Bay Engineering Inc.
Engineers, Planners and Surveyors

August 11, 2023

Anne Arundel County
Office of Planning & Zoning
2664 Riva Road
Annapolis, Maryland 21401

Attention: Ms. Sterling Seay

Re: VARIANCE REQUEST
NUMBER 5 MARYLAND AVE LLC
1724 WESTMORELAND TRAIL
ANNAPOLIS, MD 21401

Dear Ms. Seay:

On behalf of the applicants, we respectfully request a variance to Article 17-8-201(a) which states in part that 15% slopes or greater in the LDA shall not be disturbed. A variance is also requested to Article 18-4-501, R-1 Bulk Regulations which states in part that there is a minimum side lot line setback of 15 feet, with a combined side yard setback of 40 feet. This lot meets the definition of a buildable lot, subject to the approvals of the County. The property is 9,528 square feet in area. The site is served by public water (Epping Forest water supply) and septic. The site is located on Westmoreland Trail, a 20' wide right of way. Access to the site is and will remain from Westmoreland Trail. The site drains to the tidal waters of the Severn River. The site abuts community property that abuts mean high water, as such it may meet the definition of a waterfront lot. The site is located in the LDA (Limited Development Area) of the Chesapeake Bay Critical Area. The site is located in a Buffer Modification area and is not subject to a 50' expanded buffer. The site contains some steep slopes but is surrounded on all sides by steep slopes. There is a 25' buffer noted to these slopes. The site is zoned R-1.

The applicant wishes to raze the existing house and construct a new dwelling in the same footprint. The new footprint will be slightly smaller than the existing footprint, due to the proposed removal of a bumpout on the west side of the dwelling. A slightly larger porch is being added to the street side, however the overall lot coverage for the house is being reduced by 124 square feet. A deck would wrap around over this space. This feature will be located 10.85' from the west lot line. The east side of the dwelling will be located 9.02' from the east property line. At 9,528 square feet, the lot is substantially smaller than an R1 lot. The dwelling is located in the steep slopes on the property. The existing lot coverage is 1,700 square feet, which includes all lot coverage on the property. The existing house is approximately 41'x26' with an 8'x9' bumpout on the west side. The house was constructed in 1928.

The proposed structure is approximately 40.5'x27' with an 623 square foot deck constructed approximately over the existing deck. The pervious deck will expand up the west side of the dwelling to where the bumpout is located. The existing house is 1,188 square feet, and the proposed house is 1,064 square feet. The house size is proposed to be reduced by 124 square feet, including the relocated front porch. The slope disturbance is predominantly to the 25% or greater slopes is on the south and west side of the dwelling and is predominantly for work area and replacement of the septic tank. The site is restricted for stormwater management. A review of the site plan will show the disturbance is minimized, and only the area necessary to perform the work. The overall lot coverage in the LDA will be reduced by 124 square feet. The setback variances are unavoidable due to the underlying zoning and the location of the existing dwelling. An attempt to meet R2 zoning requirements for setbacks has been attempted.

Pre file comments noted concern about stormwater management. It should be noted that the proposal includes a cistern for the front of the house, which while being in the buffer it very close to the buffer line, and not located on steep slopes. Rain handlers or similar will be utilizewd for the waterfront side of the dwelling. This site is reducing lot coverage and replacing an existing dwelling in the same footprint. This fact alone will reduce stormwater impacts, however the cistern provides stormwater management to the extent practicable. The plan is being sent to the Health Department for their review.

The stormwater management shown is a concept. It is our understanding that I&P is reviewing how stormwater management is treated on sites such as this, which are extremely encumbered by steep slopes and their buffer.

This plan meets the intent of 18-16-305(a):

1. The subject property is 9,528 square feet in size, and it is zoned R1. The lot is extremely undersized for an R1 lot, which has a minimum lot area of 40,000 square feet per 18-4-501. The site is encumbered by steep slopes in and around much of the site, and much of the site is in the 25' steep slope buffer. As such, there is no reasonable possibility of developing this property without relief to the Code.

2. The exceptional circumstances and practical difficulties in redeveloping the deck have been noted in #1 above to a large degree. The house is old and cannot be replaced without a variance. There is no realistic way to even reconstruct the dwelling in the same footprint without a variance. The slope disturbance is minimal.

This plan also meets the intent of 18-16-305(b) for critical area variances.

1. What is peculiar about and inherent to this lot is that it is very undersized in relation to its zoning. It is almost entirely surrounded or encumbered by steep slopes and their buffer. Denial of a variance would be a hardship for the owners, as the house has met its life expectancy and cannot be enjoyed by the owners in its current state. The work proposed creates a modern dwelling with the minimal amount of disturbance while maintaining the existing footprint for a large degree.

2. A literal interpretation of COMAR would deny the owners use of the property enjoyed by others as the site has steep slopes and their buffers. The structure itself is in steep slopes, and their buffers, and the slope disturbance is primarily for some grading and work area as well as installation of stormwater management and upgraded septic system. For the owners to not be allowed to proceed would be a denial of rights commonly enjoyed by others.

The site is not in a bog area.

3. This project will not confer special privileges to the owner, as the structure is old, and the house is proposed almost in the same footprint. The site is typical of many properties on the Severn River and its tributaries, and the relief requested is minimal.

4. The request is not a result of actions of the owner. The steep slopes were there, the zoning was determined by Anne Arundel County, and the owners have not started work prior to the issuance of any permits.

5. This project will not result in a denigration of forest or water quality as stormwater management will be provided as required by the Code, and any clearing must be mitigated for as per the Code. The amount of new lot coverage is minimal as noted above. Stormwater management via micro-bioretention and drywell will be provided as necessary at permit should the variance be granted. This would decrease runoff and erosion and on-site stormwater management will provide an overall benefit to the environment.

6. This site is not in the bog buffer.

7. This plan meets the presumption, as the denial of this variance would deny the owners' rights of other owners in the County. The development is not detrimental to the environment as

stormwater management and modern construction will make the project a benefit not a detriment to the area.

8. The applicant has tried alternative design. Through the process of determining the footprint and location of the new dwelling, it came to be that replacing it in roughly the same footprint would be the least impactful to the slopes and the environment.

This plan meets the requirements of 18-16-305(c), as the proposal is the minimum relief necessary. The development will not impair the use of adjoining properties, nor reduce forest cover in the LDA or RCA. The work performed will not be contrary to clearing and replacement practices and will not alter the character of the neighborhood or be detrimental to the public welfare.

1. The variance request is the minimum to afford relief. The request is the minimum to allow for construct a new dwelling with a more modern and environmentally friendly structure.

2. i. This variance will not alter the essential character of the neighborhood. The new house is about the same footprint as the existing structure and will be located in basically the same footprint.

ii. This variance will not impair the use of adjoining properties. The proposal will not impact neighbors. The new dwelling is mostly in the same footprint as the existing dwelling.

iii. No tree clearing is required and any mitigation necessary during the permit process will increase cover in the LDA or RCA, as the site is in the IDA.

iv. No work will be performed contrary to approved clearing practices, as a permit will be required, and this permit must meet those requirements.

v. The project will not be detrimental to the public welfare, as it is located on private property.

This plan proposes the minimum relief necessary. The development will not impair the use of adjoining properties, nor reduce forest cover in the LDA. The work performed will not be contrary to clearing and replacement practices and will not alter the character of the neighborhood or be detrimental to the public welfare.

As this proposal is for construction in the relative same footprint, and disturbance has been minimized. A grading permit will be required, and stormwater management is shown on the plan. It appears that this request is consistent with other development in this area. Denial of this request would not allow the owner to enjoy property rights common to other properties in this area.

The enclosed plan represents the location of the proposed work to the deck. In closing, the variances requested are the minimum necessary to afford relief and is not based on conditions or circumstances that are a result of actions by the applicant. We thank for in advance for your consideration to this request.

If you have any questions, or if you require additional information, please feel free to contact me at 410-897-9290.

Sincerely,
Bay Engineering, Inc.

Mike Gillespie

Mike Gillespie
Designercc: owner, File

VARIANCE PLAN

FOR

1724 WESTMORELAND TRL

ANNAPOLIS, MD 21401
EPPING FOREST, LOTS 11 & 12, BLOCK 43, SC A
TAX ID#: 02-240-09452100
TAX MAP 45, GRID 3, PARCEL 41
SECOND DISTRICT ~ ANNE ARUNDEL COUNTY ~ ZONED R-1/LDA

VARIANCE REQUEST:

- 17-8-201(a) WHICH STATES IN PART THAT DEVELOPMENT MAY NOT OCCUR WITHIN SLOPES 15% OR GREATER

-18-4-501 R1 BULK REGULATIONS WHICH STATE IN PART THAT THE MINIMUM SIDE YARD SETBACK IS 15' COMBINED 40'

EXISTING CONDITIONS PLAN

SCALE: 1" = 20'

EXISTING LOT COVERAGE SUMMARY

DESCRIPTION	AREA
TOTAL LOT AREA	9,528 SQ. FT. ± OR 0.219 ACRES
EX. LOT COVERAGE.....	1,700 SQ. FT. ± OR 0.039 ACRES
EX. LOT COVERAGE WITHIN SETBACK LINES....	233 SQ. FT. ± OR 0.005 ACRES
ALLOWABLE COVERAGE W/IN LDA (31.25%).....	2,978 SQ. FT. ± OR 0.068 ACRES
EX. WOODS ON SITE.....	5,520 SQ. FT. ± OR 0.127 ACRES

NOTE: BREAKDOWN OF EXISTING LOT COVERAGES ARE AS FOLLOWS :

- EX. HOUSE AND COVERED PORCH = 1,188 SF
- EX. ASPHALT DRIVE = 512 SF

TOTAL = 1,700 SF

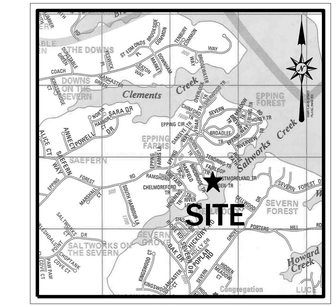
PROPOSED LOT COVERAGE SUMMARY

DESCRIPTION	AREA
TOTAL LOT AREA.....	9,528 SQ. FT. ± OR 0.219 ACRES
ALLOWABLE MAX COVERAGE W/IN LDA (31.25%).....	2,978 SQ. FT. ± OR 0.068 ACRES
PROPOSED LOT COVERAGE.....	1,576 SQ. FT. ± OR 0.036 ACRES
PROPOSED LOD.....	5,175 SQ. FT. ± OR 0.119 ACRES
TOTAL STEEP SLOPE DISTURBANCE.....	2,451 SQ. FT. ± OR 0.056 ACRES
TOTAL STEEP SLOPE BUFFER DISTURBANCE.....	2,678 SQ. FT. ± OR 0.061 ACRES
PROP. LOT COVERAGE WITHIN SLOPE BUFFER.....	1,576 SQ. FT. ± OR 0.036 ACRES
TOTAL DISTURBANCE WITHIN CA BUFFER.....	4,495 SQ. FT. ± OR 0.103 ACRES
EX. WOODS TO BE REMOVED.....	1,327 SQ. FT. ± OR 0.030 ACRES

NOTE: BREAKDOWN OF PROPOSED LOT COVERAGES ARE AS FOLLOWS :

- PROP. HOUSE AND COVERED PORCH = 1,064 SF
- EX. ASPHALT DRIVE = 512 SF

TOTAL = 1,576 SF



VICINITY MAP

SCALE: 1"=2000'

LEGEND

PROPERTY LINE / RIGHT-OF-WAY		LIMIT OF DISTURBANCE	
EXISTING CONTOUR	30	SUPER SILT FENCE	SSF SSF SSF
EXISTING SPOT ELEVATION	×30.50	100' CRITICAL AREA BUFFER	
EXISTING UTILITY POLE W/ OVERHEAD WIRE	OH OH	25% STEEP SLOPES	
EXISTING BUILDING		EXISTING SOILS TYPE DESIGNATION	CRD / CSF
BUILDING RESTRICTION LINE	BRL BRL	PROPOSED OPEN DECK	
		PROPOSED NON-ROOFTOP DISCONNECT	

PROPOSED DEVELOPMENT PLAN

SCALE: 1" = 20'

CALL "MISS UTILITY"
TELEPHONE 1-800-257-7777
FOR UTILITY LOCATION AT
LEAST 48 HOURS BEFORE
BEGINNING CONSTRUCTION.

Revisions

Rev. #	By	Date	Description

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. | Exp./Renewal Date

Bay Engineering Inc.
Engineers, Planners and Surveyors
2661 Riva Road, Building 900
Annapolis, Maryland 21401
410.897.9290
410.897.9295 fax
email: info@bayengineering.com
www.bayengineering.com

Date AUGUST, 2023

Job Number 21-8279

Scale AS SHOWN

Drawn By J. SLENKER

Approved By T. MARTIN

Folder Reference DONAHUE 1724 WESTMORELAND TRAIL

VARIANCE SITE PLAN

SITE PLANS

1724 WESTMORELAND TRAIL

ANNAPOLIS, MARYLAND 21401
TAX MAP 45 ~ GRID 3 ~ PARCEL 41
EPPING FOREST, LOTS 11 & 12, BLOCK 43, SC A
DEED REFERENCE: 34556 / 404 T.A. #02-240-09452100 ~ ZONED: R1 / LDA
SECOND DISTRICT ~ ANNE ARUNDEL COUNTY

Sheet No. 1 OF 1

24x36, VMAP, TAXMAP, LOCATION MAP, 03-733 SITE BASE

PLOTTED: Sep 13 2023 - 4:16pm

F:\21-8279 Donahue - 1724 Westmoreland Trail\Drawing Files\21-8279 VARIANCE.dwg

Bay Engineering Inc.
Engineers, Planners and Surveyors

August 1, 2023

Lori Byrne
Environmental Review Specialist
Department of Natural Resources
Fish, Heritage and Wildlife Administration
580 Taylor Avenue
Annapolis, MD 21401

RE: 1724 WESTMORELAND TRAIL
SEVERNA PARK, MD 21146
VARIANCE APPLICATION

Dear Ms. Byrne,

The purpose of this correspondence is to request an environmental review statement on the enclosed project. Our clients, Number 5 Maryland Ave LLC are submitting a variance application to Anne Arundel County, Maryland. The variance is being submitted for relief to Anne Arundel County Code, Article 17-8-201 which prohibits development in slopes greater than 15% in the critical area. A variance is also requested 18-4-501 to the Bulk Regulations for R1 zoning. The owner wishes to raze an existing dwelling and construct a new dwelling with slightly less footprint and associated improvements. The site is in the LDA. The Chesapeake Bay Critical Area Report is enclosed, as well as a cover letter to Anne Arundel County and associated plans.

Should you have any questions, please do not hesitate to call me at 410-897-9290.

Sincerely,

Bay Engineering

Mike Gillespie

Michael Gillespie
Project Designer

CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS
1804 WEST STREET, SUITE 100
ANNAPOLIS, MD 21401

PROJECT NOTIFICATION APPLICATION

GENERAL PROJECT INFORMATION

Jurisdiction: AACo Date:

Tax Map #	Parcel #	Block #	Lot #	Section
45	41	3	11-12	A

Tax ID: 2-240-09452100

FOR RESUBMITTAL ONLY

- Corrections ☐
- Redesign ☐
- No Change ☐
- Non-Critical Area ☐

*Complete Only Page 1 General Project Information

Project Name (site name, subdivision name, or other)	Number 5 Maryland Ave. LLC Report
Project location/Address	1729 Westmoreland Trail
City	Annapolis Zip 21401
Local case number	
Applicant: Last name	First name
Company	Number 5 Maryland Ave LLC

Application Type (check all that apply):

Building Permit	☐	Variance	☒
Buffer Management Plan	☐	Rezoning	☐
Conditional Use	☐	Site Plan	☐
Consistency Report	☐	Special Exception	☐
Disturbance > 5,000 sq ft	☐	Subdivision	☐
Grading Permit	☐	Other	☐ _____

Local Jurisdiction Contact Information:

Last name _____ First name _____

Phone # _____ Response from Commission Required By _____

Fax # _____ Hearing date _____

SPECIFIC PROJECT INFORMATION

Describe Proposed use of project site:

Raze Ex Structure Construct New dwelling on same general footprint

	Yes		Yes
Intra-Family Transfer	☐	Growth Allocation	☐
Grandfathered Lot	☒	Buffer Exemption Area	☒

Project Type (check all that apply)

Commercial	☐	Recreational	☒
Consistency Report	☐	Redevelopment	☐
Industrial	☐	Residential	☐
Institutional	☐	Shore Erosion Control	☐
Mixed Use	☐	Water-Dependent Facility	☐
Other	☐		

SITE INVENTORY (Enter acres or square feet)

	Acres	Sq Ft
IDA Area	0	0
LDA Area	0.219	9,528
RCA Area	0	0
Total Area	0.219	9,528

	Acres	Sq Ft
Total Disturbed Area	0.119	5,175
# of Lots Created		

	Acres	Sq Ft		Acres	Sq Ft
Existing Forest/Woodland/Trees	0.127	5,523	Existing Lot Coverage	0.039	1,700
Created Forest/Woodland/Trees	TBD	TBD	New Lot Coverage	0.032	1,376
Removed Forest/Woodland/Trees	0.090	1,327	Removed Lot Coverage	0.039	1,700
			Total Lot Coverage	0.036	1,576

VARIANCE INFORMATION (Check all that apply)

	Acres	Sq Ft		Acres	Sq Ft
Buffer Disturbance	0.103	4,495	Buffer Forest Clearing	0.030	1,327
Non-Buffer Disturbance	0.016	680	Mitigation	TBD	TBD

Variance Type		Structure	
Buffer	☐	Acc. Structure Addition	☐
Forest Clearing	☐	Barn	☐
HPA Impact	☐	Deck	☐
Lot Coverage	☐	Dwelling	☒
Expanded Buffer	☐	Dwelling Addition	☐
Nontidal Wetlands	☐	Garage	☐
Setback	☒	Gazebo	☐
Steep Slopes	☒	Patio	☐
Other	☐	Pool	☐
		Shed	☐
		Other	☐

CRITICAL AREA REPORT

DONAHUE PROPERTY
1724 WESTMORELAND TRAIL
ANNAPOLIS, MD 21401

July 2023

Prepared for:
Number 5 Maryland Ave LLC
18 West Street
Annapolis, MD 21401

Prepared by:
Bay Engineering, Inc.
2661 Riva Rd. Building 800
Annapolis, MD 21401

INTRODUCTION

This site is a 8,044 square foot property that is located 1724 Westmoreland Trail in Annapolis, MD. The property is lots 11-12 block 43, section A of Epping Forest. The proposal is to raze an existing dwelling and construct a new dwelling. The property is completely inside the Chesapeake Bay Critical Area Boundary and is designated as Limited Development Area (LDA). The property is zoned R1.

EXISTING USE

The site is currently developed with a house, driveway and associated improvements. The property is served by septic and the Epping Forest water system. The property is waterfront by definition, but does not abut mean high water. The site contains steep slopes, and drains to Saltworks Creek, a tributary of the Severn River. The site is served by Westmoreland Trail, a variable width private right of way.

SURROUNDING LAND USE

The properties that abut the site are developed as single-family lots. The general area is developed as single-family lots that are part of the Epping Forest subdivision. The site is bounded by a developed property to the north and south, Westmoreland Trail to the west and community property to the east.

SOILS

The U.S. Department of Agriculture Soil Survey defines the property to have a soil type of CRD – Collington and Annapolis Soils, 10-15% slopes (B Soils)

FLOODPLAIN

The property is located on the Federal Emergency Management Agency Map (FEMA), panel #24003C0169F Dated February 18, 2015 and lies within zone X, area of minimal flooding, and Zone AE Elevation 6.0'.

NON-TIDAL WETLANDS

There appear to be no Non Tidal Wetlands on the site.

TIDAL WETLANDS

There appear to be no Tidal Wetlands on this site.

BODIES OF WATER

The site drains overland to Saltworks Creek.

STEEP SLOPES

The site has steep slopes, which occur on throughout the site. Part of the variance request is to disturb steep slopes. The disturbance to the steep slopes is the minimum necessary for the proposed work.

RARE AND ENDANGERED SPECIES

A review of Federal and/or State listed species of rare, threatened or endangered species of plants or animals has been requested via the enclosed letter to Lori Byrne of the Maryland Department of Natural Resources Fish, Heritage and Wildlife Administration.

STORMWATER MANAGEMENT

Stormwater management will be provided as required during the permit process.

FOREST COVER

The existing forest cover is limited to over story trees which occur through out the site. The understory is mostly lawn.
The following are typical trees of areas such as this site:

Common Name	Scientific Name
Black Locust	*Robinia pseudoacaia*
Eastern Sycamore	*Platanus occidentalis*
American Holly	*Ilex opaca*
Beech	*Fagus grandifolia*
White Poplar	*Populus alba*
Mountain Laurel	*Kalmia latifolia*

WILDLIFE TYPICAL OF THIS AREA

Common Name	Scientific Name
Eastern Gray Squirrel	*Sciurus Carolinensis*
Blue Jay	*Cyanocitta Cristata*
Common Crow	*Corvus Brachythynchos*
Northern Cardinal	*Richmondena Cardinalis*

SITE CALCULATIONS

1. Total Site area.....9,528 sq. ft.
2. Site area in Critical area.....9,528 sq. ft
3. Existing Lot Coverage .....1,700 sq. ft.
4. Proposed Impervious area ...1,576 sq. ft.
5. Total Impervious Coverage Allowed ..... 2,978 sq. ft.

Real Property Data Search ( )

Search Result for ANNE ARUNDEL COUNTY

View Map **View GroundRent Redemption** **View GroundRent Registration**

Special Tax Recapture: None

Account Identifier: **District -** 02 **Subdivision -** 240 **Account Number -** 09452100

Owner Information

Owner Name: NUMBER 5 MARYLAND AVE LLC **Use:** RESIDENTIAL
Principal Residence: NO

Mailing Address: 18 WEST ST
ANNAPOLIS MD 21401- **Deed Reference:** /34556/ 00404

Location & Structure Information

Premises Address: 1724 WESTMORELAND TRL
ANNAPOLIS 21401-0000 **Legal Description:** LTS 11 12 BK 43 SC A
1724 WESTMORELAND TRL
EPPING FOREST

Map:	Grid:	Parcel:	Neighborhood:	Subdivision:	Section:	Block:	Lot:	Assessment Year:	Plat No:
0045	0003	0041	2230050.02	240	A	43	11	2023	Plat Ref: 0001/ 0039

Town: None

Primary Structure Built	Above Grade Living Area	Finished Basement Area	Property Land Area	County Use
1928	1,193 SF	132 SF	6,837 SF	

Stories	Basement	Type	Exterior	Quality	Full/Half Bath	Garage	Last Notice of Major Improvements
1	YES	STANDARD UNIT	FRAME	3	2 full		

Value Information

	Base Value	Value	Phase-in Assessments	
		As of 01/01/2023	As of 07/01/2022	As of 07/01/2023
Land:	480,500	731,200		
Improvements	90,500	119,300		
Total:	571,000	850,500	571,000	664,167
Preferential Land:	0	0		

Transfer Information

Seller: GOODSPEED JOHN D	**Date:** 05/08/2020	**Price:** $525,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /34556/ 00404	**Deed2:**
Seller: PRATT JR, RICHARD R	**Date:** 06/22/1999	**Price:** $287,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /09260/ 00239	**Deed2:**
Seller: POWER ROBT B	**Date:** 11/19/1986	**Price:** $161,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /01349/ 00173	**Deed2:**

Exemption Information

Partial Exempt Assessments:	Class	07/01/2022	07/01/2023
County:	000	0.00	
State:	000	0.00	
Municipal:	000	0.00|0.00	0.00|0.00

Special Tax Recapture: None

Homestead Application Information

Homestead Application Status: No Application

Homeowners' Tax Credit Application Information

Homeowners' Tax Credit Application Status: No Application **Date:**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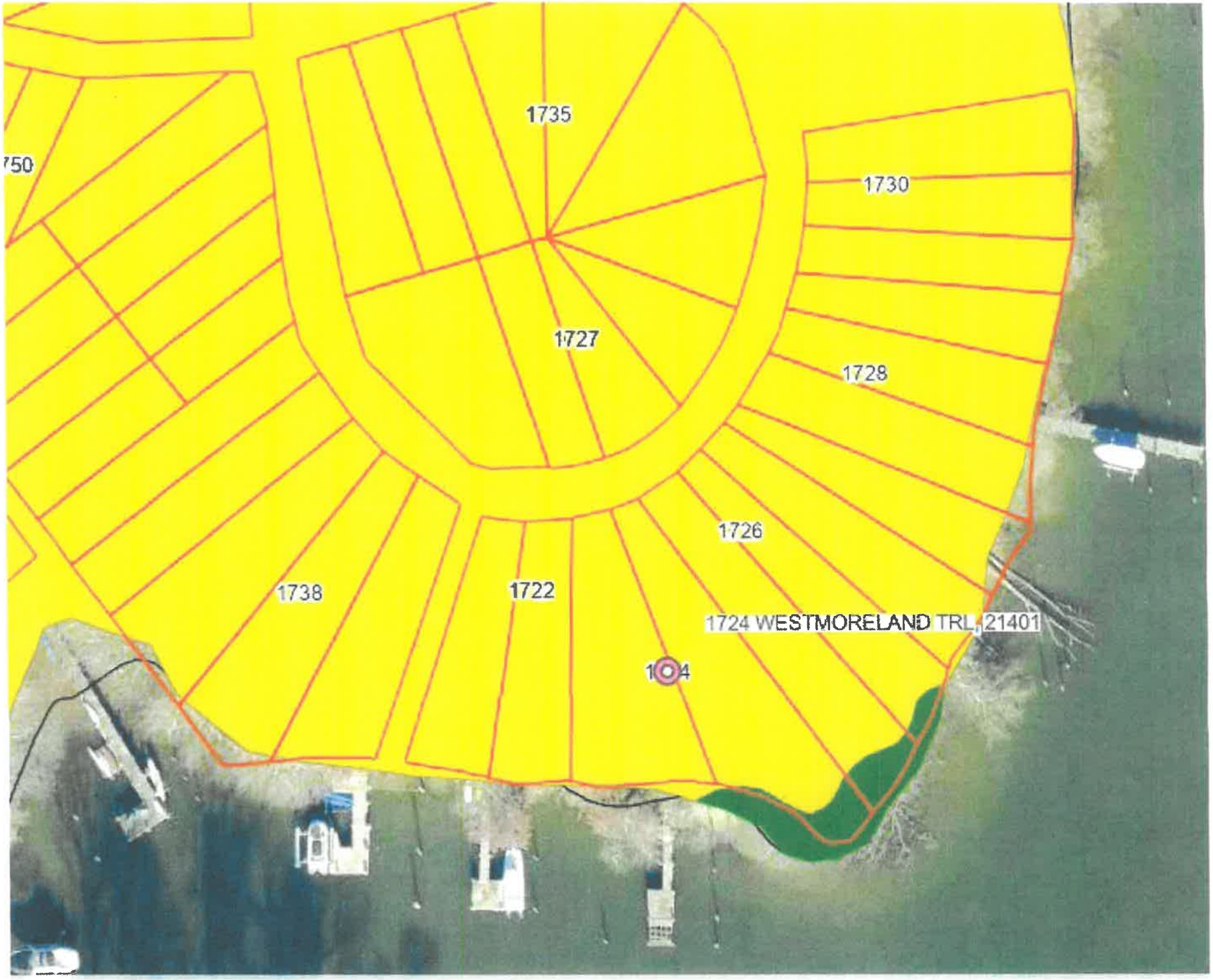
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1724 WESTMORELAND TRL, 21401
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R1 Residential
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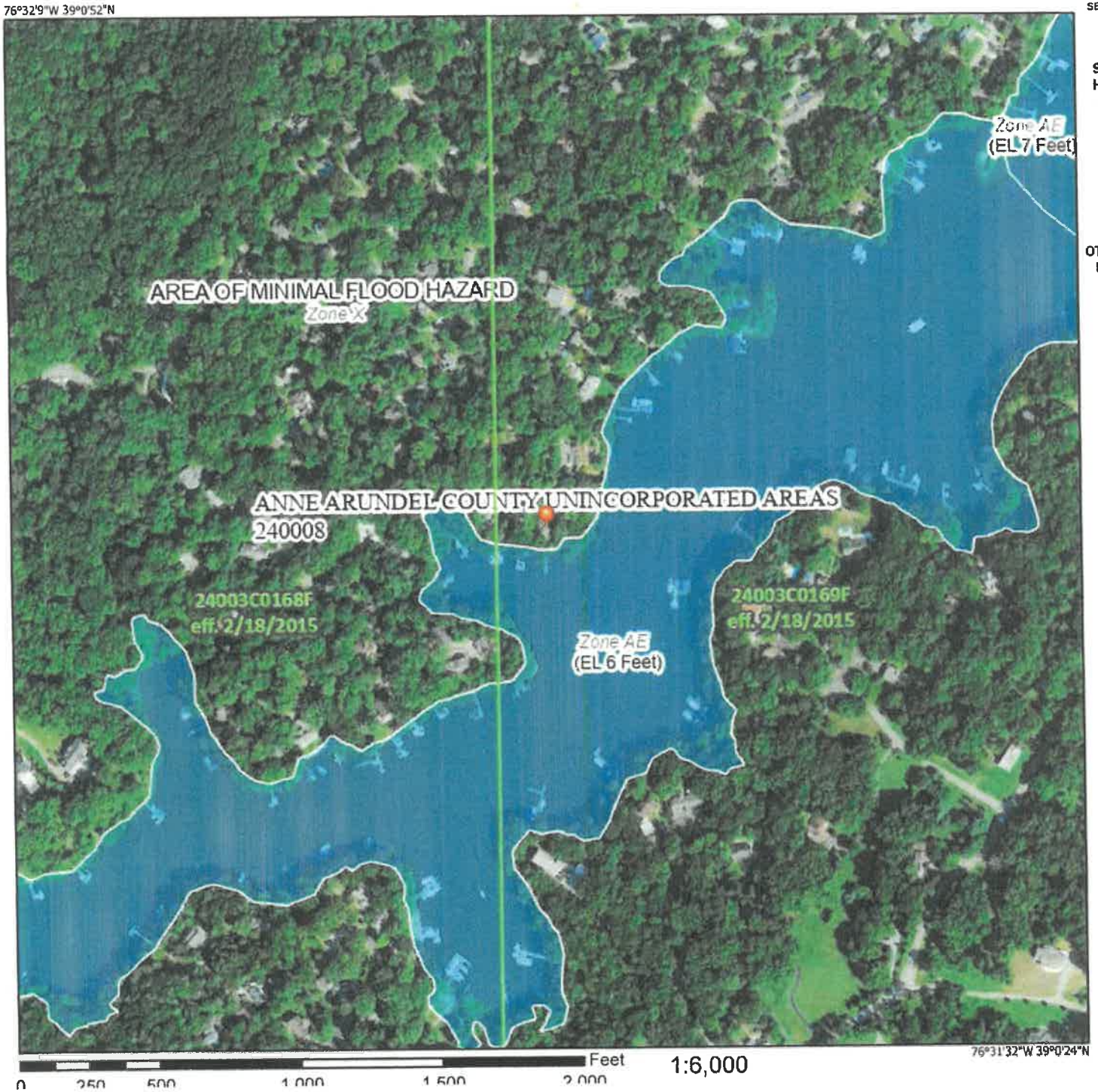
1724 WESTMORELAND TRL, 21401

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile Zone
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

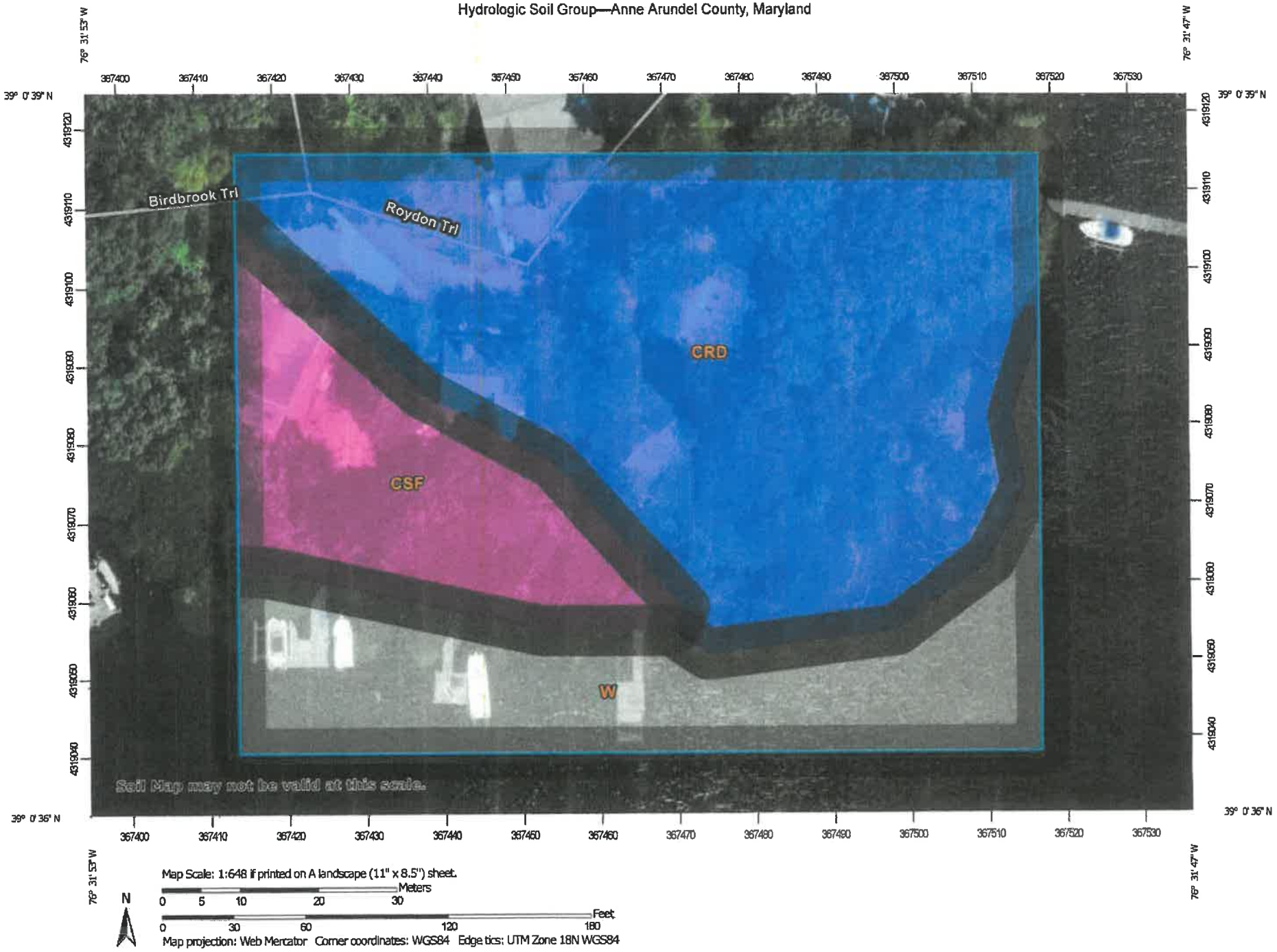
N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/25/2023 at 11:00 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Map Scale: 1:648 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Anne Arundel County, Maryland
Survey Area Data: Version 21, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 20, 2022—Aug 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CRD	Collington and Annapolis soils, 10 to 15 percent slopes	B	1.1	57.1%
CSF	Collington, Wist, and Westphalia soils, 25 to 40 percent slopes	A	0.4	18.3%
W	Water		0.5	24.5%
Totals for Area of Interest			**2.0**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Bay Engineering, Inc.
Engineers, Planners and Surveyors

STORMWATER MANAGEMENT REPORT

FOR THE

DONAHUE PROPERTY

1724 Westmoreland Trail
Annapolis, MD 21401
Tax Map 45, Grid 3, Parcel 41, Lot 11
Tax ID: #02-240-09452100
Grading Permit #G0201_____

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.

Provided by:
Bay Engineering, Inc.
2661 Riva Road, Building 800
Annapolis, MD 21401

Date: July 25, 2023
Revised: _____

I. Narrative

A. Introduction

This report contains an analysis that outlines the stormwater management obligations for this site. We evaluated management obligations, using Environmental Site Design (ESD), for Water Quality (WQ_v), Recharge (Re_v), and Channel Protection (Cp_v). For each of the requirements, we offer an assessment regarding the need for management, as well as the type of practice if management is required.

B. General Site Information

The site is known as 1724 Westmoreland Trail, Annapolis, MD 21401. It is located on Tax Map 45, Grid 3, Parcel 41, Lot 11 and contains 0.219 acres ± (9,528 square feet). The site is currently zoned R1. The site is located in the LDA (Limited Development Area) of the Chesapeake Bay Critical Area. The limit of the proposed area to be disturbed is approximately 0.036 acres ± 5,175 square feet.

Existing Conditions

The site is currently developed with a house, gravel driveway and concrete walks. The site is accessed from Westmoreland Avenue. The site consists primarily of open area sloping to the water. Slopes on site within the limit of disturbance are primarily between 10% and 15%. The predominant soil types are CSF (Collington, Wist and Westphalia Soils), 25-40% slopes, hydrologic soil group "A". Slopes on site outside of the limit of disturbance are primarily between 75% and 80%. The predominant soil type is CRD (Collington and Annapolis Soils), 10-15% slopes, hydrologic soil group "B" and CSF (Collington, Wist and Westphalia Soils), 25-40% slopes, hydrologic soil group "A".

Existing topography dictates a drainage pattern generally towards the southern property line. The conveyance is stable and should not be affected by development on site.

Developed Conditions

A new house will be constructed. A new water house connection and septic system will be tied into the proposed house.

The site has been designed to provide the least amount of environmental impacts. Due to ESD utilizing, micro-bioretention. A smaller quantity of water will reach the outfall points at the property lines. Flow paths have been maintained and the time of concentration increased. The runoff from the entirety of the new house roof surfaces will be collected by downspouts and will flow to the stormwater devise and shown on the Stromwater Management plan (page 5 of 6). Runoff from the existing parking pad will flow to non-rooftop disconnect. Roof top runoff will be both disconnected and directed to the proposed nonrooftop disconnect and rain handlers.

C. Stormwater Management Design

The Stormwater Management concept for this project was designed to meet the requirements of the Stormwater Management Act of 2007.

This stormwater management plan was developed with all treatment options in mind. The total ESD volume required will be achieved utilizing only micro-scale practices from Chapter 5 of the Maryland Stormwater Design Manual. The impervious areas will be treated via one (1) cistern (M-1), three (3) rain handlers (N-2 and one (1) non-rooftop disconnect (N-2) with the locations shown on the Stormwater Management Plan (page 5 of 6).

Erosion and sediment control has been integrated into the stormwater management strategy by using non-structural and micro-scale treatment techniques and limiting grading and disturbance which produce sediment and erosion.

D. Unified Stormwater Sizing Criteria

Methodology

In accordance with the 2007 Maryland Stormwater Design Manual, Volumes I & II, the site was designed implementing Environmental Site Design (ESD) to the maximum extent practicable (MEP). As a minimum, ESD shall be used to address both Recharge (Re_v) and Water Quality (WQ_v) requirements. Channel Protection (Cp_v) obligations are met when ESD practices are designed according to the Runoff Curve Number Method where developed conditions return the site to an RCN of "woods in good condition". ESD techniques utilized are via one (1) cistern (M-1), three (3) rain handlers (N-2 and one (1) non-rooftop disconnect (N-2).

Water Quality Requirements (WQ_v)

The site has been analyzed for Water Quality obligations based on the proposed development. Water quality volume (WQv) obligations will be met on this site by the successful implementation of ESD practices, specifically, via one (1) cistern (M-1), three (3) rain handlers (N-2 and one (1) non-rooftop disconnect (N-2).

Recharge Requirements (Re_v)

The site has been analyzed for Recharge Volume obligations based on the proposed development. Recharge Volume (REv) obligations will be met on this site by the successful implementation of ESD practices, specifically, via one (1) cistern (M-1), three (3) rain handlers (N-2 and one (1) non-rooftop disconnect (N-2).

Channel Protection Requirements (Cp_v)

The site has been analyzed for Channel Protection obligations based on the proposed developments and grading. Channel Protection volume (CPv) obligations will be met on this site by the successful implementation of ESD practices, specifically, via one (1) cistern (M-1), three (3) rain handlers (N-2 and one (1) non-rooftop disconnect (N-2).

Overbank Flood Protection Volume Requirements (Qp_{10})

Overbank flood protection obligations will be met on this site by the successful implementation of ESD practices, specifically, via one (1) cistern (M-1), three (3) rain handlers (N-2 and one (1) non-rooftop disconnect (N-2).

Extreme Flood Volume Requirements (Q_f)

No downstream flooding or erosion should occur as a result of this development.

E. Environmental Site Design (ESD)

Title 4, Subtitle 201.1(B) of the "Stormwater Management Act of 2007" defines ESD as using micro-scale practices, non-structural techniques, and better site planning to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources.

ESD was implemented in this project to the maximum extent practicable (MEP) to mimic "woods in good condition." In addition, the proposed development minimizes disturbance to existing environmental features. The site was analyzed based on the proposed impervious coverage and each impervious feature was analyzed to meet the ESD Sizing Criteria. Computations can be found in Section II.

F. Outfall Statement

The site sheet flows from a high point at the northern property line along Westmoreland Trail towards the southern property line into the tidal waters of Saltworks Creek. The conveyance is stable, and should not be affected by this development due to minimization of impervious coverage, and due to storm water management provided on site.

Stormwater Management Requirements

Project:	Donahue Property		
Job No.:	21-8279		
County:	Anne Arundel		
By:	MG	*Date:*	07/25/23
Check:	XXX	*Date:*	XX/XX/XX

Site Data

Existing Conditions

Site Area	0.22	ACRES	OR	9,528	SF
Limit of Disturbance	0.12	ACRES	OR	5,175	SF

Design Area used for ESD computations is Site Area

Soils Types

HSG 'A'	0.03	ACRES	OR	1,126	SF	11.8% *of design area*
HSG 'B'	0.19	ACRES	OR	8,402	SF	88.2% *of design area*
HSG 'C'	0.00	ACRES	OR	0	SF	0.0% *of design area*
HSG 'D'	0.00	ACRES	OR	0	SF	0.0% *of design area*

Impervious Cover

Buildings	0.03	ACRES	OR	1,171	SF	
Paving	0.01	ACRES	OR	529	SF	
TOTAL	**0.04**	ACRES	OR	**1,700**	SF	17.8% *of design area*

Proposed Conditions

Impervious Cover

Buildings	0.02	ACRES	OR	1,064	SF	
Drives	0.01	ACRES	OR	512	SF	
Paving	0.00	ACRES	OR	0	SF	
Alternative Surfaces*	0.00			0	SF	
TOTAL	**0.04**	ACRES	OR	**1,576**	SF	16.5% *of design area*

* Alternative Surfaces include Permeable Pavers (A-2 ESD Device)

Determine Target ESD_V (Total Site)

Target RCN for "Woods in Good Condition"

HSG	Area (SF)	% Site	RCN
A	1,126	12%	38
B	8,402	88%	55
C	0	0%	70
D	0	0%	77

RCN_{WOODS} = **53**

Compute Percent Imperviousness, I (Total Site)

I = Impervious Area / Site Area

Existing Impervious Area=	1,700 SF	I =	17.8% *of site*
Proposed Impervious Area=	1,576 SF	I =	16.5% *of site*

Based on % Site Development Category is : **New Development**

Stormwater Management Requirements

Project:	Donahue Property		
Job No.:	21-8279		
County:	Anne Arundel		
By:	MG	*Date:*	07/25/23
Check:	XXX	*Date:*	XX/XX/XX

Determine Target ESD_V

Percent Imperviousness

I = Impervious Area / Site Area

I =	16.5 %

Where:

Site Area = 9,528 ft^2

Dimensionless Runoff Coefficient

$R_v = 0.05 + 0.009(I)$

R_v =	0.199

Where:

I = 16.5 %

Target Pe

Using Table 5.3 with the Percent Imperviousness and Soil Type above, determine the Target Pe.

HSG	Area (ft^2)	% SITE	Pe (in)
A	1,126	11.82%	1.2
B	8,402	88.18%	1.2
C	0	0.00%	1.0
D	0	0.00%	1.0

Where:

I = 20.0 %

P_e =	1.20	in.(s)

Target ESDv

$$ESD_V = \frac{(P_e)(R_V)(A)}{12}$$

Where:

A = 9,528 ft^2

ESD_v =	189.48	ft^3

ESDv Runoff Depth

$$Q_e = (P_e)(R_v)$$

Where:

ESD Runoff Depth, QE (in):	0.239	

Pe= 1.20 in.

Water Quality Volume

$$WQ_V = \frac{(P_e)(R_V)(A)}{12}$$

Where:

Pe= 1.00 in.

WQv=	157.90	ft^3

Required Recharge Volume

$$Re_V = \frac{(S)(R_V)(A)}{12}$$

S = HSG % of site = 0.274

*S Factors from MDE 2001 Manual

HSG	Recharge Factor
A	0.38
B	0.26
C	0.13
D	0.06

Rev= 0.0010 ac-ft or 43.29 cf

***** ONE SET OF TABLES NEEDED FOR EACH SITE DRAINAGE AREA*****

Permit Number	G0201___
Project Number	21-8279
Project Name	Donahue Property
Structure Address	1724 Westmoreland Trail
Structure City	Annapolis
State	Maryland
Structure Zip	21035
Total Drainage Area (Ac.)	2.051
RCN - Pre Construction	51
RCN - Post Construction	50
RCN - Woods	77
Total Number of BMP's	5
PE Required	1.20
PE Addressed	1.27
MD 8-Digit HUC	02131003
USGS 12-Digit HUC	

https://data.maryland.gov/Energy-and-Environment/Maryland-s-8-Digit-Sub-Watersheds/e9j9-vuxg

Storm_ID	STRU_NAME	MDE BMP CLASS	MDE BMP TYPE	CONSTRUCTION PURPOSE	ON or OFF SITE	LAND USE	DEVICE DRAINAGE AREA (acres)	IMPERVIOUS AREA DRAINING TO DEVICE (acres)	IMPERVIOUS ACRES RESTORED (acres)	MD NORTH COORD (NAD83-FT)	MD EAST COORD (NAD83-FT)	WQ_v (ac-ft)
	M-1	E	MRWH	NEWD - New Development	ONSITE	11	0.013	0.013	n/a	N489855	E1445637	119.497
	RH-1	E	NDNR	NEWD - New Development	ONSITE	11	0.003	0.003	n/a	N489796	E1445672	11.875
	RH-2	E	NDNR	NEWD - New Development	ONSITE	11	0.005	0.005	n/a	E1445683	E1445683	17.100
	RH-3	E	NDNR	NEWD - New Development	ONSITE	11	0.003	0.003	n/a	N489814	E1445692	11.875
	NRD-1	E	NDNR	NEWD - New Development	ONSITE	11	0.012	0.012	n/a	N489856	E1445650	40.533

STORMWATER MANAGEMENT STRUCTURE SUMMARY TABLE

Project Name: Donahue Property				Project No.:		Subdiv. No.:				
Bay Eng. No.: 21-8279		Design By: MG		Date: 7/25/2023		Tax Map/Grid/Parcel: 0045/0003/0 41				
Overall DA	Practice	Structure No.	Type	Location		Drainage Area Treated (acres)	Maximum Volume for 1-Yr 24-Hr. Storm (Cu. Ft.)	Water Quality Volume (Cu. Ft.)	Actual Device Volume (Cu. Ft.)	Pe Provided (in.)
	Cistern	C-1	M-1	N489855	E1445637	0.013	117.14	119.50	119.50	2.70
	Rain Handler	RH-1	N-2	N489796	E1445672	0.003	32.06	11.88	11.88	1.00
	Rain Handler	RH-2	N-2	N489803	E1445683	0.005	46.17	17.10	17.10	1.00
	Rain Handler	RH-3	N-2	N489814	E1445692	0.003	32.06	11.88	11.88	1.00
	Non-Rooftop Disconnect	NRD-1	N-2	N489856	E1445650	0.012	109.44	40.53	40.53	1.00
					Total	**0.000**	**0.00**	**200.88**	**0.00**	
					ESD_v Required			**189.48**		

Total Site P_e Provided:

SWM Provided for: New Development Conditions

P_e = 1.27 in.

Where:

ESD_v = 200.88 ft^3

R_v = 0.20

A (Site Area) = 9,528 ft^2

**Note: These values taken from the Stormwater Management Requirements sheet of these computations.*

6

Environmental Site Design

N-2 2	Disconnection of Non-Rooftop Runoff		
Drainage Area:	House	Device Name:	NRD-1 Rain Handler

Concept Design:

Contributing Drainage Area=	150	ft^2	0.003 ac.
Maximum Drainage Area =	1000	ft^2	
Impervious Coverage =	150	ft^2	0.003 ac.
Percent Impervious (I)=	100	%	
$R_v = 0.05 + 0.009(I)$ =	0.95		

ESDv Provided:

Pervious Length=	0	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	12	ft.	Max. Contributing Imp. Length = 75-ft.
Impervious Ratio=	1:1		
Pervious Ratio =	0.5:1		(Per Table 5.7 (page 5.62)
Pe Provided =	1.0	in.	MD State SWM Manual
Required Length =	29		

$$ESD_v = \frac{(P_E)(A)(R_V)}{12}$$

ESDv=	11.88	ft^3	pl

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Imperviou s Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:1
Pervious Ratio	0.1:1	0.2:1	0.3:1	0.4:1	0.5:1
Pe (in.)=	0.2	0.4	0.6	0.8	1.0

Maximum ESDv Allowed:

1-year runoff (Max. Pe) = 2.7 in.

$$ESD_v = \frac{(2.7)(A)(R_V)}{12}$$

Max. ESDv=	32.06	ft^3

Environmental Site Design

N-2	Disconnection of Non-Rooftop Runoff		
Drainage Area:	House	Device Name:	NRD-2 Rain Handler

Concept Design:

Contributing Drainage Area=	216	ft^2	0.005	ac.
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	216	ft^2	0.005	ac.
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Pervious Length=	0	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	12	ft.	Max. Contributing Imp. Length = 75-ft.
Impervious Ratio=	1:1		
Pervious Ratio =	0.5:1		(Per Table 5.7 (page 5.62)
Pe Provided =	1.0	in.	MD State SWM Manual
Required Length =	10		

$$ESD_v = \frac{(P_E)(A)(R_v)}{12}$$

ESDv=	17.10	ft^3

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Imperviou s Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:1
Pervious Ratio	0.1:1	0.2:1	0.3:1	0.4:1	0.5:1
Pe (in.)=	0.2	0.4	0.6	0.8	1.0

Maximum ESDv Allowed:

1-year runoff (Max. Pe) = 2.7 in.

$$ESD_v = \frac{(2.7)(A)(R_v)}{12}$$

Max. ESDv=	46.17	ft^3

Environmental Site Design

N-2 3	Disconnection of Non-Rooftop Runoff		
Drainage Area:	House	Device Name:	NRD-3 Rain Handler

Concept Design:

Contributing Drainage Area=	150	ft^2	0.003	ac.
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	150	ft^2	0.003	ac.
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Pervious Length=	0	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	12	ft.	Max. Contributing Imp. Length = 75-ft.
Impervious Ratio=	1:1		
Pervious Ratio =	0.5:1		(Per Table 5.7 (page 5.62)
Pe Provided =	1.0	in.	MD State SWM Manual
Required Length =	12		

$$ESD_v = \frac{(P_E)(A)(R_V)}{12}$$

ESDv=	11.88	ft^3

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Imperviou s Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:1
Pervious Ratio	0.1:1	0.2:1	0.3:1	0.4:1	0.5:1
Pe (in.)=	0.2	0.4	0.6	0.8	1.0

Maximum ESDv Allowed:

1-year runoff (Max. Pe) = 2.7 in.

$$ESD_v = \frac{(2.7)(A)(R_V)}{12}$$

Max. ESDv=	32.06	ft^3

Environmental Site Design

N-2 4	Disconnection of Non-Rooftop Runoff		
Drainage Area:	Driveway	Device Name:	NRD-4

Concept Design:

Contributing Drainage Area=	512	ft^2	0.012 ac.
Maximum Drainage Area =	1000	ft^2	
Impervious Coverage =	512	ft^2	0.012 ac.
Percent Impervious (I)=	100	%	
$R_v = 0.05 + 0.009(I)$ =	0.95		

ESDv Provided:

Pervious Length=	0	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	12	ft.	Max. Contributing Imp. Length = 75-ft.
Impervious Ratio=	1:1		
Pervious Ratio =	0.5:1		(Per Table 5.7 (page 5.62)
Pe Provided =	1.0	in.	MD State SWM Manual
Required Length =	12		

$$ESD_v = \frac{(P_E)(A)(R_V)}{12}$$

ESDv=	40.53	ft^3

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Imperviou s Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:1
Pervious Ratio	0.1:1	0.2:1	0.3:1	0.4:1	0.5:1
Pe (in.)=	0.2	0.4	0.6	0.8	1.0

Maximum ESDv Allowed:

1-year runoff (Max. Pe) = 2.7 in.

$$ESD_v = \frac{(2.7)(A)(R_V)}{12}$$

Max. ESDv=	109.44	ft^3

Environmental Site Design

M-1	Rainwater Harvesting		
Drainage Area:	House	Device Name:	Cistern 1

Concept Design:

Contributing Drainage Area=	548	ft^2	0.013	ac.
Impervious Coverage =	548	ft^2	0.013	ac.
Percent Impervious (I)=	100.00	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Cistern/Rain Barrel Capacity= 1500 gal. (Per manufacturers specifications)

Maximum ESDv Allowed:

1-year runoff (Max. Pe) = 2.7 in.

$$ESD_v = \frac{(2.7)(A)(R_v)}{12}$$

Max. ESDv=	117.14	ft^3

Demand Design:

Landscaped area used for irrigation=	7,952	ft^2	0.183	ac.
Water used for Irrigation=	4,957	gallons/week		
	19,827	gallons/month		

*This is the total landscaped area onsite including grass and woods areas.

ESDv Provided:

Average Number of Storms per Year =	122	
Volume of Storage =	894	gallons
	119	cu. ft.

$$Volume\ of\ Storage = Sum\ of\ Column\ F \times \frac{year}{122\ storms}$$

OFFICE OF PLANNING AND ZONING

CONFIRMATION OF PRE-FILE MEETING

DATE OF MEETING July 22, 2022

P&Z STAFF Rkonowal, K. Krinetz, J. Bory

APPLICANT/REPRESENTATIVE Kim Burke Mike Gillespie EMAIL

SITE LOCATION 1724 Westmoreland Trail LOT SIZE 9,528 sf ZONING R1

CA DESIGNATION LDA BMA ___ or BUFFER X APPLICATION TYPE CA Variance

Demo/rebuild single family detached dwelling with front and side attached deck, and new septic tank and drywell

Variances required for side lot line setbacks (undersized R1 lot 7 feet req'd), disturbance to expanded buffer and slopes greater than 15%

COMMENTS

Engineering advised that no SWM ESD practices may be located in any environmentally sensitive areas or their buffers. If indeed the site is buffer and not modified, no SWM practices may be in the 100 buffer. The entire site is steep slope and buffer. shaded as 25% slopes, therefore there is no area to provide SWM.

Critical Area Team advised Per correspondence with the Health Department, although recommendations were made in May 2021, a site plan for the addition has not been submitted and the application is still pending. Every effort should be made to locate/design the system to minimize disturbance to the onsite slopes including locating the system on the roadside if possible. Expansion of the footprint or decks that results in additional permanent slope disturbance will not be supported. The LOD that will be established for temporary disturbance during demolition is not intended to open that area for, construction/grading.

Additional comments may be generated once the septic plan has been approved.

Zoning requests house and deck dimensions be labeled, also indicate number of stories. New dwelling offers opportunity to comply with side lot line setbacks. Need to justify. Please provide floor plan if possible.

INFORMATION FOR THE APPLICANT

Section 18-16-201 (b) Pre-filing meeting required. Before filing an application for a variance, special exception, or to change a zoning district, to change or remove a critical area classification, or for a variance in the critical area or bog protection area, an applicant shall meet with the Office of Planning and Zoning to review a pre-file concept plan or an administrative site plan. For single lot properties, the owner shall prepare a simple site plan as a basis for determining what can be done under the provisions of this Code to avoid the need for a variance.

*** A preliminary plan checklist is required for development impacting environmentally sensitive areas and for all new single-family dwellings. A stormwater management plan that satisfies the requirements of the County Procedures Manual is required for development impacting environmentally sensitive areas OR disturbing 5,000 square feet or more. State mandates require a developer of land provide SWM to control new development runoff from the start of the development process.

Section 18-16-301 (c) Burden of Proof. The applicant has the burden of proof, including the burden of going forward with the production of evidence and the burden of persuasion, on all questions of fact. The burden of persuasion is by a preponderance of the evidence.

A variance to the requirements of the County's Critical Area Program may only be granted if the Administrative Hearing Officer makes affirmative findings that the applicant has addressed all the requirements outlined in Article 18-16-305. Comments made on this form are intended to provide guidance and are not intended to represent support or approval of the variance request.