	SHEET INDEX						
SHEET N	SHEET NO. DESCRIPTION						
1	TITLE SHEET						
2	2 EXISTING CONDITIONS AND DEMO PLAN						
3	3 SITE DEVELOPMENT PLAN						
4	4 SEDIMENT EROSION CONTROL PLAN						
5	5 SEDIMENT EROSION CONTROL NOTES AND DETAILS						
6	LANDSCAPE PLAN						

STORMWATER MANAGEMENT PRACTICES							
LOT No.	ADDRESS	M-5 BIO-RETENTION DISCON		NON-ROOFTOP DISCONNECTS N-2 (NUMBER)			
5	9046 GORMAN RD	Y-4	Y-1	Y-3			

STORMWATER MANAGEMENT SUMMARY								
AREA ID. ESDV ESDV REQUIRED PROVIDED REMARKS CU.FT.								
SITE	992	997	DRYWELLS (M-5), MICRO-BIORETENTION (M-6), AND NON-ROOFTOP DISCONNECTS (N-2)					
TOTAL	992	997						

GROSS AREA = 0.61 AC. LOD = 0.49 ACRES RCN = 64TARGET Pe = 1.7" Pe PROVIDED = 1.7"

DRY WELL CHART								
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L	W	D	
5A	519 5Q. FT.	70 C.F.	98 C.F.	100%*	10' x	7'	x 3.5'	
5B	478 5Q. FT.	65 C.F.	98 C.F.	100%*	10' x	7'	x 3.5'	
5C	390 5Q. FT.	53 C.F.	77 C.F.	100%*	10' x	7'	x 2.75'	
5D	390 5Q. FT.	53 C.F.	77 C.F.	100%*	10' x	7'	x 2.75'	

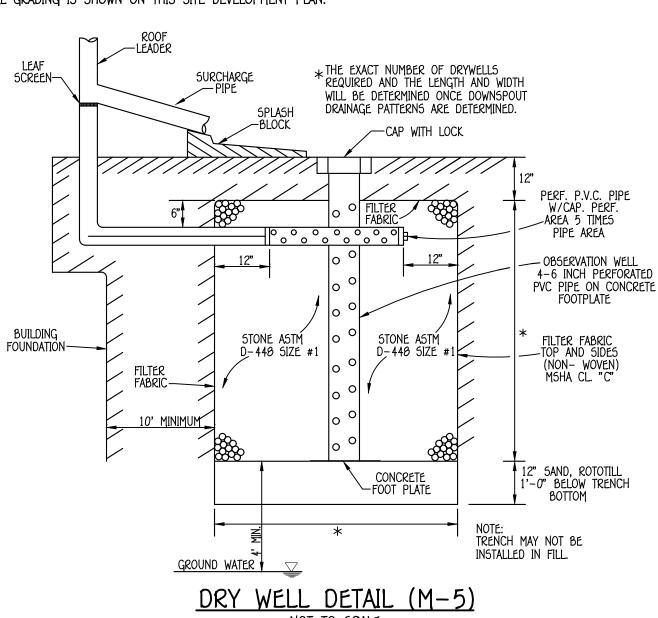
* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

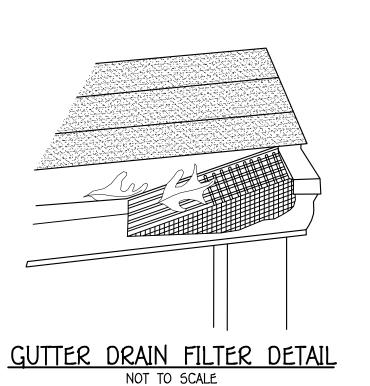
SITE DEVELOPMENT PLAN BOUNDS PROPERTY LOTS 5 & 6

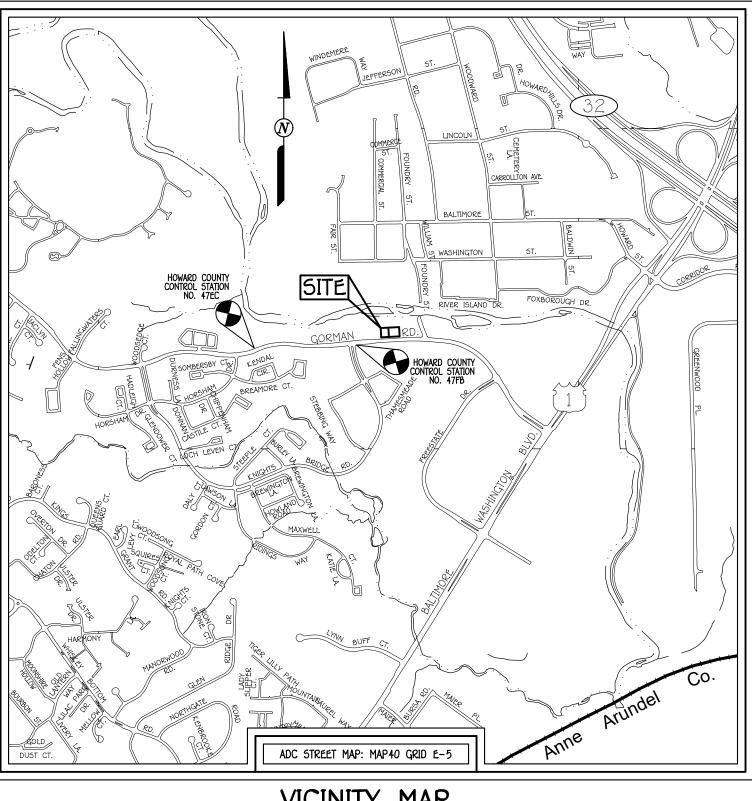
TAX MAP No. 47 GRID No. 17 PARCEL NO. 341 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

STORMWATER MANAGEMENT NOTES

- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH
- THE DETAIL SHOWN ON THIS SHEET. 4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.







VICINITY MAP

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- 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. THE OWNER SHALL PERFORM A PLANT 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 APPLIED. 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 & 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
- 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.

GOPI MANDELA

9044 GORMAN ROAD

LAUREL, MD 20723

F. 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.

- TOTAL AREA OF THIS SUBMISSION = 0.614 AC. ± $0.255 \text{ AC.} \pm (\text{Lo} + 5) + 0.359 \text{ AC.} \pm (\text{Lo} + 6)$
- (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC± TOTAL AREA OF STEEP SLOPES:
- STEEP SLOPES: 25% OR GREATER = 0.00 AC± TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC. ±
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC. ± TOTAL AREA OF EXISTING FOREST = 0.00 AC±
- TOTAL GREEN OPEN AREA = 0.388 AC± (LOT 5 = 0.148 AC.±)
- TOTAL IMPERVIOUS AREA = Lot 5=0.107 AC±, LOT 6=0.119 Ac.±

SITE ANALYSIS DATA CHART

- LIMIT OF DISTURBED AREA = 21,551 SQ.FT. OR 0.49 Ac. ± PRESENT ZONING DESIGNATION = R-SC
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: F-91-170, WP-91-08, ECP-18-041, AND F-19-010
- MODERATED STEEP SLOPES: 15%-24.9% = 0.00 AC±
- TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC± TOTAL AREA OF LOTS / BUILDABLE PARCELS = 0.614 AC±
- TOTAL AREA OF ERODIBLE SOILS = LOT 5=0.254 AC.+, LOT 6=0.359 AC.+

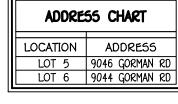
GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-SC (PER 10/06/13 COMPREHENSIVE ZONING PLAN.) THIS PLAN IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT
- JANUARY, 2018 BY FISHER, COLLINS AND CARTER, INC. EXISTING TOPOGRAPHY BASED ON FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS, & CARTER
- INC. DATED MAY, 2017 AND SUPPLEMENTED WITH HOWARD COUNTY TOPOGRAPHY. 4. COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY
- GEODETIC CONTROL STATIONS NO. 47EC AND NO. 47FB. STA. 47EC N 534,261.210 E 1,359,940.169 ELEV.= 233.687
- 5TA. 47FB N 534,295.375 E 1,361,228.708 ELEV.= 207.427 . THE GROSS PROPERTY AREA FOR THIS SITE IS 0.61 ACRES.
- 6. 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 IHAN 4 FEET INTO ANY SETBACKS. PORCHES, OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT
- MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETRACK 7. NO CEMETERIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN
- AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP. 6. THERE IS AN EXISTING DWELLING AND GARAGE ON LOT 6 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE
- ZONING REGULATION REQUIREMENTS. 9. THERE ARE NO FOREST STANDS EXISTING ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JANUARY 23, 2018.
- 10. SITE IS NOT ADJACENT TO A SCENIC ROAD. 11. 100 YEAR FLOODPLAIN, WETLANDS, STREAM(S) AND/OR THEIR BUFFERS, AND STEEP SLOPES DO NOT
- 12. THERE ARE NO WETLANDS ON THIS SITE, AS STATED IN A LETTER OF FINDINGS DATED JANUARY 23,
- 2018 PREPARED BY ECO-SCIENCE PROFESSIONALS, INC.
- 13. 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 MICRO-BIORETENTION (M-6). 14. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND WILL BE SERVED BY PUBLIC
- WATER AND SEWER. PERMISSION HAS BEEN GRANTED BY RECREATION AND PARKS FOR ACCESS TO EXISTING SEWER MAIN ON THEIR PROPERTY AS SHOWN BY PLANS. A DEED EXHIBIT REFLECTING THIS
- EASEMENT IS PROVIDED. THE DEED REFERENCE IS 15. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE CONTRACTOR'S
- 16. 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 5 TO MITIGATE VIEWS AND TO ADDRESS POTENTIAL PRIVACY AND COMPATIBILITY
- 17. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS, AND 100 YEAR FLOODPLAIN.
- 19. A PRE-SUBMISSION COMMUNITY MEETING WAS HELD ON MARCH 12, 2010 FOR THIS PROJECT. 19. THE PERIMETER LANDSCAPE AND STREET TREE OBLIGATION IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL, A LANDSCAPE SURETY IN THE AMOUNT OF \$1,900 BASED ON 1 SHADE TREE @ \$300/SHADE TREE, 3 ORNAMENTAL TREES @
- \$150/ORNAMENTAL TREE, AND 115 L.F. OF LANDSCAPE FENCE @ \$10 L.F. SHALL BE BONDED WITH
- 20. LOT 6 IS EXEMPT FROM THE PERIMETER LANDSCAPE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL BECAUSE IT CONTAINS AN EXISTING DWELLING

21. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY

CODE AND FOREST CONSERVATION ACT. TO FULFILL THE 0.1 ACRES (4,356 SQ. FT.) OF

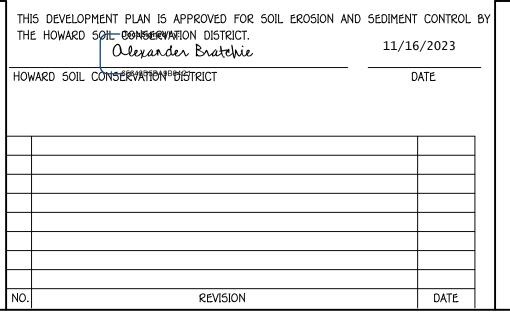
- AFFORESTATION REQUIREMENT, THE DEVELOPER HAS PAID A FEE-IN-LIEU IN THE AMOUNT OF \$3,267.00 WITH F-19-010. 22. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING
 - A). WIDTH 12 FEET (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
- 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:
- 3). MAINTENANCE SUFFICIENT TO ENSURE ALL WEATHER USE
- 23. THE USE-IN-COMMON ACCESS AND MAINTENANCE AGREEMENT WAS RECORDED WITH PLAT #25220. 24. SOIL BORING INFORMATION IS SHOWN ON THE PLANS AND IN THE STORMWATER MANAGEMENT REPORT. 25. NO NOISE STUDY IS REQUIRED BECAUSE THE PROJECT DOES NOT FALL WITHIN THE GUIDELINES OF DESIGN MANUAL, VOLUME III, ROADS, BRIDGES, SECTION 5.2.F.2.
- 26. FOR FLAG AND PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY
- 27. THIS PLAN IS NOT LOCATED WITHIN A HISTORIC DISTRICT. LOT 5 IS CURRENTLY UNIMPROVED: THEREFORE, NO HISTORIC STRUCTURES EXIST ON THE LOT.
- 28. THIS PLAN IS SUBJECT TO WP-91-08 WHICH ON OCTOBER 9, 1990 THE PLANNING DIRECTOR APPROVED A WAIVER TO SECTION 16.113.F.7 FOR DIRECT DRIVEWAY ACCESS ONTO GORMAN ROAD.
- 29. DRIVEWAY ENTRANCE TO BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R-6.02. 30. ALL THREE SPECIMEN TREES WILL BE IMPACTED, BUT LESS THAN 30% OF THE CRZ AND WILL BE DISTURBED.
- 29. SUBDIVISION I DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.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 WILL BE RECORDED SIMULTANEOUSLY WITH THIS PLAT IN THE LAND RECORDS OFFICE OF HOWARD COUNTY. MARYLAND. UPON DEMOLITION OF THE EXISTING DWELLING, M.I.H.U. FEE-IN-LIE WILL BE PAID AT THE BUILDING PERMIT.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.I.H.U.) TABULATION:
- M.I.H.U. REQUIRED = (2 LOT X 10%) = 0.2 M.I.H.U. M.I.H.U. PROPOSED = DEVELOPER WILL PURSUE ALTERNATIVE COMPLIANCE BY PAYING A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT FOR THE UNITS REQUIRED
- BY THE DEVELOPMENT. THE FEE-IN-LIEU SHALL BE PAID AT BUILDING PERMIT. 30. THE M.I.H.U. AGREEMENT FOR LOT 5 HAS BEEN RECORDED IN BOOK: 19043 AND PAGE: 5. 31. PER A LETTER FROM THE MARYLAND DEPARTMENT OF NATURAL RESOURCES DATED JULY 26, 2010,
- PROTECTIVE MEASURES FOR AQUATIC HABITATS SUPPORTING RARE, THREATENED AND ENDANGERED 1. PURSUE ENVIRONMENTALLY SENSITIVE DESIGN TO ADDRESS STORMWATER RUNOFF BY PROMOTING
- THE USE OF NONSTRUCTURAL BEST MANAGEMENT PRACTICES TO THE MAXIMUM EXTENT. THE GOAL IS TO MIMIC NATURAL INFILTRATION PATTERNS ACROSS THE SITE IN ORDER TO MAINTAIN NATURAL a. THE SITE IS UTILIZING A MICRO-BIORETENTION FACILITY, DRYWELLS, AND DISCONNECTION OF
- NON-ROOFTOP RUNOFF.
- THE SITE IS ALSO UTILIZING A SHARED DRIVEWAY FOR LOTS 5 & 6. PROPOSED HOUSE IS LOCATED 175'+ FROM THE PATUXENT RIVER.
- . IN ORDER TO MINIMIZE RISK OF SEDIMENTATION IN THE AQUATIC AND WETLAND HABITATS AND TO MINIMIZE CHANGES TO THE HYDROLOGY TO THESE HABITATS.
- NO FOREST EXISTS ON SITE SUPER SILT FENCE WILL BE USED ALONG REAR OF PROPERTY.
- FREQUENT INSPECTIONS REQUIRED.
- LOT 5 IS ADJACENT TO PARCEL 84 OWNED BY HOWARD COUNTY. NO STEEP SLOPES WILL BE DISTURBED
- 1. PER DEPARTMENT OF NATURAL RESOURCES LETTER DATED JULY 26 2010, ADDITIONAL MEASURES HAVE BEEN TAKEN TO CONTROL SEDIMENT LADEN RUNOFF. SEE SEDIMENT EROSION CONTROL PLAN, SHEETS
- 32. OPEN SPACE REQUIREMENTS ARE MET AS INDICATED IN THE APPROVED F-PLAN (F-19-010), WHERE IT IS STATED THAT THIS REQUIREMENT IS MET BY A FEE-IN-LIEU PAYMENT OF \$1,500.00.
- 33. TRAFFIC STUDY REQUIREMENTS ARE MET AS INDICATED IN THE APPROVED F-PLAN (F-19-010), WHERE IT IS STATED THAT A TRAFFIC STUDY WAS PREPARED BY MARS GROUP.



ALLOCATION EXEMPTIONS TR	<u> </u>
Total Number of Lots/Units Proposed	2
Number of MIHU Required	0.2
Number of MIHU Provided Onsite (exempt from APFO allocations)	О
Number of APFO Allocations Required (remaining lots/units)	0
MIHU Fee-in-Lieu (indicate lot/unit numbers)	0
MIHU Fee—in—Lieu Will Be Paid For The Existing House If or When it is Demolished	N/A

MODERATE INCOME HOUSING UNITS (MIHU)

FISHER, COLLINS & CARTER, INC. ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855





PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED UNDER MY SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/24.

Paul G. Cavanaugh

11/10/2023 PAUL G. CAVANAUGH BUILDER/DEVELOPER'S CERTIFICATE "I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT

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

UK Jung 11/10/2023 SIGNATURE OF DEVELOPER

DESIGNER'S CERTIFICATION HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF HE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

11/10/2023 Paul G. Cavanaugh DESIGNER'S SIGNATURE 27020 Paul G. Cavanaugh MD Registration No.: P.E., R.L.S., OR R.L.A. (CIRCLE ONE) PRINTED NAME PROFESSIONAL CERTIFICATION OWNER/DEVELOPER - LOT 5 OWNER - LOT 6

UK JUNG

EUNSOL SHIM

102 HOWLING RIVER RD

LAUREL, MD 20708

267-577-6055

11/15/2023 Chief, Division 可認識機能够的pment 11/27/2023 (Hd) Edmondson Chief, Developmed in the Pring Division 11/27/2023 lunda Eisenberg Director - Depate 1998 1998 Planning and Zoning PARCEL NO. BOUNDS PROPERTY, LOTS 5 & 6 N/A BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR. R-5C SIXTH 25228 N/A PREVIOUS HOWARD COUNTY FILES: ECP-22-003, WP-07-087, F-19-010

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

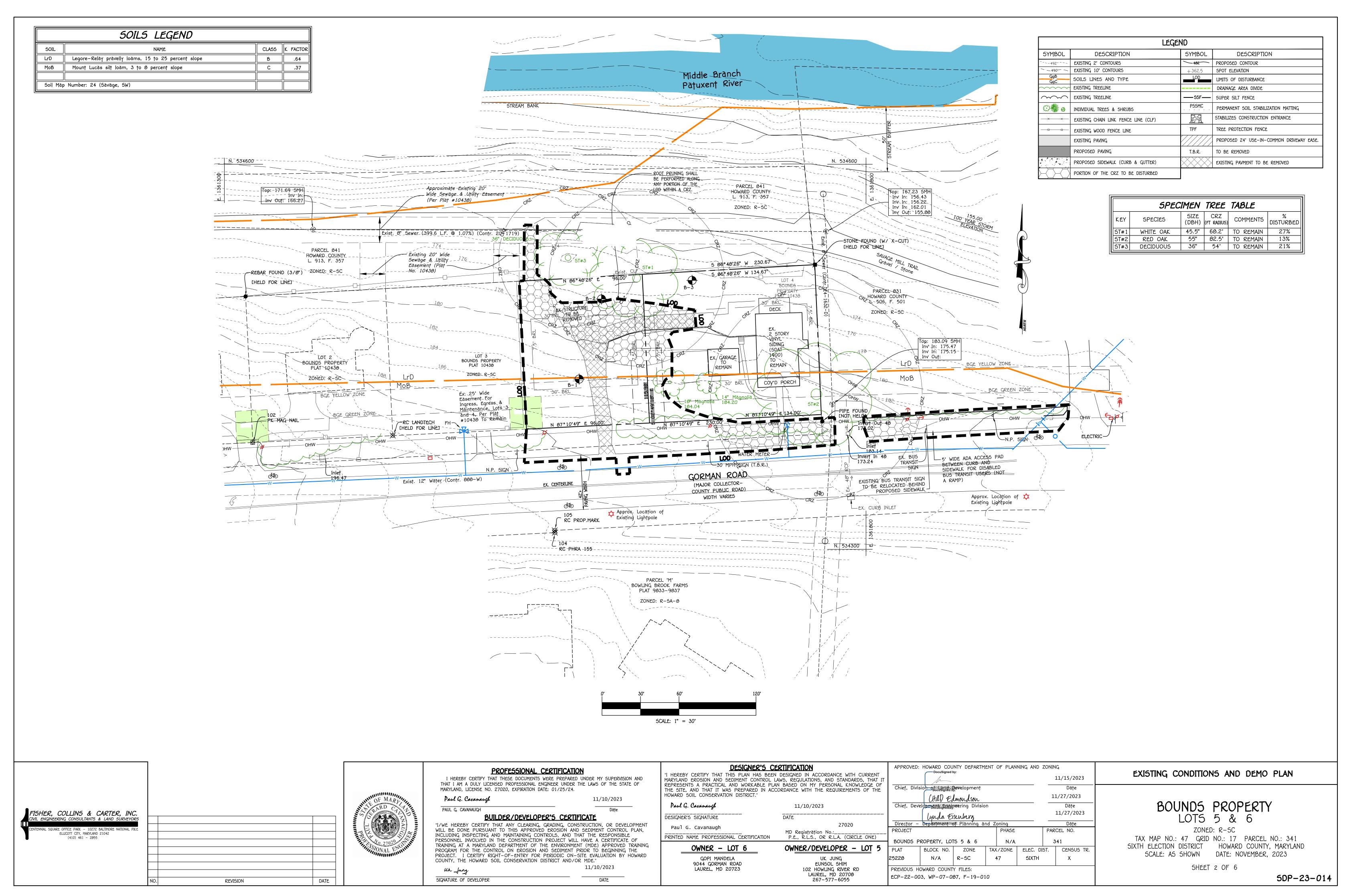
BOUNDS PROPERTY LOTS 5 & 6

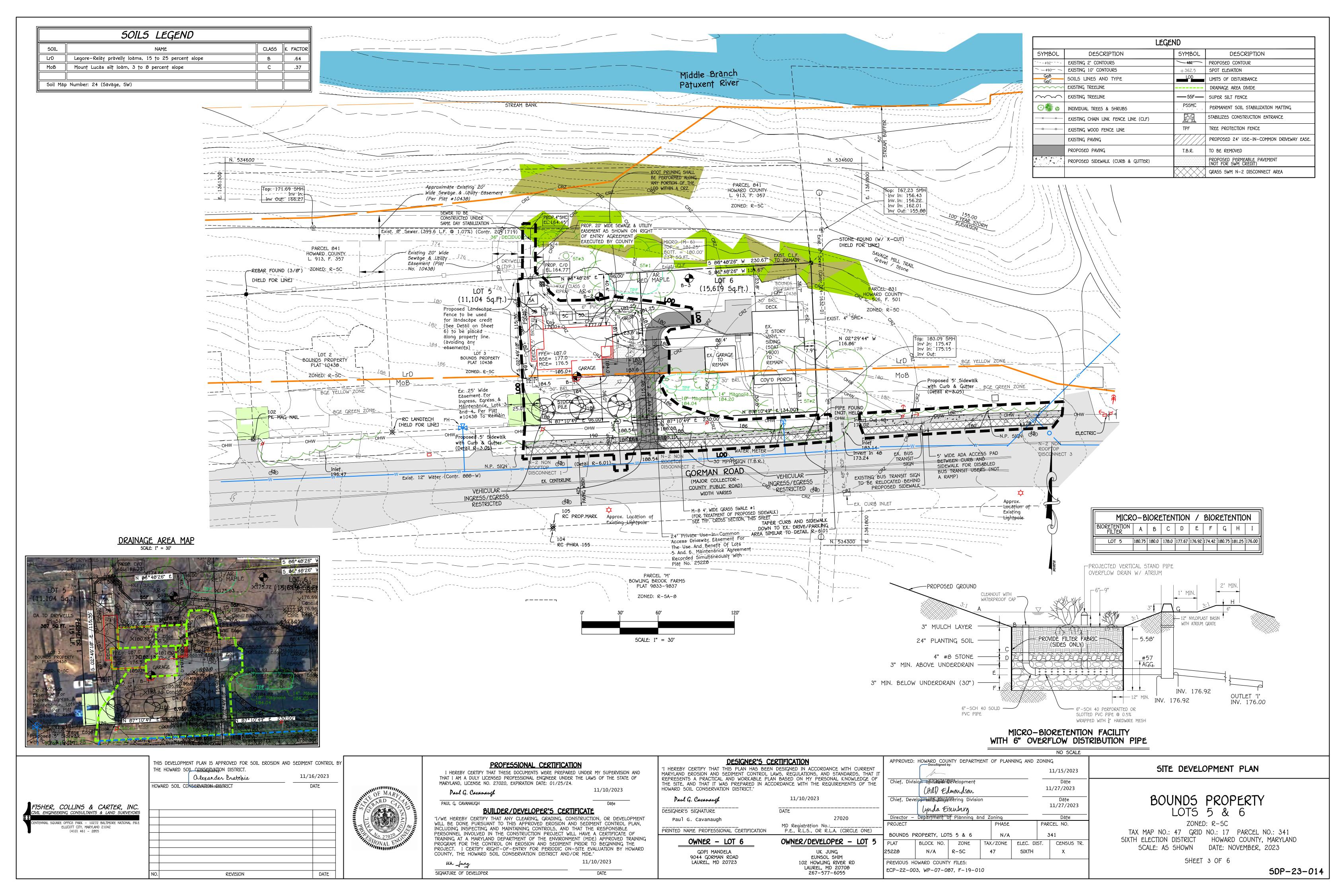
TITLE SHEET

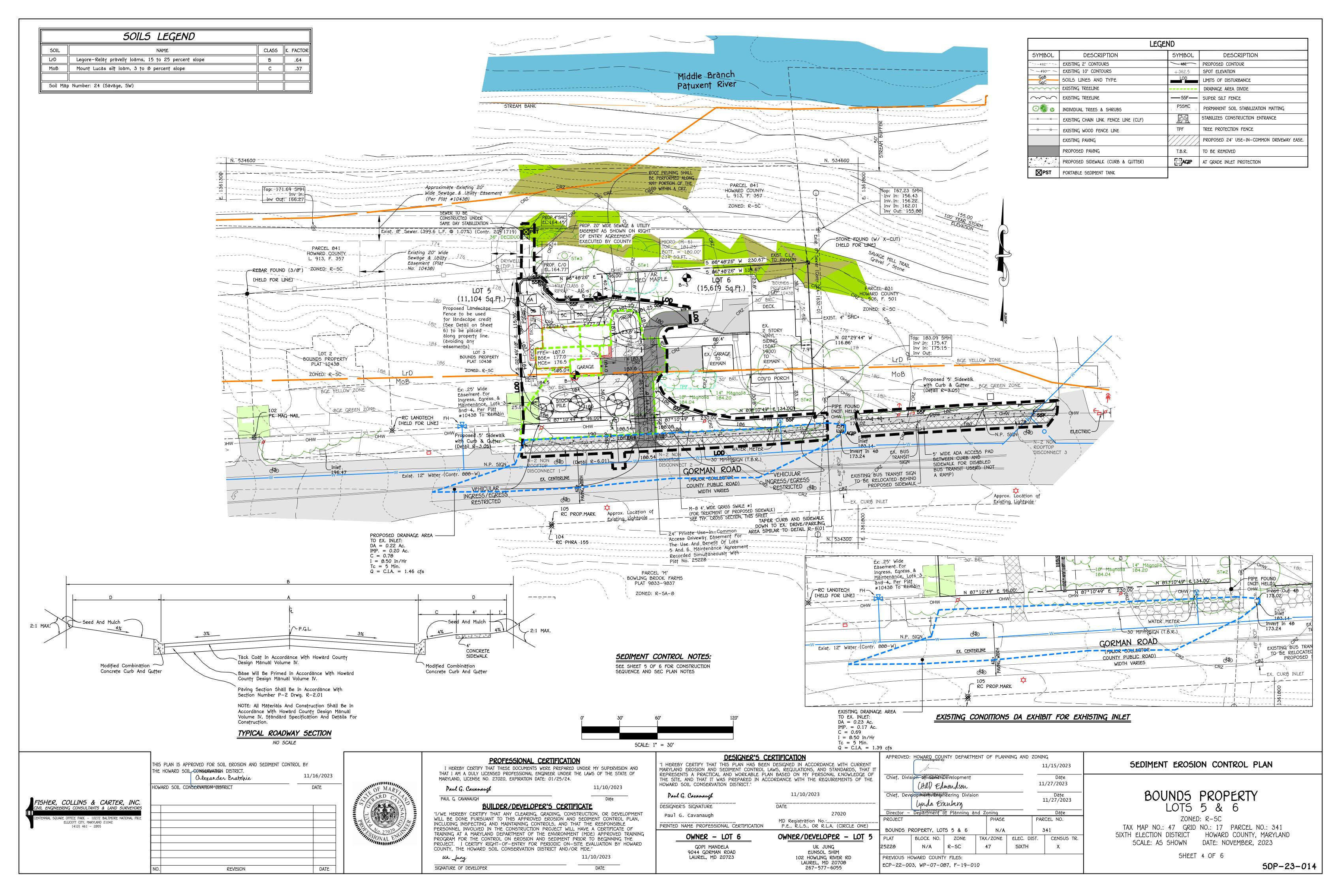
ZONED: R-5C TAX MAP NO.: 47 GRID NO.: 17 PARCEL NO.: 341 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: NOVEMBER, 2023

SHEET 1 OF 6

5DP-23-014







SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

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.

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.

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:

Soil pH between 6.0 and 7.0. . 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.

b. 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.

. 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.

d. The soil is so acidic that treatment with limestone is not feasible

c. The original soil to be vegetated contains material toxic to plant growth.

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

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true 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

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.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is

excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications) 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

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 delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be around 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.

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

TEMPORARY SEEDING NOTES (B-4-4)

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

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.

Criteria

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 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 fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Is 11	// = 0	, <u>, , , , , , , , , , , , , , , , , , </u>		051	11 051
	e (from Figure B. (from Table B.1):	3): <u>6b</u>	Ferțilizer	(10-20-20)	Lime Rațe
Species	Application Rate (Ib/ac)	Seeding Dațes	Seeding Depths	•	
BARLEY	96	3/1 - 5/15, 8/1 - 10/15	1"	436 lb/ac	2 †ons/do
OAT5	72	3/1 - 5/15, 8/1 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)
RYE	112	3/1 - 5/15, 8/1- 10/15	1"		
OXTAIL MILLET	30	5/16 - 7/31	0.50"		

PERMANENT SEEDING NOTES (B-4-5) A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

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 in the Permanent Seeding Summary .

Turforass Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the

Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

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 pounds per 1000 square feet.

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77. "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and

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

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

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

Härdiness Zone (from Figure B.3): <u>6b</u> Ferțilizer Rățe (10-20-20) Seed Mixture (from Tăble B.3): <u> </u>							Lime Rate		
No.	Species	Application Rate (lb/ac)	Seeding Da†es	Seeding Depths	N	P ₂ O ₅	K ₂ O		
8	TALL FESCUE	100	Aug. 1-Oct. 15	1/4-1/2 in.	per acre	90 lb/ac (2 lb/	90 lb/ac (2 lb/	2 †ons/ac (90 lb/	
N/A	MILLET FOXTAIL	50 50	May 15-June 15	1/4-1/2 in.	(1.0 lb/ 1000 sf)	1000 sf)	1000 sf)	1000 sf)	
N/A	50D	100	Mar. 1-May 15 May 16-Sept. 14 Sept. 15-Nov. 15	3/4 in.					
	SWITCH GRASS BUSH CLOVER (LEGUME)		June 1-July 31	4-7 in. Max.					

B-4-1 STANDARDS AND SPECIFICATIONS

FOR INCREMENTAL STABILIZATION Definition

Establishment of vegetative cover on cut and fill slopes.

<u>Purpose</u> To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

A. Incremental Stabilization - Cut Slopes 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses. Construction sequence example (Refer to Figure B.1):

a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. b. Perform Phase 1 excavation, prepare seedbed, and stabilize

c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as

d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate

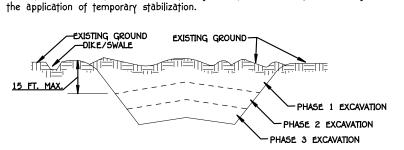


Figure B.1: Incremental Stabilization — Cut

B. Incremental Stabilization - Fill Slopes 1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses. 2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans. 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner. 4. Construction sequence example (Refer to Figure B.2):

a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address b. At the end of each day, install temporary water conveyance practice(s), as necessary, to

intercept surface runoff and convey it down the slope in a non-erosive manner.

c. Place Phase 1 fill, prepare seedbed, and stabilize.

d. Place Phase 2 fill, prepare seedbed, and stabilize

11/16/2023

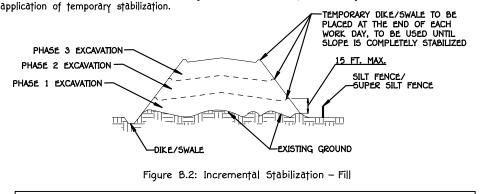
DATE

DATE

REVISION

e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as

Note: Once the placement of fill has begun the operation should be continuous from grubbing through th completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the



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

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

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

<u>Definition</u> The application of seed and mulch to establish vegetative cover

HORIZONTAL TO 1 VERTICAL (3:1); AND

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

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 seed and seeding rate.

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. 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

inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit car 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 weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of

Use four times the recommended rate when hydroseeding. Note: It is very important to keetp

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

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. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil

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 be firm after planting.

Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer). 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 og site and seed immediately and without interruption. When hydroseeding do not incorporate seed into the soil.

Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. 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 state. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.

WCFM, including dye, must contain no germination or growth inhibiting factors. iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the

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

Apply mulch to all seeded areas immediately after seeding. 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

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.

b. 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: 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. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of

wood cellulose fiber per 100 gallons of water. iii. Synthetic binders 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 4-15 feet wide and 300 to 3,000 feet long.

11/15/2023

DATE

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

(B-4-8)**Definition**

The 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.

<u>Criteria</u>

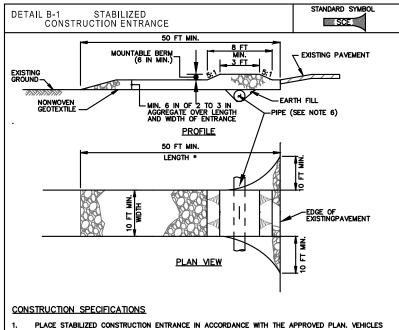
The stockpile location and all related sediment control practices must be clearly indicated on the The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper tha 2:1. Benching must be provided in accordance with

Section B-3 Land Grading. Runoff from the stockpile area must drain to a suitable sediment control practice. Access the stockpile area from the upgrade side. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an

earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.

Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slope: 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3



PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLE: MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEE FOR 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.

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. 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. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

2011

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1955 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,

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, d. Prior to the removal or modification of sediment control practices

agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to 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 AN SEDIMENT CONTROL, and revisions thereto.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection

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 MARYI AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Se 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. 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.

0.494 Ac. 0.160 Ac.

6. Site Analysis: Total Area of Site: Acres Area Disturbed: Acres Area to be roofed or paved: Acres Area to be vegetatively stabilized:

Acres Total Cut:

1041 Fill:

Offsite waste/borrow area location: Approved

10540 Ac.

600 Cu. Yds.

600 Cu. Yds.

600 Site With Active Grading Permit Acres Area to be vegetatively stabilized:

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. 8. Additional sediment control must be provided, if deemed necessary by the CID. The site and a11 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 include:

> 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

• Other inspection items as required by the General Permit for Stormwater Associated with Construction

 Identification of missing or improperly installed sediment controls Compliance status regarding the sequence of construction and stabilization requirements
 Photographs Maintenance and/or corrective action performed

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, whichever is shorter. 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the H5CD prior to proceeding with construction. Minor revisions may allowed by the H5CD per the list of 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 HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

sediment basin or other approved washout structure. 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade. 14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a

15. Stream channels must not be disturbed during the following restricted time periods Use I and IP March 1 - June 15

Use II June 16 - Sept. 30

Use III and IIIP October 1 - April 30 Use IV March 1 - May 31

16. A CODY of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT ONTROL, and associated permits shall be on-site and available when the site is active.

<u>BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS.</u> WETLAND BUFFERS. WATERWAYS, AND 100-YEAR FLOODPLAINS

1) No excess fill, construction material, or debris shall be stockpiled or stored in nontid wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain. 2) Place materials in a location and manner which does not adversely impact surface or subsurface water flo into or out of nontidal wetland buffers, waterways, or the 100-year floodplain. 3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic

nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the

material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic or any other deleterious substance. 4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands nontidal wetland buffers, or waterways, or 100 year floodplain 5) Repair and maintain any serviceable structure or fill so there is no permanent loss of

100-year floodplain in excess of that lost under the originally authorized structure or fill. 6) Rectify any nontidal wetland buffers, waterways, or 100-year floodplain temporarily impacted by any 7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (Lolium Multiflorum), Millet (Setaria italica), Barley (Hordeum sp.), Oats (Uniola sp.), and/o Rye (Secale cereale). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in wetland or buffer areas. The area should be seeded and mulched to reduce erosion after

construction activities have been completed. 8) After installation has been completed, make post -construction grades and elevations the same as the original grades and elevations in temporarily impacted areas. 9) To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream Use I waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive during any year.

Use III waters: In-stream work shall not be conducted during the period October 1 through April 30, Use IV waters: In-stream work shall not be conducted during the period March 1 through May 31, inclusive, 10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of 11) Culverts shall

SEQUENCE OF CONSTRUCTION

PERMANENTLY STABILIZED.

STABILIZE ALL DISTURBED AREAS.

FOR GREATER THAN 24 HOURS

be constructed and any riprap placed so as not to obstruct the movement

of debris into the waterway. aquatic species, unless the purpose of the activity is to

. OBTAIN A GRADING PERMIT. (2 WEEK5) NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-600-257-7777.

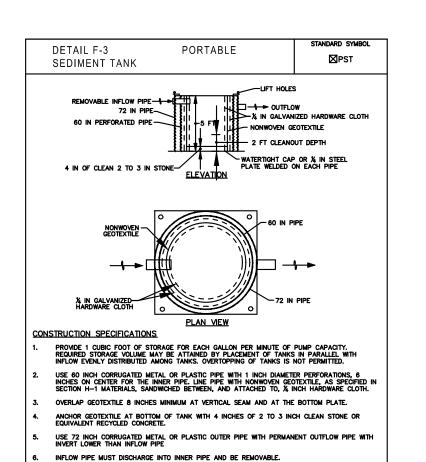
NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK. REQUEST A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR. COMMENCE INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE, INLET PROTECTION AND

SUPER SILT FENCE. (1 WEEK) 5. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, COMMENCE GRADING, CONSTRUCTION OF HOUSE, DRIVEWAY, STORM DRAINS, MICRO-BIORETENTION, DRYWELLS, AND SIDEWALK ALONG FRONTAGE (6 MONTHS) 5b. SWM FACILITY MEDIA SHALL NOT BE INSTALLED UNTIL ALL CONTRIBUTING DRAINAGE AREAS ARE

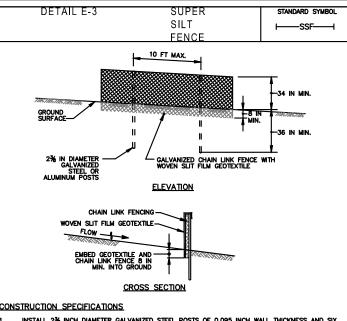
5c. PORTION OF THE SEWER SERVICE INSTALLATION OUTSIDE OF LOT 5 PROPERTY LINE SHALL BE PERFORMED UNDER SAME DAY STABILIZATION. A PORTABLE SEDIMENT TANK SHALL BE USED IF DEWATERING OF EXCAVATION IS NEEDED. CONTRACTOR SHALL HALL OFF EXCAVATED MATERIAL FROM SITE AS NECESSARY TO A DISPOSE FACILITY APPROVED BY THE SEDIMENT CONTROL INSPECTOR, AND WITH OPEN GRADING PERMIT.

OBTAIN APPROVAL OF SEDIMENT CONTROL INSPECTOR PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (3 DAYS) WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR REMOVE SEDIMENT CONTROLS AND STABILIZE AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS. NOTE: 1) THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE AFTER EACH RAINFALL AND ON A AILY BASIS. REMOVE SEDIMENT FROM ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON 2) THE CONTRACTOR SHALL STABILIZE ANY DISTURBED/UNSTABILIZED AREA THAT IS TO REMAIN UNDISTURBED

3) A DOUBLE ROW OF 55F SHALL BE INSTALLED ALONG THE NORTH SIDE OF THE LOD AS PER THE PLAN.



PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE



INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SI) FOOT 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.

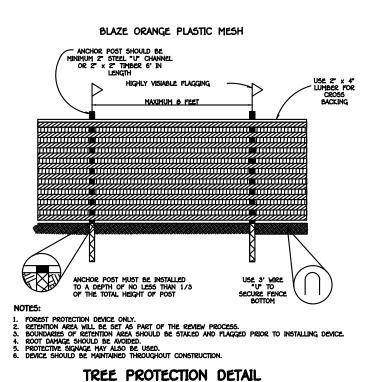
EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SUIT FENCES

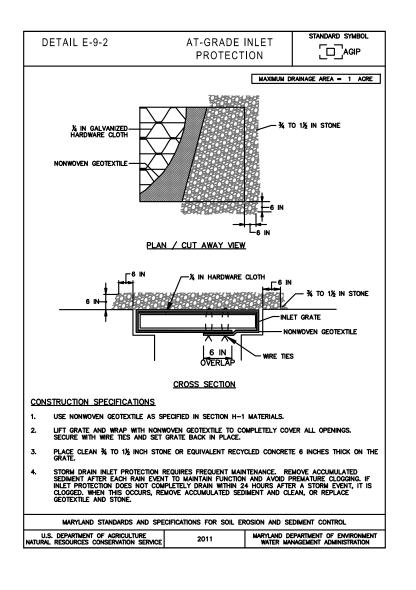
PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H $^-$ 1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS REPLISTALL CHAIN LINK FENCING AND GEOTEXTILE 1

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

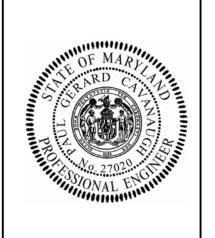
2011

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION





THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONGERNATION DISTRICT. Olexander Bratchie HOWARD SOIL CONSERVATION PRISTRICT FISHER, COLLINS & CARTER, INC. IL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED UNDER MY SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/24.

Paul G. Cavanaugh

SIGNATURE OF DEVELOPER

PAUL G. CAVANAUGH <u>BUILDER/DEVELOPER'S CERTIFICATE</u> "I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF

TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE." UK Jung 11/15/2023

HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS. REGULATIONS. AND STANDARDS. THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

11/15/2023 Paul G. Cavanaugh DESIGNER'S SIGNATURE Paul G. Cavanaugh 27020 MD Registration No.: PRINTED NAME PROFESSIONAL CERTIFICATION P.E., R.L.S., OR R.L.A. (CIRCLE ONE) OWNER/DEVELOPER - LOT 5 OWNER - LOT 6

GOPI MANDELA

9044 GORMAN ROAD

LAUREL, MD 20723

DESIGNER'S CERTIFICATION

UK JUNG EUNSOL SHIM 102 HOWLING RIVER RD LAUREL, MD 20708 267-577-6055

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

2011

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 11/15/2023 Date Chief, Division of Bush Bevelopment 11/27/2023 (HD) Edmondson Chief, Developmentsigner of Division Date 11/27/2023 lunda Eisenbera Department 3967 Planning and Zoning PROJECT PARCEL NO. BOUNDS PROPERTY, LOTS 5 & 6 341 BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR. N/A R-5C 47 SIXTH PREVIOUS HOWARD COUNTY FILES: ECP-22-003, WP-07-087, F-19-010

BOUNDS PROPERTY

SEDIMENT AND EROSION CONTROL NOTES &

DETAILS

ZONED: R-5C TAX MAP NO.: 47 GRID NO.: 17 PARCEL NO.: 341 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: NOVEMBER, 2023 SHEET 5 OF 6

5DP-23-014

