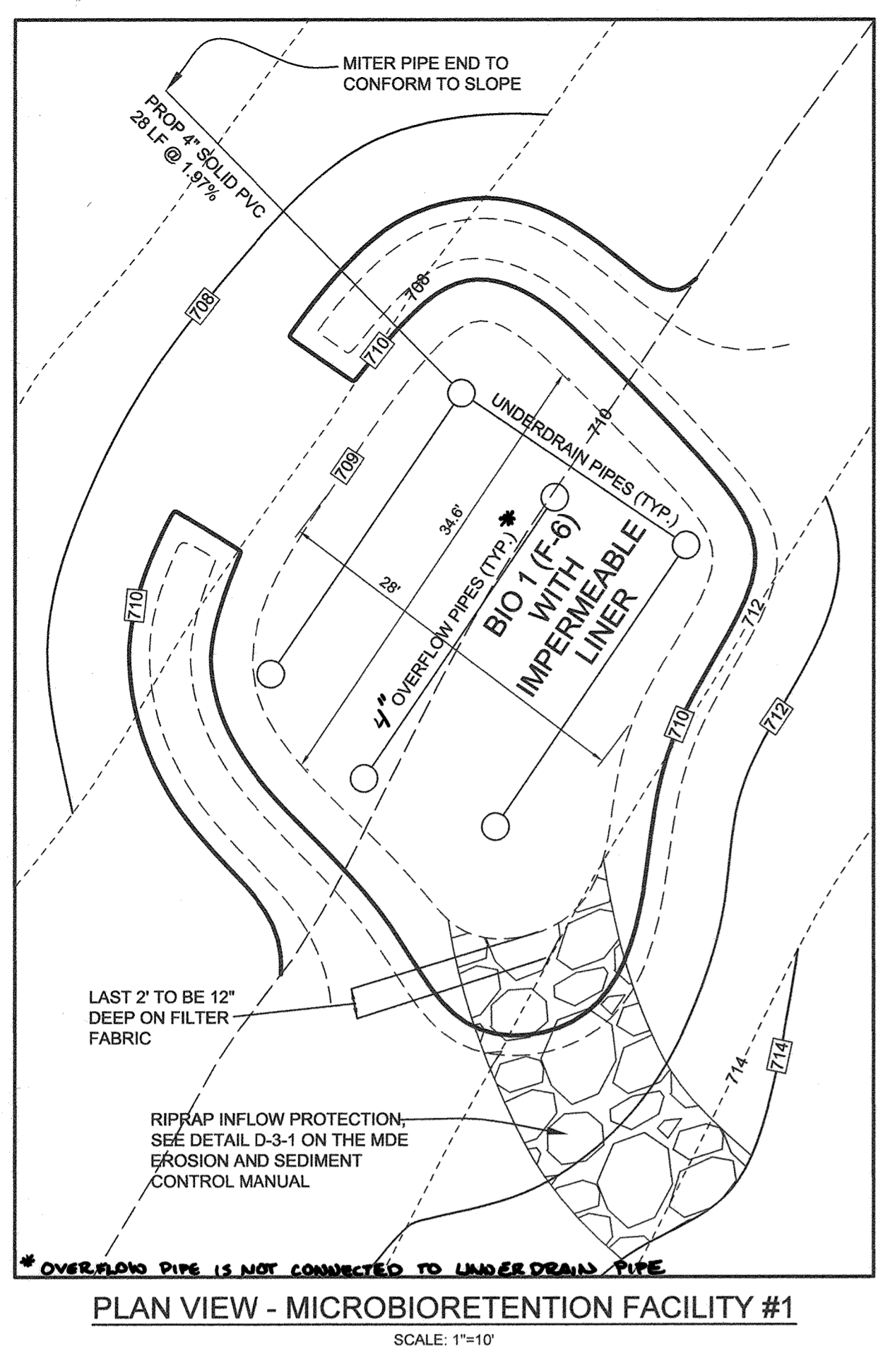
REVISED DRAINAGE AREA MAP & STORMWATER MANAGEMENT DATA HAY MEADOW OVERLOOK
 LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C
 WATERSVILLE ROAD
 TAX MAP 2 GRID 15.21 4TH ELECTION DISTRICT
 PARCEL 18 HOWARD COUNTY, MARYLAND

SILL ENGINEERING GROUP, LLC
 11130 Dovesdale, Suite 200
 Marriottsville, Maryland 21104
 Phone: 443.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development
 DESIGN BY: PS
 DRAWN BY: NM
 CHECKED BY: PS
 SCALE: 1"=100'
 DATE: JUNE 20, 2019
 PROJECT #: 17-067
 SHEET #: 8 of 10

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. 32205, EXPIRATION DATE: JUNE 20, 2022

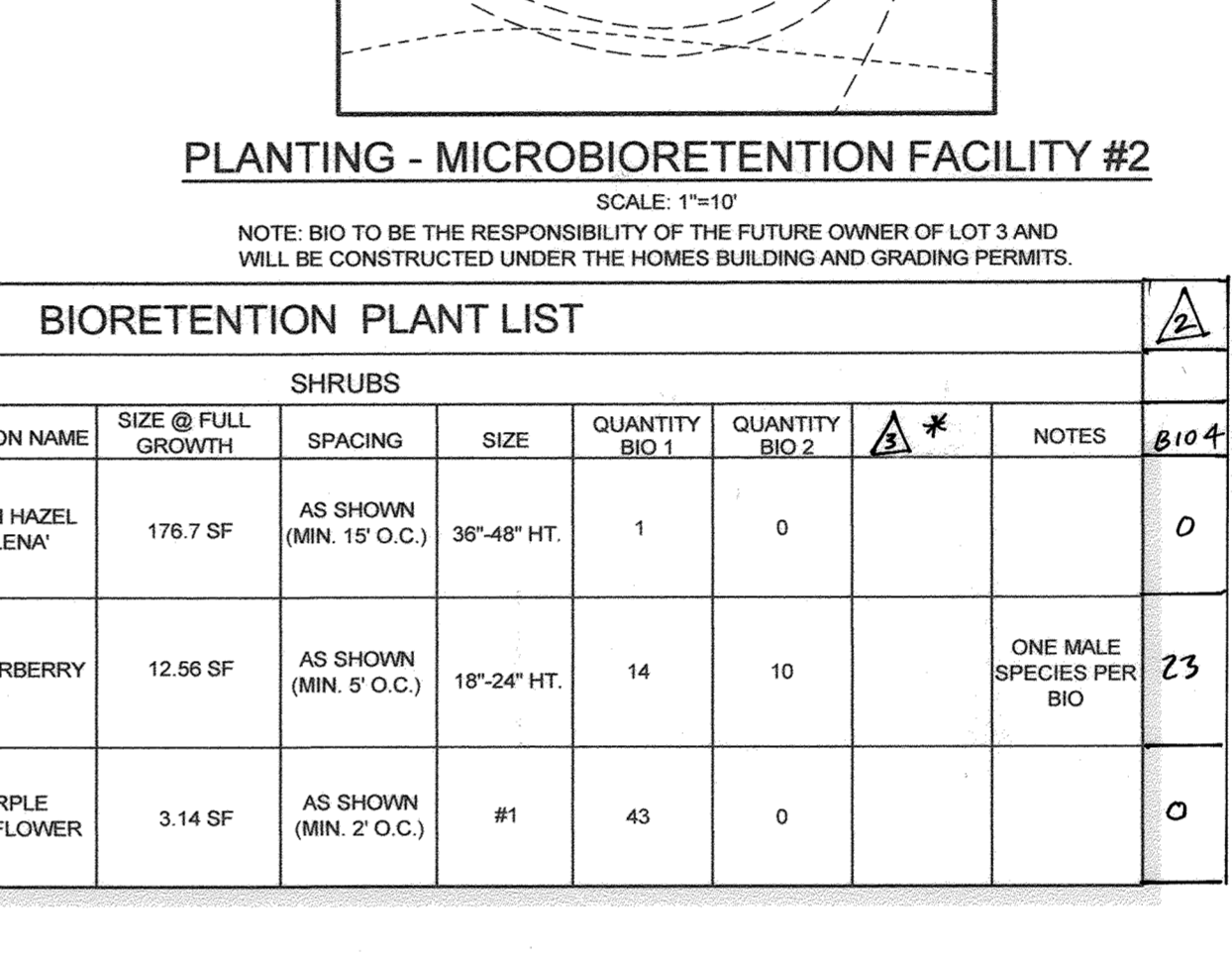
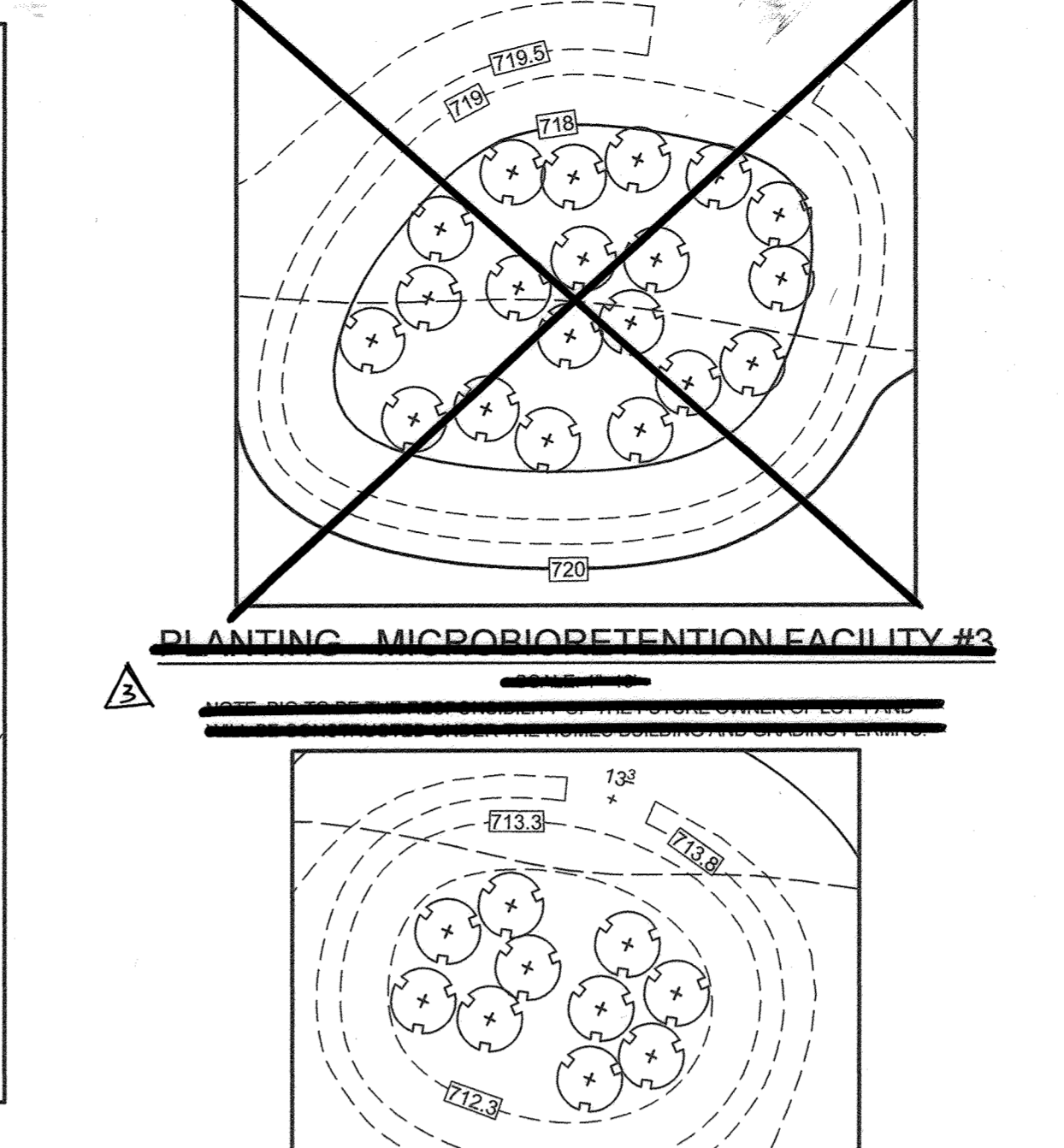


PLAN VIEW
SCALE: 1"=100'



DESCRIPTION	BIO 1	BIO 2	BIO 4
'A' PONDING DEPTH	1.00'	1.00'	1.00'
'B' WSEL	710.00'	713.30'	672.5'
'C' TOP OF MULCH	709.00'	712.30'	671.5'
'D' FACILITY LENGTH	34.6'	19.7'	46.0'
'E' FACILITY WIDTH	28.0'	15.1'	19.5'
'F' PERF. UNDERDRAIN DIMENSION	73.63'	18.57'	64.0'
'G' UNDERDRAIN INVERT	706.09'	709.22'	688.33'
'H' SOLID UNDERDRAIN DIMENSION	27.48'	46.81'	75.8'
'I' OUTFALL INVERT	705.55'	708.75'	675.2'
'J' OVERFLOW PIPE	705.75'	708.72'	688.33'

SIZE	TYPE	LENGTH
4" PERFORATED	SCH 40 PVC	99 LF
4" SOLID	SCH 40 PVC	28 LF



SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE @ FULL GROWTH	SPACING	SIZE	QUANTITY BIO 1	QUANTITY BIO 2	NOTES	BIO 4
+	HA	HAMMELIS X INTERMEDIA 'JELENA'	WITCH HAZEL 'JELENA'	176.7 SF	AS SHOWN (MIN. 15' O.C.)	36"-48" HT.	1	0		0
+	VDE	ILEX VERTICULATA	WINTERBERRY	12.56 SF	AS SHOWN (MIN. 5' O.C.)	18"-24" HT.	14	10	ONE MALE SPECIES PER BIO	23
○	EC	ECHINCEA	PURPLE CONEFLOWER	3.14 SF	AS SHOWN (MIN. 2' O.C.)	#1	43	0		0

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)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM, NO PINE OR WOOD CHIPS
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")	
GEOTEXTILE	N/A	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" 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
IMPERMEABLE LINER (IF REQUIRED)	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 LB, ELONGATION 200%) ASTM-D-262 (TEAR RESISTANCE - 150 LB/IN) ASTM-D-471 (WATER ABSORPTION: + 8 TO - 2% MASS)	30 MIL THICKNESS	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, 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 A UNIFORM MIX. 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 BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERBERIS 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:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (80%-85%) AND COMPOST (20% TO 40%) OR SANDY LOAM (50%), COARSE SAND (50%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST 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 THE SITE STOCKPILED TOPSOIL, IF TOPSOIL IS IMPORTED, 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 ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE 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.

ROTTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTTILL 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.2.3.

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 IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (8 TO 12 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 1/8TH 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 STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED 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 EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS THE PURPOSE OF THE BIORETENTION FACILITY. ONLY FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F758, TYPE PS28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G. PVC OR HDPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 1/2" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH 1/4" 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 PROVIDE A MEANS TO SORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (NO. 8 TO 9" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24"

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

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

FOREST PROTECTION NOTES

PRE-CONSTRUCTION ACTIVITIES

1. FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS
2. BEFORE CONSTRUCTION BEGINS
3. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
4. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

CONSTRUCTION PHASE

1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
3. IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

POST-CONSTRUCTION ACTIVITIES

1. AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
3. DO NOT REMOVE SIGNS.

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

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF BIODEGRADATION 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 LISTED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE 4.1 AND 2.
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, TRIM EXCESSIVE TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. 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.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

OWNER/DEVELOPER
DORSEY CONTRACTORS, INC.
MR. PHILLIP H. DORSEY, PRESIDENT
13050 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21784

REVISED BIORETENTION NOTES AND DETAILS HAY MEADOW OVERLOOK

LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C
WATERSVILLE ROAD

PARCEL 18
4TH MAP 2 GRID 15.21
14TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DESIGN BY: PS
DRAWN BY: NM
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JUNE 20, 2019
PROJECT #: 17-067
SHEET #: 7 OF 10

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2020

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 1-23-20
DATE: 1-9-20

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 12/30/2019

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 12/30/2019

FOR REVISION ONLY

NO.	DESCRIPTION	DATE
1	REUSE HOUSE TYPE, GRADING AND SWM ON LOT 1	3-6-24
2	UPDATE HOUSE TYPE GRADING, SWM	6/5/24
1	NEW SHEET / REVISED SWM NOTES AND DETAILS	7/24/18

SILL ENGINEERING GROUP, LLC
11130 Dovedale, Suite 200
Marrattsville, Maryland 21104
Phone: 413.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development



PROFESSIONAL CERTIFICATION
 I hereby certify that the line markings shown herein were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License # 11049, Expires 2/1/23
 M. Najib Roshan DATE 10/3/22
 (FOR LOT 2 ONLY)

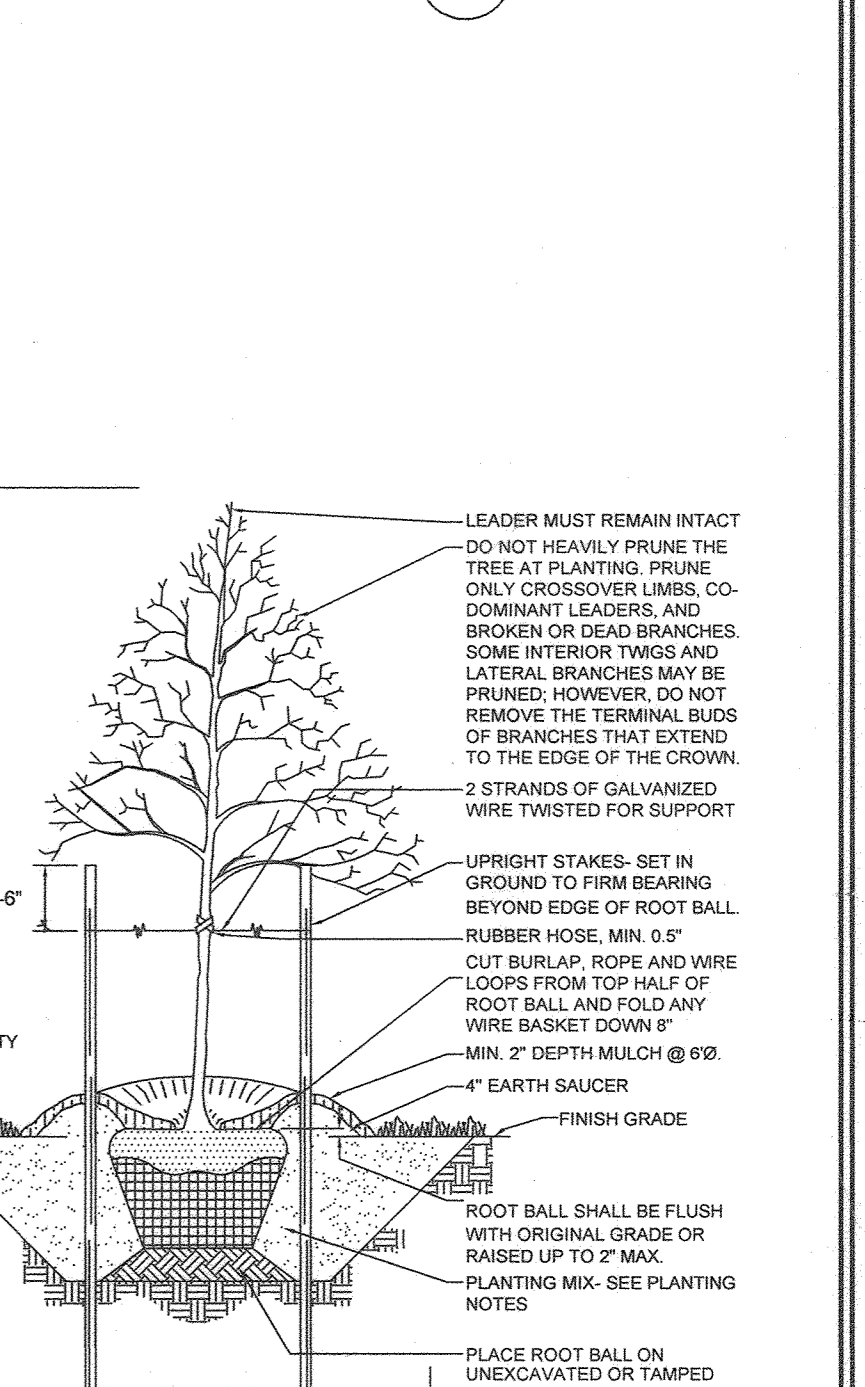
LEGEND

PROPERTY LINE	---
EXISTING CONTOUR	~
PROPOSED CONTOUR	~
EXISTING TREELINE	~
PROPOSED TREELINE	~
EX. FENCE	---
EX. UTILITY POLE	○
WELL AREA	○
SEPTIC AREA	○
PROP. 38' PRIVATE USE-IN-COMMON ACCESS & DRAINAGE EASEMENT FOR LOTS 1, 3 & 4	---
FOREST RETENTION AREA	▨
NON-CREDITED FOREST RETENTION AREA-1.17 AC.	▨
PUBLIC SITE DISTANCE EASEMENT	---
100 YR FLOOD PLAIN	---
PROP. SWM EASEMENT	---
STEEP SLOPES	▨
MODERATE SLOPES	▨
MICRO-BIORETENTION FACILITY	○
SOILS	BeC2 CID2
FLOODPLAIN CROSS-SECTION	②
FOREST CONSERVATION SIGN	○
PROPOSED SHADE TREE PER SP-08-011	○
STREET TREES PER SP-08-011	○

FOR REVISION ONLY
 STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 M. Najib Roshan
 License No. 11049

NOTES

- CONFORM TO THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF DC, MD, & VA.
- EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL.
- STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



OWNER/DEVELOPER
 DORSEY CONTRACTORS, INC.
 MR. PHILLIP H. DORSEY, PRESIDENT
 13090 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

REVISED LANDSCAPE, FOREST CONSERVATION PLAN AND DETAILS
HAY MEADOW OVERLOOK
 LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C
 WATERSVILLE ROAD
 TAX MAP 2 GRID 15.21 PARCEL 18
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SILL ENGINEERING GROUP, LLC
 11130 Dorevade, Suite 200
 Marriottsville, Maryland 21104
 Phone: 443.325.5076
 Fax: 410.696.2022
 Email: info@sillengineering.com
 Civil Engineering for Land Development

DESIGN BY: PS
 DRAWN BY: NM
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: JUNE 20, 2019
 PROJECT #: 17-087
 SHEET #: 8 of 10

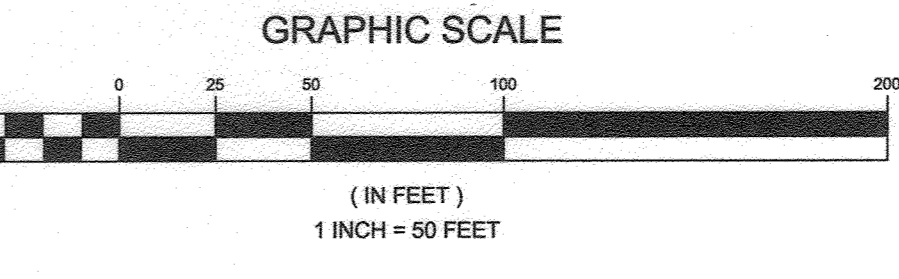
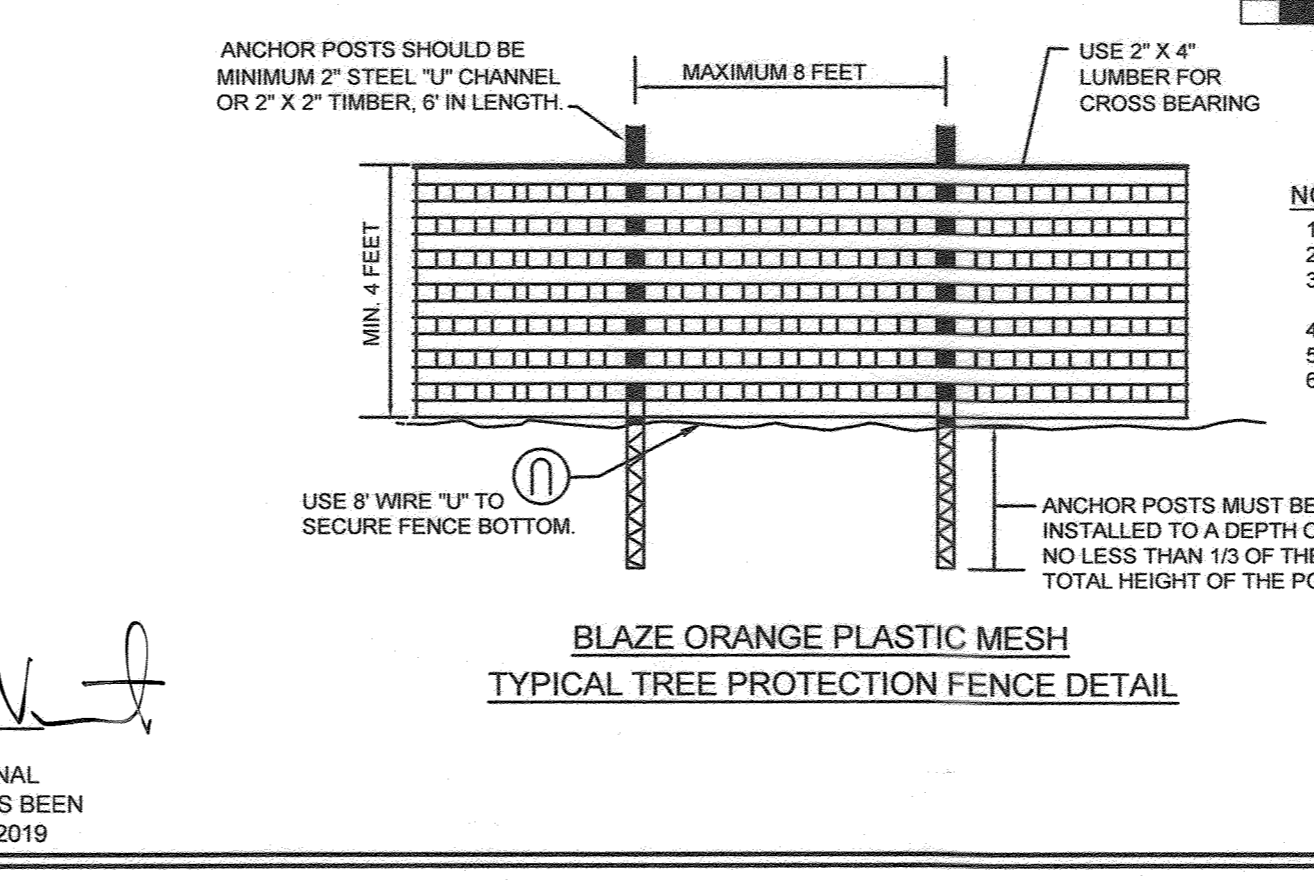
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 J. Mark for JM 1.25.20 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
 Chief Chamber 1.9.20 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 ISANNE CAREY-VERT 12/30/2019 DATE
 DNR QUALIFIED PROFESSIONAL
 THE FOREST BOUNDARY HAS BEEN RE-CERTIFIED ON APRIL 16, 2019

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 DEVELOPER: Dilly W. Wray DATE: 6/10/19

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 DEVELOPER: J. Mark for JM DATE: 1.25.20

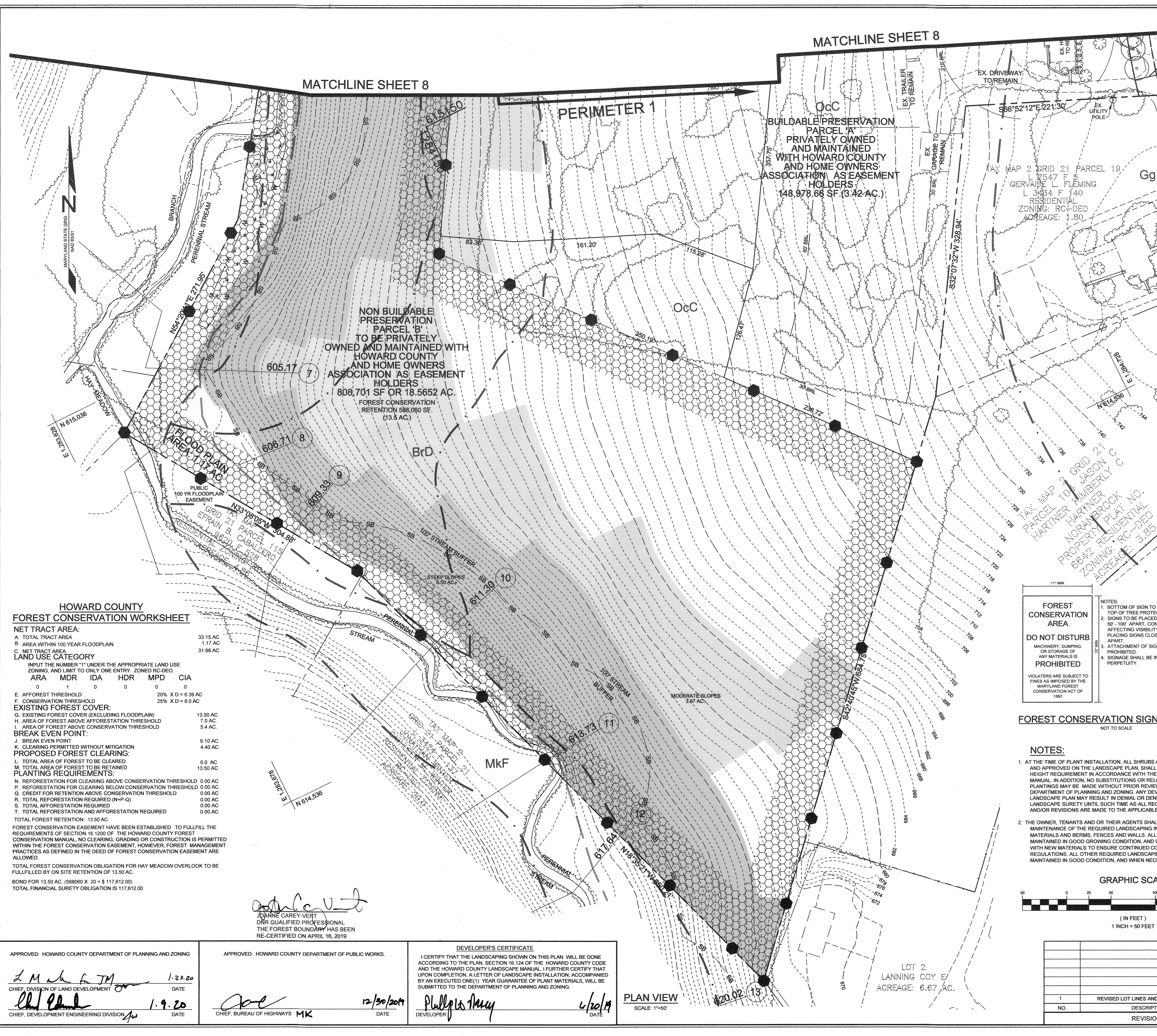
MATCHLINE SHEET 9



NOTES:

- FOREST PROTECTION DEVICE ONLY.
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- DAMAGE TO CRITICAL ROOT ZONE SHOULD BE AVOIDED.
- PROTECTION SIGNAGE SHOULD BE USED.
- DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

NO.	DESCRIPTION	DATE
1	REVISED HOUSE TYPE, GRADING AND SWM	3-6-24
2	UPDATED HOUSE TYPE, GRADING, SWM	6/5/22
1	REVISED LOT LINES AND EASEMENTS, NEW SHEET	7/24/18



MATCHLINE SHEET 8

MATCHLINE SHEET 8

LEGEND

PROPERTY LINE	EXISTING CONTOUR	PROPOSED CONTOUR	EXISTING TREELINE	PROPOSED TREELINE	EX. FENCE	EX. UTILITY POLE	WELL AREA	SEPTIC AREA	PROP. 38' PRIVATE USE-IN-COMMON ACCESS & DRAINAGE EASEMENT FOR LOTS 1, 3 & 4	FOREST RETENTION AREA	RAIN GARDEN	SOILS	FLOODPLAIN CROSS-SECTION	STREET TREES PER SP-08-011	100 YR FLOOD PLAIN	STEEP SLOPES	MODERATE SLOPES	FOREST RETENTION AREA SIGN	FOREST CONSERVATION SIGN
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SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
PERIMETER/FRONTAGE DESIGNATION	-	1 A 2 A
LANDSCAPE TYPE	-	-
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	-	776' 897'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	-	Yes* 452' Yes* 150'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)	-	No No
NUMBER OF PLANTS REQUIRED	-	324' 747'
SHADE TREES	-	1.90 06 1.60 13
EVERGREEN TREES	-	-
SHRUBS	-	-
NUMBER OF PLANTS PROVIDED	-	06 13
SHADE TREES	-	-
EVERGREEN TREES	-	-
OTHER TREES (2:1 SUBSTITUTION)	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED	-	-

LANDSCAPE SCHEDULE

QUAN	BOTANICAL NAME	SIZE	REM.
9	ACER RUBRUM 'RED SUNSET' RED SUNSET MAPLE (SHADE TREES)	2 1/2"-3" CAL.	B & B
10	QUERCUS COCCINEA SCARLET OAK		
(PUBLIC STREET TREES)			
28	AMUR MAPLE * (25'-MATURE HEIGHT) ACER GINNALA	1-1/2"-2" CAL.	B & B

* FROM BG&E SPECIFIED TREE LIST

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
WATERSVILLE RD IMPROVEMENT	834/90	28	28

SOIL TABLE

SYMBOL	NAME / DESCRIPTION	GROUP
BrD	BRINKLOW CHANNERY LOAM, 15 TO 25 PERCENT SLOPES	B
Bf	BRINKLOW-BLOCKTOWN CHANNERY LOAMS, 25 TO 65 PERCENT SLOPES	B
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C
Gg	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	B
MkF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B
OoB	OCCOOLAN LOAM, 3 TO 8 PERCENT SLOPES	B
OoC	OCCOOLAN LOAM, 8 TO 15 PERCENT SLOPES	B

DEVELOPER'S AGREEMENT

STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(a)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$8,400.00 TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE REQUIRED 28 PUBLIC STREET TREES.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$5,700.00 FOR THE REQUIRED 19 SHADE TREES.

THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT, FOR THIS SUBMISSION HAVE BEEN FULFILLED THROUGH THE CREATION OF A FOREST CONSERVATION RETENTION EASEMENT ON NON-BUILDABLE PRESERVATION PARCEL 'B' IN THE AMOUNT OF 13.50 ACRES. FINANCIAL SURETY IN THE AMOUNT OF \$117,612 TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.

FOREST CONSERVATION AREA DO NOT DISTURB

MACHINERY, DUMPING, OR STORAGE OF ANY MATERIALS IS PROHIBITED

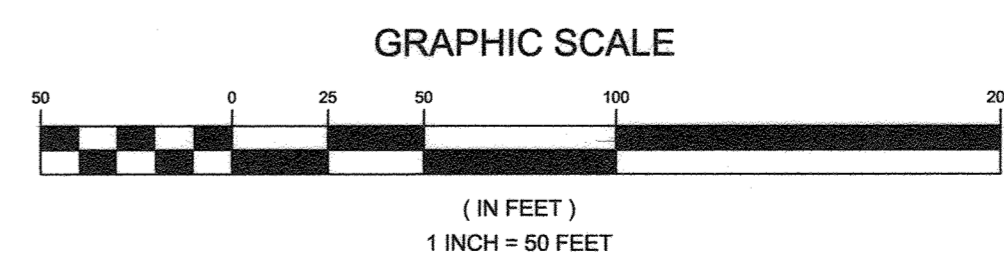
VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991

FOREST CONSERVATION SIGN DETAIL

NOT TO SCALE

NOTES:

- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIAL ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- THE OWNER, TENANTS AND OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.



REVISIONS

NO.	DESCRIPTION	DATE
1	REVISED LOT LINES AND EASEMENTS, SEE SHEET 7/24/18	7/24/18

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

NET TRACT AREA:

A. TOTAL TRACT AREA 33.15 AC

B. AREA WITHIN 100 YEAR FLOODPLAIN 1.17 AC

C. NET TRACT AREA 31.98 AC

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED RC-DEO.

ARA MDR IDA HDR MPD CIA

0 1 0 0 0 0

E. AFFOREST THRESHOLD 20% X D = 8.39 AC

F. CONSERVATION THRESHOLD 25% X D = 8.0 AC

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) 13.50 AC

H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD 7.0 AC

I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD 5.4 AC

BREAK EVEN POINT:

J. BREAK EVEN POINT 9.10 AC

K. CLEARING PERMITTED WITHOUT MITIGATION 4.40 AC

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED 0.0 AC

M. TOTAL AREA OF FOREST TO BE RETAINED 13.50 AC

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD 0.00 AC

P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD 0.00 AC

Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD 0.00 AC

R. TOTAL REFORESTATION REQUIRED (N+P-Q) 0.00 AC

S. TOTAL AFFORESTATION REQUIRED 0.00 AC

T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED 0.00 AC

TOTAL FOREST RETENTION: 13.50 AC

FOREST CONSERVATION EASEMENT HAVE BEEN ESTABLISHED TO FULLFILL THE REQUIREMENTS OF SECTION 16.1202 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL. 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.

TOTAL FOREST CONSERVATION OBLIGATION FOR HAY MEADOW OVERLOOK TO BE FULFILLED BY ON SITE RETENTION OF 13.50 AC.

BOND FOR 13.50 AC (588060 X 20 = \$ 117,612.00)

TOTAL FINANCIAL SURETY OBLIGATION IS 117,612.00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

2 M... 1-23-20

CHIEF, DIVISION OF LAND DEVELOPMENT

1-9-20

CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

JOANNE CAREY-VERT

DNR QUALIFIED PROFESSIONAL

THE FOREST BOUNDARY HAS BEEN RE-CERTIFIED ON APRIL 16, 2019

12/30/2019

CHIEF, BUREAU OF HIGHWAYS MK

DEVELOPER'S CERTIFICATE

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Phyllis Mary

6/20/19

DEVELOPER

PLAN VIEW

SCALE: 1"=50'

LOT 2 LANNING COY E/

ACREAGE: 6.67 AC.

REVISED LANDSCAPE, FOREST CONSERVATION PLAN AND DETAILS HAY MEADOW OVERLOOK

LOTS 1-4, BUILDABLE PRESERVATION PARCEL A, NON-BUILDABLE PRESERVATION PARCEL B, AND NON-BUILDABLE BULK PARCEL C

WATERSVILLE ROAD

TAX MAP 2 GRID 15.21 4TH ELECTION DISTRICT

PARCEL 18 HOWARD COUNTY, MARYLAND

DESIGN BY: PS

DRAWN BY: NM

CHECKED BY: PS

SCALE: AS SHOWN

DATE: JUNE 20, 2019

PROJECT #: 17-097

SHEET #: 9 of 10

SILL ENGINEERING GROUP, LLC

1130 Dovedale, Suite 200

Marriottsville, Maryland 21104

Phone: 443.325.5076

Fax: 410.696.2022

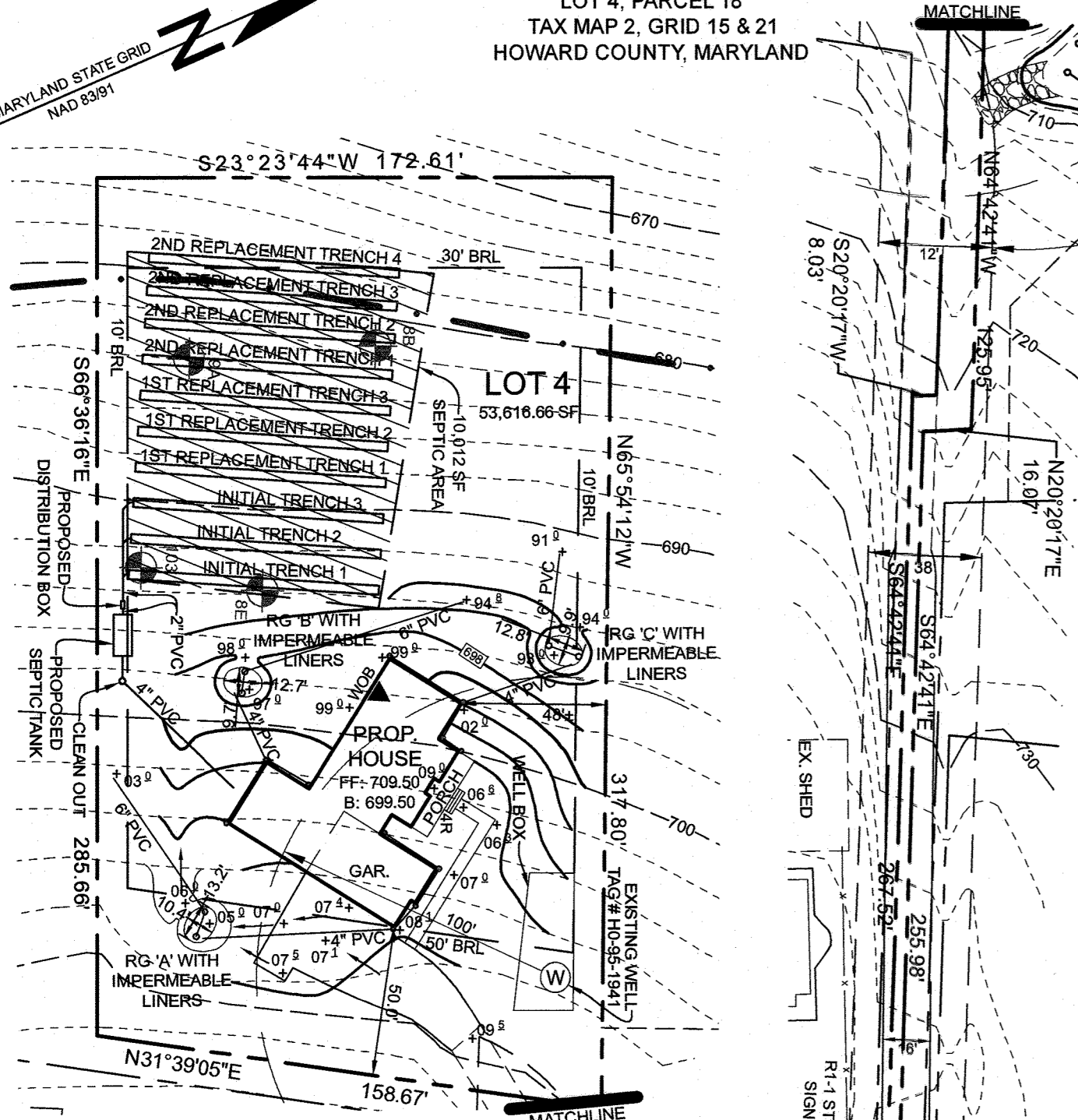
Email: info@sillengineering.com

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. 30225, EXPIRATION DATE: JUNE 20, 2020.

572 WATERVILLE ROAD

LOT 4, PARCEL 18
TAX MAP 2, GRID 15 & 21
HOWARD COUNTY, MARYLAND



OWNER/DEVELOPER

DORSEY CONTRACTORS, INC.
MR. PHILLIP H. DORSEY, PRESIDENT
8355 P COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045
410.730.1810

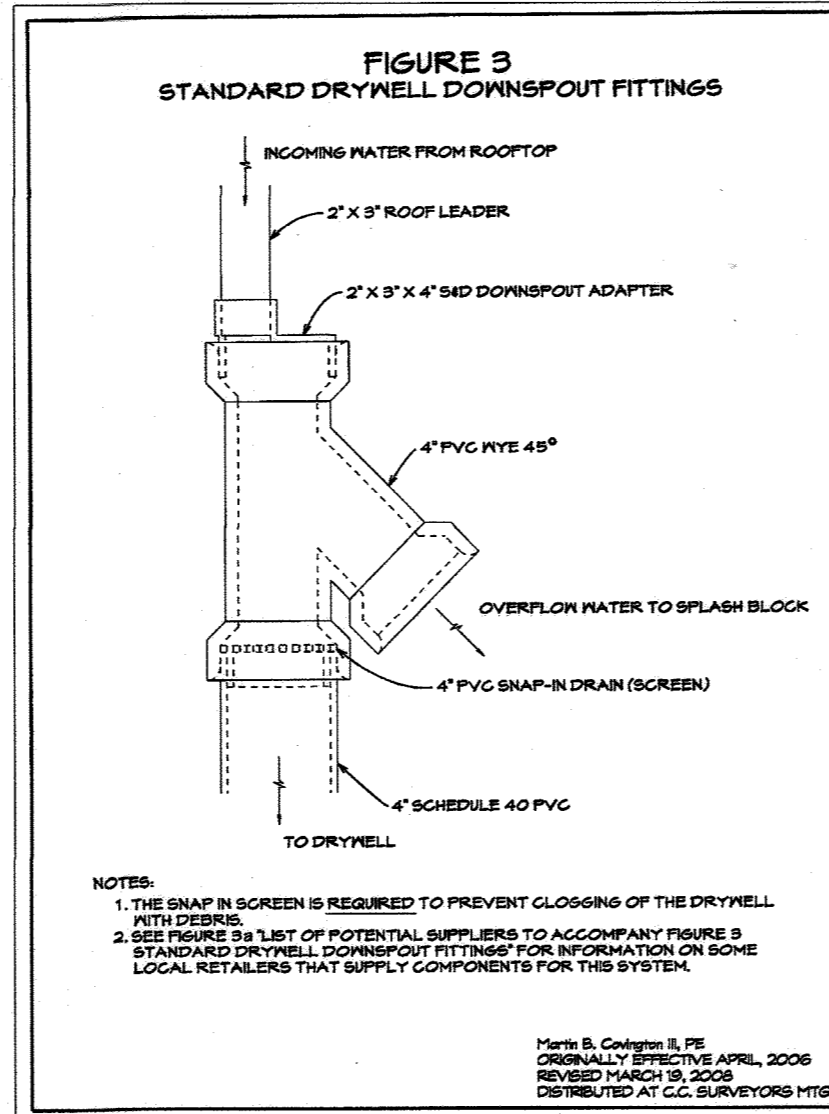
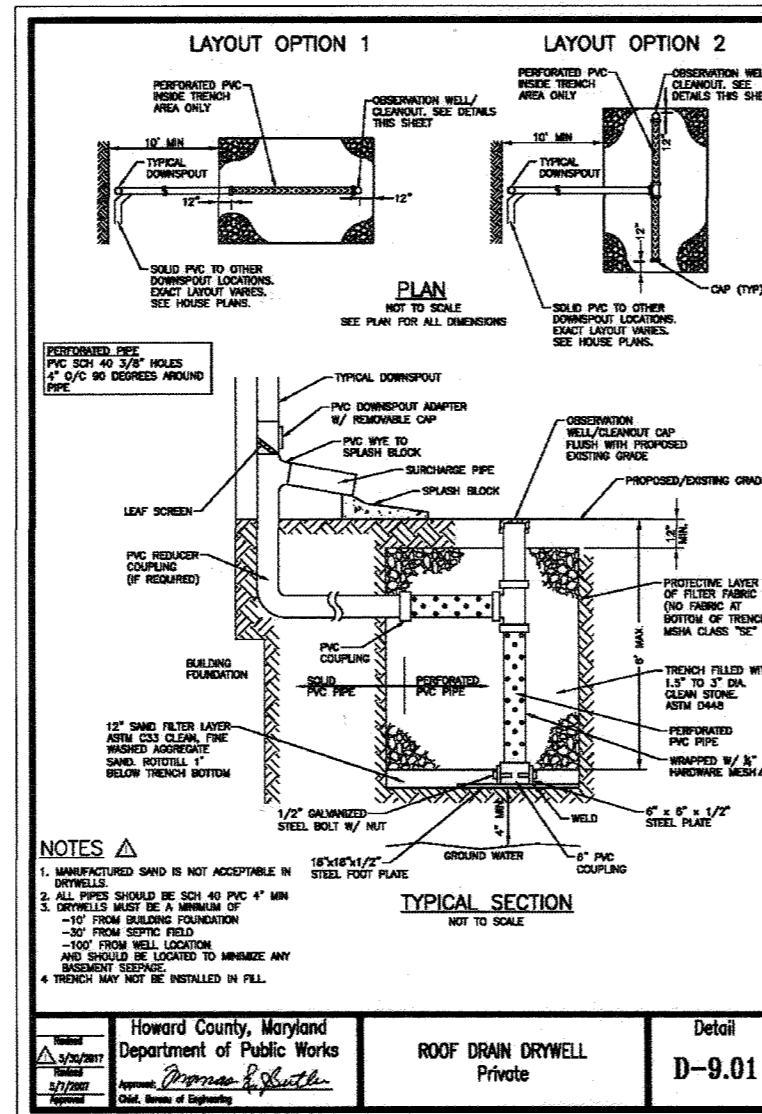
NOTE:
IMPERMEABLE LINER SHALL BE SIMILAR OR
EQUAL TO FIRESTONE #01520, 45 MIL., EPDM.

Adcock & Associates - LLC

Engineers - Surveyors - Planners

5389 Enterprise Street Suites B-C, Sykesville, Maryland 21784 Phone: 443.325.7682 Email: mike@saaland.com

DATE: 09-17-2020
SCALE: 1"=50'
FILE NO.: 18-072

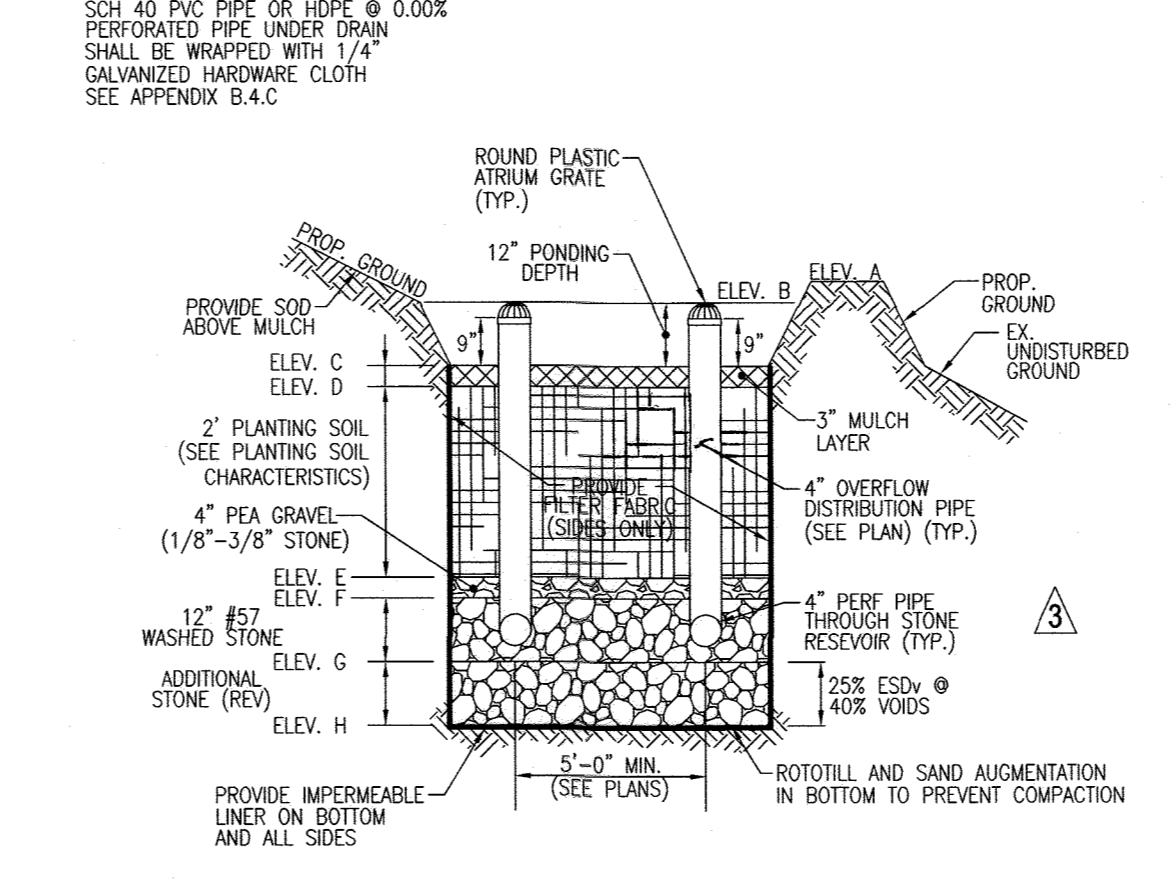
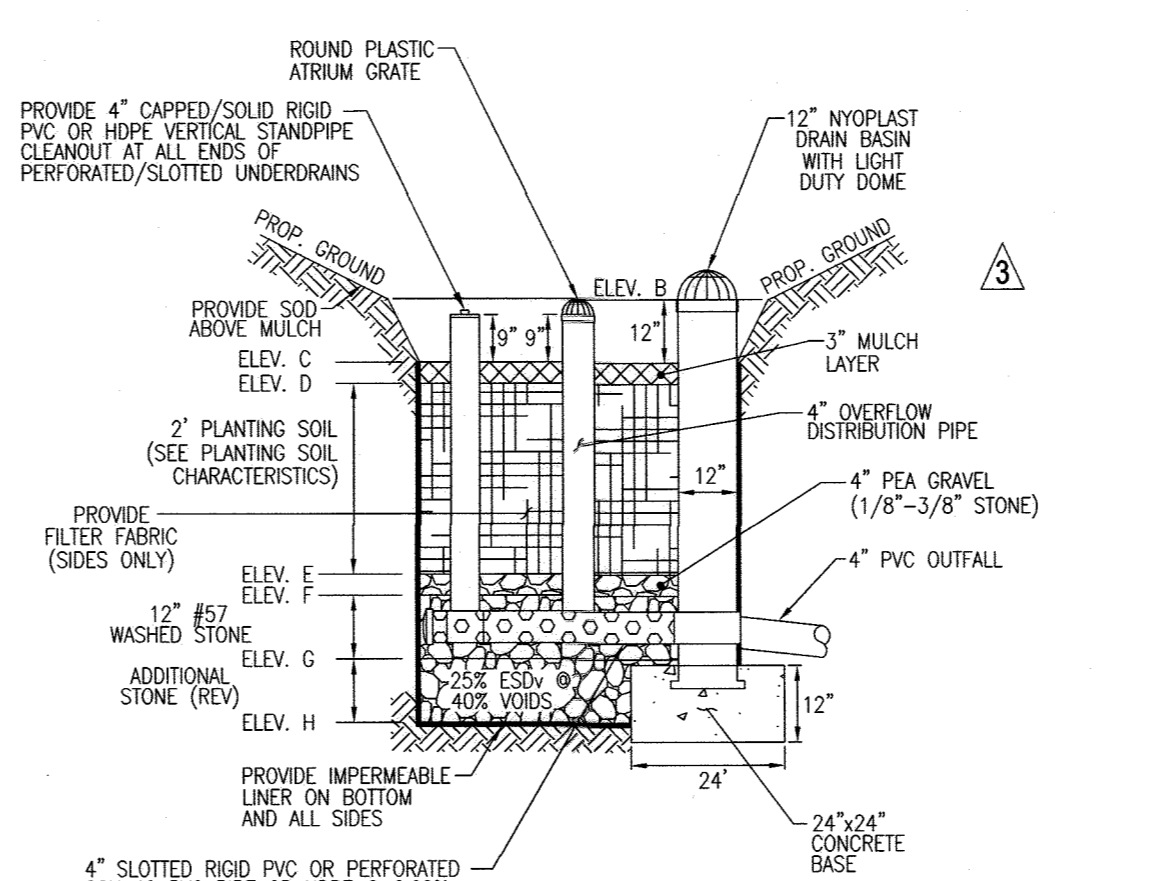


OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1) AND DRY WELLS (M-5)

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS, AND AFTER EVERY LARGE STORM EVENT.
2. 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.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. 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.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. 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.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1) AND DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

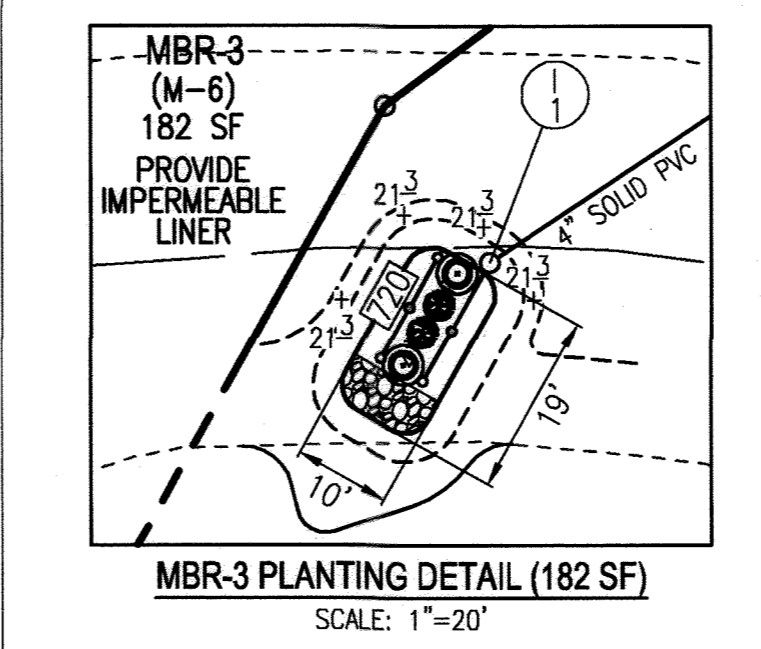
1. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.



MICRO-BIORETENTION (MBR-3)
W/ INLET STRUCTURE AND UNDERDRAIN OUTFALL
NOT TO SCALE

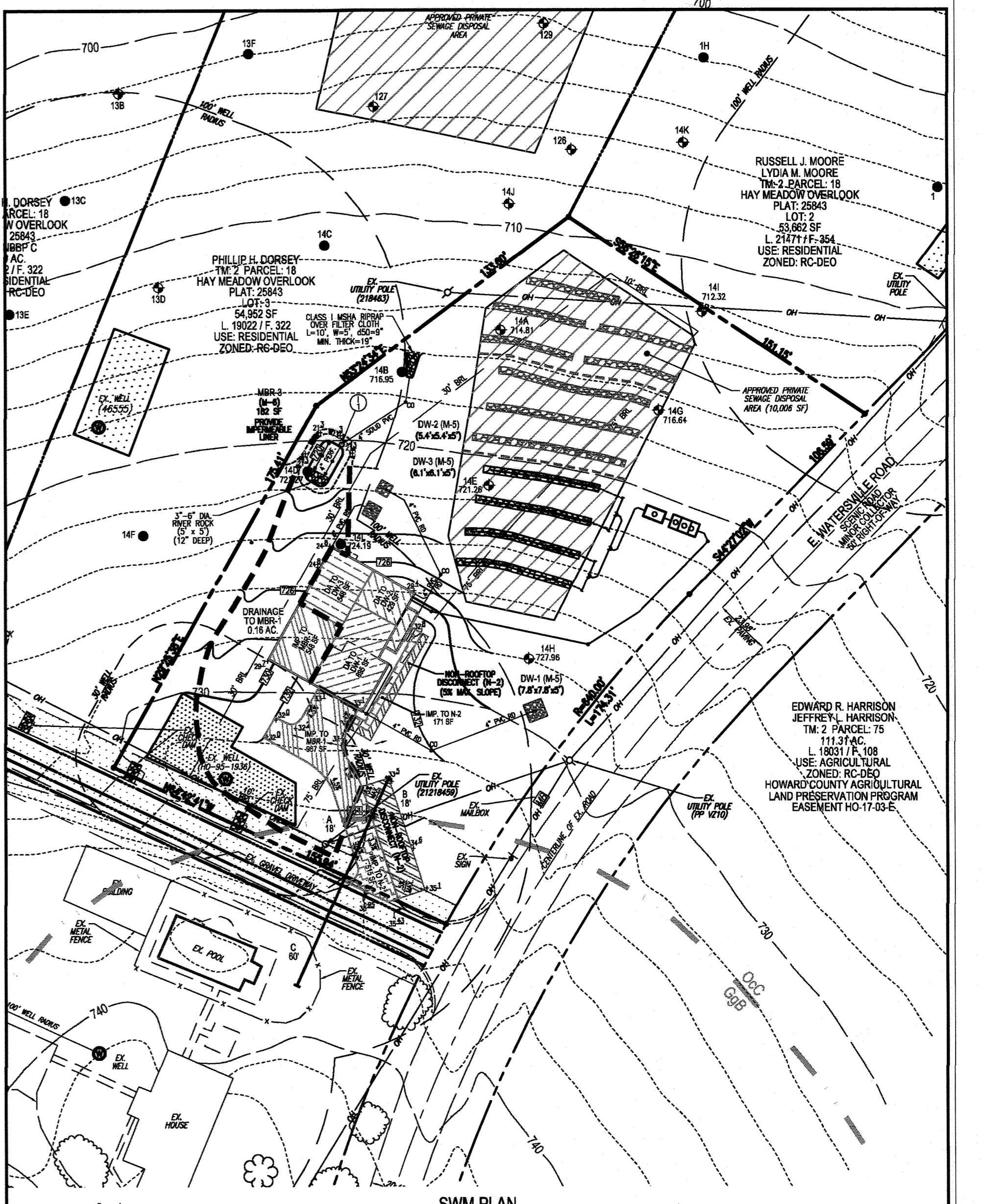
FACILITY	A	B	C	D	E	F	G	H	WELL ELEV.	UNDERDRAIN INVERT ELEVATION	OUTFALL ELEVATION	FACILITY SIZE
MBR-3	721.30	721.00	720.00	719.75	717.75	717.42	716.42	715.59	N/A	716.75	716.00	182 SF

DESCRIPTION	MINIMUM REQUIREMENTS	RECOMMENDED SPECIFICATIONS
geotextile fabric (if required)	ASTM D-4871 (geotextile strength - 125 lb.) ASTM D-4871 (tensile strength - 300 lb.)	600F duct equivalent opening size of #90 sieve
impermeable liner (if required)	ASTM D-4893 (thickness) ASTM D-4111 (tensile strength - 1,100 lb., elongation 200%) ASTM D-6351 (flow resistance - 150 R, 100) ASTM D-4771 (water absorption: < 0.8 to 2.8 mass)	30 mil thickness Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from punctures.



QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
2	UNDERS BENZON SPICEBUSH	3 GALLON	CONT.
2	ILEX GLABRA WINGSBERRY	3 GALLON	CONT.

1. SF = 0.0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED
2. PLANTING REQUIRED: 4



SCALE 1"=40'

OWNER: PHILLIP H. DORSEY, 13090 OLD FREDERICK ROAD, SYKESVILLE, MD 21784, 240-755-7378

DEVELOPER: M. GREGORY HOME BUILDING, LLC, 6310 WINTERS LANE, HANOVER, MD 21076, 240-755-7378

PLOT PLAN
HAY MEADOWS OVERLOOK - LOT 1
540 WATERVILLE ROAD
MOUNT AIRY, MD 21771

SCALE: AS SHOWN
DRAWN BY: JMR
CHECKED BY: RHV
DATE: FEBRUARY 2024
W. O. #: 03-117
SHEET#: 3 OF 7

L. 19022 / F. 322
4TH ELECTION DISTRICT
TAX MAP 2, GRID 15

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

SCALE: 1"=40'

PARCEL 18
ZONE: RC-BED
HOWARD COUNTY, MARYLAND

NO.	TYPE	LOCATION	TOP EL.	INV. IN	INV. OUT	COMMENTS
1-1	12" NYOPLAST DRAIN BASIN	N 615205.77 E 1284908.03	721.00	716.75	716.65	PROVIDE LIGHT DUTY BEEHIVE DOME

PURPOSE STATEMENT
THE PURPOSE OF THIS SHEET 10 IS TO CLARIFY REVISION OF THE HOUSE AND GRADE FOR HAY MEADOWS OVERLOOK BUILDABLE LOTS FROM A GENERAL BOX TO A NEW HOUSE TYPE.

REVISED FINAL ROAD CONSTRUCTION PLAN
REVISED HAY MEADOWS OVERLOOK

LOTS 1-4, BUILDABLE PRESERVATION PARCELA, NON-BUILDABLE PRESERVATION PARCELA B, AND NON-BUILDABLE BULK PARCELA C

TAX MAP 2 GRID 15 & 21
4TH ELECTION DISTRICT

PARCEL 18
HOWARD COUNTY, MARYLAND

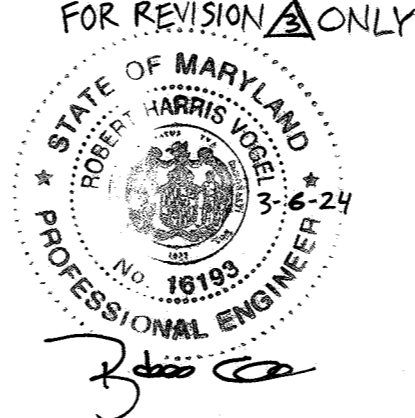
Adcock & Associates - LLC
Engineers - Surveyors - Planners
5389 Enterprise Street, Suites B-C
Sykesville, Maryland 21784
Phone: 443.325.7682
Email: info@saaland.com

DESIGN BY: DR
DRAWN BY: JT
CHECKED BY: MA
SCALE: AS SHOWN
DATE: OCTOBER 9, 2020
PROJECT #: 18-070
SHEET #: 10 of 10

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR, UNDER THE LAWS OF THE STATE OF MARYLAND, REG. NO. 21257, EXPIRATION DATE: 06-16-2021

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

11/9/20
CHIEF, DIVISION OF LAND DEVELOPMENT
11-4-20
CHIEF, DEVELOPMENT ENGINEERING DIVISION



NO.	DESCRIPTION	DATE
1	REVISE HOUSE TYPE, GRADING AND SWM ON LOT 1	3-6-24