

GENERAL NOTES

- SITE ANALYSIS:**
TOTAL PROJECT AREA: 0.253 AC.
PRESENT ZONING: R-SC
USE OF STRUCTURE: RESIDENTIAL
BUILDING COVERAGE: 1,968 SF (0.05 AC)
PAVED AREA ON SITE: 1,029 SF (0.02 AC)
LIMIT OF DISTURBED AREA: 0.191 AC
CUT: 350 CY FILL: 180 CY
- PROJECT BACKGROUND:**
LOCATION: TAX MAP 50, BLOCK 3, PARCEL 426
DEED REFERENCES: L 19392, F. 1
DPZ REFERENCES: PLAT BOOK 3, PAGE 47, PLAT BOOK 61, PAGE 470-471.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL MONUMENTS 5080 AND 5085.
- THE BOUNDARY & TOPOGRAPHY SHOWN HEREON IS BASED ON A SURVEY PERFORMED BY NJR & ASSOC., LLC, DATED JULY, 2017.
- THIS PROPERTY IS LOCATED IN THE METROPOLITAN DISTRICT AND IS TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER. WATER CONTRACT NO. 44-3727-0, SEWER CONTRACT NO. 10-3697.
- THE SUBJECT PROPERTY IS ZONED "R-SC" PER THE 10-06-2015 COMPREHENSIVE ZONING PLAN.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THIS PLAN WAS PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURVEY WITH THE AMOUNT TO BE DETERMINED AT SDP STAGE FOR THE REQUIRED 6 SHADE TREES SHALL BE POSTED WITH THE GRADING PERMIT FOR THIS PLAN.
- THE SUBJECT PROPERTY IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202(b)(1)(i) AS THE PROPERTY IS LESS THAN 40,000 SQUARE FEET.
- NO WARS, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS PROPERTY.
- THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATIONS OR BUILDING/GRADING PERMIT APPLICATIONS.
- DECATUR PLACE IS NOT A SCENIC ROAD.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION AREAS AND 100 YEAR FLOODPLAIN.
- STORM WATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING TWO MICRO-BIORETENTIONS (M-6).
- THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT, NOR ARE THERE ANY HISTORIC STRUCTURES ON SITE.
- THIS PROJECT IS LOCATED WITHIN THE LITTLE PATUXENT RIVER WATERSHED.
- THERE IS NO EXISTING STRUCTURE LOCATED ON THIS PROPERTY.
- THIS PROPERTY CONTAINS ERODIBLE SOIL.
- A WRITTEN REQUEST OF JUSTIFICATION FOR NECESSARY DISTURBANCE WITHIN THE 50' INTERMITTENT STREAM BUFFER IS BEING SUBMITTED TO THE DIVISION OF LAND DEVELOPMENT OF THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY, MARYLAND FOR THE DISTURBANCE SWM.
- ALL OFFSITE DISTURBANCE INTO THE ADJOINING PROPERTIES MUST BE CONTAINED WITHIN THE RECORDED EASEMENTS.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGE AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE DETAILED SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- A WAIVER PETITION, APPROVAL WILL BE REQUIRED FOR THE BUILDING LOCATED WITHIN 50' BUFFER OF THE INTERMITTENT STREAM.

ENVIRONMENTAL CONCEPT PLAN

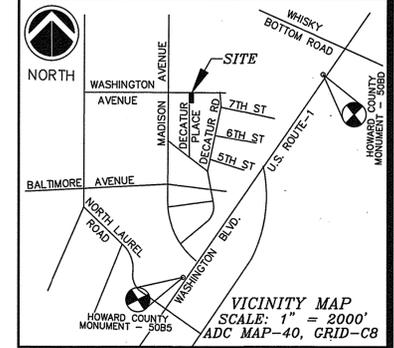
LOT 15

BLOCK "T"

NORTH LAUREL PARK

SARAH A. IBRAHIM PROPERTY
9295 DECATUR PLACE

SOIL TABLE					
SYMBOL	NAME/DESCRIPTION	TYPE	HYDROLOGIC	K VALUE	HIGHLY ERODIBLE
SrC	Sassafras & Croom 5 to 10% slopes	B	YES	0.28	NO
Ucd	Urban land-Chillum-Beltsville Complex, 5 to 15% slopes	C	YES	0.37	YES
Rsd	Russett Fine Sandy Loom 10 to 15% slopes	C	NO	0.43	NO



SWM Concept Design Narrative

Stormwater management at the proposed development will be addressed by implementing Environmental Site Design (ESD) practices to the maximum extent possible (MEP), in accordance with the revised Maryland Department of the Environment (MDE) Stormwater Design Manual Chapter 5.

The proposed development is not within any Critical Areas per Appendix D.4, nor is this a redevelopment project, or a commercial/industrial project. This site is not defined as a hot spot.

Environmental Site Design (ESD) will be achieved for the project by structural ESD practices. These include two Micro-Bio Retentions (M-6).

Background:
The property is currently vacant and covered by a young forest of trees 6-12" dbh. A new single family, 1,968 square foot house is proposed, with a concrete driveway connecting to existing Decatur Place, according to the County Standards.

The property will be serviced by public water and public sewer. This property is not subject to Historic District Commission requirements. This property does not lie within the BWI Airport Noise Zone or the Airport Zoning District. Furthermore, this property is not subject to Design Advisory Panel review (Route 1 or Route 40 Corridor).

Natural Resources Protection and Enhancement:
The property is occupied with young woods. No specimen trees exist on this site.

There are no floodplain, wetlands and steep slopes and their associated buffers existing on this property. There is erodible soil existing on this site.

There also a 50 foot buffer of an intermittent on-site stream located on this site and within the proposed limit of disturbance for which an Alternative Compliance application is being submitted.

Nonstructural Practices: ESD practice involves directing flow from impervious areas onto vegetated areas where it can soak into or filter over ground instead of being connected to storm drain system. These measures are not being proposed as this is in an fill lot on an existing subdivision with limited space.

Structural Micro-Scale Practices: Micro-Bio Retention (M-6) will be used to treat runoff from the rooftop downspouts walkway, stoop and the driveway. These items were unable to be disconnected otherwise.

Waiver to Environmental Regulations:
A written request of justification for necessary disturbance within the 50' stream buffer for this development is being submitted to the Division of Land Development of the Department of planning and Zoning of Howard County.

Reduction of Impervious Areas:
The house footprint has been minimized by proposing a mid-sized 2-story house with basement rather than a rancher-style design. The proposed driveway width will be kept to the minimal to insure access to the two car garage. The limit of disturbance is kept to a minimum possible for this site.

Integration of Erosion & Sediment Controls into SWM Strategy:
Super Silt Fence will be installed on downstream side of the limit of disturbance to trap any sediment-laden runoff during construction of the house.

The Stabilized Construction Entrance will be placed at the same location as the permanent driveway.

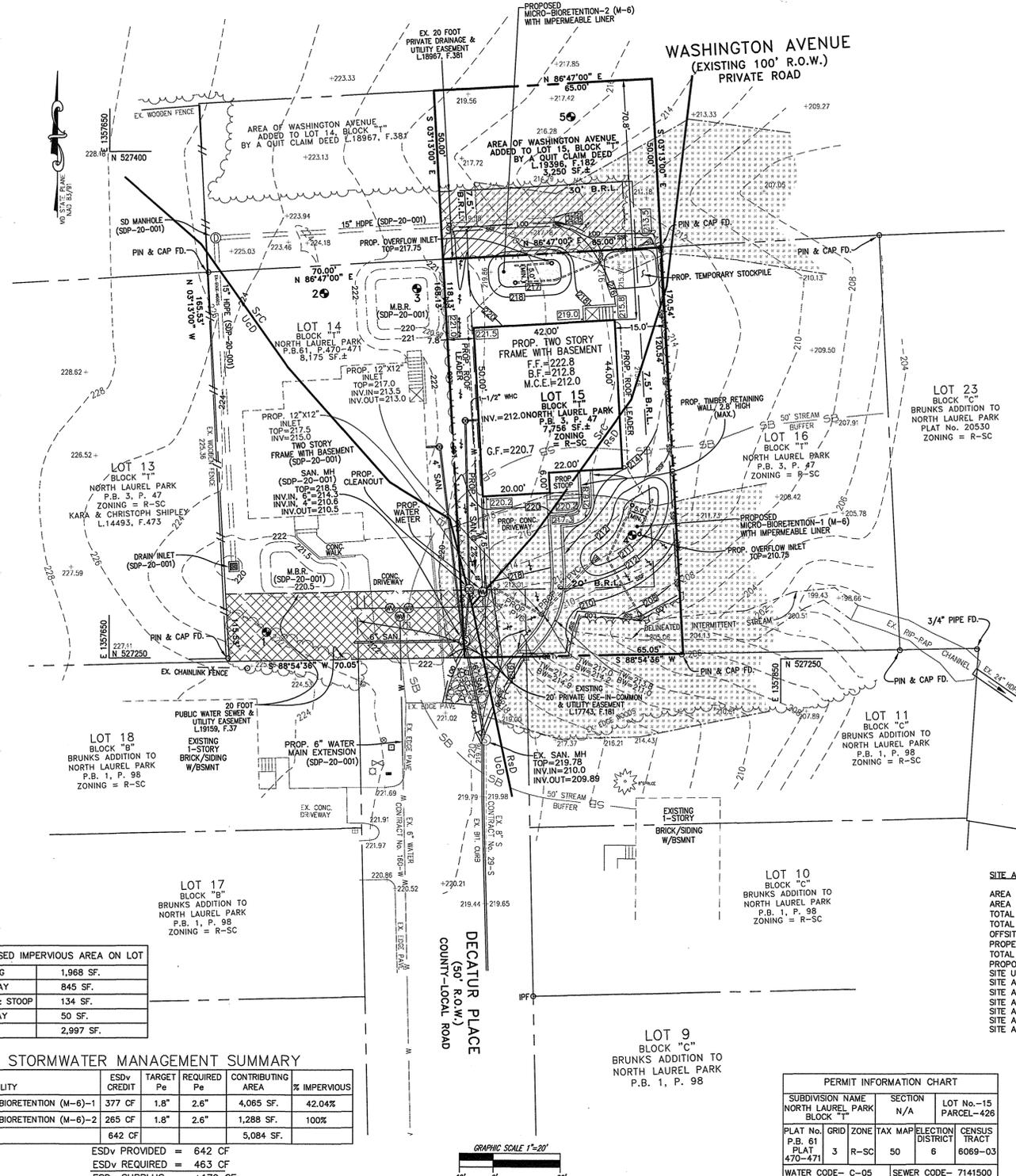
Implementation of ESD Planning Techniques and Practices:
The following is an overview of applicability for stormwater ESD practices considered for this project;

Alternative Surfaces: ESD practice includes green roofs, permeable pavements, and reinforced turf. Green roofs were not applied due to the relative high cost of the system for a residential structure. Permeable pavements such as porous pavement and concrete pavers were not used due to the poor quality of the soil on site. Reinforced turf has not been used, since frequent vehicle movement is expected on the driveway.

Nonstructural Practices: ESD practice involves directing flow from impervious areas onto vegetated areas where it can soak into or filter over ground instead of being connected to storm drain system. These measures are not being proposed as this is in an fill lot on an existing subdivision with limited space.

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LEGEND

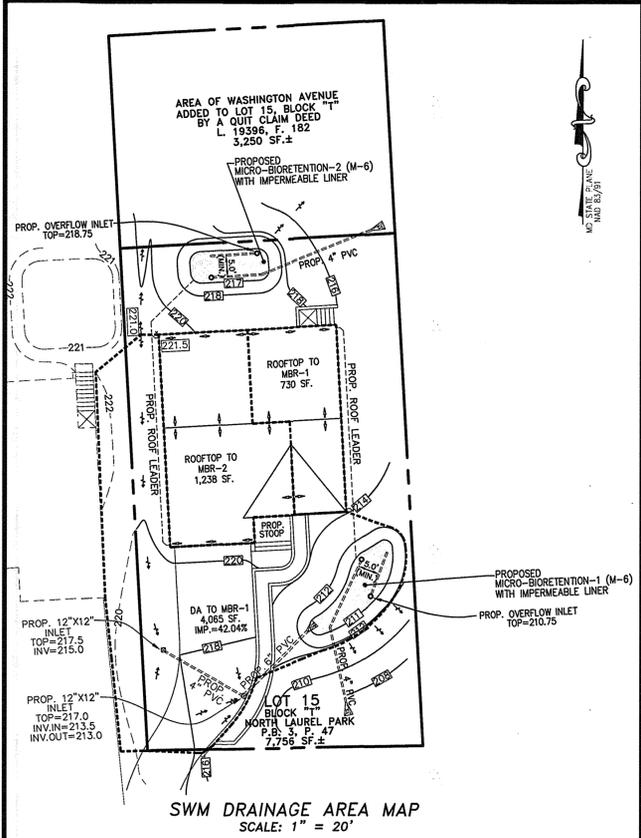
- ⊗ EX. SANITARY SEWER MANHOLE
- ⊗ EX. WATER VALVE
- ⊗ EX. LIGHT POLE
- ⊗ EX. WOOD POST
- ⊗ EX. TELEPHONE/CABLE PEDESTAL
- ⊗ EX. MAILBOX
- ⊗ EX. GAS VALVE
- ⊗ EX. EVERGREEN TREE
- ⊗ PROP. WATER WELLS
- ⊗ PROP. WATER METER
- ⊗ PROP. SANITARY SEWER CLEANOUT
- ⊗ PROP. SPOT ELEVATION
- ⊗ EX. CONTOUR
- ⊗ PROP. CONTOUR
- ⊗ EX. EDGE WOODED AREA
- ⊗ PROP. EDGE WOODED AREA
- ⊗ PROP. SUPER SILT FENCE
- ⊗ PROP. SILT FENCE
- ⊗ PROP. LIMIT OF DISTURBANCE
- ⊗ PROP. DRAINAGE DIVIDE
- ⊗ EX. WOOD FENCE
- ⊗ EX. CHAINLINK FENCE
- ⊗ EX. SOIL TYPE DEVIATION LINE
- ⊗ EX. DELINEATED INTERMITTENT STREAM LINE
- ⊗ EX. 50' STREAM BUFFER LINE
- ⊗ PUBLIC SEWER AND UTILITY EASEMENT
- ⊗ PROP. STABILIZED CONSTRUCTION ENTRANCE
- ⊗ PRIVATE DRAINAGE AND UTILITY EASEMENT
- ⊗ STEEP SLOPE AREA, 15% OR GREATER
- ⊗ SOIL BORING LOCATION

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
15	9295 DECATUR PLACE

SITE ANALYSIS DATA CHART

AREA OF LOT 15	= 0.178 ACRES (7,756 SF.)
AREA ACQUIRED BY QUITCLAIM	= 0.075 ACRES (3,250 SF.)
TOTAL PROPERTY AREA	= 0.253 ACRES (11,006 SF.)
TOTAL AREA WITHIN THE LIMIT OF DISTURBANCE	= 0.186 ACRES (8,103 SF.)
OFFSITE AREA WITHIN LIMIT OF DISTURBANCE	= 0.007 ACRES (309 SF.)
PROPERTY AREA WITHIN LIMIT OF DISTURBANCE	= 0.179 ACRES (7,794 SF.)
TOTAL PROPERTY IMPERVIOUS AREA PROPOSED	= 0.069 ACRES (2,997 SF.)
PROPOSED GREEN/OPEN AREA	= 0.184 ACRES (8,038 SF.)
SITE USAGE	= SINGLE FAMILY DETACHED
SITE AREA WITHIN WETLAND	= 0 ACRES
SITE AREA WITHIN 25' WETLAND BUFFER	= 0 ACRES
SITE AREA OF STEEP SLOPES (15% or greater)	= 0.096 ACRES
AREA OF ERODIBLE SOILS	= 0 ACRES
SITE AREA WITHIN 100-YR FLOODPLAIN	= 0 ACRES
SITE AREA WITHIN STREAM BUFFER	= 0.088 ACRES



PROPOSED IMPERVIOUS AREA ON LOT

BUILDING	1,968 SF.
DRIVEWAY	845 SF.
WALK & STOOP	134 SF.
AREAWAY	50 SF.
TOTAL	2,997 SF.

STORMWATER MANAGEMENT SUMMARY

FACILITY	ESDV CREDIT	TARGET Pe	REQUIRED Pe	CONTRIBUTING AREA	% IMPERVIOUS
MICRO-BIORETENTION (M-6)-1	377 CF	1.8"	2.6"	4,065 SF.	42.04%
MICRO-BIORETENTION (M-6)-2	265 CF	1.8"	2.6"	1,288 SF.	100%
TOTAL	642 CF			5,084 SF.	

ESDV PROVIDED = 642 CF
ESDV REQUIRED = 463 CF
ESDV SURPLUS = +179 CF

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION	LOT NO.-15
NORTH LAUREL PARK BLOCK "T"	N/A	PARCEL-426
PLAT NO. 470-471	GRID ZONE	TAX MAP ELECTION DISTRICT
61	3 R-SC	50 6 8069-03
SEWER CODE- C-05	SEWER CODE-	7141500

SHEET INDEX

DESCRIPTION	SHEET No.
SITE LAYOUT, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN	1 OF 2
SITE DETAILS AND NOTES	2 OF 2

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 7/21/21

REVISIONS

No.	DATE	DETAILS

PLAN PREPARED BY:

NJR & ASSOCIATES
 Land Surveying and Planning
 2770 STATE ROUTE 32
 WEST FRIENDSHIP, MD 21794
 TEL: (240) 508-3200

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 11049, EXPIRATION DATE: 2/10/2021.

 Michael Miller
 DATE: 11-2-2020

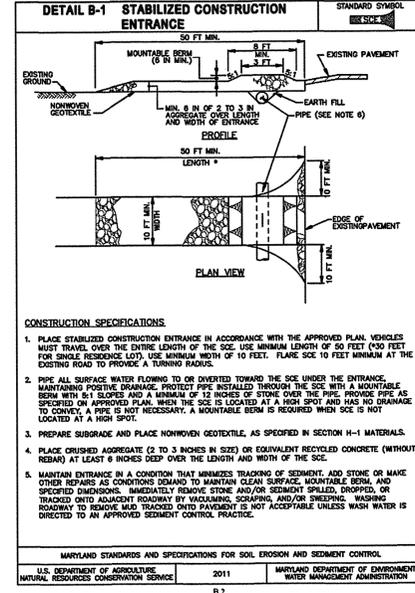
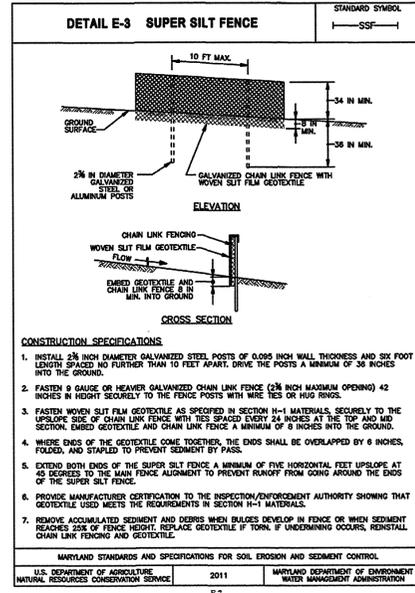
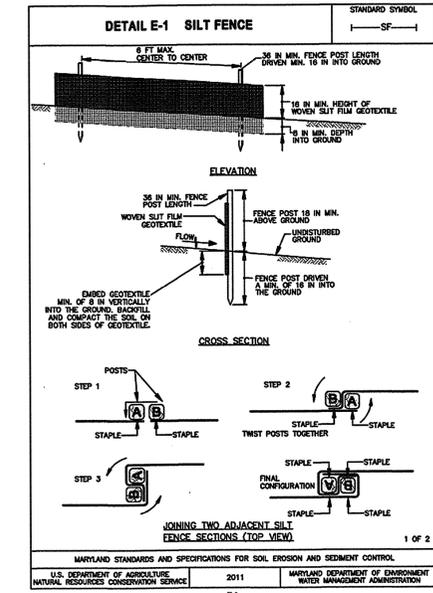
DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

 Michael Miller
 DATE: 11-2-20

DEVELOPER
 THE LEGENDS GROUP
 307 COMPTON AVENUE
 LAUREL, MD 20707
 (301) 490-3651
OWNER
 SARAH A. IBRAHIM
 9609 OVERTON DRIVE
 LAUREL, MD 20723
 (513) 410-6171

SITE LAYOUT, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
 NORTH LAUREL PARK
 LOT 15
 BLOCK "T"
 SARAH A. IBRAHIM PROPERTY
 9295 DECATUR PLACE
 TAX MAP 50, GRID 3, PARCEL 426
 ZONING: R-SC
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 20'
 JOB NO.: 3404
 DATE: MAY 10, 2020
 SHEET: 1 OF 2

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil [2" to 4" deep]	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; no necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; $f_c = 3500$ psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	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 analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graysstone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



B.4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition: To stabilize disturbed soils with permanent vegetation.

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies: Exposed soils where ground cover is needed for 6 months or more.

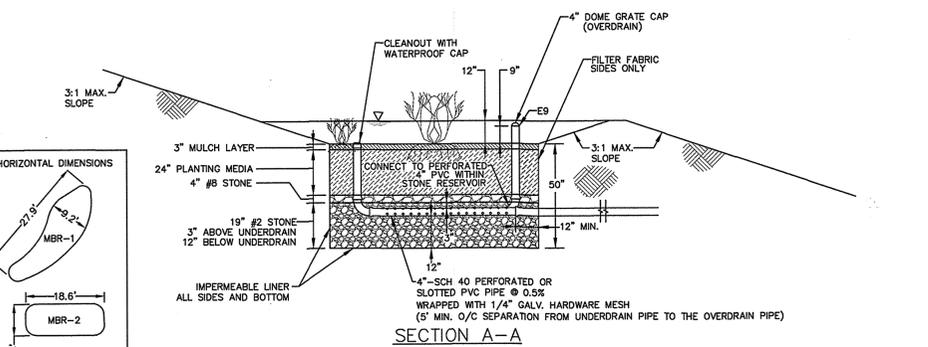
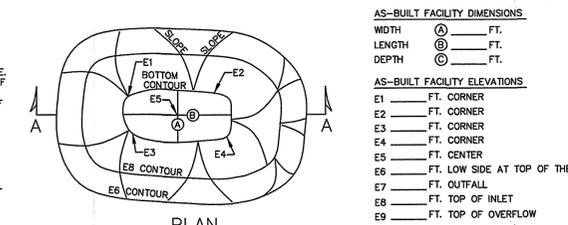
Criteria:

- General Use
 - 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.
 - 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.
 - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 A 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.
- Turfgrass Mixtures
 - Areas where turfgrasses may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - 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.
 - Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive maintenance or are irrigated in the areas of control.
 - Kentucky Bluegrass/Perennial Ryegrass Full Sun Mixture: For use in full sun areas where regular watering is necessary and where turf will receive medium to intensive management.
 - Certified Perennial Ryegrass/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium maintenance in full sun to medium shade. Recommended mixture including: Certified Tall Fescue Cultivars 85 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/Tall Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf areas. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/4 to 3 pounds per 1000 square feet.
 - Notes: Select turfgrass varieties from those listed in the most current university Maryland Publication Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland". Choose certified material. Certified material is the best guarantee of cultivar purity, root system, and genetic quality of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
 - Ideal Times of Seeding for Turf Grass Mixtures

Western MD:	March 15 to June 1, August 1 to October 1
Hardiness Zones:	5b, 6b
Central MD:	March 1 to May 15, August 15 to October 15
Hardiness Zones:	6b
Southern MD, Eastern Shore:	March 1 to May 15, August 15 to October 15
Hardiness Zones:	7a, 7b
 - Turf areas to receive seed by disk or other approved methods to a depth of 2 to 4 inches, level and rake the area to prepare a proper seedbed. Remove stones and debris over 1/4 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
 - If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/4 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings hot seasons, or on adverse sites.

NOTES

- FACILITY SHALL BE MINIMUM OF 10FT FROM ANY BUILDING.
- FACILITY SHALL BE INSTALLED IN EXCAVATED VIRGIN SOIL (NOT FILL).
- FACILITY SHALL BE MINIMUM 4" ABOVE THE SEASONAL HIGH WATER TABLE.
- REGULAR INSPECTIONS SHALL BE REQUIRED DURING FOLLOWING STAGES OF THE CONSTRUCTION.
 - DURING EXCAVATION TO SUBGRADE AND PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEM.
 - DURING PLACEMENT OF PLANTING MEDIA.
 - DURING CONSTRUCTION OF APPURTENANT CONVEYANCE.
 - UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.
- E1 TO E9 AS-BUILT SPOT ELEVATION LOCATIONS.
- THIS STANDARD IS A REFERENCE TO SHOW THE ELEMENTS AND MINIMUM DIMENSIONS FOR A MICRO-BIO RETENTION FACILITY. EACH FACILITY SHALL BE DESIGNED AND APPROVED ON A SITE SPECIFIC BASIS. THIS DETAIL PROVIDES BLANK SPACES TO INFORM WHERE AS-BUILT INFORMATION IS REQUIRED FOR SWM CLOSEOUT.



MICRO-BIORETENTION (M-6) DETAIL (NOT TO SCALE)

FACILITY	TOP POND	TOP MULCH	INVERT UNDERDRAIN	BOTTOM PIT
1	212.0	211.0	207.83	206.83
2	218.0	217.0	213.83	212.83

I. BIORETENTION AREA SOIL SPECIFICATION

A. PLANTING SOIL:

THE BIORETENTION AREA SHALL CONSIST OF A PLANTING SOIL HAVING A HOMOGENEOUS MIX OF 50% CONSTRUCTION SAND, 20-30% TOPSOIL WITH AN ALLOWABLE 5% MAXIMUM CLAY CONTENT, AND 20-30% ORGANIC COMPOST OR MULCH TO PROVIDE A SOIL MEDIUM WITH HIGH HYDROLOGIC CAPACITY.

THE PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERBERIS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANDIAN THISTLE OR OTHER AS SPECIFIED.

IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH.

THE PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

PH RANGE	5.5 - 6.5
ORGANIC MATTER	15 - 30%

THE FOLLOWING TESTING FREQUENCIES SHALL APPLY TO THE ABOVE SOILS:

PH ORGANIC MATTER: 1 TEST PER 90 CUBIC YARDS, BUT NOT MORE THAN 1 TEST PER BIORETENTION AREA.

ONE GRAIN SIZE ANALYSIS SHALL BE PERFORMED PER 90 CUBIC YARDS OF PLANTING SOIL, BUT NO LESS THAN 1 TEST PER BIORETENTION AREA.

B. MULCH LAYER SPECIFICATION:

A MULCH LAYER SHALL BE PROVIDED ON TOP OF PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCTS APPROVED BY THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES.

OF THE APPROVED MULCH PRODUCTS, ALL MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIALS, INCLUDING PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCK PILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

C. SAND SPECIFICATION:

THE SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN ONE INCH IN DIAMETER.

D. COMPACTION:

SOIL SHALL BE PLACED IN LIFTS LESS THAN 18 INCHES AND LIGHTLY COMPACTED.

SEQUENCE OF CONSTRUCTION :

- REQUEST FOR PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AGENCY (2 WEEKS).
- CLEARING AND GRUBBING AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS, (1 DAY).
- CONSTRUCTION AND STABILIZATION OF PERIMETER CONTROLS, (1 DAY).
- REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS (1 DAY).
- DRIVEWAY GRADING, (1 DAY).
- GRADING FOR THE REMAINDER OF THE SITE, (2 DAYS).
- UTILITY INSTALLATION AND CONNECTIONS TO EXISTING STRUCTURES, (4 DAYS).
- CONSTRUCTION OF BUILDING, ROADS, AND OTHER CONSTRUCTION, (4 MONTHS).
- FINAL GRADING, LANDSCAPING, AND STABILIZATION, (3 DAYS).
- INSTALLATION OF STORMWATER MANAGEMENT MEASURES (4 DAYS).
- APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF CONTROLS, (1 WEEK).
- REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS, (2 DAYS).

NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

II. BIORETENTION AREA PLANT SPECIFICATION

GENERAL PLANTING:

- ROOT STOCK OF PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM SOURCE TO THE JOB SITE AND UNTIL PLANTED.
- WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE DIAMETER OF PLANTING PIT MUST BE A MINIMUM OF SIX INCHES LARGER THAN THE DIAMETER OF THE ROOT BALL.
- THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4 OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
- THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED AT THE BOTTOM OF THE PIT.
- THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED AT THE BOTTOM OF THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL. NEVER LIFT THE PLANT BY THE BRANCHES OR TRUNK.
- SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THE CENTER OF THAT THE BALL IS APPROXIMATELY 1/4 ABOVE THE FINAL GRADE.
- BACKFILL PLANTING PIT WITH EXISTING SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
- NEVER COVER THE TOP OF THE BALL WITH SOIL. MOUND SOIL AROUND THE EXPOSED SIDE OF THE BALL.
- MAKE SURE MULCH DOES NOT CONTACT TREE'S TRUNK.
- TREE SHALL BE BRACED USING 2" X 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. THE TREE IS BRACED TO THE STAKES UTILIZING HOSE AND WIRES.

FERTILIZER:

- TREE AND SHRUB FERTILIZER SHALL BE A 21 gm. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2-YEAR) FERTILIZER TABLET WITH MINIMUM GUARANTEED ANALYSIS OF 20-10-5:
- TOTAL NITROGEN (N) - 20%
- WATER SOLUBLE ORGANIC NITROGEN - 7%
- WATER IN SOLUBLE ORGANIC NITROGEN - 13%
- AVAILABLE PHOSPHORIC ACID (P2 O5) - 10%
- SOLUBLE POTASH (K2O) - 5%

FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:

1 GAL. CONTAINER	1 ea, 21 gm. TABLETS.
3 GAL. CONTAINER	2 ea, 21 gm. TABLETS.
5 GAL. CONTAINER	3 ea, 21 gm. TABLETS.
7 GAL. CONTAINER	5 ea, 21 gm. TABLETS.

PLANTING NON-GRASS GROUND COVER:

- THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWINGS: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASS OR LEGUMES).
- BEFORE PLANTING BIODEGRADABLE POTS, THEY SHALL BE SPLIT, AND NON BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF THE POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.
- THE GROUND COVER SHALL BE PLANTED SO THAT ROOTS ARE SURROUNDED BY THE SOIL BELLOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE-ROOT PLANTS SHALL BE COVERED TO THE CROWN.
- THE MULCH AND PLANTED GROUND COVER BED SHOULD BE SHOULD BE COVERED WITH A PRE-EMERGENT HERBICIDE.
- THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

B.4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

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

Criteria:

- 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 depth. 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.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch as prescribed in Section B.4-3.A, and maintain until the next seeding season.

No.	Species	Application Rate (lb/oc)	Seeding		Fertilizer Rate (10-20-20)	Lime Rate
			Seeding Dates	Seeding Depth		
1	Cool Season Ryegrass or Equal	40 lb/oc	Mar. 15 to May 15 Aug. 1 to Oct. 15	1/2 in	436 lb/oc (90 lb/1000 sf)	2 tons/oc (400 lb/1000 sf)
2	Warm Season Fescue or Equal	30 lb/oc	May 16 to July 31	1/2 in		

No.	Species	Application Rate (lb/oc)	Seeding Dates	Seeding Depth	N			K ₂ O	Lime Rate
					45 pounds (1.0 lb/1000 sf)	90 lb/oc (2 lb/1000 sf)	90 lb/oc (2 lb/1000 sf)		
1	Cool Season Ryegrass or Equal	K.B. 60 lb/oc	May 15 to Aug. 15 to Oct. 15	1/4-1/2 in					2 tons/oc (400 lb/1000 sf)

SHRUB	BOTANICAL NAME	COMMON NAME	CONDITION	SIZE	REMARKS
	ILEX GABRA	INKBERRY	CONTAINER	12"	PLANT 3' APART
	HAMELIS VIRGINIANA	WITCH HAZEL	CONTAINER	12"-24"	PLANT 3' APART
	IRIS VERSICOLOR	BLUE FLAG	SEEDLINGS		PLANT 15" APART, TRIANGULAR GRID
	GERANIUM MACULATUM	CRANESBILL	SEEDLINGS		PLANT 15" APART, TRIANGULAR GRID
	SOLIDAGO SPHACELATA	GOLDEN FLEECE	SEEDLINGS		PLANT 15" APART, TRIANGULAR GRID

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIO RETENTION (M-6)

- 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.
- 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.
- The Owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Z.B.21
 DATE: 1/14/24

No.	DATE	DETAILS

PLAN PREPARED BY:
NJR & ASSOCIATES
 Land Surveying and Planning
 2770 STATE ROUTE 32
 WEST FRIENDSHIP, MD 21794
 TEL: (240) 508-3200

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE # 11049, EXPIRATION DATE: 2/10/2021.
 DATE: 11-2-2020

DEVELOPER'S CERTIFICATE
 DEVELOPER: THE LEGENDS GROUP, 307 COMPTON AVENUE, LAUREL, MD 20707, (301) 490-3651
 OWNER: SARAH A. ABRAHIM, 9609 OVERTON DRIVE, LAUREL, MD 20723, (513) 410-6171
 DATE: 11-2-20

SITE DETAILS AND NOTES
 NORTH LAUREL PARK
 LOT 15
 BLOCK "A"
 SARAH A. ABRAHIM PROPERTY
 9295 DECATUR PLACE
 PLAT BOOK 61, PLAT 470-471 TAX MAP 50, GRID 3, PARCEL 426
 ZONING: R-SC 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 20' JOB NO.: 3404 DATE: MAY 10, 2020 SHEET: 2 OF 2