

Minimum Lot Size Tabulation			
Lot No.	Gross Ared	Pipestem Ared	Minimum Lot Size
122	21,635 Sq. Ft.±	1,555 5q. Ft.±	20,080 5q. Ft.
123	21,629 5q. Ft.±	1,628 5q. Ft.±	20,001 5q. Ft.

## SITE DEVELOPMENT PLAN HOLIDAY HILLS

LOTS 122 & 123

STORM	WATER MANAGEMENT	PRACTICES
LOT NO.	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)	DRY WELLS (M-5) Y/N, NUMBER
122	YE5	YES, THREE (3)
123	YE5	YES, THREE (3)

	LEGEND					
5YMBOL	DESCRIPTION	5YMBOL	DESCRIPTION			
492	EXISTING 2' CONTOURS	182	PROPOSED CONTOUR			
490	EXISTING 10' CONTOURS	+362.5	5POT ELEVATION			
GgB GgC	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE			
~~~~	EXISTING TREELINE	Secretary communications.	DRAINAGE AREA DIVIDE			
© <b>*</b> e	EXISTING INDIVIDUAL TREES & SHRUBS	——5F ——	SILT FENCE			
x x	EXISTING FENCE LINE	PSSMC	PERMANENT SOIL STABILIZATION MATTING			
	EXISTING & PROPOSED PAVING	恩	STABILIZES CONSTRUCTION ENTRANCE			
ST1	EXISTING SPECIMEN TREE	55F	SUPER SILT FENCE			
TBR	TO BE REMOVED	or	DIVERSION FENCE			

## SOILS LEGEND CLASS K FACTOR GfB | Gladstone - Urban land complex, 0 to 8 percent slopes A 0.28 C 0.43 GnB Glenville-Baile silt loams, 0 to 8 percent slopes

	ADDRESS CHART	
LOT #	STREET ADDRESS	
122	11605 WILLARDS WAY	
123	11604 WILLARDS WAY	-

TOTAL AREA OF THIS SUBMISSION = 0.99 AC. ± (43,264 5Q.FT.)

LIMIT OF DISTURBED AREA = 39,480 SQ.FT. OR 0.91 Ac.+

(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)

PREVIOUS HOWARD COUNTY FILES: ECP-17-017, WP-17-068,

TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC±

TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC. ±

TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC±

TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.+

TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC+ TOTAL AREA OF LOTS / BUILDABLE PARCELS = 0.99 AC\*

TOTAL AREA OF EXISTING FOREST = 0.00 AC+

TOTAL AREA OF ERODIBLE SOILS = 0.00 AC.+

TOTAL AREA OF ROAD DEDICATION = 0.00 AC. \*

TOTAL GREEN OPEN AREA = 0.76 AC± TOTAL IMPERVIOUS AREA = 0.23 AC±

PRESENT ZONING DESIGNATION = R-20

PROPOSED USE: RESIDENTIAL

SITE ANALYSIS DATA CHART

FIFTH ELECTION DISTRICT

STORMWATER

MANAGEMENT NOTES

PROVIDED IN ACCORDANCE WITH

WITH CHAPTER 5, "ENVIRONMENTAL

1. STORMWATER MANAGEMENT IS

SITE DESIGN" OF THE 2007

MANAGEMENT DESIGN MANUAL,

2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DRYWELL SHALL BE

3. DRYWELLS SHALL BE PROVIDED AT

LOCATIONS WHERE THE LENGTH OF

DISCONNECTION IS LESS THAN 75'

CONSTRUCTION OF THE DRYWELL

SHALL BE IN ACCORDANCE WITH

4. FINAL GRADING IS SHOWN ON THIS

THE DETAIL SHOWN ON THIS SHEET.

MARYLAND STORMWATER

EFFECTIVE MAY 4, 2010.

1,000 SQ. FT. OR LESS.

AT 5%. THE SIZE AND

TAX MAP No. 41 GRID No. 6 PARCEL NO. 174 HOWARD COUNTY, MARYLAND

	STORMWA	ITER MAN	IAGEMENT SUMMARY
AREA IO.	E5DV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS
SITE	1,290	1,326	DRY WELLS (M-5) & NON-ROOFTOP DISCONNECTION (N-2)
TOTAL	1,290	1,326	

GROSS AREA = 0.99 ACRES LOD = 0.91 ACRES RCN = 38TARGET Pe = 1.4"

GROUND WATER

see Appendix A; Table A.4

compost 35-40%

sandy loam 30%

coarse sand 30% compost 40%

Organic Content

Curtain drain

Gravel (underdrains and infiltration berms)

Poured in place concrete (if

Underdrain piping

Min. 10% by dry weight (ASTM D 2974)

ped gravel: ASTM-D-448

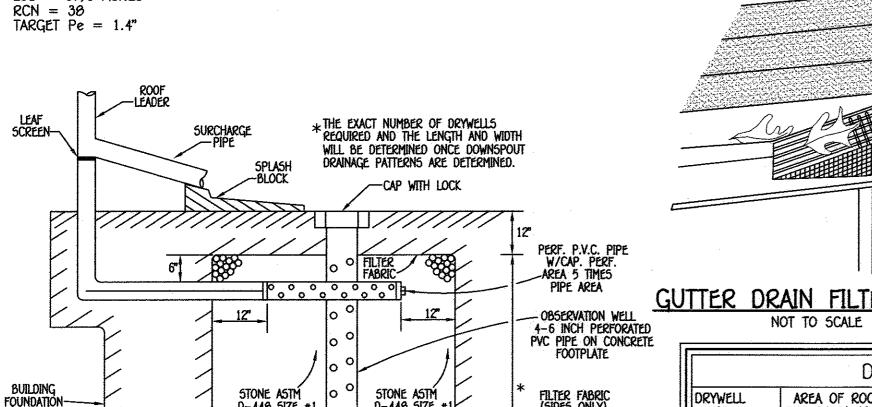
ornamental stone: washed

MSHA Mix No. 3; f = 3500 psi at 28 days, normal weigh

air-entrained; reinforcing to meet ASTM-615-60

AASHTO-M-6 or ASTM-C-38

shredded hardwood



CONCRETE

Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

stone: 2" to 5"

No. 57 or No.

4" to 6" rigid schedule 40 PVC or 5DR35

0.02" to 0.04"

n/a

DRY WELL DETAIL (M-5)

NOTE: TRENCH MAY NOT BE

plantings are site-specific

aged 6 months, minimum

PE Type 1 nonwoven

USOA soil types loamy sand or sandy loam; clay content <5%

Slotted or perforated pipe; 3/8" pert. © 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth

on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place

or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional

structural engineer licensed in the State of Maryland – design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and

INSTALLED IN FILL

DE CONTRACTOR OF THE PARTY OF T	
GUTTER DRAIN FILTER DETAIL PRATED NOT TO SCALE NOTE TO SCALE	

<u> </u>	NOT TO SCALE				SITE DEVELO	PMENT PLAN.
***************************************		DRY	WELL	CHAR		
	DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
	122 (FRONT)	940 5Q.FT.	105 C.F.	128 C.F.	100%*	8' x 8' x5'
	122 (SIDE)	940 5Q.FT.	105 C.F.	200 C.F.	100%*	10' x 10' x 5'
	122 (REAR)	940 5Q.FT.	105 C.F.	200 C.F.	100%*	10' x 10' x 5'
	123 (FRONT)	940 5Q.FT.	105 C.F.	128 C.F.	100%*	8' x 8' x 5'

123 (SIDE) 940 SQ.FT. 105 C.F. 200 C.F. 100%\* 10' x 10' x 5'

123 (REAR) | 940 5Q.FT. | 105 C.F. | 200 C.F. | 100%\* | 10' x 10' x 5'

\* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

18" REBAR

ANCHO2 (TYPICAL)

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

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- 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. C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE

AT WHICH THE FACILITY DRAINS D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD,

CORRECTIVE ACTION SHALL BE TAKEN. E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.

. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED. THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

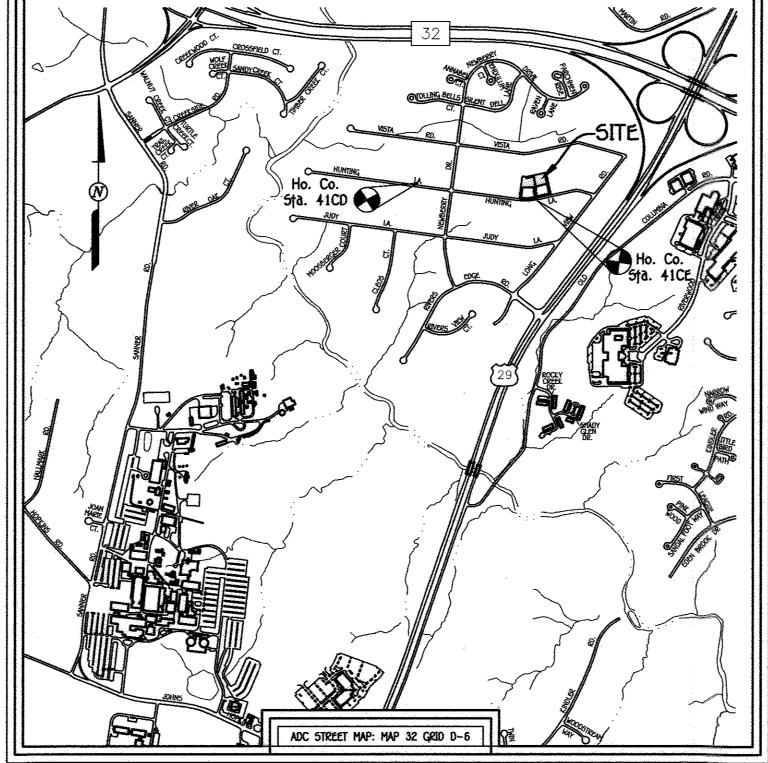
VARIES, SEE PLAN

2" X 8" X 10" PRESSURE

treated wooden boards

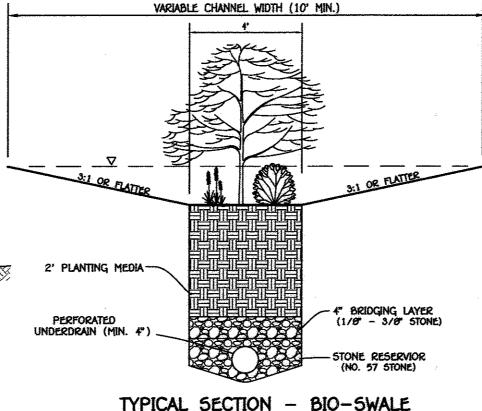
SECTION NOT TO SCALE

DATE: 01/12/2018.

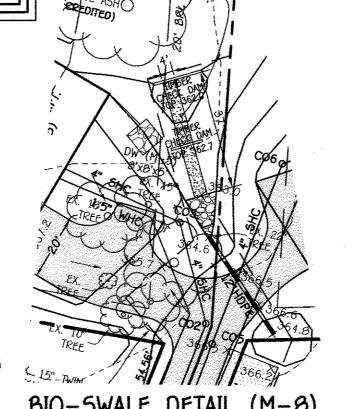


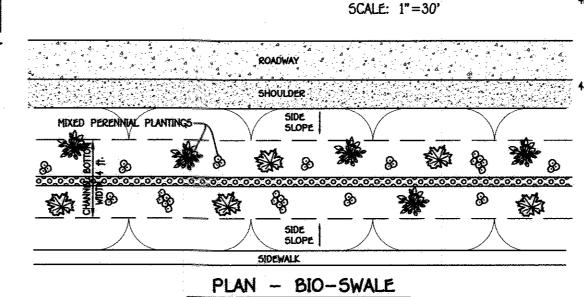
BENCHMARK INFORMATION
B.M.#1 - HOWARD COUNTY CONTROL STATION #41CD - HORIZONTAL - NAD '83) (LOCATED ON THE NORTH SIDE OF HUNTING LANE WEST OF NEWBERRY DRIVE N 550,548.6850 E 1,344,388.3850 ELEVATION = 347.74 - VERTICAL - (NAVD '86)
8.M.#2 - HOWARD COUNTY CONTROL STATION #41CE - HORIZONTAL - (NAD '83) (LOCATED ON THE SOUTH SIDE OF HUNTING LANE) N 5501,340.9790

E 1.345.892.2830



ELEVATION = 371.34 - VERTICAL - (NAVD '88)





General Notes:

SUBJECT PROPERTY ZONED R-20 PER 10/06/13 COMPREHENSIVE ZONING PLAN. 2. COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 41CD AND NO. 41CL.

STA. 41CD N 550,548.6850 E 1,344,386.3850 ELEV.= 347.74 STA. 41CE N 550,340.9790 E 1,345,892.2830 ELEV.= 371.34 THIS PLAT IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT APRIL, 2015 BY FISHER, COLLINS AND CARTER, INC.

ALL AREAS ARE MORE OR LESS (±). DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO NAD '83 GRID MEASUREMENT

FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF FLAG OR PIPE STEM AND ROAD

RIGHT-OF-WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPE STEM LOT DRIVEWAY. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY

VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS: A). WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);

B). SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING. (1 -1/2" MINIMUM); C). GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
D). STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);

E). DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE F). STRUCTURE CLEARANCE - MINIMUM 12 FEET; ). MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.

PROPERTY SUBJECT TO PRIOR DEPARTMENT OF PLANNING AND ZONING FILE NO'S: ECP-17-017, WP-17-060, F-17-063. NO HISTORIC STRUCTURES OR CEMETERIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY 10. THERE ARE NO FOREST STANDS EXISTING ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED AUGUST 10, 2015 AND

11. SITE IS NOT ADJACENT TO A SCENIC ROAD.

12. NO 100 YEAR FLOODPLAIN, WETLANDS, STREAM(5) AND/OR THEIR BUFFERS, NOR STEEP SLOPES EXIST ON-SITE. 13. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. TO FULFIL THE 0.30 ACRES (13,066 SQ.FT.) OF AFFORESTATION REQUIREMENT FOR THE SUBDIMISION, THE DEVELOPER HAS PAID A FEE-IN-LIEU IN THE AMOUNT OF \$9,601 UNDER F-17-063. 14. WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.1228 OF THE HOWARD COUNTY CODE.

PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME 16. STORMWATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. DRYWELLS (M-5) AND NON-ROOFTOP DISCONNECTION (N-2) ARE PROPOSED.

17. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAVER PETITION APPLICATION OR

18. LANDSCAPING FOR LOTS 122 & 123 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY IN THE AMOUNT OF \$2,100 FOR LOT 122 BASED ON (4) SHADE TREES \$300/5HADE TREE AND (5) EVERGREEN TREES \$150/EVERGREEN TREE AND IN THE AMOUNT OF \$2,550 FOR LOT 123 BASED ON (4) SHADE TREES \$300/SHADE TREE AND (9) EVERGREEN TREES \$150/EVERGREEN TREE WILL BE COMPLETED AS PART OF THIS 50P AND BONDED WITH THE BUILDING/GRADING PERMIT.

19. SITE DEVELOPMENT PLAN APPROVAL BY THE DEPARTMENT OF PLANNING AND ZONING IS REQUIRED PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF RESIDENTIAL DWELLINGS ON THESE LOTS.

20. THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 - RESIDENTIAL INFILL DEVELOPMENT OF THE 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 HOUSING UNIT TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSE. THE ENHANCED LANDSCAPE BUFFER HAS BEEN PROVIDED ON LOT 118 TO mitigate views and to address privacy and compatibility concerns expressed by the adjacent lot owners at the pre-submission community meeting. 21. THERE ARE NO WETLANDS ON THIS SITE, AS STATED IN A LETTER OF FINDINGS DATED AUGUST 10, 2015 AND AUGUST 31, 2016 PREPARED BY ECO-SCIENCE PROFESSIONALS,

22. THERE ARE NO DISTURBANCES TO ENVIRONMENTAL FEATURES AS THERE ARE NO ENVIRONMENTAL FEATURES LOCATED ON THIS PROPERT 23. OPEN SPACE REQUIREMENTS ARE PROVIDED BY A FEE-IN-LIEU PAYMENT OF \$3,000.00 UNDER F-17-063.

24. A COMMUNITY MEETING WAS CONDUCTED AUGUST 25, 2016 FOR THE PURPOSE OF THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED RESIDENTIAL DEVELOPMENT AND TO ALLOW THE COMMUNITY TO ASK QUESTIONS AND TO MAKE. COMMENTS, PER SECTION 16.120(D) OF THE SUBDIVISION REGULATIONS.

THE TRAFFIC STUDY FOR THIS PROJECT DATED NOVEMBER, 2016 WAS PREPARED BY MARS GROUP. 26. THESE PROPERTIES ARE LOCATED WITHIN THE METROPOLITAN DISTRICT AND WILL BE SERVED BY PUBLIC WATER AND SEWER SUBDIVISION IS SUBJECT TO SECTION 104.0.F. OF THE ZONING REGULATIONS. AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.L.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED.THE DEVELOPER SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THE M.I.H.U.

requirement will be met. The M.I.H.U. agreement and covenants will be recorded simultaneously with the plat in the land records office of howard county, MARYLAND. THIS DEVELOPMENT WILL MEET M.I.H.U. ALTERNATIVE COMPLIANCE BY A PAYMENT OF A FEE-IN-LIEU TO THE DEPARTMENT OF HOUSING FOR EACH REQUIRED UNIT. MODERATE INCOME HOUSING UNIT (M.L.H.U.) TABULATION: a. M.I.H.U. REQUIRED = (2 LOT5 X 10%) = 0.2 M.I.H.U.

b. MIH.U. PROPOSED = DEVELOPER WILL PURSUE ALTERNATIVE COMPLIANCE BY PAYING A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT FOR THE UNITS . AN EXECUTED MI.H.U. AGREEMENT WITH THE HOWARD COUNTY HOUSING DEPARTMENT HAS BEEN COMPLETED AND RECORDED SIMULTANEOUSLY WITH THE PLAT.

EXISTING WELL AND PRIVATE SEPTIC SYSTEM WERE PROPERLY ABANDONED PRIOR TO RECORDATION OF THE PLAT. TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SUVERY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN AUGUST 2015 & SEPTEMBER 2016 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVAL INTERPOLATED FOR 2' CONTOUR INTERVAL ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF

31. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) 32. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REQUIATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT. 34. TRASH AND RECYCLABLES COLLECTION WILL BE AT FREDERICK ROAD WITHIN 5' OF THE COUNTY ROADWAY. TRASH / REFUSE COLLECTION PAD WILL BE MAINTAINED BY THE

PROPERTY OWNERS (IF AN HOA) IS NOT PROPOSED. THE MAINTENANCE OF THIS COLLECTION AREA SHOULD BE REFERENCED IN THE PRIVATE USE-IN-COMMON ACCESS 35. DRIVEWAY SHALL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R-6.06 IN THE VOL. IV DESIGN MANUAL

36. A 37' PRIVATE USE-IN-COMMON DRIVEWAY ACCESS, DRAINAGE, & UTILITY EASEMENT FOR THE BENEFIT OF LOTS 122 AND 123 IS RECORDED ON PLAT \*24/26\*ND MAINTENANCE AGREEMENT RECORDED UNDER LIBERIT703, FOLIO 358. SOILS INFORMATION BASED ON NRCS WEB SOIL SURVEY FOR HOWARD COUNTY, MARYLAND.

38. IN ACCORDANCE WITH SECTION 120 (0)(a)(1)(e)OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR

39. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE 410 531 5533 STATE HIGHWAY ADMINISTRATION BGE(CONTRACTOR SERVICES)

BGE(UNDERGROUND DAMAGE CONTROL) COLONIAL PIPELINE COMPANY 410.795.1390 HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES 410.313.4900 HOWARD COUNTY HEALTH DEPARTMENT 410.313.2640 1.800.252 1133 1.800.743.0033/410.224.9210

40. ANY DAMAGE TO PUBLIC RIGHT-OF WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. UNDER F-17-063, DEVELOPER PAID A FEE-IN-LIEU OF FRONTAGE IMPROVEMENTS IN THE AMOUNT OF \$34,020.50 AS PER WP-17-060. THIS PLAN IS SUBJECT TO DESIGN MANUAL WAVER APPROVED ON MAY 12, 2017 WHICH REQUESTED TO NOT SERVE THE BASEMENT LEVEL BY GRAVITY AND BE PERMITTED TO USE A TWIN SHC. THIS APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

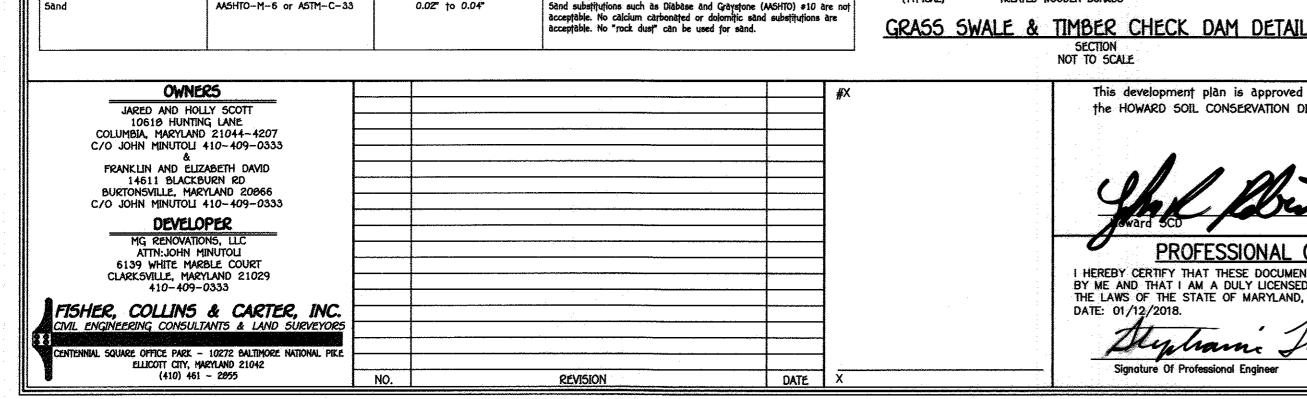
PLEASE INDICATE ON THE 50P-17-049 PLAN THAT THE CELLAR OF LOTS 122 AND 123 ARE NOT SERVED. THE USE OF A TWIN SHC IS APPROVED HOWEVER: IT SHALL BE INSTALLED AT A 2% GRADE WITHIN THE PUBLIC ROW. PLEASE REDLINE EX. CONTRACT # 34-4350 TO SHOW THE NEW TWIN 5HC, LABEL LOTS 122 AND 123 AND DENOTE EACH AS CNS. PLEASE INDICATE THE REQUIREMENT TO REMOVE THE EXISTING TREE (26") AT THE ENTRANCE OF WILLARDS WAY. THIS EXISTING TREE IS WITHIN 5 PEET OF THE PROPOSED PUBIC WATER AND SEWER CONNECTIONS.

PLAN IS SUBJECT TO ALTERNATIVE COMPLIANCE PETITION WP-17-068 WHICH ON FEBRUARY 28, 2017 THE PLANNING DIRECTOR APPROVED A REQUEST TO WAVE SECTION 16.132(A)(2)(I) LOCAL OR MINOR COLLECTOR ROADS, SECTION 16.134(A) SIDEWALKS REQUIRED, SECTION 16.135 STREET LIGHTING, SECTION 16.136 STREET TREES AND SECTION 16.127(C)(4)(I) LIMIT ON ADJOINING DRIVEWAY ENTRANCES. SUBJECT TO THE FOLLOWING CONDITIONS:

APPROVAL IS SUBJECT TO THE PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$34,820.50 OF CONSTRUCTION OF SIDEWALKS, CURB AND GUTTER AND STREET LIGHTS PER THE ATTACHED DEVELOPMENT ENGINEERING DIVISION COMMENTS DATED FEBRUARY 15, 2017. SUBMIT A DETAILED COST ESTIMATE FOR REVIEW THAT INCLUDES ALL COSTS NECESSARY TO CONSTRUCT THE IMPROVEMENTS INCLUDING MOBILIZATION, MAINTENANCE OF TRAFFIC, SEDIMENT CONTROL, ETC. THE FEE-IN-LIEU MUST BE PAID PRIOR TO RECORDATION OF F-17-063.

. A NOTE SHALL BE PLACED ON F-17-063 AND ALL SUBSEQUENT PLANS REFERENCING THIS WAIVER PETITION AND THE PAYMENT OF A FEE-IN-LIEU OF CONSTRUCTION OF SIDEWALKS, CURB AND GUTTER AND STREET LIGHTING.

> Please Note That Lots 122 & 123 In This Subdivision Is Subject To The Moderate Income Housing Unit <u>(M.I.H.U.) Fee—In—Lieu Requirement</u> 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.



the HOWARD SOIL CONSERVATION DISTRICT. PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED

BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER

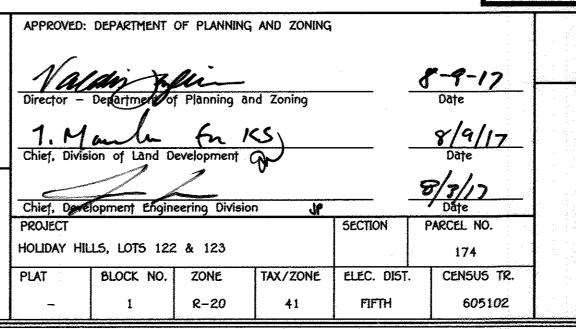
THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION

This development plan is approved for soil erosion and sediment control by

BUILDER/DEVELOPER'S CERTIFICATE 1/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY 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." AFURE OF DEVELOPER

MIXED PERENNIAL PLANTINGS

ENGINEER'S CERTIFICATE 1/WE 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."



TITLE SHEET

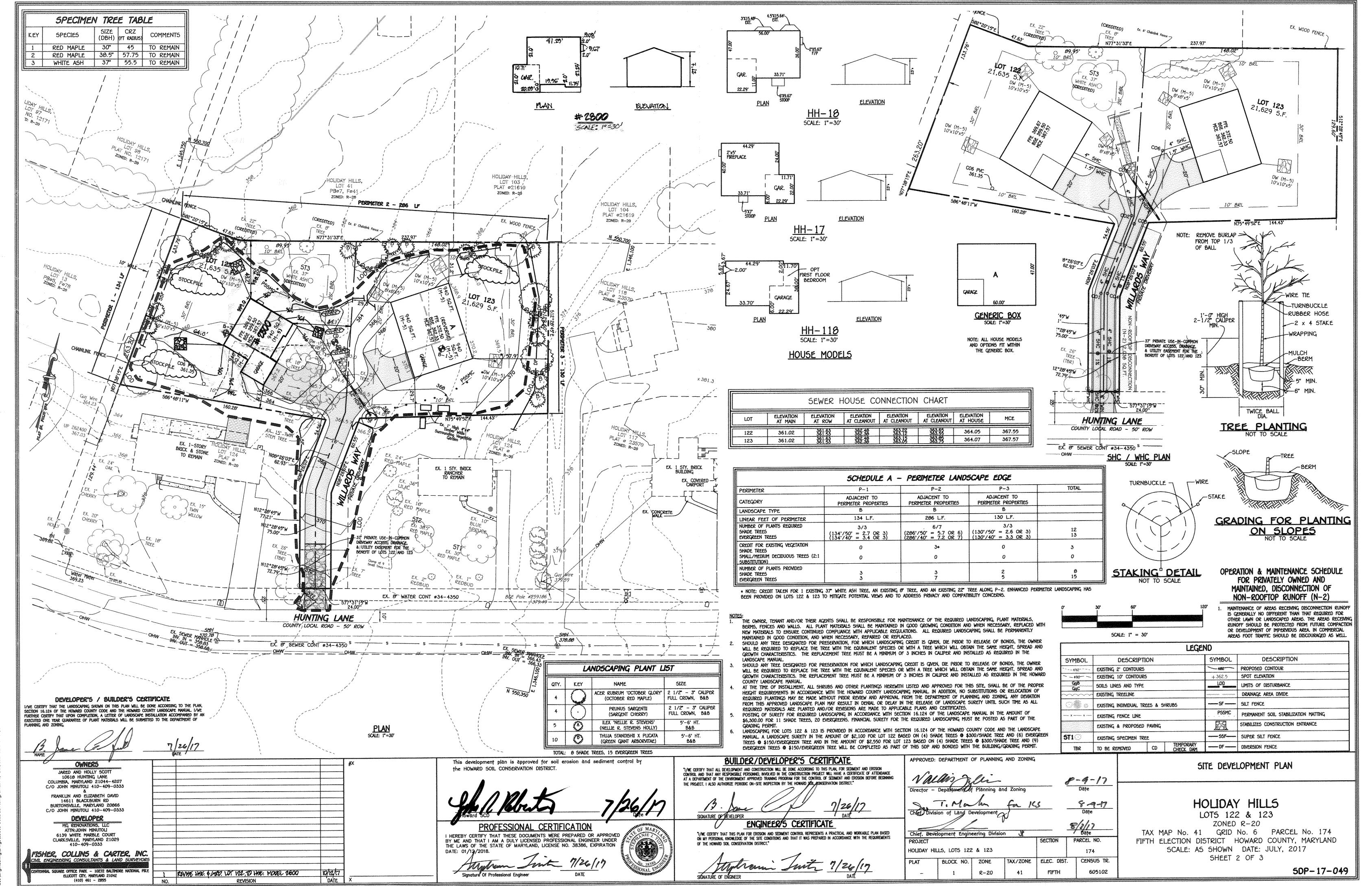
HOLIDAY HILLS

LOTS 122 & 123

SHEET 1 OF 3

ZONED R-20 TAX MAP No. 41 GRID No. 6 PARCEL No. 174 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2017

5DP-17-049



2015\15009\Engineering\Dwas\15009-3002 SDP.dwa. SHEET 2, 7/26/2017 9:21:42

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. b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

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: . 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 Application of amendments or topsoil is required if on-site soils do not meet 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.

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 moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

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 type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS

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 furnish continuing supplies of moisture and plant nutrients.

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

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria

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 1 1/2 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.

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

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)

1. 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. 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be warranty of the producer.

3. 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 90 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 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 placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Conditions Where Practice Applies

a. All seed must meet the requirement 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 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 around 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 cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less

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.

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 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

b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. . 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

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

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 0 (phosphorus), 200 pounds per acre; K 0 (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.

owners

JARED AND HOLLY SCOTT

10618 HUNTING LANE

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C/O JOHN MINUTOLI 410-409-0333

FRANKLIN AND ELIZABETH DAVID 14611 BLACKBURN RD BURTONSVILLE, MARYLAND 20066

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MG RENOVATIONS, LLC

ATTN: JOHN MINUTOLI 6139 WHITE MARBLE COURT

CLARKSVILLE, MARYLAND 21029 410-409-0333

FISHER, COLLINS & CARTER, INC

ELLICOTT CITY, MARYLAND 21042

(410) 461 - 2055

IVIL ENGINEERING CONSULTANTS & LAND SURVEYOR

Duare office park – 10272 Baltimore National Pi

iv. When hydroseeding do not incorporate seed into the soil. 1. Mulch Materials (in order of preference) 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 uniform fibrous physical

NOT TO SCALE This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Fertilizer Rate (10-20-20) Lime Rate

per acre (2 |b/ (2 |b/ (90 |b/ (1.0 |b/ 1000 sf) 1000 sf) 1000 sf)

P205

WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual

in worm is to be ayed green or contain a green aye in the pockage and win provide an appropriate contain to including 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 absorptio

and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of

iv. WCFM material must not contain elements or compounds at concentration levels that will by 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

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

a mulch anchoring tool, increase the application rate to 2.5 tons per acre.

available in rolls 4-15 feet wide and 300 to 3,000 feet long.

permanent stabilization practices are required

Hardiness Zone (from Figure B.3):

Application Rate

(lb/ac)

PERMANENT SEEDING NOTES (8-4-5)

Seed Mixture (from Table B.1):

in the Permanent Seeding Summary.

summary is to be placed on the plan.

receive a medium to high level of maintenance.

protection and assures a pure genetic line

Hardiness Zone (from Figure B.3): \_\_6b\_

8 TALL FESCUE

DATE

5eed Mixture (from Table B.3): \_\_\_\_\_\_\_\_

(lb/ac)

100

BARLEY

A. Seed Mixtures

General Use

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

prescribed in Section 8-4-3.A.1.b and maintain until the next seeding season.

Dates

3/1 - 5/15.

8/15 - 10/15

to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using

Wood cellulose fiber used as mulch must be applied to 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.

operate safely. If used on sloping land, this practice should follow the contour.

i. 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.

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 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

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

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usua

neavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time,

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardines

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 B.1 plus

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as

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

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing

agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown

a. Areas where turforass may be desired include lawns, parks, playgrounds, and commercial sites which will

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation

Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid

bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

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

establishment is necessary and when turf will receive medium to intensive management. Certified Perennial

Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the

iii. 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

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 Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3

Select turgarass varieties from those listed in the most current University of Maryland Publication, Agronomy

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program

of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer

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 1 1/2 inches in diameter

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth ( 1/2 to 1 inch

seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Dates

every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when

Depths

The resulting seedbed must be in such condition that future moving of grasses will pose no difficulty.

Ideal Times of Seeding for Turf Grass Mixtures 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

Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet.

Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The

Fertilizer Rate

(10-20-20)

Lime Rate

2 tons/ac

PROFESSIONAL CERTIFICATION 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. 38386, EXPIRATION DATE: 01/12/2018.

SIGNATURE OF DEVELOPER OF THE HOWARD SOIL CONSERVATION DISTRICT."

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter)

growth and thatch. Broken pads and forn or uneven ends will not be acceptable.

which would cause dir drying of the roots.

inches. Water sod during the heat of the day to prevent wilting.

a. Class of turforass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.

Sod must not be harvested or transplanted when moisture content (excessively dry of wet) may adversely affect its survival.

prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage pattern

Complete the operations of laying, tamping, and irrigating for any piece of sod within eight hours.

After the first week, sod watering is required as necessary to maintain adequate moisture content.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

A mound or pile of soil protected by appropriately designed erosion and sediment control measure

Conditions Where Practice Applies

Criteria

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section 8-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The

tockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes

10 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section 8-3

HOWARD SOIL CONSERVATION DISTRICT (HSCD)

STANDARD SEDIMENT CONTROL NOTES

marked clearly in the field. A minimum of 40 hour notice to CID must be given at the following

b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,
 c. Prior to the start of another phase of construction or opening of another grading unit,

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

All vegetative and structural practices are to be installed according to the provisions of this plan and

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, disches,

perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar

All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS 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 if 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. 8-4-8) 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. 8-4-6).

All sediment control structures are to remain in place, and are to be maintained in operative

Any sediment control practice which is disturbed by grading activity for placement of utilities must b

wriften report by the contractor, made available upon request, is part of every inspection and should

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

Weather information (current conditions as well as time and amount of last recorded

Brief description of project's status (e.g., percent complete) and/or current activities

Compliance status regarding the sequence of construction and stabilization requirements

Other inspection items as required by the General Permit for Stormwater Associated with natruction Activities (NPDES, MDE).

Any major changes or revisions to the plan or sequence of construction must be reviewed and

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

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 LO.D. A project is to be sequenced so that grading activities

proceed to a subsequent grading unit when at least 30 percent of the disturbed drea in the preceding grading unit has been stabilized and approved by the HSCD, no more than 30 acres cumulatively may be disturbed 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

r control, and associated permits shall be on-site and available when the site is active.

intervals, with lower ends curled uphill by 2 in elevation.

Stream channels must not be disturbed during the following restricted time periods (inclusive):

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND

Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall

condition until permission for their removal has been obtained from the CID.

Inspection date
Inspection type (routine, pre-storm event, during rain event)
Name and title of inspector

dentification of sediment controls that require maintenance dentification of missing or improperly installed sediment controls

be back-filled and stabilized by the end of each workday, whichever is shorter.

Photographs
Monitoring/sampling
Maintenance and/or corrective action performed

0.91

Prior to the removal or modification of sediment control practices.

coordination and to avoid conflicts with this plan.

Site Analysis: Total Area of Site:

Area to be vegetatively stabilized: 0.60

Evidence of sediment discharges Identification of plan deficiencies

Use I and IP March 1 - June 15

Use IV March 1 - May 31

lise III and IIIP October 1 - April 30

- ON-SITE P-1 PAVING SECTION

ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH

HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD

TYPICAL PRIVATE DRIVE CROSS

SLOPE SECTION

SPECIFICATION AND DETAILS FOR CONSTRUCTION.

The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

3. Runoff from the stockpile area must drain to a suitable sediment control practice.

4. Access the stockpile area from the upgrade side.

discharging concentrated flow in a non-erosive manner.

b. Sod must be machine cut at a uniform soil thickness to % inch, plus or minus % inch, at the time of cutting. Measurement for thickness must exclude top

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

e, 5od must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or

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

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

1. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet.

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

c. Do not mow until the sod is firmly rooted. No more than % 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.

2. 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

5. 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

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. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard 8-4-1 Incremental Stabilization and Standard 8-4-4 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 containing containing must be covered with

DETAIL D-2 STONE CHECK DAM

CROSS SECTION

PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE, CONSTRUCT THE CHECK DAM WITH WASHED 4 TO FINCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES, PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS, FORM THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES, LINE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (%, TO 1% INCH).

REMOVE ACCUANTIATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CRES

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

**(E5)** 

-BIOSWALE

—TIMBER CHECK DAM

CULVERT PROFILE

HORIZONTAL SCALE: 1"=30"

VERTICAL SCALE: 1"=3"

16' USE-IN-COMMON DRIVEWAY

-EXISTING GRADE

NOTE:
1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN

16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION

NOT TO SCALE

MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

2. SWALES ARE FOR CONVEYANCE OF RUNOFF AND NOT UTILIZED FOR TREATMENT CREDIT.

12"HOPE @0.5%.

Q2 = 0.96 CF5

 $V_2 = 1.62 \text{ FP5}$ 

 $Q_{10} = 1.50 \text{ CFS}$   $V_{10} = 2.34 \text{ FPS}$ 

\* CHECK DAMS SPACED 13 FT APART WITH WEIR HEIGHT OF 0.5 FT. WEIR 4 FT WIDE.

\* 5PACING \* 0.5 FT / 0.04 FT/FT = 12.5 FT MIN.

PROPOSED GRADE-

2 FT MAX. SLOPE S SLOP

ONSTRUCTION SPECIFICATIONS

4 TO 7 IN STONE

a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

BUILDER/DEVELOPER'S CERTIFICATE "YAME CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY 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. 7/26/17

ENGINEER'S CERTIFICATE "I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED

U.S. DEPARTMENT OF AGRICULTURE ITURAL RESOURCES CONSERVATION SERVICE 2011 APPROVED: DEPARTMENT OF PLANNING AND ZONING 8-9-17 8/9/17 PROJECT PARCEL NO. HOLIDAY HILLS, LOTS 122 & 123 174 TAX/ZONE ELEC. DIST. CENSUS TR. ZONE R-20 605102

AREA = 0.49 AC

GROUND SURFACE-

CONSTRUCTION SPECIFICATIONS

 $Q_2 = 0.53 \text{ CPS}$  $V_2 = 0.11 \text{ FPS}$ 

SCE 6 FT MAX. CENTER TO CENTER \_36 IN MIN. FENCE POST LENGTH DRIVEN MIN. 16 IN INTO GROUND B IN MIN. DEPT ELEVATION CROSS SECTION AUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEE OR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE, PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE, PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN, WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY, A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT. STAPLE ---PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.

STABILIZED CONSTRUCTION

PROFILE

PLAN VIEW

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

----SSF-----1

-36 IN MIN.

├──SFD

AXIMUM DRAINAGE AREA = 2 ACRI

LUV RESISTANT IMPERMEABLE SHEETING ON BOTH SIDES OF FENCE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

10 FT MAX.

**ELEVATION** 

CROSS SECTION

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

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.

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

DIVERSION FENCE

10 FT MAX.

ELEVATION

SECTION

USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.

SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.

EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND, SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.

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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

GALVANIZED CHAIN LINK FENCE WITH WOVEN SUT FILM GEOTEXTILE

DETAIL E-3 SUPER SILT FENCE

WOVEN SLIT FILM GEOTEXTILE-

ENTRANCE

JSE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART, EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.

JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING PSSMC - \*0.50 lb/ft<sup>2</sup> (\* INCLUDE SHEAR STRESS) CHANNEL APPLICATION

CONSTRUCTION SPECIFICATIONS: USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN, IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2½ INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. B RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES MUDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MINIMUM 1 LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.

PERFORM FINAL GRADING, TOPSCIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE, WORK FROM CENTER OF CHANNEL OUTWARD WIEN PLACING ROLLS, LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE, AVOID STRETCHING THE MATTING.

OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS, OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT. 8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL 2011 SHEAR STRESS FOR PSSMC (LOT 123) =  $62.4 \text{ LBS/FT}^6 \times 0.4 \text{ FT} \times 0.02 = 0.50 \text{ LBS/FT}^2$ SEQUENCE OF CONSTRUCTION

OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/ INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE, AND DIVERSION FENCE. (1 DAY) REMOVE NECESSARY TREES AND ROUGH GRADE LOT. UPON CUT IN OF SWALE AND INSTALLATION OF CULVERT PIPE, INSTALL TEMPORARY CHECK DAMS. (2

INSTALL TEMPORARY SEEDING. (1 DAY) CONSTRUCT HOUSES AND DRIVEWAYS. INSTALL SEWER AND WATER HOUSE CONNECTIONS. (8 MONTHS) INSTALL ROOF LEADERS & DRYWELLS UPON CONSTRUCTION OF HOUSES. FINE

GRADE, AND INSTALL PERMANENT SOIL STABILIZATION MATTING. UPON REMOVAL OF TEMPORARY CHECK DAMS, INSTALL BIOSWALE AND ASSOCIATED PLANTINGS. (1 INSTALL PERMANENT SEEDING WITH CONSTRUCTION. (1 DAY) ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY

REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH

SEDIMENT & EROSION CONTROL NOTES & DETAILS

HOLIDAY HILLS

SHEET 3 OF 3

LOTS 122 & 123 ZONED R-20 TAX MAP No. 41 GRID No. 6 PARCEL No. 174 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2017

5DP-17-049