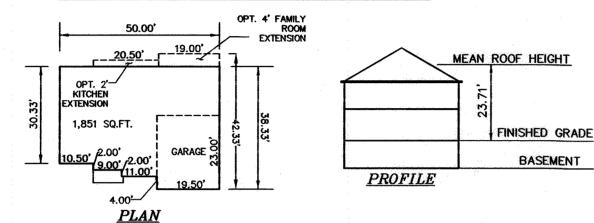
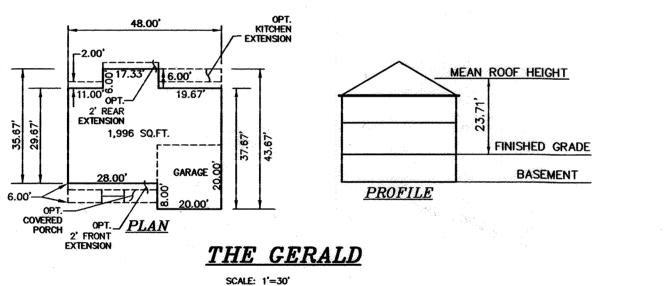
	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	<del></del>	
LOT NO.	DRY WELLS M-5 (NUMBER)	MICRO- BIORETENTION M-6 (NUMBER)	GRASS- SWALE M-8 (Y/N)
1	4		N
2	4	_	N
3	4	1	N
4	4	_	N
UIC DRIVEWAY	_	3	Y



THE THOMAS SCALE: 1'=30'



MEAN ROOF HEIGHT FINISHED GRADE

THE WYATT

SCALE: 1"=30"

	EMENT		
PROFILE	HOUSE T	YPE SELECTION	<u>CHART</u>
GENERIC BOX	THE THOMAS	THE GERALD	THE WYATT
$\boldsymbol{A}$	ALL OPTIONS	ALL OPTIONS	ALL OPTIONS
В	ALL OPTIONS	ALL OPTIONS	DOES NOT FIT

GARAGE

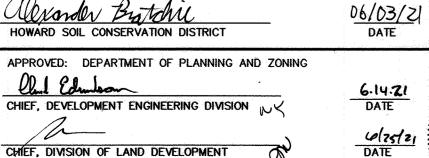
GENERIC BOX 'A'

SCALE: 1"=30"

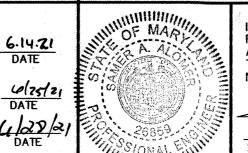
DEVELOPERS CERTIFICATE  I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON—SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
SIGNATURE OF DEVELOPER S-27-21  DATE
PRINTED NAME OF DEVELOPER
ENGINEER'S CERTIFICATE  I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL

FRINTED NAME OF DEVELOPER	i i i i i i i i i i i i i i i i i i i
ENGINEER'S CERTIFICAT	<b>E</b>
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIM REPRESENTS A PRACTICAL AND WORKABLE PLAN BAKNOWLEDGE OF THE SITE CONDITIONS AND THAT IT VACCORDANCE WITH THE REQUIREMENTS OF THE HOWADISTRICT.	ENT CONTROL SED ON MY PERSONAL WAS PREPARED IN
	08/30/2020
SIGNATURE OF ENGINEER	DATE
SAMER A. ALOMER P.E.	

PRINTED NAME OF ENGINEER THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT



An Cono



NOTES:

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. 26859, EXP. DATE 08/08/21.

SAMER A. ALOMER, P.E

1. HOUSE AREA SHOWN INCLUDES ALL OPTIONS.

OWNER/DEVELOPER THOMAS O'NEILL GERARD O'NEILL 5239 KERGER ROAD ELLICOTT CITY, MD 21043 410-292-4831

GARAGE

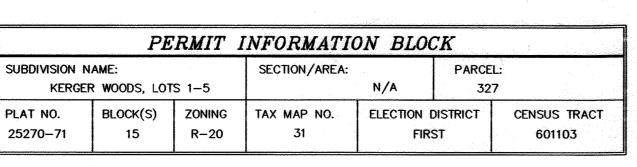
GENERIC BOX 'B'

SCALE: 1"=30'

WITH THEIR CHOSEN OPTIONS EXCEED 2,200 SQUARE FEET, THE STORMWATER

2. IF THE FOOTPRINT AREA OF ANY OF THE SELECTED HOUSE MODELS

MANAGEMENT FOR THAT PARTICULAR LOT WILL BE REDESIGNED.



ISO SA FT VI

1,973 SQ.FT

DEVONSHIRE TRAPITIONAL LOT#4

ALL MODELS, ALL

OPTIONS, NO SIDE

GENERIC BOX 'C'

LOAD GARAGE

F166"4

1,963 SR.FT

186 SQ. FT.

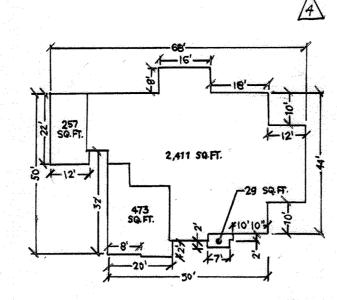
GARAGE

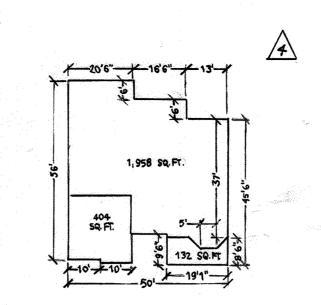
12'7"

**← 16' →** 

GARAGE

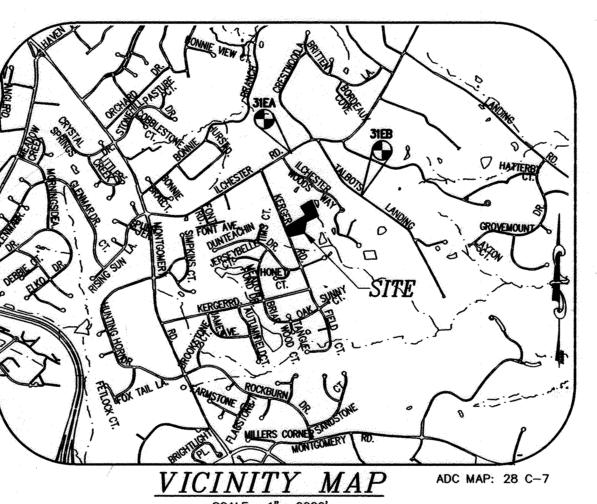
840 SQ.FT

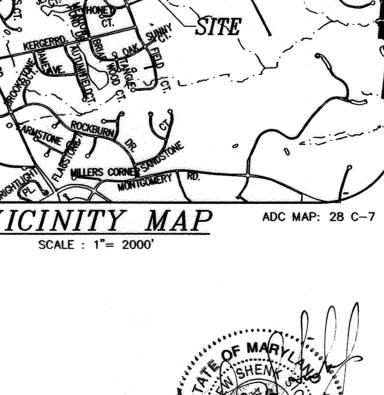


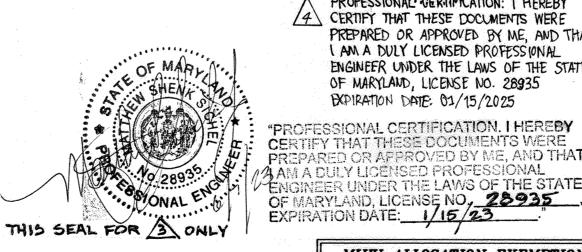


# SITE DEVELOPMENT PLAN KERGER WOODS

LOTS 1 THRU 4 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND







PROFESSIONAL GERTIFICATION: I HEREBY 4 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. 28935 EXPIRATION DATE: 01/15/2025 PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT AM A DULY LICENSED PROFESSIONAL

MIHU ALLOCATION EXEMPTION	TRACKING
TOTAL NUMBER OF LOTS/UNITS	4
NUMBER OF MIHU REQUIRED	0
NUMBER OF MIHU PROVIDED ONSITE (EXEMPT FROM APFO ALLOCATIONS)	0
NUMBER OF APFO ALLOCATION REQUIRED (REMAINING LOTS/UNITS)	0
MIHU FEE-IN-LIEU (INDICATED LOT/UNIT NUMBERS	1-4

LOTS 1-4 IN THIS PROJECT ARE SUBJECT TO THE MODERATE INCOME HOUSING UNIT (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.

**GENERAL NOTES:** 

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.

3. SITE ANALYSIS DATA: LOCATION: TAX MAP: 31 PARCEL: 327 GRID: 15 **ELECTION DISTRICT: FIRST** 

PROPOSED USE FOR SITE: RESIDENTIAL

ZONING: R-20 TOTAL TRACT AREA: 3.60 AC.± AREA OF PLAN SUBMISSION (LOTS 1-4): 3.60 AC.± LIMIT OF DISTURBANCE: 1.47 AC.±

TOTAL NUMBER OF UNITS: 4 TYPE OF PROPOSED UNITS: SFD NUMBER OF REQUIRED PARKING SPACES: 4 UNITS x 2.5 SPACES = 10 SPACES NUMBER OF PARKING SPACES PROVIDED: 4 SPACES PER UNIT; 4x4 = 16 SPACES

DPZ FILE NUMBERS: F-19-053, ECP-19-001, WP-19-028 4. PROJECT BOUNDARY IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON

OR ABOUT MAY 2018 BY MILDENBERG, BOENDER & ASSOC., INC. HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND STATE PLANE COORDINATE

SYSTEM AS PROJECTED FROM HOWARD COUNTY CONTROL STATIONS NO. 31EA & 31EB STA. No. 31EA EL. 468.877 N 569,641.138 E 1,374,816.086

STA. No. 31EB EL. 452.657 N 568,730.995 E 1,376,273.635 6. EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY, WITH MAXIMUM TWO FOOT CONTOUR INTERVALS, PERFORMED ON OR ABOUT MAY, 2018 BY MILDENBERG, BOENDER & ASSOC., INC.

7. NO CEMETERIES EXIST ON SITE. 8. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.

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

ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:

A) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE). SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP

C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. OF 45 FOOT

D) STRUCTURES (CULVERT/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS

E) 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.

11. FOREST CONSERVATION OBLIGATION REQUIREMENTS FOR THIS PROJECT HAVE BEEN PROVIDED VIA PAYMENT OF FEE-IN-LIEU IN THE AMOUNT OF \$19,602 FOR THE REQUIRED 0.6 ACRES (26,136 SQ. FT.) OF AFFORESTATION UNDER F-19-053.

12. LANDSCAPING FOR LOTS 1 THRU 4 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF \$17,850 (34 SHADE TREES, 51 EVERGREENS) FOR THE REQUIRED LANDSCAPING WILL BE PROVIDED WITH THE GRADING PERMIT APPLICATION.

13. 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

14. 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.

15. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S

16. 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 TO THE PIPESTEM LOT DRIVEWAY.

17. STORMWATER MANAGEMENT REQUIREMENTS WILL BE SATISFIED VIA MICRO-BIORETENTION FACILITIES AND DRY WELLS AND WILL BE PRIVATELY OWNED AND MAINTAINED, AS APPROVED UNDER F-19-053.

18. THE OPEN SPACE REQUIREMENT FOR THIS PROJECT WAS MET BY A PAYMENT OF FEE-IN-LIEU IN THE AMOUNT OF \$6,000.00 UNDER F-19-053.

19. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED UNDER CONTRACT # 266W (WATER) AND # 10-1215-D (SEWER).

20. 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

21. NO WETLANDS AND ITS BUFFER EXIST ON SITE AS CERTIFIED IN THE WETLAND AND FSD LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN JUNE 2018 UNDER F-19-053.

22. 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.

23. LOTS 1-4 IN THIS PROJECT 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. 24. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS

OF HOWARD COUNTY PLUS MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS AND SPECIFICATIONS IF APPLICABLE.

25. 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.

26. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE. 27. IN ACCORDANCE WITH SECTION 128.0. OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS.

CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FFFT INTO ANY SETBACK. PORCHES OR DECKS, OPEN OR ENCLOSED, MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK. 28. 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.

29. NO 100 YEAR FLOODPLAIN EXISTS ON THIS SITE.

30. THIS PLAN IS SUBJECT TO WP-19-028, 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 OCTOBER 25, 2018, SUBJECT TO THE FOLLOWING CONDITIONS: 1. ADD THE ALTERNATIVE COMPLIANCE PETITION WP-19-028, ON ALL PROPOSED PLANS AS

A GENERAL NOTE STATING THE REQUEST, THE APPROVAL DATE AND CONDITIONS. 2. SHOW THE 2 SPECIMEN TREES BEING REMOVED AND LABELED PER WP-19-028 ON ALL PLANS. THE SPECIMEN TREE REMOVAL WILL BE MITIGATED BY THE PLANTING OF 4 PERIMETER LANDSCAPE TREES OF 2.5" TO 3" CALIPER.

31. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO EXCAVATION WORK BEING DONE. MISS UTILITY 800-257-7777

VERIZON TELEPHONE COMPANY (410) 725-9976 HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900 AT&T CABLE LOCATION DIVISION (410) 393-3533 BALTIMORE GAS AND ELECTRIC (410) 685-0123 STATE HIGHWAY ADMINISTRATION (410) 531-5533

32. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.

33. SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.

34. FOR DRIVEWAY ENTRANCE DETAIL, REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06.

35. 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.

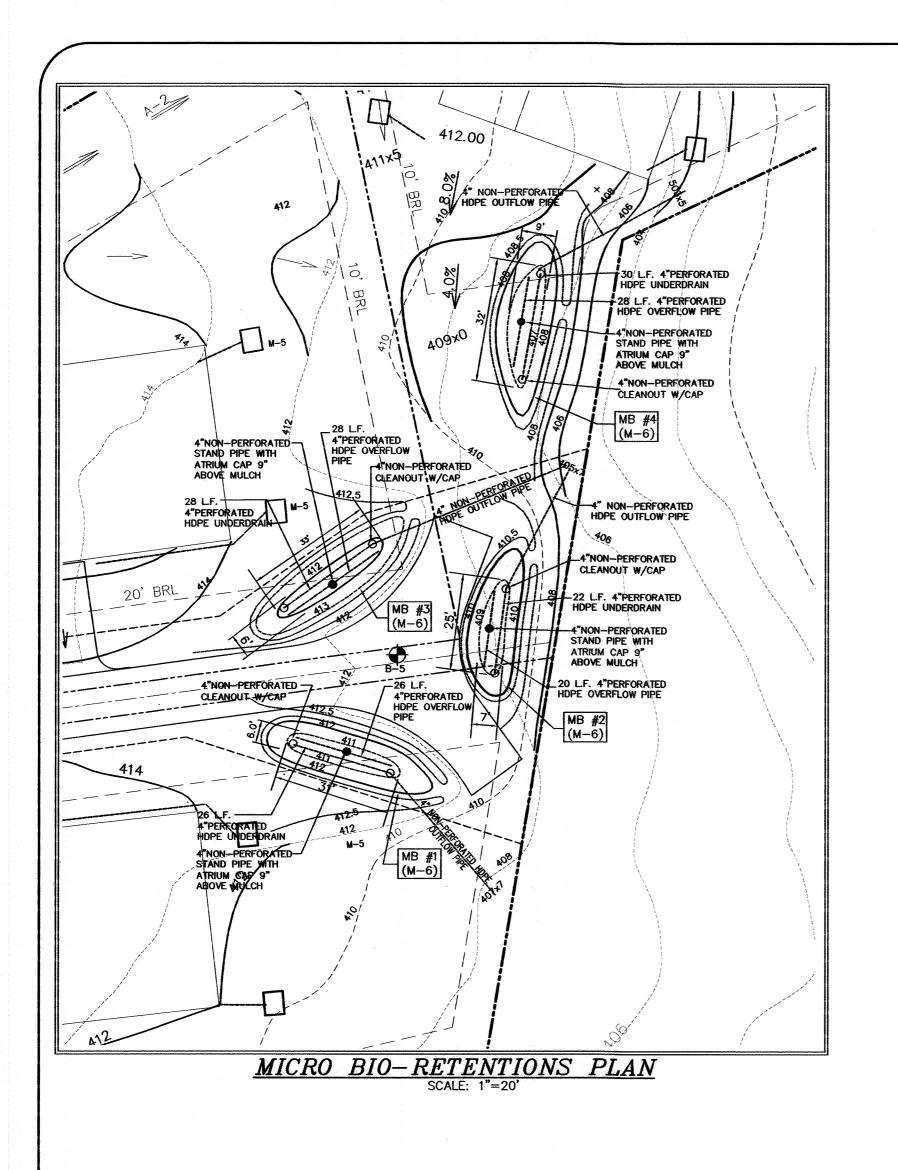
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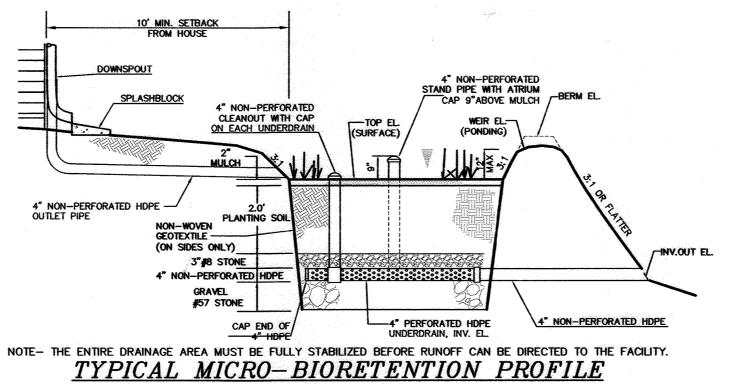
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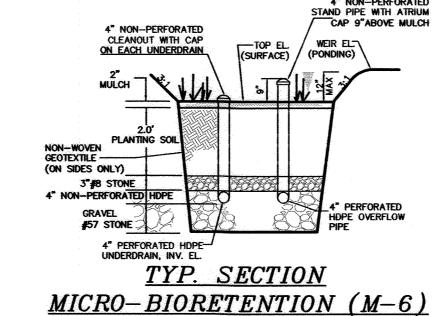
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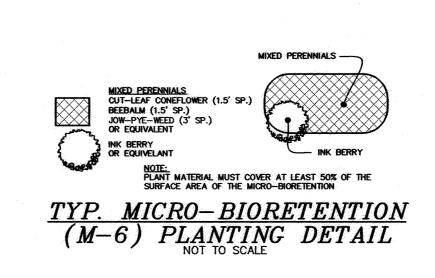
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SOILS TABLE			myym ! ! w. Z		020 Jung
SYMBOL RATING NAME K FACTOR MAP NO. COMMENTS  ChB (B) CHILLUM-RUSSETT LOAMS, 2-5% SLOPES .37 19  ChC (B) CHILLUM-RUSSETT LOAMS, 5-10% SLOPES .37 19 HIGHLY ERODIBLE  Fa (D) FALLSINGTON SANDY LOAM, 0-2% SLOPES .20 19		4.S AS WP-	SHADE TREES PER CONDITION OF -19-028 APPROVAL  3  244.60		ct date  1 AUG.2  2n enginee.  MMT MMM  approva
Fa (D) FALLSINGTON SANDY LOAM, 0-2% SLOPES .20 19  SCHEDULE A : PERIMETER LANDSCAPE EDGE		N591	2'26"E		project 18-011 illustratio MMM/N scale 1"=30"
CATEGORY ADJACENT TO PERIMETER PROPERTIES  LANDSCAPE TYPE B (PERIMETER 1) B (PERIMETER 2) B (PERIMETER 3)* B (PERIMETER 4)** B (PERIMETER 5)*** B	ADJACENT TO ROADWAY TOTAL  6) B (PERIMETER 7)**** N/A (PERIMETER 8)  123.81 LF 85.75 LF	N 568500	35.5" 31" WHITE OAK SP#4	30" TULIP POPLAR SP#5	7.28,22 Alev 2021 date
CREDIT FOR EXISTING VEGETATION NO NO YES YES YES NO NO NUMBER OF PLANTS REQUIRED	YES N/A		GREEN ASH SP#7	LOT 35 HOWARD COUNTY, MD.	OT 1 Abide
SHADE TREES EVERGREEN TREES SHRUBS  10 SHADE TREES 15 EVERGREEN TREES 0 SHRUBS  5 EVERGREEN TREES 0 SHRUBS  5 EVERGREEN TREES 0 SHRUBS  5 SHADE TREES 6 EVERGREEN TREES 7 SHADE TREES 7 EVERGREEN TREES	0 SHRUBS 0 SHRUBS 0 SHRUBS		36.5″ PIN OAK S₽#6	LCHESTER WOODS WAY PLAT#10260 R-120	REVISE CR
EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) O SUBSTITUTION TREES	Trees 3 Evergreen trees 0 Evergreen trees 51 Evergreen trees			28° 0	ring Dewe
(PERIMETER 5)***-CREDIT TAKEN FOR 1 EXISTING TREES. (PERIMETER 7)****-CREDIT TAKEN FOR 2 EXISTING TREESNOTE- SEE GENERAL NOTE 12 REGARDING THE REQUIRED LANDSCAPING SURETY.		N30	N 5685po w	OAK NOAK	RETAIN EXIS
PERIMETER LANDSCAPE REQUIREMENT PLANTING SCHEDULE  QUANTITY SYMBOL BOTANICAL NAME  18 PRUBUS SARGENT OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL  16 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  17 PRICE BOX OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL  18 PROBLEM TO SARGENT CHERRY  19 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  10 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  11 PRICE BOX OF EQUIVALENT AS OUTLINED IN THE OF ELEGANTISSIMA ARBORVITAE  11 PRICE BOX OF FUNCTIONAL PROBLEM TO SARGENT CHERRY  11 PRICE BOX OF FUNCTIONAL PROBLEM TO SARGENT CHERRY  12 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  13 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  14 PROBLEM TO SARGENT CHERRY  15 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  16 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  17 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  18 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  19 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  10 PROBLEM TO SARGENT CHERRY  10 PROBLEM TO SARGENT CHERRY  10 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  10 PROBLEM TO SARGENT CHERRY  10 PROBLEM TO SARGENT CHERRY  10 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  10 PROBLEM TO SARGENT CHERRY  10 PROBLEM TO SARGENT CHERRY  2.5"-3" CAL.  10 PROBLEM TO SARGENT CHERRY  10 PR	PRIME AS DIRECTED HUBBER HOSE WE GUTS TURNBUCKLES  NOTE: ALL MATERNALS AS SPECIFIC  2 MALCH PLANT SAUCER HUBBER BRAP FROM TOP 1/2 AS SPECIFIC STAKES BOOKER BRAP FROM TOP 1/2 AS SPECIFIC STAKES BOOKER BRAP FROM TOP 1/2 ALL SIGES  EVERGREEN TREE WITING DETAIL  THOSE SALES  GERARD ON	LOT 4 JEFFREY CNEILL SUSAN CNEILL C'NEIL PROPERTY PLAT#8578 R-20  ChB  ChC  ChC  ChB	75.00' BUFFER STREAM BANK	400 300.43	D REVISED TO R
PLANTING DETAIL  NOT TO SCALE	LOT 2  LOT 2  LOT 2  PLAT#857  R-20	EILL TOP=411.09 PERIY INV=396.36	34.5"	PIN-OAK PAR	TARYLAN AN
	PLAT#8578  PLAT#8578  PLAT#8578  R-20	FRENCH DRAIN & ASPHALT	75.00' TOEAM BANK BUFFER		UNTY, M
THOMAS ONEILL SHARON CNEILL SHARON CNEILL PROPERTY O'NEILL PROPERTY PLAT#8578	1921-D TEMPORARY CLEAN WATER DIVERSION SWALE (F-19-053)	112.38 BRIT A86.07 EX. SSF	THOMAS CHERT GENARD CHERT ARCEL 327	32" PIN QAK	327 ARD COI
HASIUK FARMS PLAT#8711 R-20  R-20  R-20  R-20  R-20	1)	F-19-05:	93,637 Sq Ft R-20 4.09 AC±	SP#9	OOL 4 PARCEL HOW. LANI
1/8 0 4 1/3 1/3 1/4 1/3 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4	OD  A-2  A-2  A-2  A-2  A-2  A-2  A-2  A-		The contract of the contract o	TULIP POPLAR SP#10 S25:000	W THRU II THRU RID 15 AND
EX. 4  SIDEWALK  SIDEWALK  G.=417.6		Ft 1411x5 (CARACE) (M-5) (M-5)	28" GREEN 4	3"E	AENT
F.=419.6 B.=409.6 MCE=404	3 20,023 Sq Ft	410 410 A10 A10 A10 A10 A10 A10 A10 A10 A10 A	166.34 283.02 100 100 100 100 100 100 100 100 100 100		KERGE  LATA MAP 3: RICT  VELOPMEN
RANGE OF ADDRESS SIGN  JOHN HASIJAK  GRATE INLET  GRIDS PRO SERIES  CHANNEL DRAIN  DR EQUIVALENT)  99.75'  99.75'	F.=418.73 B.=408.73 MCE=401.60 GARAGE GARAGE	10D 3000	Fa ChC		K DISTRIC DEVE
SUSAN HASIUK HASIUK FARMS PLAT#8711 R-20 8  SUSAN HASIUK  A"SHC  INV. 392.10  THEFT MASIUK  A"SHC  A	10' BRI (M-5) [12.18]	MB #3 (M-6) (M-6) -EX. DOUBLE ROW	B		SITE
OWNER/DEVELOPER  THOMAS O'NEILL  OWNER/DEVELOPER  THOMAS O'NEILL  THOMAS O'NEILL	173.00 173.00 2.29	OF SSF(F-19-053)	1568200 Lu		1ST EI
5239 KERGER ROAD ELLICOTT CITY, MD 21043 410-292-4831  EX. PRIV. 391.68  PRIVATE DRIVE USE-IN-	S5.5" RED MAPLE SP# VATE 30' -COMMON ACCESS IS 1-5,	EX. PRIVATE VARIABLE WIDTH			
DEVELOPERS CERTIFICATE    T   CURB	ATER MANAGEMENT, SE AND UTILITY NT, PLAT# 25270-71  GARAGE / "C"	DRAINAGE AND UTILITY EASEMENT	SEE SHEET 7 FOR UISED GRADING AND EVELOPMENT PLAN	OF MARIER ALAN	
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.	G=.416.13 F.=418.03 B.=408.03 MCE=401,60	6 RED	SEE SHEET 8 FOR VISED GRADING AND EVELOPMENT PLAN	PRO 22390 : 11	., INC
THOMAS JAMES O'WEILL JR. PRINTED NAME OF DEVELOPER  3977 3977	21,385 Sq Ft	EX. DOUBLE ROW		Revision # 2 only  nal Certification. I hereby certify that these	SSOC urveyors und 21044 0298 Fax.
ENGINEER'S CERTIFICATE  I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	SOUR CHERRY O SP 172  LOD  GE 25  LOD  GE	M. C. S.	document  I am a dui  of the Sta	is were prepared or approved by me, and that by licensed professional engineer under the laws the of Maryland.	RG, R AS ers Sun nia, Marylan 410) 997-0
O8/30/2020 SIGNATURE OF ENGINEER  O8/30/2020 DATE  EXISTING 4' SIDEWALK	123 812 W	1 406	LEGEND  EXIST. TREE LINE	o. 22390 Expiration Date: 6-30-23	VBEF ER e Plann ve, Columi
SAMER A. ALOMER P.E.  PRINTED NAME OF ENGINEER  THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  SAMER A. ALOMER P.E.  406  CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT	AS OCONNOR  RCEL 487-	AQA	PROP. TREE LINE LOD LIMITS  SP# EXIST. SPECIMEN TREE	OF DISTURBANCE	MILDENBERG, BOENDER & A Engineers Planners 350-B Grace Drive, Columbia, Ma (410) 997-0296 Tel. (410) 99
Alexander Bratchie  Howard Soil conservation district  O6/03/2   DATE  DESCRIPTION -401.63  EX. GRATE INLET	R-20		OHE OVERHEAD ELEC.  MINOR CONTOUR  EX. I	PRIVATE USE—IN—COMMON ACCESS, RMWATER MANAGEMENT AND UTILITY EMENT, PLAT# 25270—71	
APPROVED DEPARTMENT OF PLANNING AND ZONING  OF MARY  OF MARY  OF MARY  OF MARY  OF MARY  A DULY LICENSED PROFESSIONAL ENGINEER UNDER  THE LAWS OF THE STATE OF MARYLAND, LICENSE	GRAPHIC SCALE	DEVELOPER'S OWNER'S CERTIFICATE  I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE, AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED	PROPOSED SILT FENCE PROPOSED SUPER SILT FENCE		
CHIEF, DIVISION OF LAND DEVELOPMENT ON DATE  OLZEZI  DATE  NO. 26859, EXP. DATE 08/08/21.	30 0 15 30 60 120 (IN FEET )	UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  5-27-21 OWNER  DATE	STABILIZED CONSTRUCTION ENTRANCE		2 OF 18/18
DIRECTOR DATE  O8/30/2020  SAMER A. ALOMER, P.E.  DATE	1 inch = 30 ft.	OWNER		SI	DP-20-014









# - LEAF SCREEN DRYWELL TYP. DETAIL

SEE SHEET 7 FOR REVISED SWM DRYWELL LOCATIONS

# MICRO-BIORETENTION SCHEDULE

FACILITY	TOP EL. (SURFACE)	WEIR EL. (PONDING)	BERN EL.	INV. IN	INV. OUT	SURFACE AREA	PONDING AREA	PONDING DEPTH	GRAVEL DEPTH BELOW UNDERDRAIN	SITE SLOPE
MB-1	411.00	412.00	412.50	408.08	407.70	150 SF	420 SF	12"	12"	3:1
MB-2	409.00	410.00	410.50	406.08	405.70	110 SF	380 SF	12"	12"	3:1
MB-3	412.00	413.00	413.50	409.08	405.70	175 SF	470 SF	12°	9"	3:1
MB-4	407.00	408.00	408.50	404.08	403.50	200 SF	480 SF	12"	9"	3:1

SEE SHEET 8 FOR REVISED SWM DRYWELL LOCATIONS

# SWM PRACTICES SCHEDULE

		2,413 C.F.	
TOTAL		-2.476 C.F.	3,822 CF.
P/O UIC	M-6, MICRO-BIORETENTION (MB #2)	165 C.F.	289 C.F.
LOT 4	M-5, DRYWELLS (4 EACH), (7'×7' EACH) M-6, MICRO-BIORETENTION (MB #1)	<del>3<b>41</b> C.F</del> . 244 C.F. <del>231 C.F.</del> 222 C.F.	392 C.F. 345 C.F.
LOT 3	M-5, DRYWELLS (4 EACH), (1'x1' EACH) M-6, MICRO-BIORETENTION (MB#4)	<del>343 C.F</del> . 281 C.F. <del>206 C.F</del> . 234 C.F.	390 C.F. 400 C.F.
LOT 2	M-6, MICRO-BIORETENTION (MB #3)	257 <del>3/2</del> C.F. 173 <del>206</del> C.F.	<b>392</b> C.F. 376 C.F.
LOT 1	M-8, GRASS SWALE 10'X8'	402 <del>342</del> C.F. 200 <del>299</del> C.F.	640 396 C.F. 200 <del>299</del> C.F.
AREA	PROPOSED PRACTICES M-5, DRYWELLS (2 EACH). (11'x9' EACH)	REQUIRED ESDv 253 C.F.	PROVIDED ÉSD 396 C.F.

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO BIO-RETENTION (M-6), GRASS SWALE (M-8)

- A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- B. THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES. C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING, THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS
- D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

OPERATION AND MAINTENANCE SCHEDULE FOR DRY WELLS (M-5)

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. 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.
- B. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS. C. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A 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.
- E. 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.

**DEVELOPERS CERTIFICATE** I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE 5-27-21 **ENGINEER'S CERTIFICATE** CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION 08/30/2020 DATE SIGNATURE OF ENGINEER SAMER A. ALOMER P.E. PRINTED NAME OF ENGINEER THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT 06/03/2 alexander Bratable HOWARD SOIL CONSERVATION DISTRICT APPROYED: , DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION NY

CHIEF, DIVISION OF LAND DEVELOPMENT

An ana

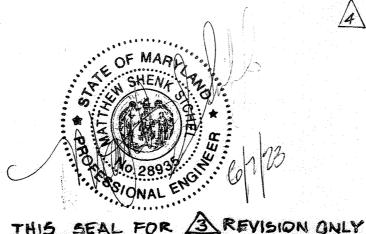
DATE

4/22/21

OWNER/DEVELOPER

THOMAS O'NEILL GERARD O'NEILL 5239 KERGER ROAD ELLICOTT CITY, MD 21043 410-292-4831

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. 26859, EXP. DATE 08/08/21. 08/30/2020 SAMER A. ALOMER, P.E. DATE



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28935 EXPIRATION DATE: 01/15/2025

Ö

DISTRICT
STORMWATEF

3 OF \$7)8

SDP-20-014

- 1. 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 FOLLOWING STAGES:
- A. PRIOR TO THE START OF EARTH DISTURBANCE, UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER
- PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS

- 2. 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 EROSION AND SEDIMENT CONTROL, AND REVISIONS
- 3. 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 UNDER ACTIVE GRADING.
- 4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION 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 II THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
- 5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE

	CID.	
6.	SITE ANALYSIS:	
	TOTAL AREA OF SITE:	3.60ACRES
	AREA DISTURBED:	1.47ACRES
	AREA TO BE ROOFED OR PAVED:	0.27ACRES
	AREA TO BE VEGETATIVE STABILIZED:	1.20ACRES
	TOTAL CUT:	1,000CU. YI
	TOTAL FILL:	1,000CU. YI
	OFFSITE WASTE/BORROW AREA LOCATION:	

- 7. 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 NECESSAR'S BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD
  - -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 MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS -COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS -PHOTOGRAPHS
  - -MONITORING/SAMPLING -MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED

USE IV MARCH 1 - MAY 31

- -OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
- 9. 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,
- 10. 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.
- 11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING 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.
- 12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- 13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON—SITE FOR REDISTRIBUTION ONTO FINAL
- 14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBERICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN
- 15. 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
- 16. 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.

	DEVELOPERS CERTIFICATE
	I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON—SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
	SIGNATURE OF DEVELOPER  T.). O'NEILLO.  PRINTED NAME OF DEVELOPER  5-27-21  DATE
	ENGINEER'S CERTIFICATE I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL
	REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
	KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION
WG	KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
NOUDS.DWG	KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  08/30/2020

CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

APPROVED DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION WY

alexander Bratchie

HOWARD SOIL CONSERVATION DISTRICT

CHIEF, DIVISION OF LAND DEVELOPMENT

# THOMAS O'NEILI GERARD O'NEILL 5239 KERGER ROAD ELLICOTT CITY, MD 21043

HARDINESS ZONE (FROM FIGURE B.3): 61

SEED MIXTURE (FROM TABLE B.3): 8

DATES

NO. 26859, EXP. DATE 08/08/21.

AUG 15-0CT 15

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

APPLICATION

RATE (LB/AC)

410-292-4831

SPECIES

CONTROL MAY BE USED.

DATE

1272

# (B-4-2) STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

**DEFINITION** 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.

# A. SOIL PREPARATION

- 1. 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. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER

# 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.
- II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM) III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) 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.

THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.

- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN,
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF 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

MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE 2. 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

1. 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 CONCERN HAVE LOW

- TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY 3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE
- THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
  THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH
- THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- 4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA: 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 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 11/2 INCHES IN DIAMETER 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
- 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 APPLICATION
- EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. 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. 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.

- APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM 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
- 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
- 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. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE

# (B-4-8) STANDARDS AND SPECIFICATION FOR STOCKPILE AREA

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. 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.

- 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
- 2. THE FOOTPRINT OF 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.
- 3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE
- 5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVISE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
- 6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
- 7. STOCKPILE MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-I INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
- 8. 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 COVERED WITH IMPERMEABLE

FERTILIZER RATE

(10-20-20)

PER ACRE

(1 LB./1000 SF) (2 LB./1000 SF) (2 LB./1000 SF)

PER ACRE (90 LBS / 1000

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 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.

PER ACRE

PERMANENT SEEDING SUMMARY

MIXTURES 1, 4-7, 9, AND 10 FROM TABLE B.3 OF THE 2011 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

# (B-4-3) STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING 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 CRITERIA
- TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING. A. SEEDING 1. SPECIFICATIONS
- 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
- 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. 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 CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
- 2. APPLICATION a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS
- 1. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES. II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL
- I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST
- 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING. II. ÁPPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN
- 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;  $P_2$   $O_5$  (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

c. Hydroseeding: Apply seed uniformly with Hydroseeder (slurry includes seed and fertilizer).

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

# 1. MULCH MATERIALS (IN ORDER OF PREFERENCE

DEFINITION

- a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, 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 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 MULCI-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. V. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL . 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.
- 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.
- 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 3. ANCHORING
- 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 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 DR 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. I. 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 IS STRICTLY PROHIBITED. IV. 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

#### (B-4-4) STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

**DEFINITION**TO STABILIZE DISTURBED SOIL WITH VEGETATION FOR UP TO 6 MONTHS.

**PURPOSE** 

PLANT SPECIES

ANNUAL RYEGRASS

HORDEUM VULGARE

(AVENA SATIVA

(TRITICUM AESTIVUM)

CEREAL RY

(SECALE ITALICA)

(SETARIA ITALICA)

PEARL MILLET

PENNISETUM GLAUCUM

(LOLIUM PERENNE SSP. MULTIFLORUM

COOL SEASON GRASSES

WARM SEASON GRASSES

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURB SOIL. CONDITIONS WHERE PRACTICE APPLIES

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.

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT
- ON THE PLAN AND COMPLETED, THEN TABLE B-1 PLUS FORTELIZER AND LIME RATES MUST BE PUT ON 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

TEMPORARY SEEDING FOR SITE STABILIZATION

AUG 1 TO SEP 30

MAR 15 TO MAY 31

AUG 1 TO SEP 30

AUG 1 TO SEP 30

MAR 15 TO MAY 31-

DEPTH

(INCHES)

0.5

0.5

40 | 1.0

112 2.8

20 0.5 0.5

2.2

RECOMMENDED SEEDING DATED BY PLANT HARDINESS ZONE

AUG 1 TO OCT 15

AUG 1 TO OCT 15

MAR 1 TO MAY 15

AUG 1 TO OCT 15

MAR 1 TO MAY 15;

AUG 1 TO OCT 15

MAR 1 TO MAY 15;

JUN 1 TO JUL 31 | MAY 16 TO JUL 31 | MAY 1 TO AUG 14

AUG 1 TO OCT 31 | AUG 1 TO OCT 15 | AUG 15 TO DEC 15

AUG 15 TO NOV 30

**AUG 15 TO NOV 30** 

FFR 15 TO APR 30

AUG 15 TO NOV 30

FEB.15 TO APR 30:

AUG 15 TO NOV 30

FEB.15 TO APR 30:

MAR 15 TO MAY 31: | MAR 1 TO MAY 15:

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.1b, AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

# (B-4-5) STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

TO STABILIZE DISTURBED SOIL WITH PERMANENT VEGETATION.

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER OF DISTURBED CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

#### A. SEED MIXTURES 1. GENERAL US A. SELECT ONE OR MORE OF THE SPIECES OF MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED IN THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN

- THE PERMANENT SEEDING SUMMARY ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DINES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD GUIDE, SECTION 342-CRITICAL AREA PLANTING.
- FOR SITES HAVING DISTURBAD AREA OVER 5 ACRES, USE AND SHOW RATES RECOMMENDED BY THE D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FROM FERTILIZED (40-0-01) AT 3 1/2 POUNDS PER 1000 S.F. (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE
- SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY. 2. TURFGRASS MIXTURES AREAS WHERE TURFGRASS MAY BE DESIRE INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIA SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE

B. SELECT ONE OR MORE OF THE SPECIES OF MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS

- OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE anagement. Irrigation required in the areas of central maryland and easrern shore RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS SEEDING RETA: 1.5 TO 2.0 POUNDS PER 1000 S.F
- CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. KENTUCKY BLUEGRASS/PERENIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY ABD WHEN TURF WILL RECEIVE MEDIUM TO INTENSUVE MANAGEMENT. CERTIFIED PERENIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDINGRATE: 2 POUNDS MIXTURE PER 1000 S.F. SHOOSE A MINIMUM OF THREE
- KENTUCKYBLUEGRASS CULTIVARS EITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL MIXTURE: FOR USE IN DROUGHT AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 65 TO 100 PERCENT, CERTIFIED KENTUCK BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 PERCENT PER 1000 S.F. ONE OR
- IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TIRF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCANT AND CERTIFIES FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATES 1 1/2 TO 3 POUNDS PER
- C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURE WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B,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 (HARDINESS ZONE: 7A, 7B)
- ). 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 STONE AND DEBRI OVER 1.5 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE
- E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH 0.5 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 SEASON, OR ON ADVERSE SITES.

# STANDARD STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), AND
- B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

# EROSION AND SEDIMENT CONTROL NOTES

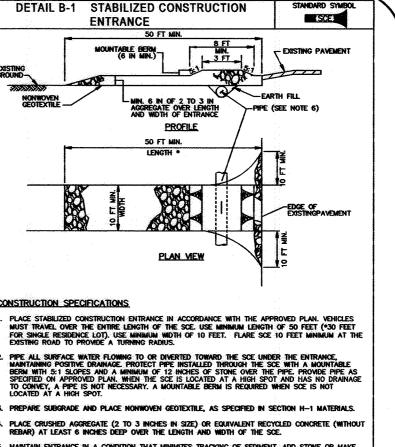
- 1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
- 2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF 3. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE MAIN TRENCH
- 4. EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY. . IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE
- ABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN 6. THROUGHOUT THE PROJECT, THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES AND PROVIDE ALL NECESSARY MAINTENANCE TO INSURE THAT ALL DEVICES ARE IN
- 7. ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

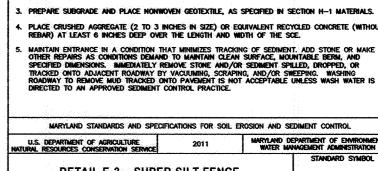
# SEQUENCE OF CONSTRUCTION

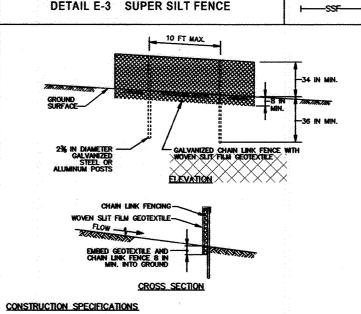
- OBTAIN GRADING PERMIT (1 DAY).
- 2. INSPECT AND REPAIR AS NEEDED PERIMETER CONTROLS INSTALLED UNDER F-19-050:
- SILT FENCE, SUPER SILT FENCES AND TEMPORARY DIVERSION SWALE (1 DAY). 3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AT LOCATION SHOWN FOR EACH HOUSE TO BE BUILT (2 DAY).
- 4. CONSTRUCT HOUSES AND STORMWATER MANAGEMENT FACILITIES (90-120 DAYS PER
- COMPLETE FINE GRADING OF THE SITE TO GRADE INDICATED (2 DAYS PER HOUSE).
- SEED AND MULCH ALL REMAINING DISTURBED AREAS (1 DAY PER HOUSE). 7. AFTER ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED, CONSTRUCT

MICRO-BIORETENTION FACILITIES (5 DAYS EACH).

WITH THE PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE PERIMETER CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS (1 DAY).

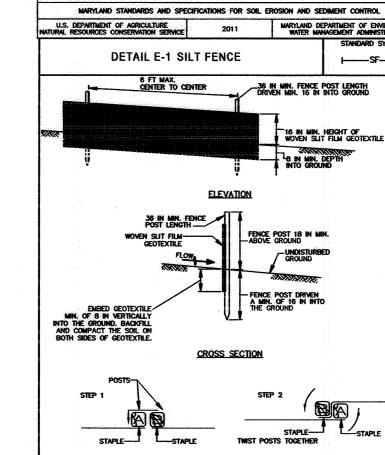


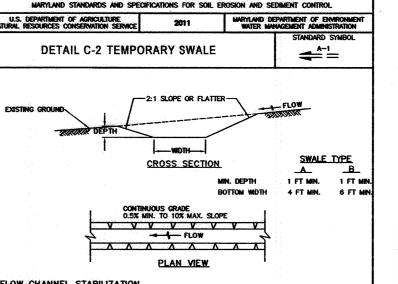




INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FO LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.

- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- 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
  NATURAL RESOURCES CONSERVATION SERVICE
  2011
  WARYLAND DEPARTMENT OF ENVIRONMEN
  WATER MANAGEMENT ADMINISTRATION





FLOW CHANNEL STABILIZATION A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD. A=3/B=3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

 REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTI MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF TEMPORARY SWALE. Excavate or shape temporary swale to line, grade, and cross section as specified. Ban Projections or other irregularities are not allowed. . Stabilize temporary swale within three days of installation, stabilize swales used for lear water diversion within 24 hours of installation. Construct flow channel on an uninterrupted, continuous grade, adjusting the location due to field conditions as necessary to maintain positive drainage. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN

. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND INITIAN POSITIVE DRAINAGE. KEEP TEMPORARY SWALE AND POINT OF DISCHARGE FREE OF EROSION, NO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. UPON REMOVAL OF TEMPORARY SWALE, GRADE AREA FLUSH WITH EDISTING GROUND. WITHIN 24
HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON
APPROVED PLAN MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

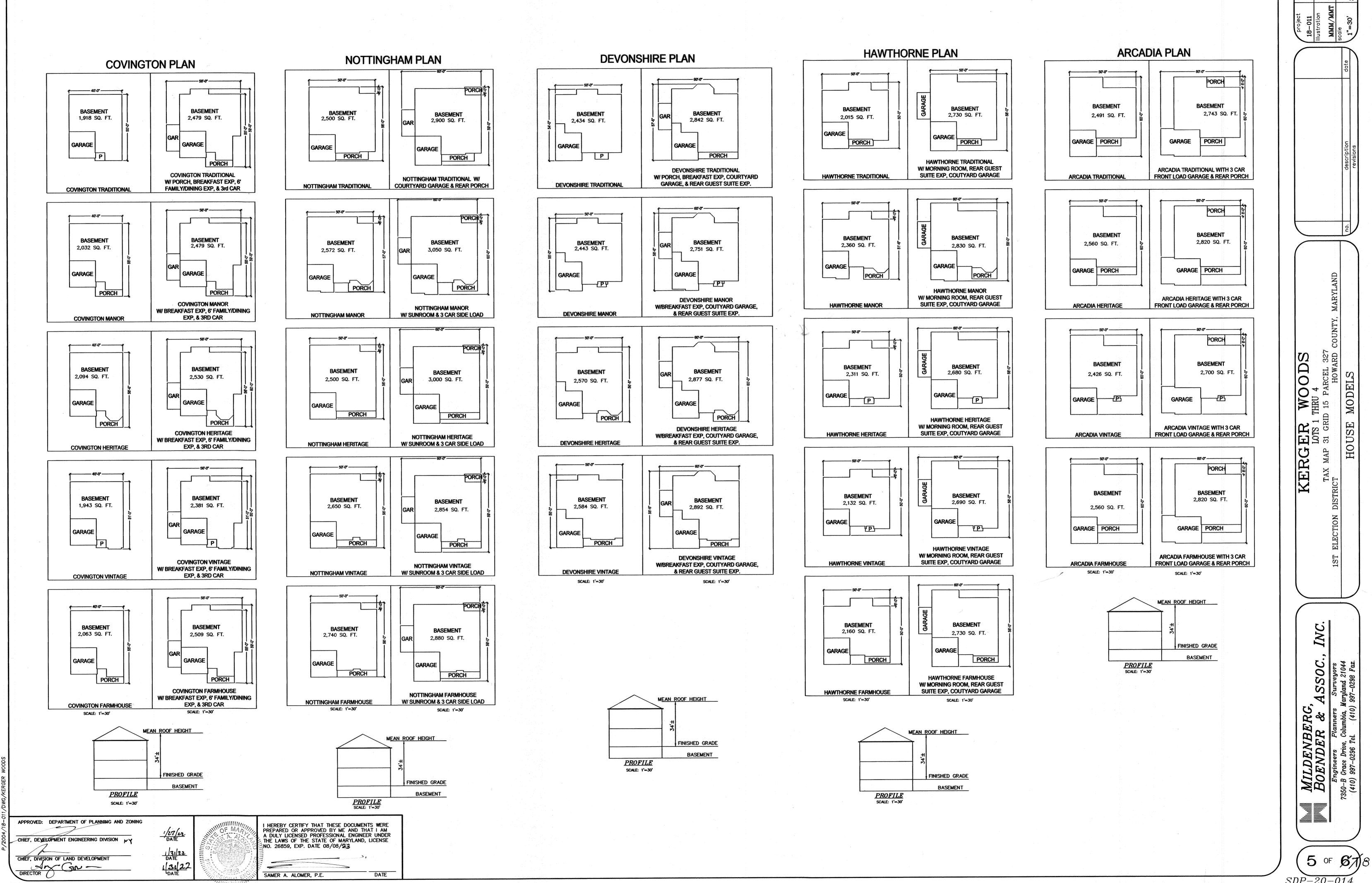
S. DEPARTMENT OF AGRICULTURE
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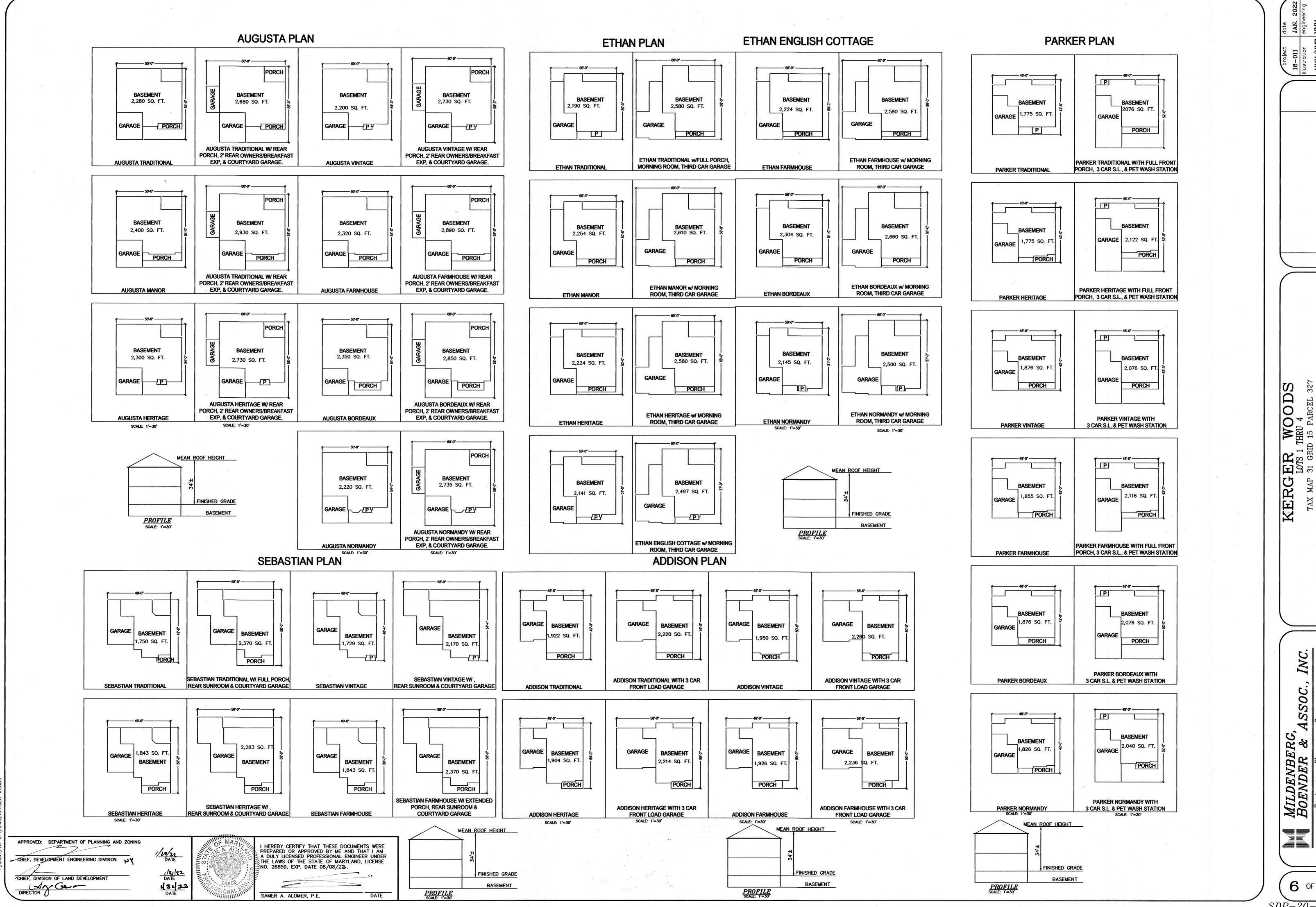
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