Stanton		SOILS TABLE			
SYMBOL	RATING	NAME	K FACTOR	MAP #	COMMENTS
GhB	(B)	GLENELG URBAN LOAM, 6-8% SLOPES.	.37	20	
GnB	(C)	GLENVILLE-BAILE SILT LOAMS, 0-8% SLOPES.	.43	20	
MaC	(B)	MANOR LOAM, 8-15% SLOPES.	.32	20	<u> </u>

#### SPECIMEN TREE

	DATEGRA			and the second s
KEY	SPECIES	SIZE	CRZ	COMMENTS
ST A	RED MAPLE	34.5	51.75	FAIR HEAVY VINE COVER
ST B	NORWAY MAPLE	NORWAY MAPLE 30.5		NOT NATIVE
ST C	SIVER MAPLE	34.0	51.0	GOOD CONDITION

#### FOREST CONSERVATION DATA

NET TRACT AREA:	
A. Total tract area	=3.6
B. Area within 100 year floodplain	=0.0
C. Area to remain in agricultural production	=0.0
D. Net tract area	=3.6

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual) Input the number "1" under the appropriate land use zoning, and limit to only one entry.

E. Afforestation Threshold		
EXISTING FOREST COVER:		

G. Existing forest cover (excluding the H. Area of forest above afforestation l. Area of forest above conservation	n threshold	=
BREAK EVEN POINT:		

					tion=0 =0
PROPOSE	D FOREST	CLEAR	ING:		

							=0.0 =0.0
PL	ANTIN	G REC	QUIF	REMENT	S:		

-	N.	N. Reforestation for clearing above conservation t	threshold=0.
1	Ρ.	<ol> <li>Reforestation for clearing below conservation t</li> </ol>	hreshold=0.0
1	Q.	Q. Credit for retention above conservation threshold	old=0.
		R. Total reforestation required	
:	s.	S. Total afforestation required	=0.5
		T. Total reforestation and afforestation required	

DECIDUOUS TREE PLANTING DETAIL NOT TO SCALE

## PERIMETER LANDSCAPE PLANTING SCHEDULE

FLA.I.	<u>MLIL</u>	<u>N LANDSCAPE PLA</u>	ANTING SCHEDULE	
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
17	0	PRUNUS SARGENTI	SARGENT CHERRY	2 1/2" - 3" CA
17		ACER RUBRUM (AR)	RED MAPLE	2 1/2" - 3" C
4	総	ACER RUBRUM (AR)	RED MAPLE	3" CAL MINIMU
68	**	THUJA OCCIDENTALIS 'ELEGANTISS	SIMA' ELEGANTISSIMA ARBORVITAE	2'- 2 1/2' HGT
TOTAL				

### SCHEDULE A · PERIMETER LANDSCAPE EDGE

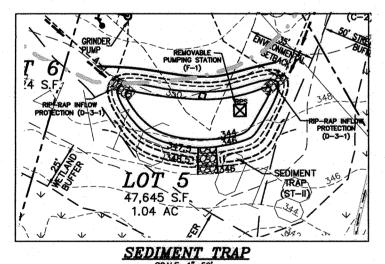
CATEGORY		ADJACENT TO PERIM	ETER PROPERTIES							TOTAL
LANDSCAPE TYPE	D (PERIMETER 1-A)	B (PERIMETER 1)	B (PERIMETER 2)	B (PERIMETER 3)*	B (PERIMETER 4)	B (PERIMETER 5)	B (PERIMETER 6)	D (PERIMETER 7-A)	B (PERIMETER 7)	
INEAR FEET OF PERIMETER	250.00	485.54 LF	259.34 LF	504.51 LF	127.47 LF	80.90 LF	158.58 LF	90 LF	99.6 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO:	YES, 154 LF OF EXISTING TREES	YES, 100 LF OF EXISTING TREES	YES, 50 LF OF EXISTING TREES	NO	NO	NO	NO	NO	
REDIT FOR WALL, FENCE, OR BERM YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	4 SHADE TREES 25 EVERGREEN TREES 0 SHRUBS	7 SHADE TREES 8 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 4 EVERGREEN TREES 0 SHRUBS	9 SHADE TREES 11 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 2 EVERGREEN TREES 0 SHRUBS	3 SHADE TREES 4 EVERGREEN TREES 0 SHRUBS	1 SHADE TREES 9 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 2 EVERGREEN TREES 0 SHRUBS	34 SHADE TREES 68 EVERGREEN TREES 0 SHRUBS
JUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	4 SHADE TREES 25 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	7 SHADE TREES 8 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS		13 SHADE TREES 11 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	3 SHADE TREES 3 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	2 SHADE TREES 2 EVERGREEN TREES	3 SHADE TREES 4 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	1 SHADE TREES 9 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	2 SHADE TREES 2 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	38 SHADE TREES 68 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS

6,480 C.F. 6,590 C.F.

3,240 C.F. 3,280 C.F.

38 SHADE TREES, 68 EVERGREENS

### Permeter 3— 4 additional shade trees have been provided as per WP—19—038 approval condition.



ENGINEER'S CERTIFICATION

HOWARD SOIL CONSERVATION DISTRICT.

DACOB HIKMAT, MEMBER

BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

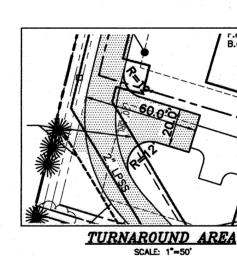
CHIEF, DIVISION OF LAND DEVELOPMENT

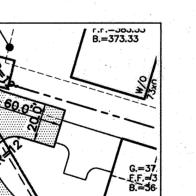
Same Alemer

DRY STORAGE REQUIRED: DRY STORAGE PROVIDED: X. GROUND ELEV. O OUTLET: 346.00 **BOTTOM ELEVATION:** 344.00 BOTTOM DIMENSIONS: 20'x70' WEIR CREST ELEV .: TOP OF EMBANKMENT ELEV.: 348.50 TOP OF EMBANKMENT WIDTH: 4' OUTLET PROTECTION LENGTH: 10' OUTLET PROTECTION DEPTH: 9"

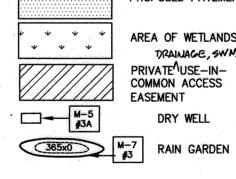
SEDIMENT TRAP (ST II) DATA

TOTAL STORAGE REQUIRED: TOTAL STORAGE PROVIDED:

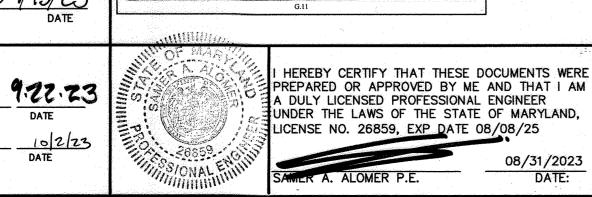




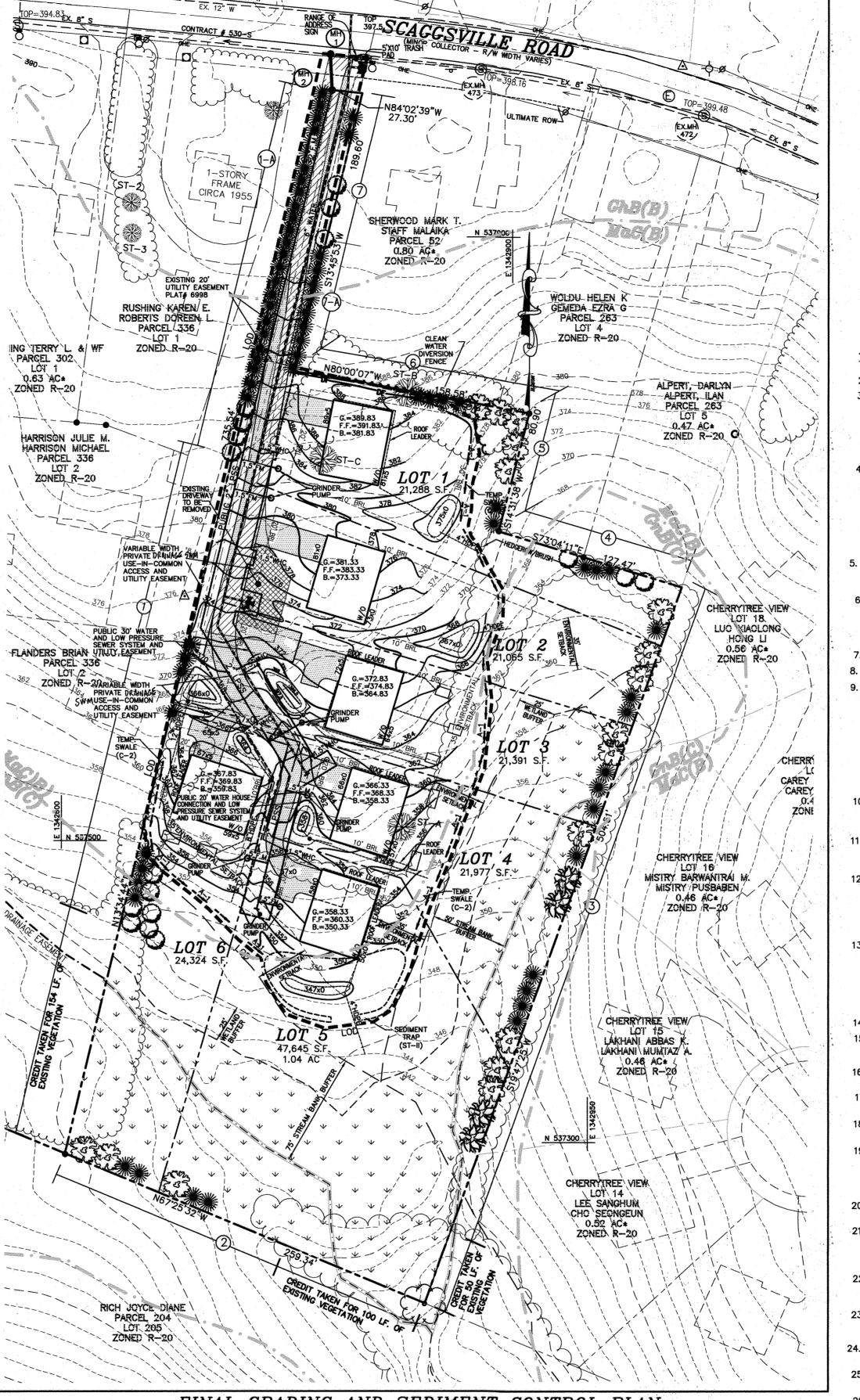
<u>LEGEND</u> LOD A-1	LIMIT OF DISTURBANCE TEMP. DIVERSION SWAL DIVERSION FENCE DRAINAGE AREA
	EX. PAVEMENT TO BE REMOVED EX. PAVEMENT
	TO REMAIN PROPOSED PAVEMENT
, , , , ,	AREA OF WETLANDS TRAINAGE, SWM PRIVATE USE IN



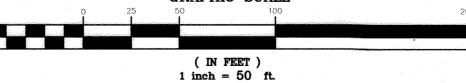
#### STANDARD SYMBOL DETAIL G-1-2 STONE/RIPRAP OUTLET ST-II SEDIMENT TRAP ST-II HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS. AND STANDARDS. THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 9.1.2023 DISCHARGE TO STABLE AREA OR RECEIVING CHANNEL MD REGISTRATION NO. (P.E.) OWNER/DEVELOPER CERTIFICATION I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND 19 IN MIN. THICKNESS OF CLASS 1 RIPRAP OUTLET ELEVATION FLOW STORAGE DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE LOWARD DIL CONSERVATION DISTRICT AND/OR MDE. 4 TO 7 IN STONE -SECTION A-A HOWARD SCD SIGNATURE BLOCK THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL



RAFAT LLC 50 STERRETT PLACE, SUITE 103 COLUMBIA, MD. 21044 443-538-9547



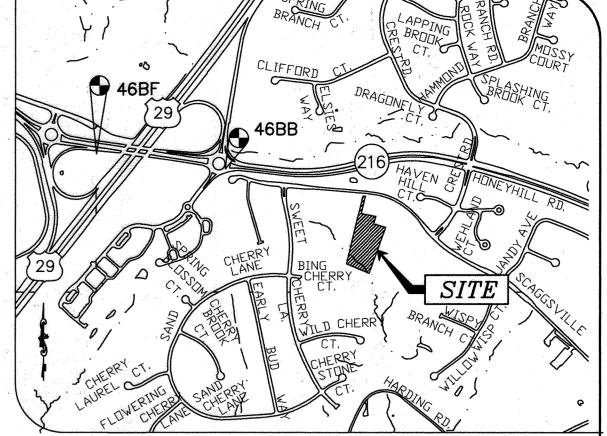
# FINAL GRADING AND SEDIMENT CONTROL PLAN



- 32. THIS PLAN IS SUBJECT TO WP-19-038, SEEKING AN ALTERNATIVE COMPLIANCE TO SECTIONS 16.1205(a)(7) WHICH STATES THAT STATE CHAMPION TREES, TREES 75% OF THE DIAMETER OF STATE CHAMPION TREES AND TREES 30" IN DIAMETER OR LARGER SHALL BE LEFT IN AN UNDISTURBED CONDITION DURING CONSTRUCTION. THIS ALTERNATIVE COMPLIANCE WAS APPROVED ON NOVEMBER 28, 2018, SUBJECT TO THE FOLLOWING CONDITIONS:
- 1. THE ALTERNATIVE COMPLIANCE PETITION NUMBER (WP-19-038) AND ITS CONDITIONS OF APPROVAL MUST BE ADDED TO ALL SUBDIVISION PLANS AND FINAL PLAT, F-18-079. 2. THE DEVELOPER SHALL PLANT FOUR (4) 3" MINIMUM CALIPER NATIVE SHADE TREES IN ADDITION TO THE REQUIRED PERIMETER LANDSCAPING TO MITIGATE THE REMOVAL OF THE SPECIMEN TREES, INCLUDE THE ADDITIONAL TREES ON

THE FINAL PLAN. THESE TREES WILL BE BONDED WITH THE DEVELOPER'S AGREEMENT UNDER THE FINAL SUBDIVISION

3. THE ALTERNATIVE COMPLIANCE APPROVAL APPLIES ONLY TO THE 2 SPECIMEN TREES TO BE REMOVED AS SHOWN ON THE ALTERNATIVE COMPLIANCE EXHIBIT. THE REMOVAL OF ANY OTHER SPECIMEN TREES ON THE PROPERTY IS NOT PERMITTED UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED BY THE APPLICANT TO BE JUSTIFIED.



## SCALE: 1"=1,000"

ADC MAP-39, GRID-C3

1. SUBJECT PROPERTY ZONED "R-20" PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN. 2. ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.

PROJECT BACKGROUND: ADDRESS: 10965 SCAGGSVILLE ROAD LAUREL, MD 20723 LOCATION: TAX MAP: 46 PARCEL: 263 GRID: 5 LOTS: 6 **ELECTION DISTRICT: SIXTH** 

70NING: R-20 DPZ FILE NUMBERS: ECP-18-004, WP-19-038

ZUNEU K-ZU

TOTAL TRACT AREA: 3.62 AC.±
NUMBER OF PROPOSED BUILDABLE LOTS:
NUMBER OF OPEN SPACE LOTS: 0
AREA OF THE ROAD DEDICATION: 0 AC.

TYPE OF PROPOSED UNIT: SFD NUMBER OF PARKING SPACES REQUIRED: 2.5 SPACES PER UNIT NUMBER OF PARKING SPACES PROVIDED: 4 SPACES (2 IN GARAGE+ 2 DRIVEWAY) PER UNIT.

EXISTING ON-SITE TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS CONDUCTED BY MILDENBERG, BOENDER & ASSOCIATES ON OR ABOUT AUGUST

5. COORDINATES BASED ON NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 46BB AND 46BF

N 538,306.5015 E 1,341,329.156 ELEV. 422.637 STA. No. 46BF N 538,448.152 E 1,340,010.492 ELEV. 446.607

7. THE PROPOSED SUBDIVISION WILL CONSIST OF SINGLE FAMILY DETACHED DWELLINGS.

8. STEEP SLOPES GREATER THAN 25% AND OVER 20,000 SQ. FT. IN AREA DO NOT EXIST ON SITE.

DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS: WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)

SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2") GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. OF 45 FOOT TURNING RADIUS. STRUCTURES (CULVERT/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).

DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD PLAIN WITH NO MORE THAN 1 FOOT OF DEPTH OVER DRIVEWAY SURFACE. STRUCTURE CLEARANCES - MINIMUM 12 FEET.

MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE. 10. FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY A PAYMENT OF FEE-IN-LIEU FOR 0.50 ACRES IN THE AMOUNT OF \$ 16,335.00 TO BE POSTED WITH THIS PLAN.

LANDSCAPING FOR THIS SUBDIVISION IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SURETY FOR THE REQUIRED 38 SHADE, 68 EVERGREEN

12. THE OWNER, TENANT, 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,

13. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTION OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

14. THERE ARE NO EXISTING DWELLING/STRUCTURE(S) LOCATED ON-SITE.

15. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM LOT AND ROAD RIGHT-OF-WAY LINE AND NOT

16. STORMWATER MANAGEMENT REQUIREMENTS WILL BE SATISFIED VIA RAINGARDENS AND DRY WELLS FACILITIES AND WILL BE PRIVATELY OWNED AND MAINTAINED. 17. THE OPEN SPACE REQUIREMENT FOR THIS SUBDIVISION IS MET BY A PAYMENT OF FEE-IN-LIEU IN THE

AMOUNT OF \$7,500.00. 18. THIS SUBDIVISION IS IN THE METROPOLITAN DISTRICT. WATER AND SEWER ARE PUBLIC (CONTRACT #

354-W AND CONTRACT # 530-S). 19. THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 RESIDENTIAL INFILL DEVELOPMENT OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERMS, FENCES, SIMILAR HOUSE TYPES AND THE DIRECTIONAL ORIENTATION OF

20. WETLANDS AND ITS BUFFER EXIST ON SITE AS CERTIFIED IN THE WETLAND AND FSD LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN FEBRUARY 25, 2016.

21. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003). DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION OR BUILDING/GRADING PERMIT

22. ALL LOTS/RESIDENTIAL UNITS IN THIS SUBDIVISION ARE SUBJECT TO THE MIHU FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.

23. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS AND SPECIFICATIONS IF

24. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK. 25. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO

26. PER COUNCIL BILL CB1-2018 NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT. NO INTERSECTIONS OF MAJOR COLLECTOR OR HIGHER CLASSIFICATION ROAD WITH A MAJOR COLLECTOR OR A HIGHER CLASSIFICATION

ROAD IS WITH IN 1.5 MILES IN ALL DIRECTIONS FROM THE PROJECT ENTRANCE. 27. NO 100 YEAR FLOODPLAIN EXISTS ON THIS SITE. DRAINAGE AREA IS LESS THAN 30 ACRES.

28. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARED TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE)-3' LONG. A GALVANIZED

STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST. 29. EXISTING UTILITIES ARE BASED ON AS-BUILT PLANS FOR WATER AND SEWER CONTRACTS AND ARE VERIFIED BY FIELD RUN SURVEY CONDUCTED BY MILDENBERG, BOENDER & ASSOC., INC. 30. 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 410-313-2430 FOR DETAILS AND COST ESTIMATES.

31. DISTURBANCE TO THE 35' ENVIRONMENTAL BUFFER IS CONSIDERED ESSENTIAL FOR THE STORMWATER MANAGEMENT COMPLIANCE BASED ON DEPARTMENT OF ENGINEERING DIVISION DECISION.

0

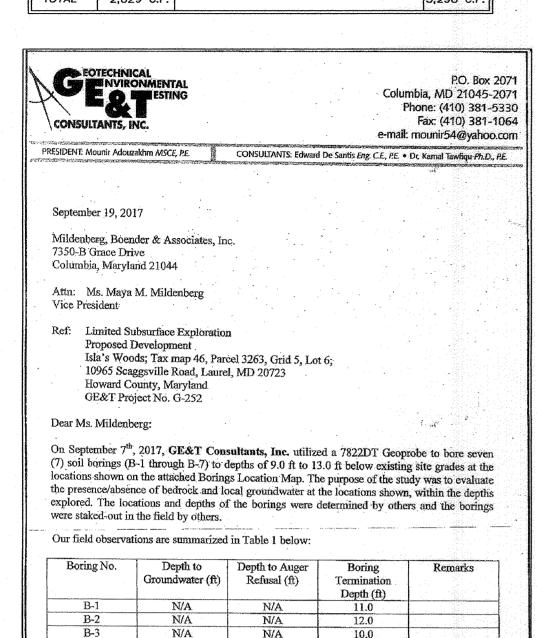
V

MILDENBEI BOENDER

OF

### SWM SUMMARY TABLE

LOT	ESDv REQUIRED	SWM PRACTICE	ESDv PROVIDED
1	403 C.F.	RAIN GARDEN (M-7)	509 C.F.
2	432 C.F.	RAIN GARDEN (M-7)	485 C.F.
3	494 C.F.	RAIN GARDEN (M-7)	535 C.F.
. 4	446 C.F.	RAIN GARDEN (M-7), DRY WELLS (M-5)	470 C.F.
5	441 C.F.	RAIN GARDEN (M-7)	480 C.F.
6	424 C.F.	RAIN GARDEN (M-7), DRY WELLS (M-5)	443 C.F.
P/O UIC DRIVEWAY	189 C.F.	RAIN GARDEN (M-7)	376 C.F.
TOTAL	2,829 C.F.		3,298 C.F.



B-7	8.0	N/A
Note: All depths are b	elow existing s	ite grades

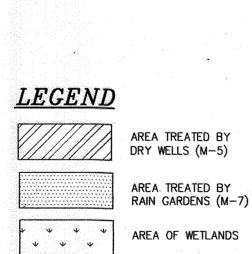
It should be noted that the actual level of groundwater and the amount and level of perched water should be anticipated to fluctuate through the year, depending on variations in precipitation, surface run-off, infiltration, site topography, drainage, and other factors not evident at the time of our exploration. GE&T can not be responsible for changes in groundwater conditions at the site due to seasonal variations and changes caused by other factors such as grading operations at the

GE&T appreciates the opportunity to provide this geotechnical engineering service to you. Should you have any questions regarding this letter report, or require additional services, please feel free to contact our office.

GE&T Consultants, Inc.

Mounir Abouzakhm, PE





- - - DRAINAGE AREA

EX. PAVEMENT TO REMAIN

> EX. PAVEMENT TO BE REMOVED

RAIN GARDEN

MD REGISTRATION NO. (P.E.) OWNER/DEVELOPER CERTIFICATION

10.3.2023

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OF DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE. 10/12/23

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS,

REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND

WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND

THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE

OWNERS/ DEVELOPER'S SIGNATURE DATE 12. JAGOR HIKMAT PRINTED NAME & TITLE MEASEN HOWARD SCD SIGNATURE BLOCK THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL

BY THE HOWARD SOIL CONSERVATION DISTRICT. Marder Beatchie HOWARD SOIL CONSERVATION DISTRICT

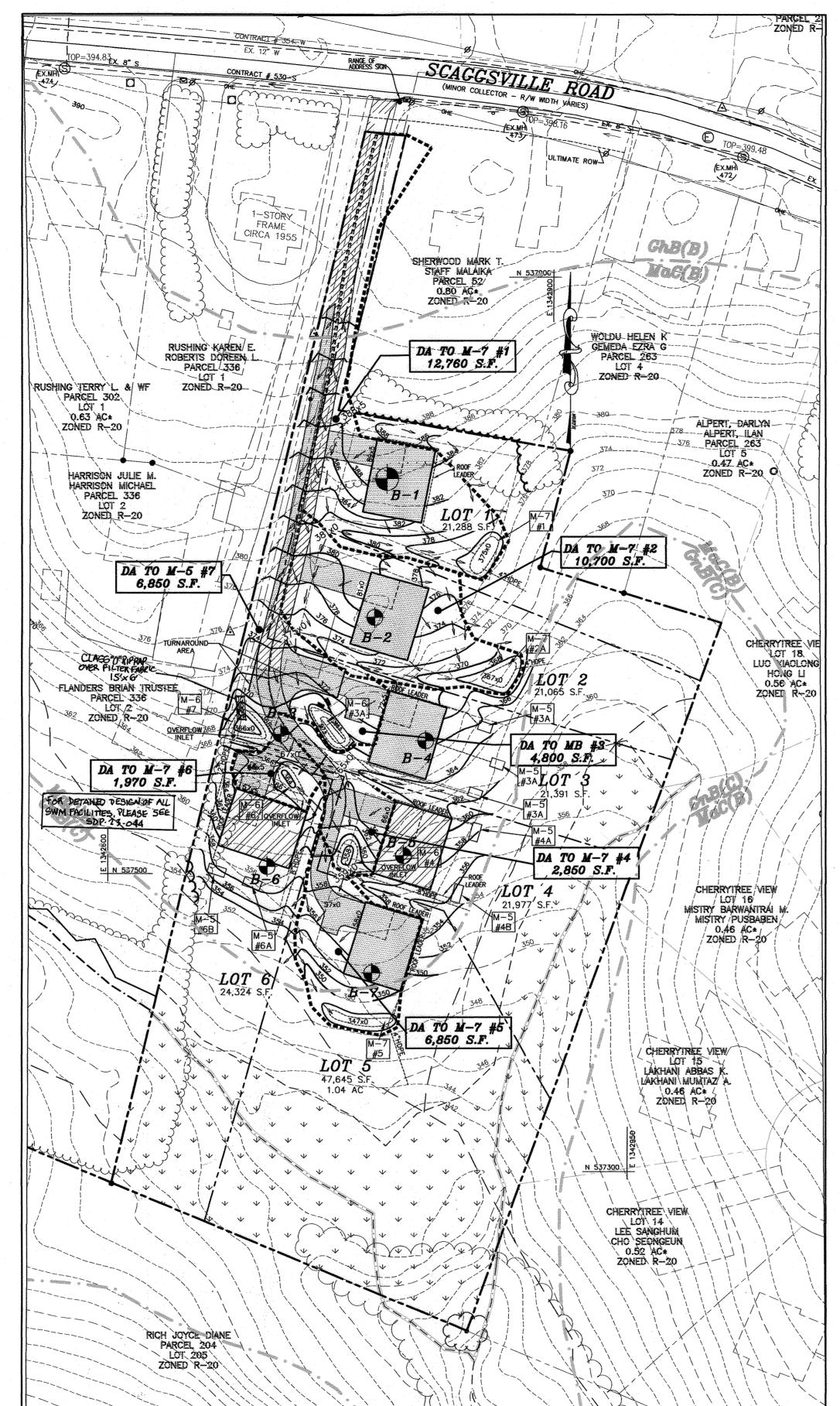
 and the second second second second	and the second s	han are recommended to the control of the control o
APPROVED:	DEPARTMENT OF PLANNING AND ZONING	
Med	Almah.	10.26.23
CHIEF DEVE	LOPMENT ENGINEERING DIVISION ~>	DATE
		12/4/2

CHIEF, DIVISION OF LAND DEVELOPMENT

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM EA DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,

SOIL BORING LOCATION

<u>OWNER</u> 5550 STERRETT PLACE, SUITE 103 COLUMBIA, MD. 21044 443-538-9547

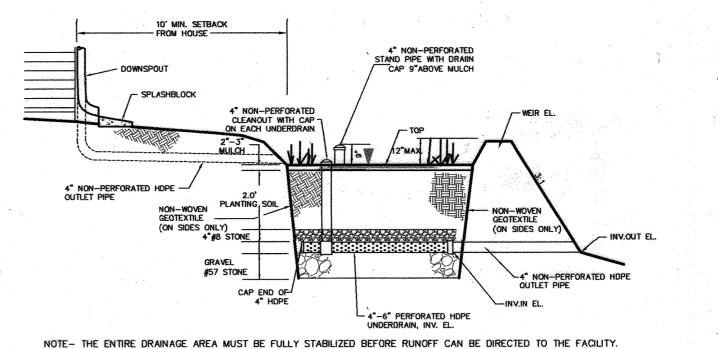


FINAL SWM PLAN SCALE: 1"=50"

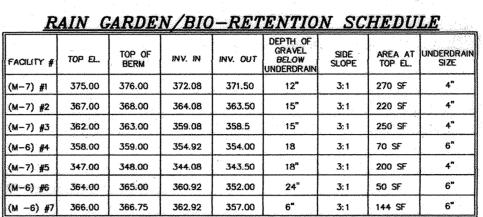
GRAPHIC SCALE

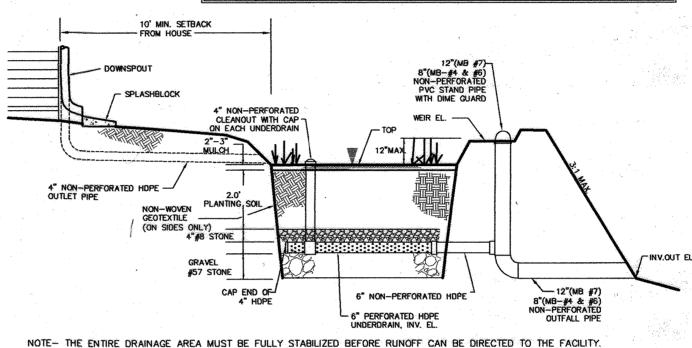
( IN FEET )

1 inch = 50 ft.



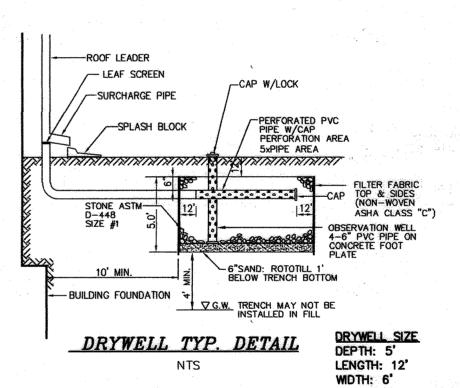
## TYPICAL RAIN GARDEN PROFILE





NTS

NOTE- THE ENTIRE DRAINAGE AREA MUST BE FULLY STABILIZED BEFORE RUNOFF CAN BE DIRECTED TYPICAL MICRO-BIORETENTION PROFILE



# 4" NON-PERFORATED CLEANOUT WITH CAP ON EACH UNDERDRAIN 4" NON-PERFORATED STAND PIPE WITH DRAIN CAP 9"ABOVE MULCH TOP SURFACE -TOP BERM -PLANTING SOIL #57 AGGREGATE 4"-6" PERFORATED HDPE

TYP. SECTION RAIN GARDEN (M-7) NOT TO SCALE



### OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDEN/MICRO-BIORETENTION (M-6) AND (M-7)

ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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.

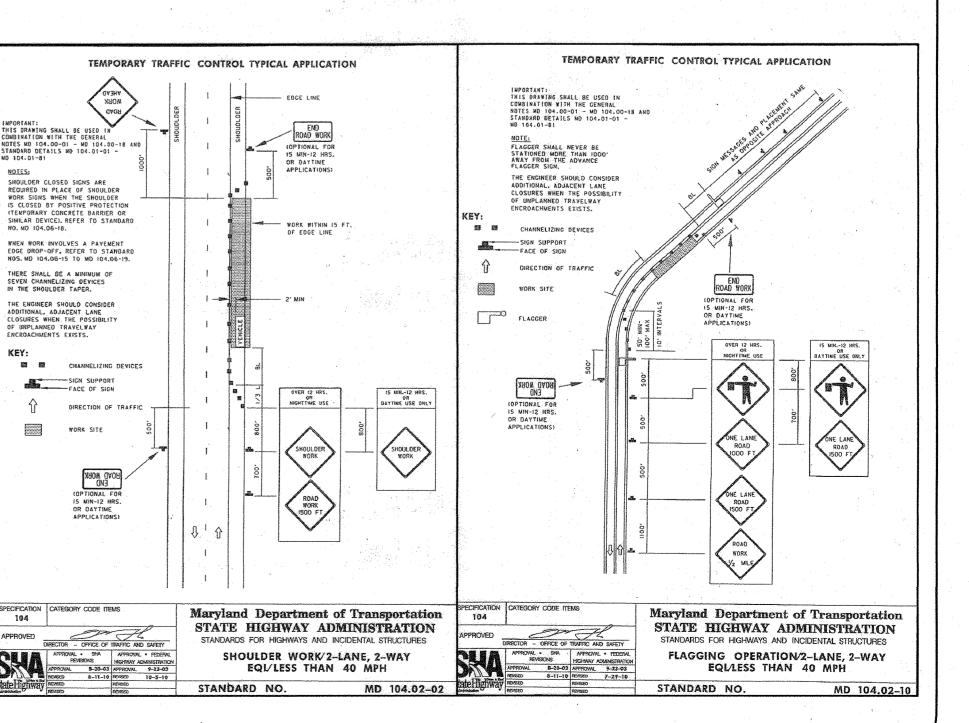
SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3

SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM

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

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



MARYLAND

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30 0.7 0.5 JUN 1 TO JUL 31

20 0.5 0.5 JUN 1 TO JUL 31

(SETARIA ITALICA)

PEARL MILLET

COLUMBIA, MD, 21044

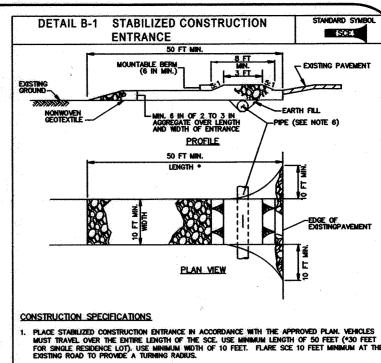
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01/06/2023

CHIEF, DIVISION OF LAND DEVELOPMENT

MAY 16 TO JUL 31

MAY 1 TO AUG 14



PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE, PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE, PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MUUNTABLE BERM, AND SPECIFED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

2011 DETAIL E-3 SUPER SILT FENCE -----SSF------ galvanized Chain Link Fence Witi >woven>slit/film geotextike>

INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOL LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE

JRAL RESOURCES CONSERVATION SERVICE

2011 **DETAIL C-9 DIVERSION FENCE** ├── DF ── AXIMUM DRAINAGE AREA - 2 ACRE 10 FT MAX. ELEVATION UV RESISTANT IMPERMEABLE SHEETING ON BOTH SIDES OF FENC

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING . USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOO LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.

SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE

WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

CROSS SECTION

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

MARYLAND DEPARTMENT OF ENVIRONMENT

PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFIL

MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

3 OF 3

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