<u>GENERAL NOTES</u>	
1. PROJECT BACKGROUND: – SUBDIVISION NAME: JESSUP PARK – TAX_MAP: 43_GRID_22	
– SECHONZARLA. NYA – LOT/PARCEL: PARCEL 108–A – ZONING: M–2 – ZB/BA REFERENCE: BA–19–043V	
– ELÉCTION DISTRICT: FIRST – TOTAL (GROSS) TRACT AREA: 4.81 ACRES – AREA OF R/W TRANSFER: 0.00 AC.	
- SECTION/AREA: N/A - NUMBER OF PROPOSED BUILDINGS: 0 - 0.00 S.F. TRAILER PARKING AND STORAGE ONLY - NET AREA OF PROJECT: 4.81 ACRES± (4.81 SITE-0.00 ENV.=4.81 AC.) - APEA OF PRODOCED P (W)	
– OPEN SPACE REQUIRED: N/A – GREEN AREA PROVIDED: N/A – PUBLIC WATER & SEWER WATER CONTRACT NO. 24–4399.	
- DPZ REF.'S SEWER CONTRACT NO. 14-4597-D. BA-0265C, SDP-03-164 AMERIGAS (VOIDED), WP-11-095, WP-12-084, ECP-20-019 WP-13-084, WP-13-143, SDP-10-030, J-4148-C, WP-21-058, BA-19-043V.	
 ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS, PLUS MSHA AND OSHA UNLESS WAIVERS HAVE BEEN APPROVED. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING 	
MORE ON THESE DEAMINGS: MISS UTILITY: VERIZON TELEPHONE COMPANY:	
AT&T CABLE LOCATION DIVISION:	
 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 START OF WORK. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1–800–257–7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL NOTIFY IN ACCOMPANIES WITH THE ACCOMPANIES AND LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. 	2
AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003. - DEVELOPMENT OR CONSTRUCTION OF THIS PARCEL MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, ALTERNATIVE COMPLIANCE REQUEST, OR BUILDING AND GRADING PERMITS.	
 THE PROJECT BOUNDARY SHOWN HEREON ARE BASED ON A PLAT BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH 2013 AND RECORDED ON APRIL 17, 2013. THE EXISTING ON-SITE TOPOGRAPHY SHOWN HEREON IS TAKEN FROM A COMPOSITE OF FIELD RUN SURVEYS INTH TWO FOOT INTERVALS, PREPARED SHANNABERGER JAND LANE, DATED OCTOBER 30, 2001 AND BY VOGEL ENGINEERING + TIMMONS GROUP, DATED NOVEMBER 25, 2019 AND SUPPLEMENTED BY AN AERIAL TOPOGRAPHICAL SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED JANUARY 2008, FROM RECENTLY APPROVED CAPITAL PROJECT J-4148-C GRADING FLANS AND FROM APPROVED GRADING PLAN SDP-10-03' 	WATER -
WHICH IS TO BE REACTIVATED UNDER WP-21-058. 9. COORDINATES AND ELEVATIONS ARE BASED ON MARYLAND COORDINATE SYSTEM - NAD83(1991) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 43HA AND 48A 10. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. 11. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT	A.
 NO PUBLIC WATER EXTENTION IS PLANNED FOR THIS PROJECT. SERVICE IS AVAILABLE FROM EXISTING PUBLIC 12" WATER. (CONTRACT #24-4399) NO PUBLIC SEWER EXTENTION IS PLANNED FOR THIS PROJECT. SERVICE IS AVAILABLE FROM EXISTING PUBLIC SEWER. (CONTRACT #14-4597-D) NO PUBLIC SEWER EXTENTION IS PLANNED FOR THIS PROJECT. SERVICE IS AVAILABLE FROM EXISTING PUBLIC SEWER. (CONTRACT #14-4597-D) EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATED FOR THIS PROJECT. 	
AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIO SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. 15. THERE ARE NO AREAS OF "100 YEAR FLOODPLAIN" LOCATED ON THE PROJECT SITE.	
 SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEB SOIL SURVEY HOWARD COUNTY, MARYLAND – SAVAGE MAP #25. THERE ARE SEVERAL SMALL AREAS OF NATURALLY OCCURING STEEP SLOPES ON SITE, THAT LIE WITHIN THE ENVIRONMENTAL BUFFERS AND WILL REMAIN UNDISTURBED. THERE ARE NO NATURALLY OCCURRING STEEP SLOPES WITHIN THE DEVELOPMENT AREA FOR THIS PLAN. ALL STEEP AND MODERATE SLOPES SHOWN ARE THE RESULT OF PREVIOUS DEVELOPMENT AND NONE ARE GREATER THAN 20 DOO SE CONTIGUIDUS 	
18. THE SITE WAS FIELD INVESTIGATED BY ECO-SCIENCE PROFESSIONALS, INC ON JUNE 29, 2017. STREAMS, WETLANDS AND THEIR BUFFERS ARE PRESENT ONSITE, BUT NOT WITHIN T DEVELOPMENT AREA. THE SMALL POND SHOWN WITHIN THE DEVELOPMENT AREA WAS DETERMINED BY ECO-SCIENCE PROFESSIONALS TO BE AN EXISTING WET BASIN WITHIN AN EXIS SWM FACILITY. IT WAS CREATED AS PART OF THE CONSTRUCTION OF DORSEY RUN ROAD UNDER CAPITAL PROJECT #J-4148-C AND IS NOT A NATURALLY OCCURING, REGULATORY WETLAND. THIS POND WAS CREATED SPECIFICALLY FOR THE BENEFIT AND USE OF PARCEL 108-A FOR FUTURE DEVELOPMENT, HOWEVER IT DOES NOT MEET THE NEEDS OF THE PROPOSED DEVELOPMENT UNDER THIS PLAN. ONLY ONSTRE RUNOFF IS BEING RECEIVED BY THIS POND. IT DOES NOT RECEIVE RUNOFF FROM DORSEY RUN ROAD OR ANY OTHER PROPOSED DEVELOPMENT UNDER THIS PLAN. ONLY ONSTRE RUNOFF IS BEING RECEIVED BY THIS POND. IT DOES NOT RECEIVE RUNOFF FROM DORSEY RUN ROAD OR ANY OTHER	HE STING
 EXISTING IMPERVIOUS AREAS, NOR IS IT ACTING AS STORMWATER TREATMENT FOR DORSEY RUN ROAD. 145,663 S.F. OF FOREST STAND #1 AS DEFINED UNDER SDP-10-030 IS LOCATED ON THIS SITE. APPROXIMATELY 53,022 S.F. OF THE ORIGINAL FOREST STAND #1 WAS CLEARED FROM PARCEL 108A UNDER CAPITAL PROJECT J-4148-C. ANOTHER 88,804 S.F. IS PROPOSED BE CLEARED UNDER THE GRADING PLAN FOR SDP-10-030. APPROXIMATELY 63,4 S.F. OF FOREST STAND #2 AS DEFINED UNDER SDP-10-030 IS LOCATED ON THIS SITE. APPROXIMATELY 19.009 S.F. OF THE ORIGINAL FOREST STAND #2 WAS CLEARED UNDER S.F. OF FOREST STAND #2 WAS CLEARED UNDER 	411
CAPITAL PROJECT J-4148-C. OF THE ORIGINAL 209.074 S.F. OF FOREST STAND, 48,239 S.F. REMAINS AFTER CLEARING UNDER CAPITAL PROJECT J-4148-C AND SDP-10-030. 43,806 S.F OR 1.01 AC. OF THE REMAINING FOREST WAS PLACED UNDER A PUBLIC FOREST CONSERVATION RETENTION EASEMENT AND ANOTHER 10,181 S.F. (0.24 AC.) WAS REPLANTED AND PLACED IN A FOREST CONSERVATION REFORESTATION EASEMENT, UNDER SDP-10-030. EXISTING FOREST REMAINING ONSITE AT INITIATION OF THIS PROJECT, INCLL FOREST CONSERVATION RETENTION AND REFORESTATION EASEMENTS, IS 58,420 S.F. OR 1.34 AC. AN ADDIIONAL 1,985 S.F. OF THE REMAINING FOREST STAND IS PROJECT, INCLL	
CLEARED FROM FOREST STAND #1 ALONG THE NORTHERN AND EASTERN BOUNDARY. NO ADDITIONAL DISTURBANCES TO FOREST STAND #2 ARE PROPOSED UNDER THIS PLAN. APPROXIMATELY 56,435 S.F. OR 1.30 AC. OF FOREST WILL REMAIN ON PARCEL 108-A AT THE COMPLETION OF THIS PLAN. 20. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION. THE FOREST CONSERVATION OBLIGATION FOI THIS PLAN HAS BEEN MET UNDER SDP-10-030(FC) PLAT NUMBER 22345. BY PROVIDING ONSITE RETENTION OF 1.01 AC ONSITE REFORESTATION OF 0.24 AC AND A FEE	۶ * / ۲
IN LIEU PAYMENT OF \$41,817.75 TO THE HO.CO. FÓREST CONSERVATION FUND FOR THE REMAINING 1.28 AC. OF REFORESTATION OBLIGATION (1.28 AC.= 55,757 SF. X \$0.75=\$4 21. GEOTECHNICAL INVESTIGATIONS SHALL BE COMPLETED AS PART OF THIS SITE DEVELOPMENT PLAN SUBMISSION. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION. BASED ON SOIL TEST PRIOR TO CONSTRUCTION.	1,817.75).
22. DORSEY RUN ROAD IS CLASSIFIED AS A MAJOR COLLECTOR. SITE ACCESS SHALL BE VIA A PROPOSED A 30' WIDE COMMERCIAL ENTRANCE ALONG DORSEY RUN ROAD. 23. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED WITHIN THE DEVELOPMENT AREA. 24. THERE ARE NO EXISTING DWELLINGS OR STRUCTURES ON THE PROJECT SITE. 25. THESE AND ADDITION AND ADDITION AND ADDITIONAL A	x
QUANTITY STORMWATER MANAGEMENT CONTROL IS REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II, SECTION 5.2 STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF ESDV MICRO-SCALE PRACTICES AND BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH THE 2000 MA STORMWATER DESIGN MANUAL VOLUMES I AND II, CHAPTERS 3 AND 5 AND ENVIRONMENTAL SITE DESIGN CRITERIA. ESDV MICROSCALE AND BMP PRACTICES INCLUDE TWO (2) STOR SYSTEMS TWO (2) SURFACE SAND FILTERS (F-1) AND ONE (1) MICRO-BIORETENTION FACILITY (M-6) AS WELL AS ADDITIONAL GRAVEL STORAGE AT THE BOTTOM OF FACILITIES FOR VOLUME AS DECIMPED AND MANDAD COLUMES (ALL FACILITIES OF DENATELY OWNED AND MANTANED) AND MANTANED	A. RYLAND M FILTER R RECHARGE
26. 1.61 AC. OF HYDRIC SOILS ARE PRESENT ON-SITE. 0.23 ACRES OF HYDRIC SOILS ARE WITHIN THE LOD. 27. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS, EXCEPT AS APPROVED BY DPZ. 28. PUBLIC STREET TREES ALONG DORSEY RUN ROAD WERE PROVIDED UNDER CAPITAL PROJECT # J-4148-C, IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION	
REGULATIONS AND THE LANDSCAPE MANUAL. ANY STREET TREES REMOVED OR DAMAGED IN CÔNJUCNTION WITH CONSTRUCTION OF THIS PLAN WILL`BÉ REPLACED IN KIND. THERE IS NO FINAL PLAN ASSOCIATED WITH THIS PROJECT. FINANCIAL SURETY IN THE AMOUNT OF \$1,200 FOR THE REQUIRED FOUR (4) STREET TREES TO BE REPLACED AND ADDITIONAL SURETY IN THE AMOUNT OF \$3,300 FOR THE EXISTING ELEVEN (11) TREES THAT ARE ADJACENT TO THE LIMITS OF DISTURBANCE TO INSURE REPLACEMENT OF ANY DAMAGED OR COMPROMISED STREET TREES PROPOSED TO REMAIN. THE TOTAL AMOUNT OF \$4,500 SHALL BE POSTED WITH THE DPW PUBLIC COST ESTIMATE.	S [Building]
 29. REFERENCE WP-21-058: ALL EXISTING SPECIMEN TREES REMOVED UNDER THIS PLAN SHALL BE REPLACED AT A RATIO OF 2:1. TWO (2) SPECIMEN TREES ARE TO BE REMOVED UNDER THIS PLAN AND REPLACED WITH FOUR (4) NATIVE SHADE TREES AT LEAST 3" DBH PLANTING SIZE. 30. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING. IN CUDING MITIGATION OF SPECIMEN TREES. HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF (\$15.600) 	
FOR THE REQUIRED TWENTY-SEVEN (27) SHADE TREES (\$8,100) AND FIFTY (50) EVERGREENS (\$7,500). 31. THE OFFICIAL PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON NOVEMBER 4, 2020 VIRTUALLY THROUGH THE ZOOM PLATFORM. 32. AN ENVIRONMENTAL CONCEPT PLAN (ECP-20-019) WAS APPROVED ON JANUARY 29, 2021.	GENERAL
 IN ACCORDANCE WITH SECTION TO TOTAL (4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THERE IS NO OPEN SPACE REQUIREMENT FOR THIS M- 34. THERE IS NO AMENITY AREA REQUIREMENT FOR THIS M-2 PROJECT. FOR ALL STANDARDS REFERRED TO ON THIS PLAN THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT: 	2 PROJECT. 54. (CONT'D) THE DIRECTORS OF SUSTAINABILITY APPR
ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION. ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION. REFER TO DETAILS ON SHEET 8 OF THIS PLAN SET. 36. TRAFFIC CONTROL DEVICES:	APPROV 1. T
A. THE RT-T(STOP) SIGNS AND STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE. B. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES. C. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC	2. T
CONTROL DEVICES' (MDMUTCD). D. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, ("QUICK PUNCH") SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-%" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE - 3' LONG) THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK "HOLES ABOVE GROUND LEVEL - A GALVANIZED STEEL	1 F A
POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST. 37. PUBLIC STREET LIGHTING ALONG DORSEY RUN ROAD WAS PROVIDED IN ACCORDANCE WITH SECTION 16.135 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, UNDER CAP. PROJ. # J-4148-C. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES ARE IN ACCORDANCE WITH THE HOW DO CONTRACT OF THE AUGUST AND THE TOP OF THE AUGUST AND THE TYPE OF FIXTURES AND POLES ARE IN ACCORDANCE WITH THE	55. THIS PROJECT DIVISION APPF 1. HOW
ARE REMOVED UNDER THIS PLAN SHALL BE REPLACED IN KIND. A MINIMUM OF 20 FEET SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. 38. NO TRASH OR RECYCLING IS REQUIRED FOR THIS PROJECT. NO TRASH GENERATED. TRAILER STORAGE ONLY. 39. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.	2. HOW
 40. ELEVATIONS ARE TO FLOW LINE / BOTTOM OF CORB, UNLESS OTHERWISE NOTED. 41. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. 42. ANY DAMAGE TO PUBLIC RICHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. 43. ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH THE CURRENT HOWARD COUNTY STANDARDS AND SPECIFICATIONS. 	3. HOW
 ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3,500 P.S.I. ALL PAVING TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS, UNLESS OTHERWISE NOTED. (SEE DETAIL, SHEET 8). THE GEOTECHNICAL ENGINEER TO CONFIRM PAVING SECTION PRIOR TO CONSTRUCTION. ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE DETAIL 3.01 UNLESS OTHERWISE SPECIFIED. (SEE DETAIL, SHEET 8) 	APPROV HOWARI 1
 47. HANDICAP PARKING IS NOT REQUIRED FOR THIS SITE. NO CAR PARKING. TRAILER STORAGE ONLY 48. WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN. 49. DEBRIS IS TO BE KEPT OUT OF ALL STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION. 50. ALL EXTERIOR LIGHTING SHALL CONFORM TO ZONING REGULATIONS. SECTION 134.0 (SEE DETAILS. SHEET 14) 	-
 REFERENCE HOWARD COUNTY CAPITAL PROJECT #J-4148-C FOR CONSTRUCTION OF EXISTING DORSEY RUN ROAD, UTILITES, LIGHTING AND STREET TREES THEREIN. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLEY FOR THE PURPOSE OF CALCULATING FES. REFERENCE VARIANCE PETITION BA-19-043V TO REDUCE THE 50' STRUCTURE AND USE SETBACK FROM AN EXTERNAL PUBLIC STREET RIGHT-OF-WAY TO 20' FOR TRACTOR TRAIL OF TRACTOR TRACTO	HOWARE 2
WITH THE ACCESS DESIGNED TO BE OPPOSITE OF THE ACCESS TO THE SISTER PROPERTY ACROSS DORSEY RUN ROAD. TOTAL PARKING SPACES PROVIDED: 87 OF 11'X57' INDUSTRIAL SPACES. 54. REFERENCE ALTERNATIVE COMPLIANCE PETITION WP-21-058 APPROVED ON FEBRUARY 12, 2021; THE DIPERTONS OF THE DEPARTMENT OF PLANNING AND ZONING ADDROVED THE DEPUGEST TO WAKE SECTIONS.	-
16.156(o)(1)(i) TO ALLOW: 1) RE-ACTIVATION OF EXPIRED SDP-10-030.	HOWARL 3
APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: 1. THE PETITIONER SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS – REAL ESTATE SERVICES DIVISION TO EXECUTE THE DEVELOPERS AGREEMENTS FOR SDP-10-030 WITHIN 120 DAYS FROM THE APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION (ON OF BEFORE JUNE 12, 2021). THE STEE DEVELOPMENT PLANS FOR THE PROPOSED DEVELOPMENT OF PARCELS 108-A AND 108-B WILL NOT RECEIVE FINAL SIGNATURE APPROVAL UNTIL THE DEVELOPMENT FOR SOME FOR THE PROPOSED DEVELOPMENT OF PARCELS 108-A AND 108-B WILL NOT RECEIVE FINAL SIGNATURE APPROVAL UNTIL	
 IHE DEVELOPER AGREEMENTS FOR SDP-10-030 HAVE BEEN EXECUTED. THE PETITIONER SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS - REAL ESTATE SERVICES DIVISION TO ASSUME THE RESPONSIBILITIES OF THE SDP-10-030 FOREST CONSERVATION AGREEMENT WITHIN 120 DAYS FROM THE APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION (ON OR BEFORE JUNE 12, 2021). THE PETITIONER SHALL COMPLETE THE REQUIRED REFORESTATION PLANTINGS AND SIGNAGE AS APPROVED ON THE SDP-10-030 FOREST 	56. THIS PROJECT DIVISION DENII 1. HOW
CONSERVATION PLAN. 3. THE PETITIONER MUST APPLY TO THE DEPARTMENT OF INSPECTIONS, LICENSES & PERMITS FOR GRADING PERMITS TO INITIATE THE MASS-GRADING OF PARCELS 108-A AND 108-B WITHIN 1 YEAR FROM THE APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION (ON OR BEFORE FEBRUARY 12, 2022). 4. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE COLUMY AND STATE RECILIATIONS AND ORTAIN ALL NECESSARY DEDMITS FOR THE DEPARTMENT OF	2. HOW
INSPECTIONS, LICENSES AND PERMITS AND THE SOIL CONSERVATION DISTRICT. 5. REFERENCE GRADING PERMIT # G21000174.	THE DEVELOP HOWARE 1
	HOWARE 2
	57. IN ACCORDANC A NECESSARY
	FLBRUARY 11 NECESSARY D STORM DRAIN STORM DRAIN
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	FACILITY. THE FOR A STABLE AND HEADWAL NECESSARY TO
CHIEF, DEVELOPMENT DEFING DIVISION DATE	WITH THE ERC SUBJECT TO T
<u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>	
	A F
CHIEF, DIVISION OF LAND DEVELOPMENT DATE Docusigned by: 9/12/2022 Amy Gionan	REC A F 2. THE SED

7868 DORSEY RUN ROAD JESSUP, MARYLAND 20794



DISTURBED AREAS SHALL BE STABILIZED AND SEEDED IN ACCORDANCE WITH THE SDP-21-048 EROSION AND NIMENT CONTROL PLAN.

CENSUS TR.

601203

1ST

M-2

43

22

DEED REF:

18997/F 11

Rob Vogel

ROBERT A. STOCEL, PE No.161

RAL NOTES (CONT'D)	SWM	PRAC1	FICE	CHAR	T PA	R
ROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER ON FEBRUARY 23, 2022, THE CHIEF DEVELOPMENT ENGINEERING DIVISION APPROVED THE REQUEST TO WAIVE DESIGN	PRI	VATE ES	SD PR	ACTICE	S BY	LO
_ VOLUME I SECTIONS 5.2.5.A.2. 1. HOWARD COUNTY DESIGN MANUAL VOLUME I, SECTION 5.2.5.A.2 TO:	lot #		ESD	PRACTICE		
 REDUCE 25 FOOT MINIMUM DISTANCE FROM END OF OUTLET STRUCTURE OR RIP—RAP TO PROPERTY LINE TO 3 FEET. YAL IS SUBJECT TO THE FOLLOWING CONDITIONS: HOWARD COUNTY DESIGN MANUAL VOLUME I, SECTION 5.2.5.A.2: 1. – THE DIVISION ALONG WITH THE DEPARTMENT OF PUBLIC WORKS APPROVED THE 	PARCEL 108-A	TWO (2) ONE (1) TWO (2)	SURFACE MICRO-B STORM F	SAND FILTERS IORETENTION (M ILTERS	(F-1) -6)	
REQUEST BASED ON THE RELOCATION OF THE OUTFALL TOWARDS THE WETLANDS AND SOUTH OF THE FXISTING STORMWATER POND LOCATED ON THE ADJACENT			ADDRES	S CHART		
PROPERTY. THE APPROVAL IS SUBJECT TO AN APPROVAL FOR THE SUBDIVISION	LOT/PARCEL#		ę	STREET ADDRI	ESS	
REGULATION SECTION TO.ITO(C) FOR NECESSARY DISTURBANCE TO THE STREAM BUFFER.	PARCEL 108-A	7868 DC	DRSEY R	UN ROAD		
		PERM	IT INF	ORMATIO	N CHAI	RT
	SUBDIVI JESS	ISION NAME SUP PARK		SECTION N/	√/AREA ∕A	
	PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. [DIST.

SDP-21-048

SHEET 18

W.O. NO.: 04-76





					DDIME	SLUPE	
ESCRIPTION	GROUP	K-FACTOR	HYDRIC	INCLUSIONS	FARMLAND	W/ ERUSION POTENTIAL	
HAMMONTON SANDY LOAM, 2 TO 5 PERCENT	А	.15	NO	NO	NO	NO	
HAMMONTON SANDY LOAM, 5 TO 10 PERCENT	А	.15	NO	NO	NO	NO	
ID EVESBORO SOILS, 10 TO 15 PERCENT SLOPES	С	.32	NO	NO	NO	NO	
ND BELTSVILLE SOILS, 2 TO 5 PERCENT SLOPE	С	.28	NO	NO	YES	NO	
ND-FALLSINGTON COMPLEX, 0 TO 2 PERCENT SLOPE	D	-	YES	YES	NO	NO	
ND-SASSAFRAS-BELTSVILLE COMPLEX, PERCENT SLOPE	D	-	NO	NO	NO	NO	

R: THIS DI AN FOR FROSION AND SEDIME		** REFER TO GENERAL NOTE #57, NECESSARY DISTURBANCE APPRO STORM DRAIN OUTFALL WITHIN STREAM BANK BUFFER.**	SHEET 1 FOR OVAL OF THE STREAM
PRACTICAL AND WORKABLE PLAN BASED GE OF THE SITE CONDITIONS, AND THA CORDANCE WITH THE REQUIREMENTS C ION DISTRICT) ON MY PER- IT IT WAS DF THE HOWARD		
	TH	HIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EDIMENT CONTROL BY THE HOWARD SOIL CONSERV	EROSION AND ATION DISTRICT.
		Docusigned by: Olexander Bratchie	9/12/2022
	8/29/2022 _	HOWARD S.C.D.	DATE
ATURE OF ENGINEER	DATE		

PIPE OUTLET SEDIMENT TRAP ST-I, TRAP NO. 1				
DRAINAGE AREA - INITIAL	1.69	ACRES		
DRAINAGE AREA - INTERIM	1.15	ACRES		
DRAINAGE AREA - FINAL	1.15	ACRES		
TOTAL STORAGE REQUIRED	6068	CF		
TOTAL STORAGE PROVIDED	6626	CF		
WET STORAGE REQUIRED	3034	CF		
WET STORAGE PROVIDED	3465	CF		
DRY STORAGE REQUIRED	3034	CF		
DRY STORAGE PROVIDED	3161	CF		
TRAP BOTTOM ELEVATION	211.00	FT		
TRAP BOTTOM DIMENSIONS	44 X 78	FT x FT		
HDDD INVERT (WET STORAGE) ELEV.	212.50	FT		
RISER CREST (DRY STORAGE) ELEVATION	213.50	FT		
CLEANOUT ELEVATION	211.75	FT		
TOP OF EMBANKMENT ELEV.	216.00	FT		
SIDE SLOPE	3:1	H:V RATIO		
EMBANKMENT TOP WIDTH	10	FT		
SPILLWAY MATERIAL	RCP			
SPILLWAY (BARREL) DIAMETER	24	IN		
RISER MATERIAL	CONCRETE			
RISER DIMENSIONS (INSIDE)	4' X 4'	SQUARE		
TRASH RACK DIAMETER / HEIGHT	* N/A	IN		
ANTI-SEEP COLLAR DIMENSIONS	* N/A	FT		
OUTLET PROTECTION - LENGTH	* N/A	FT		
OUTLET PROTECTION - WIDTH	* N/A	FT		
OUTLET PROTECTION - DEPTH	* N/A	IN		
* SEE RISER DETAILS SHEET 10				



-FACTOR	HYDRIC	HYDRIC INCLUSIONS	PRIME FARMLAND	<15% SLOPE W/ EROSION POTENTIAL
.15	NO	NO	NO	NO
.15	NO	NO	NO	NO
.32	NO	NO	NO	NO
.28	NO	NO	YES	NO
-	YES	YES	NO	NO
_	NO	NO	NO	NO

	/ (((0.))		
1	1.15	PIPE OUTLET SEDIMENT TRAP (ST-1) / GABION INFLOW PROTECTION / GABION INLET PROTECTION	G-1-1 / D-3-2 9-7
2	1.28	PIPE OUTLET SEDIMENT TRAP (ST-1) / GABION INFLOW PROTECTION / GABION INLET PROTECTION	G-1-1 / D-3-2 9-7
3	0.49	SUPER SILT FENCE	E-3
4	0.16	STANDARD INLET PROTECTION	E-3
4A	0.11	AT GRADE INLET PROTECTION	E-9-2
* INCLUDES	AREA 4A		

2	OF THE HOWARD		
		THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EF SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVAT	Rosion and Tion district.
	8/29/2022	Docusigned by: Olexander Bratchie	9/12/2022
	DATE	HOWARD S.C.D.	DATE



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AND WANNED CLEARED IN THE HIELD. A WINNING OF TO HOOK NOTICE TO GO WOST DE GIVEN AT THE
A DRIAD TO THE START OF FARTH DISTURBANCE
B LIPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS BUT REFORE
B. BROCEEDING WITH ANY OTHER FARTH DISTURBANCE OR CRADING
PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER CRADING UNIT
D PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES OTHER BUILDING OR
GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED INTIL THIS INITIAL APPROVAL BY THE
INSPECTION ACENCY IS MADE OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED TO
ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN
ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS
PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR
SOIL FROSION AND SEDIMENT CONTROL. AND REVISIONS THERETO.
FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS
REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS DIKES
SWALES DITCHES PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3.1)
AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR
THOSE AREAS INDER ACTIVE CRADING
ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH
THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL FOR
TOPSOIL (SEC. $B-4-2$) PERMANENT SEEDING (SEC. $B-4-5$) TEMPORARY SEEDING (SEC. $B-4-4$) AND
MULCHING (SEC B-4-3) TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN
THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN INCEMENTAL STABILIZATION
(SEC B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUIT AND/OR FULL STOCKPUES
(SEC. $B = A = B$) IN EXCESS OF 20 FT MUST BE BENCHED WITH STABLE OUT FT ALL CONCENTRATED FLOW
(SEED STOPE STOP AND HIGH Y EPOTIDIE A DEAS SHALL DECENTES ON EXAMINATION MATTING (SEC D_4_6)
SILLE SLOFE, AND HIGHEL LAUDIDLE ANLAS SHALE INCLIVE SHALLIZATION WATHING (SLC. D=+=0).
CONDITION LINTUI PERMISSION FOR THEIR REMOVAL HAS BEEN ORTHINE FROM THE CID
STE ANALYSIS
TOTAL AREA OF SITE 4.81 ACRES
ARFA DISTURBED 3.15 ACRES
AREA TO BE ROOFED OR PAVED
AREA TO BE VEGETATIVELY STABILIZED <u>1.09</u> ACRES
TOTAL CUT <u>3,907</u> CU. YDS.*
TOTAL FILL <u>2.059</u> CU. YDS.*
NET <u>175</u> CU.YDS (CUT)*
OFFSITE WASTE/BORROW AREA LOCATION**
ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES
MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL
CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT.
A WRITIEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION
AND SHOULD INCLUDE:

A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE

HOWARD SOIL CONSERVATION DISTRICT (HSCD)

STANDARD SEDIMENT CONTROL NOTES

- INSPECTION DATE - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT) - NAME AND TITLE OF INSPECTOR - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION) BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES EVIDENCE OF SEDIMENT DISCHARGES IDENTIFICATION OF PLAN DEFICIENCIES IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE WAINTENANCE STATUS REQUIREMENTS CONTROLS COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS - MONITORING/SAMPLING MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER
- OTHER INSPECTION TIEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE). TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITES. RECIN. ON ONE CADDING LIMIT (MARCHER FOR DE 20 OF DE ORDING LIMIT) AT A TIME ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- UISTORGED AT A GIVEN TIME. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25'
- MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION. MILVINUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2 IN ELEVATION. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE): – USE I AND IP MARCH 1 – JUNE 15 – USE III AND IIIP OCTOBER 1 – APRIL 30 – USE IV MARCH 1 – MAY 31 A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.
- ESTIMATE ONLY; BASED ON USE OF MASS GRADED CONTOURS FROM SDP-10-030 AS "EXISTING". CONTRACTOR SHALL VERIFY QUANTITIES TO HIS OWN SATISFACTION.
- TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, WITH AN APPROVED AND ACTIVE GRADING PERMIT
 - B-4-4 STANDARDS AND CONSTRUCTION NOTES FOR TEMPORARY STABILIZATION
- DEFINITION TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

<u>CONDITIONS WHERE PRACTICE APPLIES</u> EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED. <u>CRITERIA</u>

SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE 8.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE 8.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN. 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY 3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

	HARDINESS Z SEED MIXTUR	FERTILIZER	LIME RATE			
NO	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	(10-20-20)	
1	COOL SEASON ANNUAL RYEGRASS OR EQUAL	40 LB / AC	3/1 TO 5/15 8/1 TO 10/15	1/2 IN.	436 LB/AC	2 TONS/AC
2	WARM SEASON FOXTAIL MILLET OR EQUAL	30 LB / AC	5/16 TO 7/31	1/2 IN.	1000 SF)	(90 LB PER 1000 SF)

B-4-8 STANDARDS AND CONSTRUCTION NOTES FOR STOCKPILE AREA

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. <u>PURPOSE</u>

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

<u>CRITERIA</u>

DEFINITION

- THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/

- WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/ SEDIMENT_CONTROL_PRACTICE_MUST_BE_USED TO INTERCEPT THE DISCHARGE.
- SECTIVELY CONTROL FRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

APPROVED: HOWARD C	OUNTY DEPARTMENT OF	PLANNING AND ZONING
	— Docusigned by: (HAD Edmoindson,	9/9/2022
CHIEF, DEVELOPMEN	TENGINEERING DIVISION	DATE
	- DocuSigned by:	9/9/2022
CHIEF, DIVISION OF	LAND 5 DEVELOPMENT	DATE
	DocuSigned by:	9/12/2022
DIRECTOR	Amy Olonan	DATE

R_4_5 STANDARDS AND CONSTRUCTION N	NOTES
	NUILS
FOR PERMANENT STABILIZATION	

DEFINITION TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA A SEED MIXTURES SEED MIXTURES I. GENERAL USE A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 8.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE 8.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN. B. 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, SEETION 342 - CRITICAL AREA PLANTING. C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES. USE AND SHOW THE RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES ECOMMENDED BY THE SOIL TESTING AGENCY. . FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) 3-1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT

SEEDING SUMMARY 2. TURFGRASS MIXTURES URFGRASS MIXTURES A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. B. SELECT 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. I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE 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 KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. I. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN

- KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE
- AREAS WHERE RAFID ESTABLISHMENT IS NECESSART AND WHEN TORF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. 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.
- TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED. CULIVAR'S MAY BL BILENDED. IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING DATE: 11/ TO A DOLING DED FOR COLOR FESCUE AND 60 TO 70 PERCENT.

SEEDING RATE: 11/6 TO 3 POUNDS PER 1000 SQUARE FEET NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED ECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC

- . IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES - WESTEM MD: MARCH 15 TO JUNE 1, AUGUST ITO OCTOBER 1 (HARDINESS ZONES: SB, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 SOUTHERM MD, EASTERN SHOKE: MARCH I'TO MAT IS, ADDRIVED TO COODER IS
 (HARDINESS ZONES: 7A, 7B)
 D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF
 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE
 STONES AND DEBRIS OVER 1¼ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN
 SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
 E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.
- SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER). GENERAL SPECIFICATIONS A. CLASS OF TURFORASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR INUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE OP CROWTH AND THATCH. BROKEN PADS AND TOM OR UNEVEN ENDS WILL NOT BE ACCEPTABLE. C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION. D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT XCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. D NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR
- SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOL SCIENTIST PRIOR TO ITS INSTALLATION. SOD INSTALLATION A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD. B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS. C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF NUCLEURG SOLUTION SOLUTION OF A CONTROL OF A
- HOURS. 3. SOD MAINTENANCE A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING. B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

PERMANENT SEEDING SUMMARY										
	HARDINESS Z SEED MIXTUR	ONE (FROM FIGUI E (FROM TABLE I	RE B.3): <u>ZONE</u> 3.3): <u>9</u>		LIME RATE					
10	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	Ν	P2 05	к ₂ 0			
1	COOL SEASON TALL FESCUE	T.F. 60 LB/AC	3/1 TO 5/15	1/4-1/2 IN.	45 LB/AC	90 LB/AC (2 LB PER	90 LB/AC (2 LB PER	2 TONS/AC		
BLUEGRASS OR EQUAL	K.B. 40 LB/AC	8/15 TO 10/15		1000 SF)	1000 SF)	1000 SF)	1000 SF)			

BY THE DEVELOPER:	BY THE ENGINEER:
 "I/WE CERTIFY THAT ALL DEVELOPEMENT 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." 	"I CERTIFY THAT THI REPRESENTS A PRAC SONAL KNOWLEDGE PREPARED IN ACCOF SOIL CONSERVATION
- Bocusigned by: 0F0FCD9A0SIGNATURE OF DEVELOPER DATE	Rob Vogel SAD20FBAF33B4CE SIGNATU

R-4-2 STANDARDS AND CONSTRUCTION NOTES FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

<u>DEFINITION</u> THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION. TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. CONDITIONS WHERE PRACTICE APPLIES WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

<u>CRITERIA</u> A. SOIL PREPARATION

TEMPORARY STABILIZATION
 A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

 B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 C. INCORPORATE LIME AND EFERTILIZED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING

INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER_SUITABLE MEANS. 2. PERMANENT STABILIZATION A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE: I. SOIL PH BETWEEN 6.0 AND 7.0.

PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD PLANIED, HEIN A SANDT SOIL (LESS THAN 30 PERCENT SILT PLOS CLAT) WOULD BE ACCEPTABLE.
 IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ADDR/F CONDITIONS

THE ABOVE CONDITIONS. C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO

5 INCHES.
 D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

I. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCEM HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-

B. TOPSOILING

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH. B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FLIRNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER. B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED. AS SPECIFIED. C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

 C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

 SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
 FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZERS MUST BE UNIFORM THE APPROPRIATE APPROVAL AUTHORITY.
 FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
 JUME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE

 . LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE. 4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSE OF HEAVY CLAYS, SPEED OF LIMESTONE AT THE PATE OF A TO 8 TONS (ACPE (200-400 POLINDS) SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

B-4-3 STANDARDS AND CONSTRUCTION NOTES FOR SEEDING AND MULCHING

DEFINITION THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION. CONDITIONS WHERE PRACTICE APPLIES TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE C<u>RITERIA</u> SEEDIN⊾ 1. NOTES

NOIES A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE. B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS THAWS. C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE. D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR OUTPOLS.

PR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS. 2. APPLICATION OF PHTTO-TOAID WATELINGLS.
2. APPLICATION
A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE 8.1, PERMANENT SEEDING TABLE 8.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING TABLE 0.1, PERMANENT SEEDING TABLE 8.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

- APPLT SEED IN TWO DIRECTIONS, PERFENDICULAR TO EACH OTHER. APPLT HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
 DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 LULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LETER ACK INCLUSION OF THE DEPENDENCE OF THE SEED IN SUCH A FASHION AS TO PROVIDE AT LETER ACK INCLUSION OF THE DEPENDENCE OF THE SEED IN SUCH A FASHION AS TO PROVIDE
- AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING. II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. . HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND
- I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN;
- P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING L. MULCH MATERIALS (IN ORDER OF PREFERENCE) A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, LYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED. USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM. 2. APPLICATION

- APPLICATION
 A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
 B. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
 C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 A. ANCHORING
- 3. ANCHORING A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE

LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD: I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR. II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. III. SYNTHETIC BINDERS SILCH AS ACPUIC DIP (ACRO_TACK) DCA_TO_PETROSET III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS STRICTLY PROHIBITE

IN STRUCT PROHIBITED. IN LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET

SEQUENCE OF CONSTRUCTION STAGE I - INITIAL CONDITION & DEMOLITION: SEE SHEET

- OBTAIN GRADING PERMIT. (1 DAY)
- DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO BEGINNING CONSTRUCTION (1 DAY)
- NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)
- STAKEOUT LIMITS OF DISTURBANCE. (3 DAYS) INSTALL STABILIZED CONSTRUCTION ENTRANCE, AS SHOWN HEREON. (1 DAY) CLEAR AND GRUB ONSITE AREA, INCLUDING REMOVAL OF ANY STRUCTURES, FOR THE INSTALLATION OF PERIMETER CONTROLS. (1 DAY)
- INSTALL PERIMETER SUPER SILT FENCE. 1 WEEK) UPON COMPLETION OF ABOVE, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CLEAR & GRUB INTERIOR OF SITE, INCLUDING DEMOLTION ITEMS ON SHEET 2. (3 DAYS) CONSTRUCT PIPE OUTLET SEDIMENT TRAP #1 AND ITS OUTFALL, FROM MH-1 TO R-1, AND PIPE OUTLET SEDIMENT TRAP #2 AND ITS OUTFALL, FROM EW-3 TO R-2, BEGINNING AT THE DOWNSTREAM END OF THE PIPE SYSTEM AND
- PROVIDE INLET PROTECTION AS SHOWN. INSTALL REMOVABLE PUMPING STATION AND FILTER BAG AT TRAP #1. GRADE AS NECESSARY FOR INSTALLATION OF TRAPS AND INSTALL LANDSCAPE WALLS ALONG NORTHERN AND SOUTHWESTERN PROPERTY LINES, AS SHOWN. ONCE COMPLETED AND APPROVED BY INSPECTOR, STABILIZE DISTURBED AREAS WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. SEE SHEETS 10 AND 11 FOR RISER DETAILS AND PROFILES, AND MAKE TEMPORARY MODIFICATIONS TO RISER AS SHOWN. (4 WEEKS) 10. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION
- CONTROLS SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS (1 DAY)

STAGE II – INTERIM CONDITION: SEE SHEET 4

NOTE: ONLY THAT PORTION OF SEWER AND STORM DRAIN WORK THAT CAN BE COMPLETED, BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY MAY BE EXCAVATED. (DAILY)

- 11. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, ROUGH GRADE SITE. BRING DRIVEWAYS AND PARKING AREAS TO COMPACTED SUBGRADE ELEVATION WHERE SHOWN. RELOCATED FIRE HYDRAINT AND 6" WATER, INSTALL STORM DRAIN, UNDERGROUND STORMWATER DETENTION FACILITIES, AND STORMFILTERS AS SHOWN ON SHEET 4, ALWAYS WORKING UP FROM DOWNSTREAM END. PLACE INLET PROTECTION WHERE SHOWN, INSTALL TEMPORARY PIPE DIVERSIONS AND TEMPORARILY BLOCK OPENINGS TO UNDERGROUND PIPES. (6 WEEKS). 12. INSTALL CURB AND GUTTER. AND STONE SUBBASE WHERE SHOWN ON SHEET 4.
- (4 WEEKS 13. STABILIZE DISTURBED AREAS WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. (1 DAY)

STAGE III - FINAL CONDITION: SEE SHEET 5

(1 WEEK)

- 14. ONCE MAJOR CONSTRUCTION IS COMPLETE AND SITE IS STABILIZED, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE TEMPORARY PIPES TO TRAPS, REMOVE BLOCKING AT INLETS, AND REMOVE TEMPORARY MODIFICATIONS FROM RISER STRUCTURES. CONVERT SEDIMENT TRAPS TO PERMANENT SURFACE SAND FILTER FACILITIES AND INSTALL MICRO-BIORETENTION FACILITY (M-6). PROTECT SWM FACILITIES FROM SEDIMENTATION WITH SILT FENCE OR
- 15. INSTALL SIDEWALK RAMPS, BASE COURSE PAVING, SURFACE PAVING, LANDSCAPING, STRIPING, LIGHTING AND SIGNAGE. (2 WEEKS)

PERIMETER DEVICES, SUPER SILT FENCE, TREE PROTECTION FENCE, ETC SHALL BE INSPECTED AND REPAIRED AS REQUIRED ON A DAILY BASIS.

- 16. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, COMPLETE ANY REMAINING FINE GRADING IN ACCORDANCE WITH STORMWATER MANAGEMENT CRITERIA. ADD TOPSOIL PER THE SPECIFICATIONS SHOWN HEREON, AND STABILIZE
- ANY REMAINING DISTURBED AREAS WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH (1 WEEK) 17. AFTER PERMISSION HAS BEEN GIVEN BY SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING PERIMETER CONTROLS AND STABILIZE THESE DISTURBED AREAS WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION

THIS PLAN FOR EROSION AND SEDIMENT CONTROL PRACTICAL AND WORKABLE PLAN BASED ON MY PER- SE OF THE SITE CONDITIONS, AND THAT IT WAS CORDANCE WITH THE REQUIREMENTS OF THE HOWARD ON DISTRICT		
	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL E SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVA	Rosion and Tion district.
8 / 20 / 20 22	DocuSigned by: Olexander Bratchie	9/12/2022
ATURE OF ENGINEER DATE	HOWARD S.C.D.	DATE







DIRECTOR



DATE

⁹⁷SIGNATURE OF DEVELOPER

Rob Vogel

DATE









	C
	<u> </u>
	PUMP DISCHARGE
	FLOW - 6
<u>cc</u>	NSTRUCTION
1.	TIGHTLY SEAL SI
2.	PLACE FILTER BASTRAW BALES) L STABILIZED AREA
3.	CONTROL PUMPIN WITH THE MANUF RATE.
4.	REMOVE AND PR AFTER BAG HAS FROM THE BAG OF THE WORK D REMOVAL OF TH
5.	USE NONWOVEN SLEEVE TO ACCO MANUFACTURED VALUES (MARV)
	GRAB TENSILE PUNCTURE FLOW RATE PERMITTIVITY (SE UV RESISTANCE APPARENT OPEN SEAM STRENGTH
6.	REPLACE FILTER CONNECTION BET DISPLACED.

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U.S.	DEPARTME
NATURAL	RESOURCES

GINEER:			
THAT THIS PLAN FOR EROSION AND SEDIMI S A PRACTICAL AND WORKABLE PLAN BASE WLEDGE OF THE SITE CONDITIONS, AND TH IN ACCORDANCE WITH THE REQUIREMENTS RVATION DISTRICT."	ENT CONTROL D ON MY PER- AT IT WAS OF THE HOWARD		
		THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL I SEDIMENT CONTROL BY THE HOWARD SOIL CONSERV.	EROSION AND ATION DISTRICT.
ned by:		Olexander Bratchie	9/12/2022
igel	8/29/2022	65648D5BA9B64C1	
SIGNATURE OF ENGINEER	DATE	HOWARD S.C.D.	DATE









SPECIFICATIONS: EXCAVATE AREA TO LINE AND GRADES AS SHOWN ON CONSTRUCTION DRAWINGS SUBGRADE TO BE FIRM AND UNDISTURBED AND COMPACTED TO 95% S.P.D. PLACE THE FIRST COURSE OF UNITS, MIN. THICKNESS - 6" (150mm)









DRAINAGE AREAS FOR STORM DRAINAGE							
AREA NO.	AREA (AC.)	C FACTOR	IMPERVIOUS %				
R-1	0.21	0.1900	0.00				
I-1	0.99	0.8414	95.93				
I-2	1.00	0.8449	96.41				
R-2	0.26	0.1273	0.04				
TR-1	0.10	0.7554	83.85				
I-3	0.06	0.1600	0.00				





						JESSUP	PARK	TRAILER	STORA	GE - ES	Dv CON	ΛΡυτΑ	TIONS			
	SITE DEVE	LOPMENT A	REA:	3.14	AC	136978	SF									
	TARGET P	2:		2.08	IN											
	SITE IMPE	RVIOUS:		65.05	PERCENT											
	SITE RV RE	QUIRED		0.6354					1074							
	SITE ESDV	REQUIRED:		15110	CF +/- (see 1	able 1)	SILE REV R	EQUIRED:	1374	L CT						
/max= 1/r rainfall=2 6"		(2 6x0 95xA	1/12													
Vrequired=2.09"		(2.070.557A	A)/12													
		(2.05/0.55/	/													
DRAINAGE AREA ID	% IMPERV	Rv	DA (SF)	DA (AC)			TARGET VOLUME	PROVIDED VOLUME (CF)	IMPERV AREA (SF)	IMPERV AREA (AC)	GREEN SPACE (AC)	FILTER AREA (SF)	RECHARGE PROVIDED	FOREBAY PROVIDED		
							(0.7						(0.7	(0.)	Surf	ace San
DA #1	79.11	0.7620	52203	1.20	3315	8619	6895	2359	41300	0.95	0.25	1940	590	349	2359	17
Surface Sand Filter															236	Р
(F-1)															349	*
								1061							1061	1769
								3315							3315	1" P
															590	1769
															Surf	ace San
DA #2	76.31	0.7368	55115	1.27	3384	8798	7039	4671	42057	0.97	0.30	3755	1168	576	4671	37
Surface Sand Filter															467	Pr
(F-1)															576	*
								2102							2102	3503
								3384							3384	1" P
															1168	3503
	53.10	0.5279	6729	0.15	296	770	616	724	3573	0.08	0.01	306	181	82		MICRO
DA #3															724	54
MBR															72	P
(M-6)															82	*
					-										181	543
τοταις	76.22	0 7260	114047	2.62	6005	10107	14540	16259	86020	2.00	0.56	NI/A	1020			*500 51
TUTALS	70.22	0.7500	114047	2.02	0995	10107	14349	10238	80930	2.00	0.50	N/A	1939			Pre-tr
Note: Pe of 1 inch FSI	Dy to be n	rovided in	nronose	d Storm I	Liltors SE_1	and SE_2 nri	or to ent	I or in the sur	face sand	filtors fac	ilitios					The th
Note. Pe of I mich Loi					$\frac{1}{2} \left(2 \left(\frac{1}{2} \right) \right)$	anu 37-2 pri										
DA #2 Exceeds Max v	olume pro	ovided. Or	niy the m	lax volum	e (2.6 pe) na	as been cree	aitea in ti	ne volume p	rovided to	otal.						
OPERATION A FOR PRIVATE SURFACE STOR	<u>ND MAII</u> LY OW MWATE <u>F-1 A</u>	NTAINA NED AN R FILTF ND F-2	<u>NCE S</u> ID MAI RATIOI	<u>CHEDU</u> NTAINE N SYST	JLE ED EMS				, (1 ⊤	APPENI CONST . material he allowai	DIX B.3. RUCTIO specificatic ble material	IN SPE	CIFICAT	TIONS F	OR SA rea are	ND I detailei
THE STORMWATER WETLAN AFTER MAJOR STORMS. IN WEATHER TO DETERMINE THE TOP AND SIDE SLOP	ND FACILITY NSPECTIONS IF THE FACII	SHALL BE IN SHALL BE P LITY IS FUNC	NSPECTED PERFORMED CTIONING P T SHALL P	ANNUALLY A DURING W ROPERLY.	AND ET				T S P W T	HE SOIL SH UBSTANCES PLANTING OF VEEDS AS S HE PLANTIN	IALL BE A U SHALL BE M MAINTENANG PECIFIED UN G SOIL SHAL	NIFORM MI MIXED OR CE OPERAT DER COMA LL BE TEST	X, FREE OF DUMPED WITH ONS. THE R 15.08.01.0 ED AND SHA	STONES, STU HIN THE BIOF PLANTING SC 5. LL MEET THE	IMPS, ROC RETENTION VIL SHALL E FOLLOWI	DTS OR AREA 1 BE FRE ING CRI1
MINIMUM OF ONCE PER ` OR AS NEEDED. FILTERS THAT HAVE A GR	YEAR, WHEN	SHALL BE N	REACHES	18" IN HEI	GHT					PH RANGE ORGANIC MA MAGNESIUM PHOSPHORL POTASSIUM SOLUBLE SA	5.2 – 7. NTER 1.5 35 LB./ S (PHOSPHA (POTASH 0) NLTS NIT	.U 3% (B14 WE10 AC .T205) 175 K85 LB./A TO EXCEE	GHT) LB./AC C D 500 PPM			
HEIGHT OF LESS THAN 1 DEBRIS AND LITTER SHAL	2 INCHES.	ED DURING	REGULAR	MOWING					A A T	ILL BIORETE ND POTASS HE TOP SO	NTION AREAS IUM AND ADE IL WAS EXCA	SHALL HA DITIONAL TE VATED.	AVE A MINIMU EST OF ORGA	IM OF ONE ⁻ NIC MATTER,	TEST. EA AND SOL	.CH TEST .UBLE S,
VISIBLE SIGNS OF EROSIC AS IT IS NOTICED.	DED. On in the f	ACILITY SHAL	LL BE REP	AIRED AS S	SOON				S	SINCE DIFFE	RENT LAB CA PH FALL O	ALIBRATE TI UT OF THE	HEIR TESTING ACCEPTABLE	EQUIPMENT E RANGE, IT	DIFFEREN MAY BE N	ITLY, AL MODIFIE[

REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.

A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.

THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA

ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM 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 (M-6), (M-7) AND (M-8) MICROBIORETENTION AREAS

ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER

S 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 YEARS. 4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

MICROBIORETENTION AND RAINGARDEN NOTES:

. ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETNTION WILL CAUSE THE MBR TO FAIL, AND THERFORE SHALL NOT BE INSTALLED

2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.

3. PROVIDE 5' MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFERATED PIPE THROUGH STONE RESIVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

NOTE:

50% OF MICRO-BIORETENTION AND RAIN GARDEN SURFACE AREA SHALL BE PLANTED.

APPROVED: HOWARD	COUNTY DEPARTMENT OF	PLANNING AND ZONING
	—Docusigned by: (HAD Edmondson	9/9/2022
CHIEF. DEVELOPME	T DENGINEERING DIVISION	DATE
	M	9/9/2022
CHIEF, DIVISION OF	LAND DEVELOPMENT	DATE
	DocuSigned by:	9/12/2022
	Any Gonan	
DIRECTOR	5B4D5DD9470C4D4	DATE

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION AREA AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE HOES TO REMOVE ORIGINAL SOIL. IF BIORETENTION AREAS ARE EXCAVATED USING LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRE. 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 ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS 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

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENION FACILITY BEFORE BACKFILLING THE REQUIRED SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL 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.

MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED HARDWOOD MUCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILD FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE. ROOT STOCK 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. 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 PLNTING 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, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS OF NITROGEN

UNDERDRAINS ARE TO BE PLACED ON A 3'-O" WIDE SECTION FILTER CLOTH. PIPE IS PLACED NEXT, FOLLOWED BY THE GRAVEL BEDDING. THE ENDS OF UNDERDRAIN PIPES NOT TERMINATING IN AN OBSERVATION WELL SHALL BE CAPPED. THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELL AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

OPERATION AND MAINTAINANCE SCHEDUL FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTE (F-1 AND F-2

- 1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- 2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED
- 3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
- 4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- 5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- 6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY. 7. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE
- 8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH
- 9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE
- 10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM 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.

Designed by:	gah		
Date:	11/11/21		
Checked by:	RHV		
Date:			
REMAR	KS		
ld Filter	(F-1)		
69 SF SSF FILTER AREA	@ 1' PONDING		
Pre-treatment Required	2359	х	0.1
Pre-treatment Provided	ł		
9 SF SSF @ 1.5' FIL	TER 1.5	Х	0.4
e Treated by Storm Filt	er		
9 SF SSF Rev Recha	arge 0.83	х	0.4
nd Filter	(F-1)		
'55 SF SSF @ 1' PONDI	NG		
re-treatment Required	4671	х	0.1
Pre-treatment Provide	d		
3 SF SSF @ 1.5' FIL	TER 1.5	Х	0.4
e Treated by Storm Filt	er		
B Rev Recharge	0.83	х	0.4
O-BIORETENTION	(M-6)		
43 SF MBR @ 1.0 PON	DING		
Pre-treatment Required	724	х	0.1
Pre-treatment Provided	k		
Rev Recharge	0.83	х	0.4
tage-Storage Comput	ations		
reatment included in	ESDv		



								MBR	DATA CHART				
SWM acility #	Facility Type	Ponding Depth (ft.)	Ponding/ Grate Elevation ELEV. A	Top of Mulch ELEV. B	Bottom of Mulch ELEV. C	Bottom of Plant Mix ELEV. D	Bottom of 4" Sand/Pea gravel Layer ELEV. E	Depth of Stone (Esdv) (ft.)	Bottom of Stone (ESDv) ELEV. F	Depth of Additional Stone (Esdv) (ft.)	Bottom of Additional Stone (ESDv) ELEV. G	Invert of 6" Underdrain INV. ELEV.	D Sto
3	MBR (M-6)	1.00	225.50	224.50	224.25	222.25	221.92	1.00	220.92	0.00	N/A	221.17	
*Refer to Micro-Bioretention Details													

FILTERS, BIORETENTION AND OPEN CHANNELS

ED IN TABLE B.3.2.

OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE REE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS TERIA:

SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, PHOSPHORUS, ALTS. A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE

TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. (HIGHER) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR.

RECOMMENDED PLANT MATERIAL FOR BIORETENTION AREAS CAN BE FOUND IN APPENDIX A, SECTION A.2.3. OF THE 2000 MARYLAND STORMWATER DESIGN MANUAL.

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MS

NOTES:

1. A GEOTECHNICAL ENGINEER IS TO BE PRESENT ON-SITE TO SUPERVISE THE CONSTRUCTION OF THE IMPERVIOUS CORE / CUTOFF TRENCH, PER MD-378 SPECIFICATIONS. CORE MATERIAL SHALL BE DEWATER PRIOR TO PLACEMENT OF COUNTY APPROVED FILL MATERIAL. THE SITE SHALL BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OF STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOF-ROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE. FOR AREAS THAT ARE NOT ACCESSIBLE TO A DUMP TRUCK, EXPOSED MATERIAL SHALL BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVE SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOF ROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLY FIRM SOIL AND THEN REESTABLISHED BY BACKFILLING WITH SUITABLE SOIL. 4. REFER TO GEOTECHNICAL RECOMMENDATIONS SHEET



NOTE: THIS PLAN IS FOR PURPOSES OF STORMWATER QUANTITY MANAGEMENT CALCULATIONS ONLY. THE ORIGINAL, PRE-MASS-GRADED CONTOURS AND COVER CONDITIONS ARE SHOWN FOR PURPOSES OF STORMWATER MANAGMENT MODELING. NOT FOR CONSTRUCTION.

STORMWATER MANAGMENT SUMMARY CHART					
CONDITION	Q2 (CFS)	Q10 (CFS)	Q100 (CFS)		
PRE-DEVELOPED CONDITION	2.04	6.40	18.15		
DEVELOPED CONDITION (UNMANAGED)	9.92	17.01	31.93		
DEVELOPED CONDITION (MANAGED)	2.2	6.2	15.9		
DDITIONAL SWM QUANITITY VOLUME PROVIDE	D IN SWM	FACILITY	#1 AND #2		

TO OFFSET UNMANAGED AREAS SWM #3 AND BYPASS AREA #4. SWM #3 PROVIDES ESDV ONLY.

VOLUME SUMMARY CHART					
DESCRIPTION	TOTAL REQUIRED (CU. FT.)	SWM #1 PROVIDED (CU. FT.)	SWM #2 PROVIDED (CU. FT.)	SWM #3 PROVIDED (CU. FT.)	TOTAL PROVIDED (CU. FT.)
ESDv STORAGE	15,110	6,735	**8,798	724	16,258
*100 YEAR STORAGE	20,466	10,518	11,806	0	22,324

*STORAGE VOLUME PROVIDED IS CALCULATED TO TOP OF EMERGENCY SPILLWAY CREST. **ACTUAL ESDV PROVIDED EXCEEDS THE MAX 2.6 PE. ONLY THE MAX IS CREDITED TOWARD TOTAL ESDV PROVIDED.

MAPPED SOILS TYPES - SAVAGE MAP #25						DDIME	<15% SLOPE
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	HYDRIC	INCLUSIONS	FARMLAND	POTENTIAL
DhB	DOWNER-HAMMONTON SANDY LOAM, 2 TO 5 PERCENT	А	.17	NO	NO	NO	NO
DhC	DOWNER-HAMMONTON SANDY LOAM, 5 TO 10 PERCENT	А	.17	NO	NO	NO	NO
CrD	CROOM AND EVESBORO SOILS, 10 TO 15 PERCENT SLOPES	С	.37	NO	NO	NO	YES
RuB	RUSSET AND BELTSVILLE SOILS, 2 TO 5 PERCENT SLOPE	С	.43	NO	NO	YES	NO
UfA	URBAN LAND-FALLSINGTON COMPLEX, 0 TO 2 PERCENT SLOPE	D	.28	YES	YES	NO	NO
UsD	URBAN LAND–SASSAFRAS–BELTSVILLE COMPLEX, 5 TO 15 PERCENT SLOPE	D	-	NO	NO	NO	NO
TAKEN F	FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY						

NOTE

HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

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WLS LIGHTING SYSTEMS	Type: CLA SERIES LED AREA SPECIFICATIONS	MOTES: 1. DETAIL SHOWN IS CONCEPT FOR ILLUSTRATION ONLY. FINAL PLAN BY OTHERS. DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH CURRENT IBC, PROLECT SPECS, OSHA, AND LOCAL CODES. 2. SITE GEOMETRY SHOWN IS BASED ON THE CML GRADING PLAN AND HCEA WALL PLAN DATED 11/2021. VERIFY CRITICAL DIMENSIONS. RESOLVE DISCREPANCY BEFORE PROCEEDING. 3. NOTIFY MISS UTILITY PRIOR TO SUBSURFACE CONSTRUCTION. 4. HCEA RECOMMENDS A PRE-CONSTRUCTION SURVEY OF THE SURROLINDINGS PRIOR TO CONSTRUCTION TO DOCUMENT EXISTING CONDITIONS. MONTOR SCE AND ADJUSCENT FEATURES DECIMARY
	 APPLICATION - The CLA Series of high output LED luminaries are designed for new outdoor parking area lighting and to be a replacement for HID area lights. They are optimal for lighting applications where long life, low maintenance and consistent color rendering is required. The high efficient/limen output allows the fixture to be used for parking, restaurant, quick service, shopping centers or general area lighting applications CONSTRUCTION - The hewy-duty housing is constructed of cast aluminum with heat dissipating fins. The optical assemblies are sealed in place using a silicone gasket for weather tight protection. ETL listed for wet locations (IP65). Each fixture can accommodate advanced wireless control, management and reporting systems for outdoor lighting when ordered with the optional accessories (verify compatibility if using controls supplied by others) such as CLTARM mounting (required). FINISH - A corrosion-resistant epoxy E-Coat layer that forms a uniform and all-encompassing protective barrier is applied to the fixtures and Witeo Coate and the protection accommodate advanced wine point a super durable powder coat finish. Standard colors available: Black, Bronze, US Green and Witeo Coate and where Coate and Coate and where Coate and where	MUNITING CONSTRUCTION. FAVOREN FUELORE DURING CONSTRUCTION. FAVORITIES REGULARE TAKE ACTION TO PREVENT FURTHER DISTRESS (BACKFILL OR SIM). OFTANIE EXEMPTION EXEMPTION EXEMPTION FOR PROCEEDING IN A SAFE MANNER. COMMERCIAL ELO.D. FENCE FENCE CODE 230 # SHOWN
Dimensions shown for 5L - 20L Drick Un 1	 OPTICAL SYSTEM Made with state of the art UV stabilized acrylic high performance retractive optical assemblies that use high transmissivity materials to achieve precise photometric distributions. Available in Type II, III, N, N Automotive, Automotive Frontine Wide, IV Tennis, V Medium and V Wide Bearn configurations. Star Light friendly (meets or exceeds Dark Sky requirements) in the horizontal position. ELECTRICAL SYSTEM - Available in up to a 70,000 LED lumens in most optical distributions with either 5000K Cool White (44-500K, 1000K Neutral White or 3000K Warm White color temperatures. LED's rated for over 00,000 hours at 25°C ambient temperature. Available with 120-277 50/60 Hz power supply, 480V and 347V input option available. 0-10V dimming, Built-in surge protection up to 10 kV. Built-in Active PEC Function II FD driver conforms to UI 8780 standards. MOUNTING - Proprietary slide on mounting system allows torquick installation. The CI A can be ordered with an aesthetically plexing arm mount (CLARAWA - required for integrated dynamic control systems), a 2° adjustable slip filter (CLA2AF) for mounting on a standard 2-376° OD tenon and an entire compliment of pole brackets with integrated quick mount technology, CLASM for direct mounting to poles in single (1(890°) or D180 (26: 180°). LISTINGS - Complies with UL8750. ETL listed for wet locations. Meets US and Canadian safety standards40°C to 50°C ambient operation. RoHS Compliant. WABBANTY - The complete luminaire is covered by a 5-year limited warranty. 	UNINFROVED GROUND V.I.F. 228- 226- 224- BOREHOLE 222- 220- TMBER. LAGGING TYPICAL SECTION PILE AND LAGGING TEMPORARY SUPPORT OF EXCAVATION REMOVET OWN. JUPPORT
Dimensions shown for 25 40. Back Just	FIXTURE WEIGHTS (APPROXIMATE) 2 BF CK 4 BRICK 5 BFICK Weight (Ibs) 12 bs 20 lbr 28 lbs	NOTE: THE ACTUAL MEANS AND METHODS FOR A DETERMINED BY THE CONTRACTOR AND I
Dimensions shown for 45L - 70_ Gick Jnit 23.55	Project Name:	
ONE-PIECE RTPT N - 2-3/8" (60mm) O.D. x 4-3/4" (121mm) Tenon	Type: STATS SERRIES ROUND TAPERED STEEL POLE SPECIFICATIONS POLE Shaff is electro-welded ASTM-A595 Grade A steel tubing with a minimum yield strength of 55,000 PSI. On Enon Mount steel poles, tenon is 2-3/8° O.D. high-strength pipe. Tenon is 4-3/4" in length. HAD-HOLE	
20'-39' (6.1m - 11.9m) Hand-hole Optional Base (305mm)	 Standard hand-hole location is 12" above pole base. Hand-hole size is 4" x 6" and reinforced. BASE Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 PSI. Two-piece square base cover is optional. ANCHOR BOLTS Steel Round Tapered poles of 11 gauge material are furnished with anchor bolts featuring zinc-plated double nuts and washeers. Galvanized anchor bolts are optional. Poles of 7 gauge material are furnished with galvanized anchor bolts as a standard. Anchor bolts conform to ASTM F 15454-07a Grade 55 with a minimum yield strength of 55,000 PSI. GROUND LUG Ground lug is standard. DUPLEX RECEPTACLE Weatherproof duplex receptacle is optional. GROUND FAULT CIRCUT INTERRUPTER Self-testing ground fault circuit interrupter is optional. 	
RPB3, RPB5 - Bolt-On Mount, 2-Bolt Pattern Pole Preparation	 Every pole is provided with the DuraGrip* Protection System and a 5-year limited warranty Each shaft is purchased to a stricter straightness tolerance than specified on industry material standards. Shafts with dents, dings, or patterns on the exterior surface are rejected. Shafts are stored indoors to prevent corrosion. After connecting holes are cut and hand holes and baseplates are welded to the shaft, each pole undergoes a thorough shot-peening process, resulting in a near-white surface. This procedure removes all dirt and scale and strengthens the surface of the steel by inducing a compressive residual stress that helps prevent cracking and extend the life of the pole. After shot-peening, a neutral wash is applied followed by the application of a zirconium treatment that improves powder-coat adhesion and protects from corrosion. Next, each pole is coated through electrostatic application of a polyester powder paint in standard WLS bronze or the color approved by the customer. Paint thickness is measured in multiple locations along the pole to ensure specification Adherence. Finally, the pole is oven baked to form a homogeneous, non-porous surface and wrapped for shipment in a woven fabric sleeve to protect the finish during transit. When the top-of-the-line DuraGrip* Plus Protection System is selected, in addition to the DuraGrip* Protection System, a non-porous, automotive-grade corrosion coating is applied to the lower portion of the pole interior, sealing and further protecting it from corrosion. This option extends the limited warranty to 7 years. 	
	SHIPPING WEIGHTS - Round Steel Tapered Poles ONE-PIECE SHJET 20' (6.1m) 511 Ga. is approximately 137 lbs. (62kg) 20' (6.1m) 5.80° (147mm)O.D. 3.0° (76mm)O.D. 22' (6.7m) 511 Ga. is approximately 165 lbs. (75kg) 20' (6.1m) 5.80° (147mm)O.D. 3.0° (76mm)O.D. 25' (7.6m) 511 Ga. is approximately 129 lbs. (99kg) 20' (6.1m) 5.80° (147mm)O.D. 3.52° (89mm) O.D. 27' (8.2m) 511 Ga. is approximately 219 lbs. (99kg) 25' (7.6m) 6.60° (168mm)O.D. 3.10° (79mm)O.D. 30' (9.1m) 511 Ga. is approximately 234 lbs. (106kg) 27' (8.2m) 7.50° (191mm)O.D. 3.72° (94mm)O.D. 32' (9.7m) 511 Ga. is approximately 286 lbs. (130kg) 30' (9.1m) 7.50° (191mm)O.D. 3.30° (84mm)O.D. 35' (10.7m) 511 Ga. is approximately 310 lbs. (141kg) 32' (9.7m) 8.50° (216mm)O.D. 4.02° (102mm)O.D. 39' (11.9m) 507 Ga. is approximately 527 lbs. (239kg) 35' (10.7m) 8.50° (216mm)O.D. 3.64° (90mm)O.D. 39' (11.9m) 507 Ga. is approximately 521 lbs. (29kg)/set 39' (11.9m) 9.00° (229mm)O.D. 3.54° (90mm)O.D. 39' (11.9m) 507 Ga. is approximately 521 lbs. (29kg)/set	
WLS LIGHTING 1919 Windsor Place Fort Worth, TX 76110 800.633.8711 www.wlslighting.com 1919 Windsor Place	Project Name:	
AFFRUVED: HUWARD COUNTY DEPAR	9/9/2022	
CHIEF, DEVELOPMENT ENGINEERING Docusigned by: CHIEF, DIVISION OF LAND DEVELOI	S DIVISION DATE 9/9/2022 PMENT DATE	
Director Stars Stars Stars	9/12/2022 DATE	

ANY REQUIRED SHEETING AND SHORING TO BE PROJECT GEOTECHNICAL ENGINEER IN THE FIELD.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.

- D. GEOGRID REINFORCEMENTS SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTHS AND PLACED SIDE-BY-SIDE TO PROVIDE 100% COVERAGE AT EACH LEVEL SPLICED CONNECTIONS BETWEEN SHORTER PIECES OF GEOGRID OR GAPS GREATER THAN 2 INCHES BETWEEN ADJACENT PIECES OF GEOGRID ARE NOT PERMITTED.
- A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEOGRID AND INSTALLATION DAMAGE TO GEOGRID.
- B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND OPERATED COMPACTION EQUIPMENT IS USED, OR 8 - 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY
- C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE +
- D. ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE
- E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEOGRID REINFORCEMENT A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TRACKED VEHICLE TURNING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING OR DISPLACING THE SEGMENTAL CONCRETE UNITS OR GEOGRID.
- REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND TURNING SHALL BE AVOIDED.
- G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE
- 3.06 CAP INSTALLATION
- SOIL AND ANY OTHER MATERIAL.

- DURING CONSTRUCTION.
- SPECIFICATIONS.

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12/2/21

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TRAIL 7 5 GRID 22 20 DISTRICT	ER PARKING AND ST 868 DORSEY RUN RO JESSUP, MD 20794 L. 18997 / F. 00119	ORAGE AD ZONED: M-2 PARCEL 108-A HOWARD COUNTY, MARYLAND
HII ENG 10975 Gui Phone: (41	LLIS-CARN INEERING ASSOC Iford Road, Suite A Annapolis Junct 10) 880-4788 www.hcea.com Fax: (4	JES CIATES ion, Maryland 10) 880-4098
	DESIGN BY: <u>JE/AM</u> DRAWN BY: <u>AM</u> CHECKED BY: <u>HM</u>	PROFESSIONAL CERTIFICATE 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. 14808 EXPIRATION DATE: 02-27-2022
1488/25/2022 STE DIGULINU NAL DIGULINU D. Hill C., PE No. 14808	DATE: <u>NOVEMBER, 2021</u> SCALE: <u>AS SHOWN</u> HCEA NO.: <u>21101B</u>	

ADDED NOTE FOR SUPPORT OF EXCAVATION

NEW TITLE BLOCK

ADDED STATION LOCATIONS FOR ELEVATIONS

REVISION

SITE DEVELOPMENT PLAN

RETAINING WALL

ELEVATION AND NOTES

JESSUP PARK PARCEL 108-A

A. PRIOR TO PLACEMENT OF CAP UNITS, THE UPPER SURFACE OF THE TOP COURSE WALL UNITS SHALL BE CLEANED OF B. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER EXTERIOR CONSTRUCTION ADHESIVE

RECOMMENDED BY THE MANUFACTURER.

A. THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES, TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES

B. AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, RETAINED SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN

PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND

> **OWNER/DEVELOPER** TEAM DORSEY, LLC C/O ERIC ROSENBAUM 2308 FORT WILLIAM DRIVE OLNEY, MD 20832 (301) 787-0220

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