Messick & Associates
Consulting Engineers,
Planners, Surveyors
& Landscape Architects

November 3, 2025

Anne Arundel County
Office of Planning & Zoning
2664 Riva Road
Annapolis, Maryland 21401
Attention: Ms. Sterling Seay

Re: VARIANCE REQUEST
KINCAID PROPERTY
1031 LANDON LANE
ARNOLD, MD 21012

Dear Ms. Seay:

On behalf of the applicants, we respectfully request a variance to Article 18-13-104. Buffers, expanded buffers, and buffer modification areas (a) Buffer. There shall be a minimum 100-foot buffer landward from the mean high-water line of tidal waters, tributary streams, and tidal wetlands. Specific development criteria apply as set forth in Article 17 of this Code and COMAR. A variance is also requested to Article 17-8-301, development on properties with buffers shall meet the requirements of COMAR, Title 27.

The property is located in a Buffer Modification Area. However, due to the presence of tidal wetlands, the wetland are subject to a 100' buffer. The lot is developed with dwelling and associated improvements. This lot meets the definition of a buildable lot, subject to the approvals of the County. The property is 25,480 square feet in area. The site is served by well and septic. It is served by Landon Lane, a 50' public right of way. The site drains to the tidal waters of Deep Creek. The site is waterfront. The site is located in the LDA (Limited Development Area) and a small portion of RCA (Resource Conservation Area) of the Chesapeake Bay Critical Area. The site is zoned R1. The Health Department has approved a septic plan for the proposed work.

The applicant wishes to construct a new dwelling on the property. Due to the BMA and the 100' tidal wetlands buffer, the house is being rebuilt entirely in the original footprint inside the BMA and tidal wetlands buffer. The new structure will meet required zoning setbacks.. The site currently meets the underlying lot coverage requirements for a lot of this size in the LDA. Existing lot coverage is 4,983 square feet, and the proposed lot coverage is 5,292 square feet which is under the allowable 5,445 square feet. Disturbance in the wetlands buffer is also necessary for the installation of a BAT septic tank and distribution box and connection to the existing drywells. Disturbance is also necessary for removal of the existing septic tank.

The clients have designed the new home to keep the footprint in the buffers the same, and this includes the construction of a deck, also in the same footprint.

The following is offered in response to the prefile comments dated October 1, 2025. The variances required are noted in the letter and on the site plan. The zoning has been noted throughout the letter. The owners do not wish to relocate the dwelling for several reasons. The home was built in 1979 which predates the expanded buffer legislation. The location of the dwelling and the tidal wetlands is unique to this property. Moving the home would be inconsistent with a BMA property if not for this small area of tidal wetlands. The new development will not increase the lot coverage in the wetlands buffer, while adding a BAT septic tank and stormwater management where none currently exists. Moving the house back would also be contrary to provisions of variance requirements to not alter the character of the neighborhood, and impede air light and view. Moving the dwelling would impair the air, light and view of the subject property, pushing it back would place the dwelling behind the façade of Lot 19, 1035 Landon Lane, altering the air light and view of the subject property. The owners would like to utilize a geothermal system for the home, and space is needed for the location of the wells required for this task. Removal of the home would require disturbance to the wetlands buffer regardless, and it is our opinion that the proposed stormwater management where none exists will offset any perceived negative impact of leaving the home in its current location. The I&P site plan comments have been addressed, however, the LOD is required for installation of the soil amendment for the driveway.

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

1. The subject property is 25,480 square feet in size, and it is zoned R1 and a portion of the property and the existing house is encumbered by the 100' buffer to tidal wetlands. The site is subject to a 100' buffer. The approved septic plan requires disturbance in the wetlands buffer for its installation and connection, as well as for the removal of the existing septic tank. 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 lot have been noted in #1 above to a large degree. The house will be replaced in the same footprint as the existing dwelling inside the buffer.

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 subject to a 100' buffer to tidal wetlands that encumbers about half the house. The property is developed, and there is no possibility of replacing the aged home, without relief to the Code.

2. A literal interpretation of COMAR would deny the owners use of the property enjoyed by others as the site is subject to the 100' tidal wetlands buffer, and there is no way to do the proposed work without disturbing the 100' buffer. The owners have designed the house to not expand inside the buffers, as such, for the owners to not be allowed to proceed would be a denial of rights commonly enjoyed by others. This proposal also will not increase lot coverage in the 100' tidal wetlands buffer.

The site is not in a bog area.

3. This project will not confer special privileges to the owner, as replacing an aged dwelling is not a special privilege and if not for the wetlands buffer, no variance would be necessary.

4. The request is not a result of actions of the owner. The 100' tidal wetlands buffer encumbers about half the existing dwelling, and 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. The proposal will not increase lot coverage in the buffer. Minimal tree clearing is required or proposed. Stormwater management will be provided as required by the Code, and any clearing must be mitigated for as per the Code.

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 presumption is not to disallow development but provide responsible development. The owners are achieving this by keeping the same footprint inside the buffers.

8. The applicant has tried alternative design. However, it seemed that utilizing the existing footprint in the buffers is the best design.

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 construction of a new home, with no new lot coverage proposed in the buffers.

2. i. This variance will not alter the essential character of the neighborhood. The new home will essentially replace the existing home in the same footprint, with an expansion on the north side, which is outside the buffers.

ii. This variance will not impair the use of adjoining properties. The proposal will not impact neighbors. The new home will not be closer to the water than the existing home.

iii. Minimal tree clearing is proposed and any mitigation necessary during the permit process will not decrease tree cover in the LDA or RCA.

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 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.

As this proposal is for construction of a new home, disturbance has been minimized. A grading permit will be required. 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. 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.

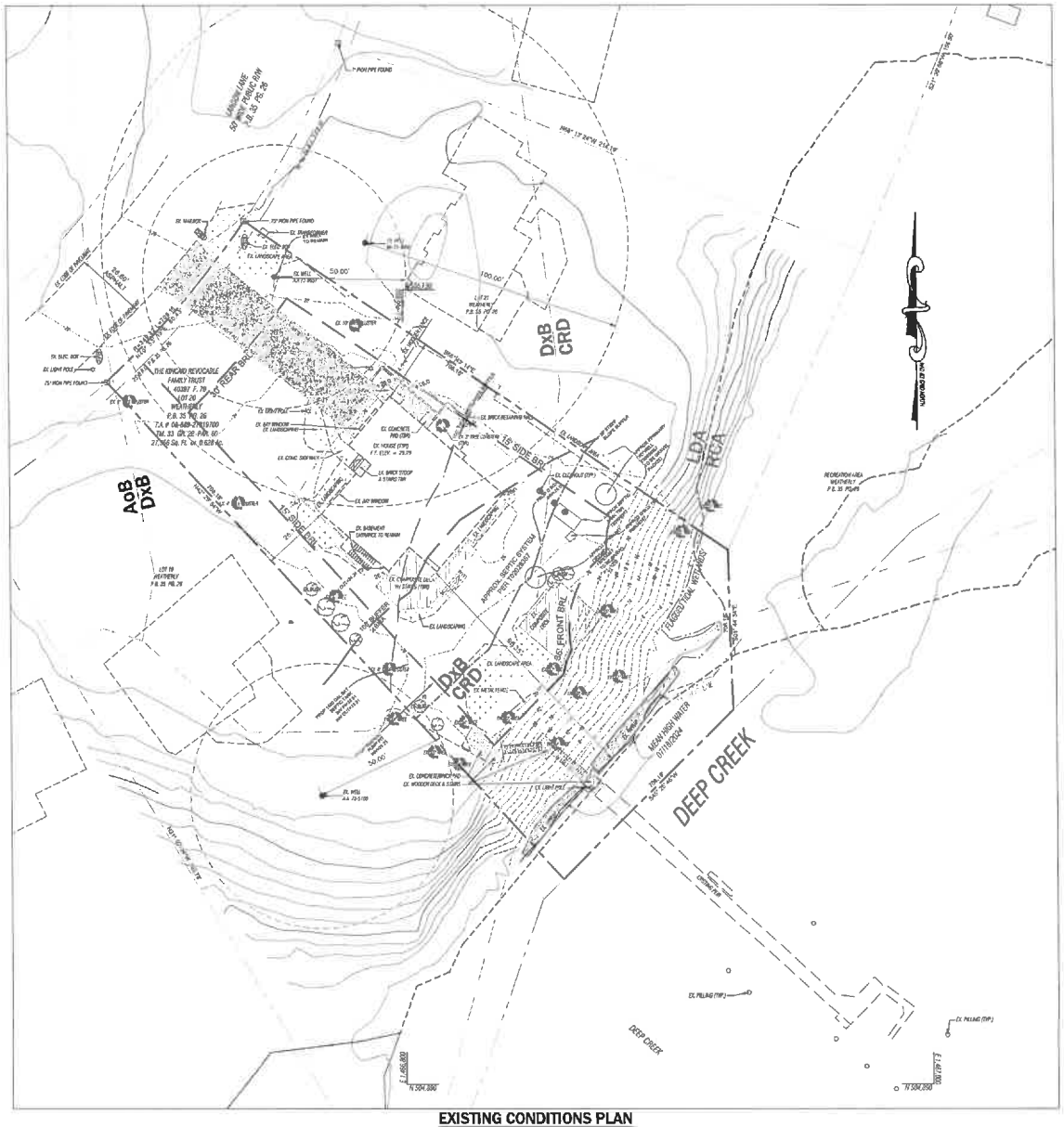
If you have any questions, or if you require additional information, please feel free to contact me at 410-266-3212.

Sincerely,
Messick and Associates

Mike Gillespie

Mike Gillespie

Project Manager



EXISTING CONDITIONS PLAN
SCALE: 1" = 20'

VICINITY MAP
SCALE: 1" = 2,000'
COPYRIGHT ADC THE MAP PEOPLE
PERMITTED USE NO. 21003176

GENERAL NOTES

1. OWNER:
THE KINCAID REVOCABLE FAMILY TRUST
805 JUNIPER COURT
BETHANY BEACH, DE 21912
PHONE:
EMAIL: tkim@lincolnenterpriseslic.com

ENGINEER:
MESSICK & ASSOCIATES
7 OLD SOLOMONS ISL. RD STE 202
ANNAPOLIS, MD 21401
C/O MIKE DILLSAPR

2. THE PROPERTY IS KNOWN AS:
TAX MAP 33, GRID 22, PARCEL 60, LOT 20 WEATHERLY, DEED REF: 40287 / 75
3. EXISTING ZONING OF THE SITE IS R1 (RESIDENTIAL DISTRICT)
4. THE SITE ADDRESS IS 1031 LANDON LANE ARNOLD, MD 21012
TAX ACCOUNT NO 03-889-27819179
5. EXISTING BOUNDARY AND FEATURES SHOWN HEREON WERE TAKEN FROM DEEDS AND PLATS OF RECORD, AND A FIELD SURVEY PERFORMED BY MESSICK & ASSOCIATES AUGUST 2024.
6. THE SITE IS LOCATED WITHIN THE LDA (LIMITED DEVELOPMENT AREA) AND RESOURCE CONSERVATION AREA (RCA) OF THE CHESAPEAKE BAY CRITICAL AREA.
7. THE SITE CURRENTLY UTILIZES A PRIVATE WELL AND SEPTIC. CONTRACTOR SHALL UTILIZE THE EXISTING SEPTIC CONNECTION IF POSSIBLE. IF NOT POSSIBLE, CONTRACTOR IS TO INSTALL A NEW SHC PER ANNE ARUNDEL COUNTY SPECIFICATIONS AND DETAILS
8. THIS PROPERTY DESCRIBED HEREON IS LOCATED IN THE FLOOD HAZARD ZONES "AE" (AREA WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN WITH BASE FLOOD ELEVATION OF 8 FEET) AND "X" (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS DELINEATED ON THE FIRM FLOOD INSURANCE MAP #24003C0178F DATED FEBRUARY 15, 2015 FOR ANNE ARUNDEL COUNTY AND DISTRIBUTED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY
9. WATER AND SEWER CATEGORIES

WATER - PLANNED SERVICE - (W-5 BROADNECK)
SEWER - FUTURE SERVICE - (W-5, BROADNECK)

EXISTING LOT COVERAGE SUMMARY

DESCRIPTION	AREA
EXISTING LOT AREA....	25,480 SQ. FT. OR 0.585 AC.
EXISTING WOODLANDS ON SITE....	6,186 SQ. FT. OR 0.146 AC.
ALLOWABLE COVERAGE....	5,445 SQ. FT. OR 0.125 AC.
EXISTING LOT COVERAGE...	4,983 SQ. FT. OR 0.114 AC
HOUSE	2,500 S F.
DRIVEWAY	1,582 S F
CONC WALKS & STOOP	207 S F
CONC PAD	13 S F.
DECK	496 S F.
RETAINING WALL	25 S F.

VARIANCE REQUEST

15-13-104. BUFFERS, EXPANDED BUFFERS, AND BUFFER MODIFICATION AREAS.
(a) BUFFER. THERE SHALL BE A MINIMUM 100-FOOT BUFFER LANDWARD FROM THE MEAN HIGH WATER LINE OF TIDAL WATERS, TRIBUTARY STREAMS, AND TIDAL WETLANDS. SPECIFIC DEVELOPMENT CRITERIA APPLY AS SET FORTH IN ARTICLE 17 OF THIS CODE AND COMAR.
17-8-301 (a) SCOPE. THIS SECTION DOES NOT APPLY TO A BUFFER MODIFICATION AREA.
(b) DEVELOPMENT ON PROPERTIES CONTAINING BUFFERS. DEVELOPMENT ON PROPERTIES CONTAINING BUFFERS SHALL MEET THE REQUIREMENTS OF COMAR, TITLE 27.

SOILS TABLE

SYMBOL	NAME	HYDROLOGIC SOIL TYPE	PERCENT COVERAGE	HYDRIC SOIL	HIGHLY ERODABLE SOIL
CRD	COLLINGTON AND ANNAPOLIS SOILS, 10 TO 25 PERCENT SLOPES	"B"	35%	NO	NO
DxB	DOWNER-PHALANX COMPLEX, 2 TO 5 PERCENT SLOPES	"A"	65%	NO	NO

SCALE: 1" = 20'

MESSICK & ASSOCIATES
CONSULTING ENGINEERS,
PLANNERS AND SURVEYORS
7 OLD SOLOMONS ISLAND ROAD, SUITE 202
ANNAPOLIS, MARYLAND 21401
(410) 266-3212 * FAX (410) 266-3502 email:
engr@messickandassociates.com
* MESSICK GROUP INC. DBA MESSICK AND ASSOCIATES

REVISION DESCRIPTION	BY	DATE

OWNER/DEVELOPER
TOM KINCAID
THE KINCAID FAMILY TRUST
805 JUNIPER COURT
BETHANY BEACH, DE 21912
410-981-6612

VARIANCE EXISTING CONDITIONS SITE PLAN
KINCAID PROPERTY
SITE PLAN
1031 LANDON ROAD
ARNOLD, MD 21012
WEATHERLY
TAX MAP: 33 GRID: 22 PARCEL: 60 P1 LOT:20 ZONING: R1/LDA
TAX ACCOUNT: 03-889-27819700
THIRD ELECTION DISTRICT ANNE ARUNDEL COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER 2025 SHEET 1 OF 2

PROPOSED CONDITIONS PLAN

SCALE: 1" = 20'

PROPOSED LOT COVERAGE SUMMARY

DESCRIPTION	AREA
EXISTING LOT AREA ...	25,480 SQ. FT. OR 0.585 AC.
EXISTING WOODLANDS ON SITE....	6,100 SQ. FT. OR 0.140 AC.
ALLOWABLE COVERAGE (15%)	5,445 SQ. FT. OR 0.125 AC
EXISTING LOT COVERAGE..	4,983 SQ. FT. OR 0.114 AC.
EXISTING LOT COVERAGE TO BE REMOVED	2,933 SQ. FT. OR 0.067 AC.
HOUSE	2,529 S.F.
CONC WALK & STOOP	267 S.F.
RETAINING WALL	23 S.F.
DRIVEWAY	114 S.F.
EX. LOT COVERAGE TO REMAIN ...	2,050 SQ. FT. OR 0.047 AC.
PROPOSED LOT COVERAGE.....	3,242 SQ. FT. OR 0.074 AC.
HOUSE	3,136 S.F.
CONC WALK	106 S.F.
POST CONSTRUCTION LOT COVERAGE......	5,292 SQ. FT. OR 0.121 AC

SCALE: 1" = 20'

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ANNAPOLIS, MARYLAND 21401
(410) 266-3212 * FAX (410) 266-3502 email:
engr@messickandassociates.com

REVISION DESCRIPTION	BY	DATE

OWNER/DEVELOPER
TOM KINCAID
PATTI KINCAID
605 JUNIPER COURT
BETHANY BEACH, DE 21012
tom@kincaidenterprisesllc.com
patti@kincaidenterprisesllc.com
410-951-8612

PROPSED CONDITIONS PLAN

KINCAD PROPERTY
SITE PLAN
1031 LANDON ROAD
ARNOLD, MD 21012
WEATHERLY

TAX MAP: 33 GRID: 22 PARCEL: 60 PT LOT20 ZONING: R1/LDA
TAX ACCOUNT: 03-889-27819700
THIRD ELECTION DISTRICT ANNE ARUNDEL COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER 2025 SHEE 2 OF 2

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

PROJECT NOTIFICATION APPLICATION

GENERAL PROJECT INFORMATION

Jurisdiction: Anne Arundel County Date: 9-23-25

Tax Map #	Parcel #	Block #	Lot #	Section
33	60	22	20	

Tax ID:

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): Kincaid Property

Project location/Address: 1031 London Lane

City: Arnold MD Zip: 21012

Local case number:

Applicant: Last name: Kincaid First name: Tom + Patti

Company:

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: AACo Zoning Administration Section First name:

Phone #: 410-222-7437 Response from Commission Required By: TBD

Fax #: Hearing date: TBD

Revised 12/14/2006

SPECIFIC PROJECT INFORMATION

Describe Proposed use of project site:

Tear Down ex Dwelling Construct a new dwelling

	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	0.579	25,241
RCA Area	0.005	239
Total Area	0.584	25,480

	Acres	Sq Ft
Total Disturbed Area	0.320	13,927

# of Lots Created 0

	Acres	Sq Ft		Acres	Sq Ft
Existing Forest/Woodland/Trees	0.146	6,368	Existing Lot Coverage	0.114	4,985
Created Forest/Woodland/Trees	TBD	TBD	New Lot Coverage	0.074	3,242
Removed Forest/Woodland/Trees	0.008	334	Removed Lot Coverage	0.067	2,953
			Total Lot Coverage	0.121	5,292

VARIANCE INFORMATION (Check all that apply)

	Acres	Sq Ft		Acres	Sq Ft
Buffer Disturbance	0.111	4834	Buffer Forest Clearing		
Non-Buffer Disturbance	0.186	8084	Mitigation	TBD	TBD

Variance Type		Structure	
Buffer Tidal Wetlands	☑	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

1031 LANDON LANE
ARNOLD, MD 21012

October 2025

Prepared for:
Tom & Patty Kincaid

Prepared by:
Messick and Associates
7 Old Solomons Island Road
Suite 202
Annapolis, MD 21401

INTRODUCTION

This site is a 25,480 square foot property that is located on Landon Lane in Arnold, MD. The property is Lot 20 of Weatherly. The proposal is to raze the existing dwelling and construct a new dwelling on the property. The site is served by septic and well. The property is predominantly inside the LDA (Limited Development Area) and a small portion of RCA (Resource Conservation Area) of the Chesapeake Bay Critical Area. The property is zoned residential, R-1 and has waterfront on Deep Creek.

EXISTING USE

The property consists of 25,480 square feet. The site is currently developed with a dwelling, driveway and deck near the water. The property is currently a residential lot developed with a house, driveway, and associated improvements. The property is not a corner lot and gains access from Landon Lane.

SURROUNDING LAND USE

The properties that abut the site are similar in size to the subject property, and are developed as single-family lots. The site is bounded by a developed property to the northeast and southwest, Deep Creek to the south east, with Landon Lane to the northwest.

PROPOSED WORK

The owners wish to construct a new dwelling, deck and septic system. This construction will require relief to the 100' tidal wetlands buffer. No zoning variances are required. The overall plan meets the underlying lot coverage requirements. Mitigation is proposed for the tree clearing.

SOILS

The U.S. Department of Agriculture Soil Survey, defines the property to have a soil type of DxB – Downer-Phalanx Complex 2-5% Slopes (A Soils) and CrD – Collington and Annapolis Soils 10-15% slopes (B Soils).

FLOODPLAIN

The property described hereon is located in the flood hazard zones "X" - (area of minimal flood hazard) zone AE elevation 6', as delineated on the firm flood insurance map #24003C087F dated February 18, 2015 for said county and distributed by the Federal Emergency Management facility. No work is proposed in the 100 year flood plain.

NON-TIDAL WETLANDS

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

TIDAL WETLANDS

There are Tidal Wetlands present on this site.

BODIES OF WATER

The site drains to Deep Creek.

STEEP SLOPES

Steep slopes and their buffer are noted on the southeast side of the property along Deep Creek. These features will not be disturbed.

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 via non rooftop disconnects and drywells.

FOREST COVER

The existing forest cover is limited to overstory trees and some woodlands on the slope to the community beach.

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*

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SITE CALCULATIONS

1. Total Site area.....25,480 sq. ft.
2. Site area in LDA Critical area.....25,241 sq. ft
3. Site area in RCA critical area.... 239 sq. ft.
3. Allowable Lot Coverage.....5,445 sq. ft
4. Existing lot coverage .....4,983 sq. ft.
5. Lot coverage to be removed.....2,933 sq. ft.
6. Proposed lot coverage .....3,242 sq. ft.
7. Total Lot Coverage after Construction...5,292 sq. ft.
8. Proposed Disturbed Area.....13,927 sq. ft.
9. Woodland Clearing.....334 sq. ft.

Real Property Data Search ( )

Search Result for ANNE ARUNDEL COUNTY

View Map **No Ground Rent Redemption on File** **No Ground Rent Registration on File**

Special Tax Recapture: None

Account Number: **District -** 03 **Subdivision -** 889 **Account Identifier -** 27819700

Owner Information

Owner Name: THE KINCAID REVOCABLE FAMILY TRUST **Use:** RESIDENTIAL
Principal Residence: NO

Mailing Address: 605 JUNIPER CT
BETHANY BEACH DE 21012-1707

Deed Reference: /40397/ 00070

Location & Structure Information

Premises Address: 1031 LANDON LN
ARNOLD 21012-0000
Waterfront

Legal Description: LT 20
1031 LANDON LN
WEATHERLY

Map:	Grid:	Parcel:	Neighborhood:	Subdivision:	Section:	Block:	Lot:	Assessment Year:	Plat No:
0033	0022	0060	3190050.02	889			20	2025	Plat Ref: 0035/ 0026

Town: None

Primary Structure Built	Above Grade Living Area	Finished Basement Area	Property Land Area	County Use
1979	3,537 SF		28,340 SF	

Stories	Basement	Type	Exterior	Quality	Full/Half Bath	Garage	Last Notice of Major Improvements
2	NO	STANDARD UNIT	SIDING/	5	3 full/ 1 half	1 Attached	

Value Information

	Base Value	Value	Phase-in Assessments	
		As of 01/01/2025	As of 07/01/2025	As of 07/01/2026
Land:	667,000	867,800		
Improvements	441,100	811,100		
Total:	1,108,100	1,678,900	1,298,367	1,488,633
Preferential Land:	0	0		

Transfer Information

Seller: YOUNG II CASSIN	**Date:** 05/01/2024	**Price:** $2,250,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /40397/ 00070	**Deed2:**
Seller: KORTH, EDWARD G	**Date:** 04/01/1998	**Price:** $509,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /08377/ 00134	**Deed2:**
Seller:	**Date:**	**Price:**
Type:	**Deed1:**	**Deed2:**

Exemption Information

Partial Exempt Assessments:	Class	07/01/2025	07/01/2026
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:**


1031 LANDON LN, 21...
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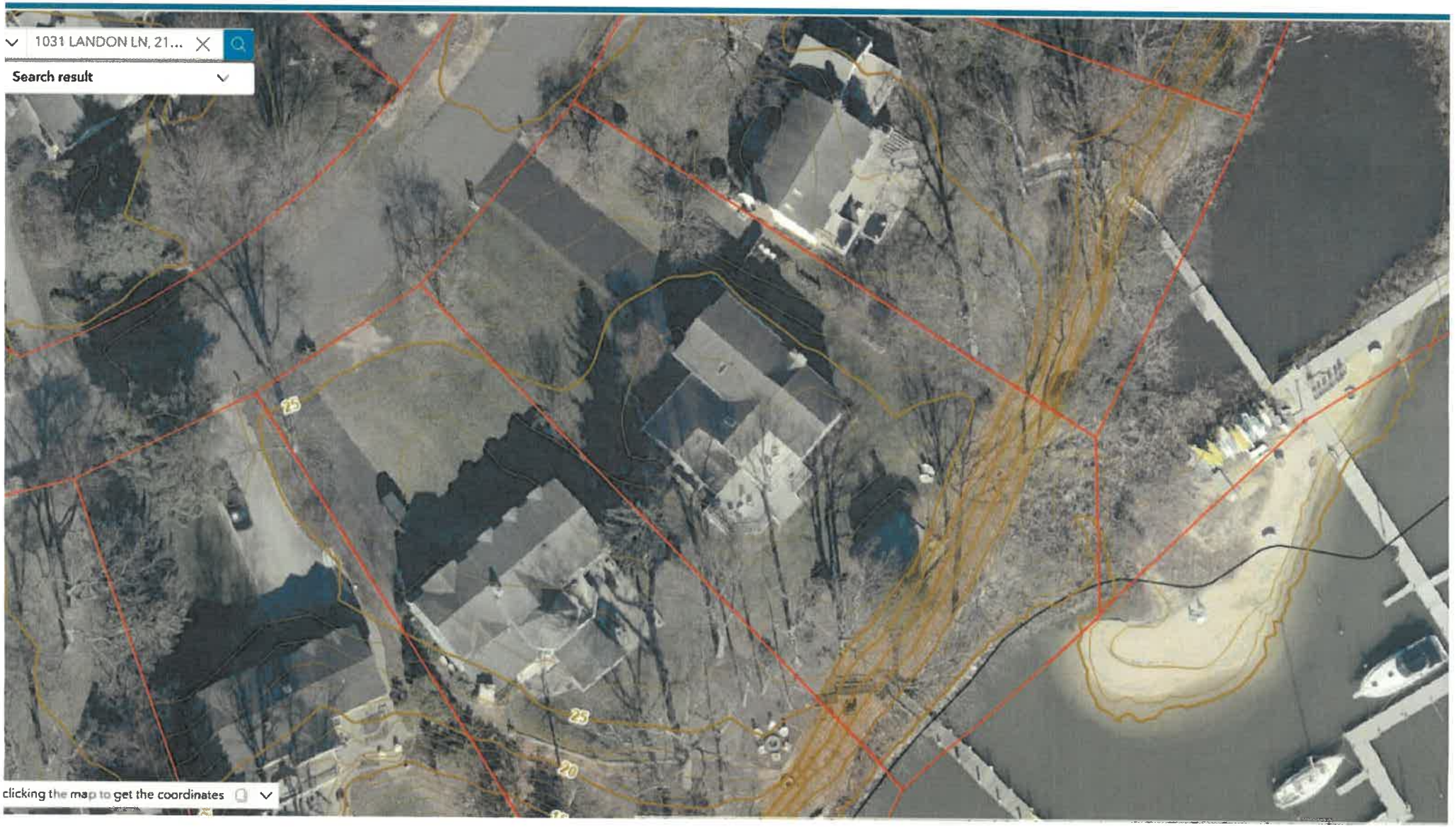
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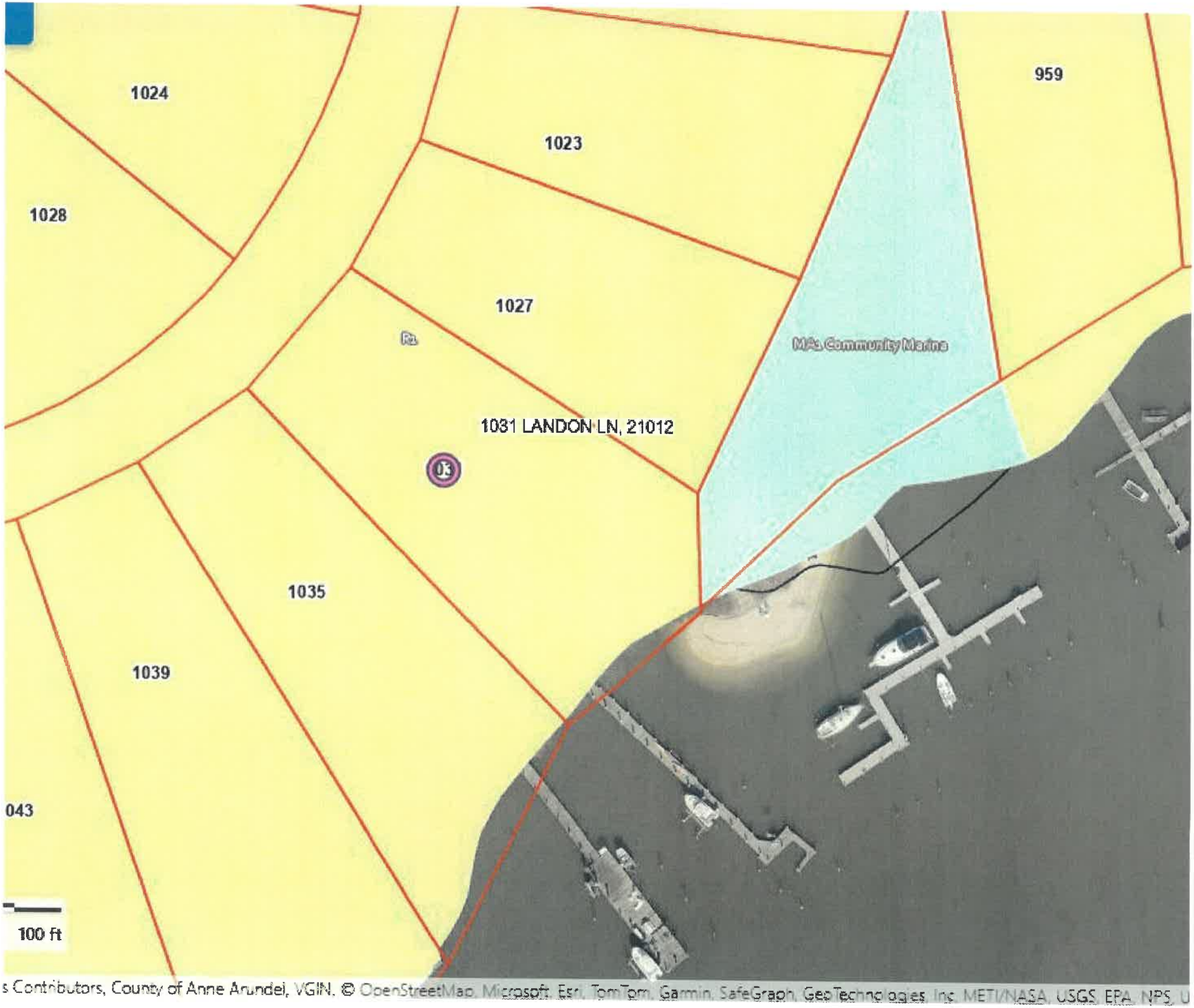
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MA's Community Marina
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s Contributors, County of Anne Arundel, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, U


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1031 LANDON LN, 21012
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Buffer
Modified Buffer
Maxar, Microsoft

National Flood Hazard Layer FIRMette

FEMA

76°27'41"W 39°3'22"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

76°27'3"W 39°2'55"N

Basemap Imagery Source: USGS National Map 2023

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, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- 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 D*

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
- 513 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

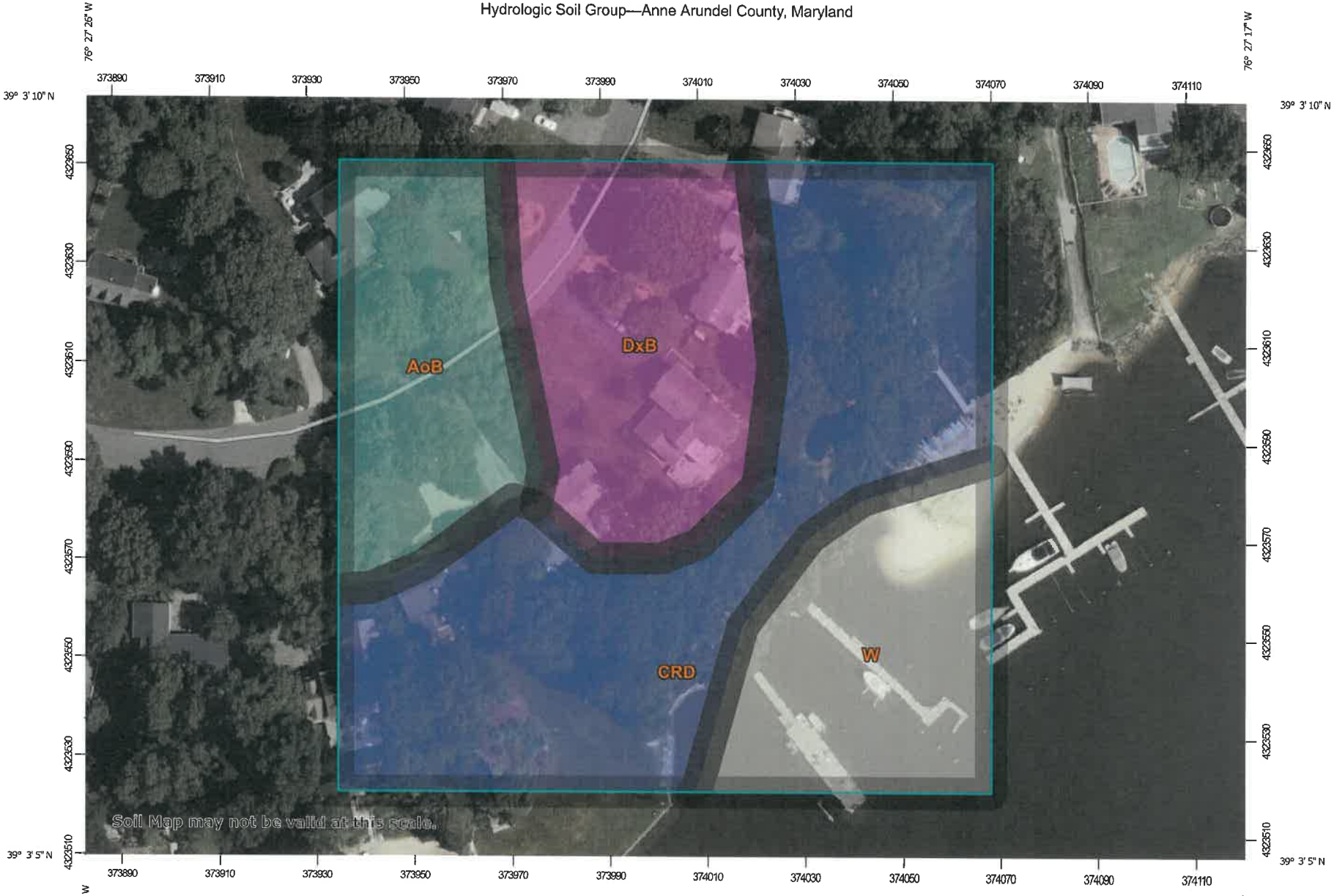
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 2/18/2025 at 7:15 PM 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.

Hydrologic Soil Group—Anne Arundel County, Maryland



Map Scale: 1:1,090 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

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 23, Sep 6, 2024

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
AoB	Annapolis loamy sand, 2 to 5 percent slopes	C	0.7	17.2%
CRD	Collington and Annapolis soils, 10 to 15 percent slopes	B	1.8	43.0%
DxB	Downer-Phalanx complex, 2 to 5 percent slopes	A	0.9	22.2%
W	Water		0.8	17.7%
Totals for Area of Interest			**4.3**	**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

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

PROJECT NOTIFICATION APPLICATION

GENERAL PROJECT INFORMATION

Jurisdiction: Anne Arundel County Date: 9-22-25

Tax Map #	Parcel #	Block #	Lot #	Section
33	60	22	20	

Tax ID:

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): Kincaid Property

Project location/Address: 1031 London Lane

City: Arnold MD Zip: 21012

Local case number:

Applicant: Last name: Kincaid First name: Tom + Patti

Company:

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: AACo Zoning Administration Section First name:

Phone #: 410-222-7437 Response from Commission Required By: TBD

Fax #: Hearing date: TBD

SPECIFIC PROJECT INFORMATION

Describe Proposed use of project site:

Tear Down ex Dwelling Construct a new dwelling

	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	0.579	25,241
RCA Area	0.005	239
Total Area	0.584	25,480

	Acres	Sq Ft
Total Disturbed Area	0.320	13,927

# of Lots Created 0

	Acres	Sq Ft		Acres	Sq Ft
Existing Forest/Woodland/Trees	0.146	6,368	Existing Lot Coverage	0.164	9,985
Created Forest/Woodland/Trees	TBD	TBD	New Lot Coverage	0.074	3,242
Removed Forest/Woodland/Trees	0.008	334	Removed Lot Coverage	0.067	2,953
			Total Lot Coverage	0.121	5,292

VARIANCE INFORMATION (Check all that apply)

	Acres	Sq Ft		Acres	Sq Ft
Buffer Disturbance	0.111	4834	Buffer Forest Clearing		
Non-Buffer Disturbance	0.186	8084	Mitigation	TBD	TBD

Variance Type		Structure	
Buffer Tidal Wetlands	☒	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	☐

STORMWATER MANAGEMENT REPORT

FOR

KINCAID PROPERTY

1031 Landon Lane
Arnold, MD 21012

Tax Map 33, Grid 22, Parcel 60, Lot 20
Tax ID: #03-889-27819700
Grading Permit #G02020

Provided by:
Messick and Associates
7 Old Solomons Island Road
Annapolis, MD 21401

Date: October 2025

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 1031 Landon Lane in Arnold, MD. It is located on Tax Map 33, Grid 22, Parcel 60, Lot 20 of Weatherly, and contains 0.585 acres ± (25,480 square feet). The site is currently zoned R1. The site is located in the LDA (Limited Development Area) with a very small portion of RCA (Resource Conservation Area) of the Chesapeake Bay Critical Area. The limit of the proposed area to be disturbed is approximately 0.32 acres ± 13,927 square feet.

Existing Conditions

The site is developed with a house, driveway and waterfront deck. The house be removed. Most of the entrance drive will remain. The site is accessed from Landon Lane. The site contains 4,983 square feet of existing lot coverage. Slopes on site within the limit of disturbance are primarily between 2% and 10%. The predominant soil type is DxB (Downer-Phalanx Land Complex), 2 to 5% slopes, hydrologic soil group "A", and CrD (Collington and Annapolis Soils) 10-15% slopes, hydrologic soil group "B".

Existing topography dictates a drainage pattern generally towards the southeast to the tidal waters of the Deep Creek. This drainage area enjoys a tidal outfall. A portion of the site also drains to the right of way of Landon Lane. These conveyances are stable and should not be affected by development on site.

Developed Conditions

A new house and pervious deck will be constructed. The site will be served by the existing water well and a new septic system with a BAT tank. Non Rooftop disconnects and dry well devices will be provided for ESD stormwater management.

The site has been designed to provide the least amount of environmental impacts. Due to ESD utilizing non rooftop disconnects and drywells, a runoff will be treated before it reaches the tidal waters of Deep Creek or the right of way of Landon Lane. Flow paths have been directed to the tidal waters of the Deep Creek as well as the right of way of Landon Lane. The runoff from the entirety of the new house roof surfaces will be collected by downspouts and will flow to the stormwater devices, four drywells, and the existing driveway, new sidewalk area will be treated by three non-rooftop disconnects as shown on the Stormwater Management plan (page 5 of 7).

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 three (3) non-rooftop disconnects (N-2) and four (4) dry wells (M-5) with the locations shown on the Stormwater Management Plan (page 5 of 7).

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 three (3) non-rooftop disconnects (N-2) and four (2) micro-bioretention devices (M-6).

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, four (4) non-rooftop disconnects (N-2) and two (4) dry wells (M-5).

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, four (4) non-rooftop disconnects (N-2) and two (4) dry wells (M-5).

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, four (4) non-rooftop disconnects (N-2) and two (4) dry wells (M-5).

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, four (4) non-rooftop disconnects (N-2) and two (4) dry wells (M-5).

Extreme Flood Volume Requirements (Q_f)

No downstream flooding or erosion should occur as a result of this development. The site enjoys a tidal outfall and outfalls to the right of way of Landon Lane

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 roughly the center of the property east towards the southeastern property line into the tidal waters of Deep Creek. The site also outfalls to the northwest to the right of way of Landon Lane. The post development flows have been adequately disconnected or treated by the proposed drywells to mimic woods in good condition. The conveyance is stable and should not be affected by this development due to the minimization of the impervious coverage, and due to stormwater management provided on site.

Stormwater Management Requirements

Project:	1031 Landon Lane		
Job No.:	24-1711		
County:	Anne Arundel		
By:	mg	*Date:*	09/22/25
Check:	XXX	*Date:*	

Determine Target ESD_V

Percent Imperviousness

I = Impervious Area / Site Area

I =	34.3 %

Where:

LOD Area = 13,927 ft^2

Imp = 4,777 ft^2

Dimensionless Runoff Coefficient

$R_v = 0.05 + 0.009(I)$

R_v =	0.359

Where:

I = 34.3 %

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	13,024	93.52%	1.8
B	903	6.48%	1.8
C	0	0.00%	1.6
D	0	0.00%	1.6

P_e =	1.80	in.(s)

Where:

I = 35.0 %

Target ESDv

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

ESD_v =	749.35	ft^3

Where:

A = 13,927 ft^2

ESDv Runoff Depth

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

ESD Runoff Depth, QE (in):	0.646

Where:

Pe= 1.80 in.

Water Quality Volume

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

WQv=	416.30	ft^3

Where:

Pe= 1.00 in.

Required Recharge Volume

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

Rev= 0.0039 ac-ft or 171.34 cf

S = HSG % of site = 0.412

HSG	Recharge Factor
A	0.42
B	0.29
C	0.14
D	0.08

Permit Number	G02020
	DA1
Project Name	Kincaid Property
Structure Address	1031 Landon Ln 407 Paradise
Structure City	Arnold
State	MD
Structure Zip	21012
Total Drainage Area (Ac.)	0.24
RCN - Pre Construction	57
RCN - Post Construction	58
RCN - Woods	30
Total Number of BMP's	4
PE Required	1.80
PE Addressed	1.81
MD 8-Digit HUC	2131001
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)	MAINTENANCE RESPONSIBILITY	COMMENTS
	DW-1	E	MIDW	NEWD - New Development	ONSITE		0.00	0.00		505,112	1,466,744	0.000	Owner	None
	DW-2	E	MIDW	NEWD - New Development	ONSITE		0.02	0.02		505,095	1,466,760	0.002	Owner	None
	DW-3	E	MIDW	NEWD - New Development	ONSITE		0.01	0.01		505,122	1,466,847	0.001	Owner	None
	DW-4	E	MIDW	NEWD - New Development	ONSITE		0.00	0.00		505,103	1,466,752	0.000	Owner	None
	NRTD-1	E	NDNR	NEWD - New Development	ONSITE		0.02	0.02		505,130	1,466,760	0.002	Owner	None
	NRTD-2	E	NDNR	NEWD - New Development	ONSITE		0.12	0.12		505,172	1,466,785	0.009	Owner	None
	NRTD-3	E	NDNR	NEWD - New Development	ONSITE		0.03	0.03		505,201	1,466,746	0.004	Owner	None

STORMWATER MANAGEMENT STRUCTURE SUMMARY TABLE

Project I 1031 Landon Lane						Project No.:		Subdiv. No.:	
Proj # 24-1654		Design By: mg		Date:	9/22/2025	Tax Map/Block/Parcel:			
Overall DA	Practice	Structure No.	Type	Location		Drainage Area Treated (acres)	Runoff from 1-Yr 24-Hr. Storm	Water Quality Volume (Cu. Ft.)	Actual Device Volume (Cu. Ft.)
	Dry Well 1	DW-1	M-5	505,112	1,466,744	0.023	212.00	212.00	212.90
	Dry Well 2	DW-2	M-5	505,095	1,466,760	0.021	192.00	192.00	193.23
	Dry Well 3	DW-3	M-5	505,122	1,466,847	0.023	192.00	192.00	213.75
	Dry Well 4	DW-4	M-5	505,103	1,466,752	0.003	32.40	25.01	25.01
	Non Rooftop Disconnect 1	NRTD-1	N-2	505,130	1,466,760	0.003	9.82	9.82	26.51
	Non Rooftop Disconnect 2	NRTD-2	N-2	505,172	1,466,785	0.023	79.17	79.17	213.75
	Non Rooftop Disconnect 1	NRTD-3	N-2	505,201	1,466,746	0.013	44.33	44.33	119.70
					Total	0.067	761.72	**754.33**	1,004.84
					ESD_v Required			**749.35**	

Total Site P_e Provided:

P_e = 1.81 in.

Where:

ESD_v = 754.33 ft^3

R_v = 0.36

A (LOD Area) = 13,927 ft^2

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

Environmental Site Design

N-2 Disconnection of Non-Rooftop Runoff

Drainage Area:	Sidewalk DA-5	Device Name:	NRTD1

Concept Design:

Contributing Drainage Area=	124	ft^2	0.003	ac.
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	124	ft^2	0.003	ac.
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Pervious Length=	75	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	75	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

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

ESDv=	9.82	ft^3

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Impervious Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:01
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=	26.51	ft^3

Environmental Site Design

N-2	Disconnection of Non-Rooftop Runoff		
Drainage Area:	Ex Driveway DA 6	Device Name:	NRTD2

Concept Design:

Contributing Drainage Area=	1000	ft^2	0.023	ac.
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	1000	ft^2	0.023	ac.
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Pervious Length=	75	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	75	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

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

ESDv=	79.17	ft^3

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Impervious Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:01
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=	213.75	ft^3

Environmental Site Design

N-2	Disconnection of Non-Rooftop Runoff		
Drainage Area:	Ex Driveway DA 6	Device Name:	NRTD3

Concept Design:

Contributing Drainage Area=	560	ft^2	0.013	ac.
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	560	ft^2	0.013	ac.
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Pervious Length=	75	ft.	Max. Contributing Pervious length = 150-ft
Contributing Imp. Length =	75	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

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

ESDv=	44.33	ft^3

Table 5.7 ESD Sizing Factors for Non-Rooftop Disconnection

Ratio of Disconnection Length to Contributing Length					
Impervious Ratio	0.2:1	0.4:1	0.6:1	0.8:1	1:01
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=	119.70	ft^3

Environmental Site Design

M-5		Dry Well	
Drainage Area:	1	Device Name:	DW-1

Concept Design:

Contributing Drainage Area=	996	ft^2	0.02	acres
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	996	ft^2	0.02	acres
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Dry Well Dimensions:

Width =	5.3	ft.	Max. Depth A soils = 12-ft.
Length=	10	ft.	Max. Depth B soils = 5-ft.
Depth=	10	ft.	
Stone Storage Volume=	212	cf	Where n = 0.4
Number of Dry wells =	1		
Total Storage =	212	cf	

ESDv=	212.00	ft^3

Maximum ESDv Allowed:

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

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

Max. ESDv=	212.90	ft^3

P_e Provided:

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

P_e =	2.69	in.

Environmental Site Design

M-5		Dry Well	
Drainage Area:	2	Device Name:	DW-2

Concept Design:

Contributing Drainage Area=	904	ft^2	0.02	acres
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	904	ft^2	0.02	acres
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Dry Well Dimensions:

Width =	6	ft.	Max. Depth A soils = 12-ft.	
Length=	8	ft.	Max. Depth B soils = 5-ft.	
Depth=	10	ft.		
Stone Storage Volume=	192	cf	Where n =	0.4
Number of Dry wells =	1			
Total Storage =	192	cf		

ESDv=	192.00	ft^3

Maximum ESDv Allowed:

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

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

Max. ESDv=	193.23	ft^3

P_e Provided:

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

P_e =	2.68	in.

Environmental Site Design

M-5		Dry Well	
Drainage Area:	3	Device Name:	DW-3

Concept Design:

Contributing Drainage Area=	1000	ft^2	0.02	acres
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	1000	ft^2	0.02	acres
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Dry Well Dimensions:

Width =	5	ft.	Max. Depth A soils = 12-ft.	
Length=	8	ft.	Max. Depth B soils = 5-ft.	
Depth=	12	ft.		
Stone Storage Volume=	192	cf	Where n =	0.4
Number of Dry wells =	1			
Total Storage =	192	cf		

ESDv=	192.00	ft^3

Maximum ESDv Allowed:

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

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

Max. ESDv=	213.75	ft^3

P_e Provided:

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

P_e =	2.43	in.

Environmental Site Design

M-5		Dry Well	
Drainage Area:	4	Device Name:	DW-4

Concept Design:

Contributing Drainage Area=	117	ft^2	0.00	acres
Maximum Drainage Area =	1000	ft^2		
Impervious Coverage =	117	ft^2	0.00	acres
Percent Impervious (I)=	100	%		
$R_v = 0.05 + 0.009(I)$ =	0.95			

ESDv Provided:

Dry Well Dimensions:

Width =	5	ft.	Max. Depth A soils = 12-ft.
Length=	3.6	ft.	Max. Depth B soils = 5-ft.
Depth=	4.5	ft.	
Stone Storage Volume=	32.4	cf	Where n = 0.4
Number of Dry wells =	1		
Total Storage =	32.4	cf	

ESDv=	32.40	ft^3

Maximum ESDv Allowed:

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

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

Max. ESDv=	25.01	ft^3

P_e Provided:

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

P_e =	3.50	in.

EMG

1031 Landon Lane
Existing Conditions
Anne Arundel County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Ex DA1	Open space; grass cover > 75%	(good)	A	.156	39
	Paved parking lots, roofs, driveways		A	.075	98
	Woods	(good)	A	.011	30
	Total Area / Weighted Curve Number			.24	57

EMG

1031 Landon Lane
Existing Conditions
Anne Arundel County, Maryland

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Ex DA1							
SHEET	50	0.0500	0.150				0.064
SHALLOW	48	0.0630	0.050				0.003
					Time of Concentration		0.1

EMG

1031 Landon Lane
Existing Conditions
Anne Arundel County, Maryland

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)
SUBAREAS		
Ex DA1	0.09	0.41
REACHES		
OUTLET	0.09	0.41

EMG

1031 Landon Lane
Existing Conditions DA2
Anne Arundel County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Ex DA2	Open space; grass cover > 75%	(good)	A	.095	39
	Open space; grass cover > 75%	(good)	B	.077	61
	Paved parking lots, roofs, driveways		A	.029	98
	Paved parking lots, roofs, driveways		B	.012	98
	Woods	(good)	A	.014	30
	Woods	(good)	B	.116	55
	Total Area / Weighted Curve Number			.34	56

EMG

1031 Landon Lane
Existing Conditions DA2
Anne Arundel County, Maryland

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Ex DA2							
SHEET	56	0.0390	0.150				0.077
SHALLOW	92	0.2600	0.050				0.003
					Time of Concentration		0.1

EMG

1031 Landon Lane
Existing Conditions DA2
Anne Arundel County, Maryland

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)
SUBAREAS		
Ex DA2	0.11	0.53
REACHES		
OUTLET	0.11	0.53

EMG

1031 Landon Lane
Proposed Conditions DA1
Anne Arundel County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
DA-1	Open space; grass cover > 75%	(good)	A	.16	39
	Paved parking lots, roofs, driveways		A	.08	98
	Woods	(good)	A	.004	30
	Total Area / Weighted Curve Number			.24	58

EMG

1031 Landon Lane
Proposed Conditions DA1
Anne Arundel County, Maryland

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
DA-1							
SHEET	44	0.0660	0.150				0.052
SHALLOW	52	0.0440	0.050				0.004
					Time of Concentration		0.1

EMG

1031 Landon Lane
Proposed Conditions DA1
Anne Arundel County, Maryland

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)
SUBAREAS		
DA-1	0.10	0.44
REACHES		
OUTLET	0.10	0.44

24

EMG

1031 Landon Lane
Proposed Conditions DA2
Anne Arundel County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Prop DA2	Open space; grass cover > 75%	(good)	A	.095	39
	Open space; grass cover > 75%	(good)	B	.077	61
	Paved parking lots, roofs, driveways		A	.029	98
	Paved parking lots, roofs, driveways		B	.012	98
	Woods	(good)	A	.014	30
	Woods	(good)	B	.116	55
	Total Area / Weighted Curve Number			.34	56

EMG

1031 Landon Lane
Proposed Conditions DA2
Anne Arundel County, Maryland

Sub-Area Time of Concentration Details

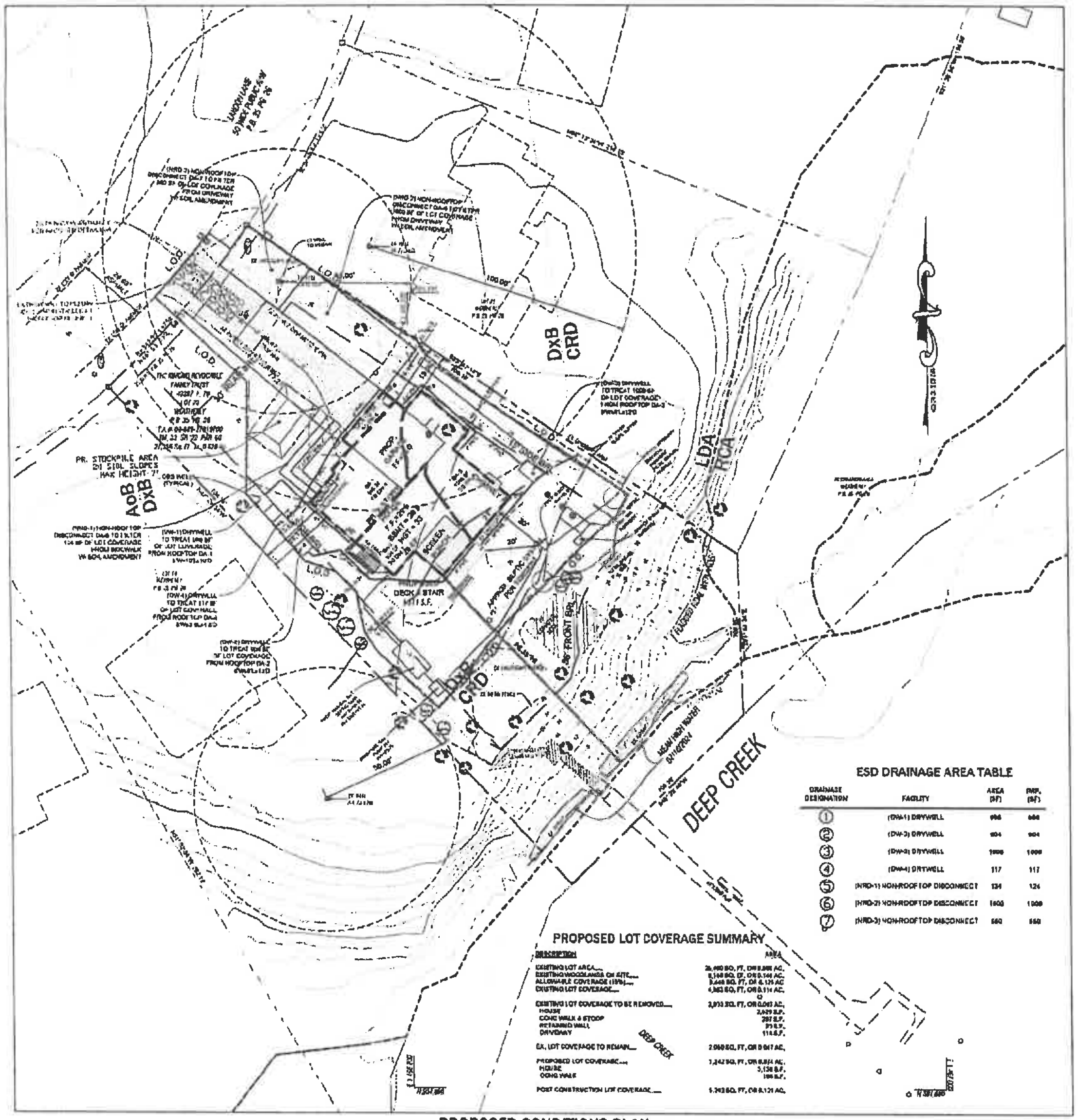
Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Prop DA2							
SHEET	56	0.0390	0.150				0.077
SHALLOW	92	0.2600	0.050				0.003
						Time of Concentration	0.1

EMG

1031 Landon Lane
Proposed Conditions DA2
Anne Arundel County, Maryland

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)
SUBAREAS		
Prop DA2	0.11	0.53
REACHES		
OUTLET	0.11	0.53



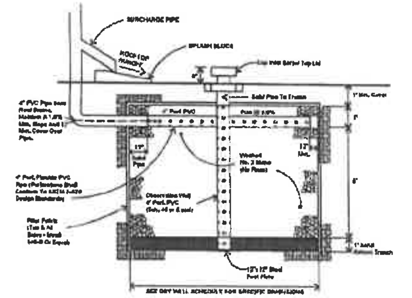
PROPOSED LOT COVERAGE SUMMARY

DESCRIPTION	AREA
EXISTING LOT AREA....	26,460 SQ. FT, OR 0.6[illegible] AC.
EXISTING WOODLANDS ON SITE....	6,160 SQ. FT, OR 0.144 AC.
ALLOWABLE COVERAGE (15%)....	5,448 SQ. FT, OR 0.125 AC.
EXISTING LOT COVERAGE....	4,963 SQ. FT, OR 0.114 AC.
EXISTING LOT COVERAGE TO BE REMOVED....	2,903 SQ. FT, OR 0.067 AC.
HOUSE	2,629 S.F.
CONC WALK & STOOP	267 S.F.
RETAINING WALL	31 S.F.
DRIVEWAY	114 S.F.
EX. LOT COVERAGE TO REMAIN....	2,060 SQ. FT, OR 0.047 AC.
PROPOSED LOT COVERAGE....	3,242 SQ. FT, OR 0.074 AC.
HOUSE	3,136 S.F.
CONC WALK	106 S.F.
POST CONSTRUCTION LOT COVERAGE....	5,302 SQ. FT, OR 0.121 AC.

ESD DRAINAGE AREA TABLE

DRAINAGE DESIGNATION	FACILITY	AREA (SF)	IMP. (SF)
1	(DW-1) DRYWELL	906	906
2	(DW-2) DRYWELL	904	904
3	(DW-3) DRYWELL	1000	1000
4	(DW-4) DRYWELL	117	117
5	(NRD-1) NON-ROOFTOP DISCONNECT	124	124
6	(NRD-2) NON-ROOFTOP DISCONNECT	1600	1600
7	(NRD-3) NON-ROOFTOP DISCONNECT	560	560

PROPOSED CONDITIONS PLAN
SCALE 1" = 20'



TYPICAL DRY WELL DETAIL
NOT TO SCALE

DRY WELL SCHEDULE

NUMBER	DRAINAGE AREA	SQUARE FEET SERVED	DIMENSIONS (LxWxD)
1	ROOFTOP LEFT FRONT	906 SQ. FT.	5.2' x 10' x 10'
2	ROOFTOP LEFT REAR	904 SQ. FT.	8' x 8' x 10'
3	HOUSE ROOF RIGHT	1000 SQ. FT.	9' x 9' x 12'
4	GARAGE ROOF FRONT	117 SQ. FT.	3.5' x 3' x 4.5'

DRY WELL CONSTRUCTION SPECIFICATIONS

A DRY WELL SHALL NOT BE CONSTRUCTED OR PLACED IN SERVICE UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED AND APPROVED BY THE RESPONSIBLE INSPECTOR.

DRY WELL PREPARATION

EXCAVATE THE DRY WELL TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE EXCAVATED SIDES TO ENHANCE WALL STABILITY. LARGE TREE ROOTS SHALL BE TRIMMED FLUSH WITH THE SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE DRY WELL SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.

FABRIC LAYDOWN

THE FILTER FABRIC ROLL SHALL BE CUT TO THE PROPER WIDTH PRIOR TO INSTALLATION. THE CUT WIDTH MUST INCLUDE SUFFICIENT MATERIAL TO CONFORM TO WELL PERIMETER IRREGULARITIES AND FOR A 6-INCH MINIMUM TOP OVERLAP. PLACE THE FABRIC ROLL OVER THE WELL AND UNROLL A SUFFICIENT LENGTH TO ALLOW PLACEMENT OF THE FABRIC DOWN INTO THE WELL. STONES OR OTHER ANCHORING OBJECTS SHOULD BE PLACED ON THE FABRIC AT THE EDGE OF THE WELL TO KEEP THE LINED WELL OPEN DURING WINDY PERIODS. WHEN OVERLAPS ARE REQUIRED BETWEEN ROLLS, THE UPSTREAM ROLL SHALL LAP A MINIMUM OF 2 FEET OVER THE DOWNSTREAM ROLL IN ORDER TO PROVIDE A SHINGLED EFFECT. THE OVERLAP ENSURES FABRIC CONTINUITY OR THE FABRIC CONFORMS TO THE EXCAVATION SURFACE DURING AGGREGATE PLACEMENT AND COMPACTION.

AGGREGATE PLACEMENT AND COMPACTION

DRAINAGE AGGREGATE SHALL BE PLACED IN LIFTS AND COMPACTED USING PLATE COMPACTORS. AS A RULE OF THUMB, A MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES IS RECOMMENDED. THE COMPACTION PROCESS ENSURES FABRIC CONFORMITY TO THE EXCAVATION SIDES, THERE BY REDUCING THE POTENTIAL FOR SOIL PIPING AND FABRIC CLOGGING.

OVERLAPPING AND COVERING

FOLLOWING AGGREGATE PLACEMENT, THE FABRIC PREVIOUSLY WEIGHTED BY STONES SHOULD BE FOLDED OVER THE AGGREGATE TO FORM A 6" MINIMUM LONGITUDINAL LAP. THE DESIRED FILL SOIL SHOULD BE PLACED OVER THE LAP AT SUFFICIENT INTERVALS TO MAINTAIN THE LAP DURING SUBSEQUENT BACKFILLING.

CONTAMINATION

CARE SHALL BE EXERCISED TO PREVENT NATURAL FILL SOILS FROM INTERMIXING WITH THE DRAINAGE AGGREGATE. ALL CONTAMINATED AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED AGGREGATE.

VOIDS BEHIND FABRIC

VOIDS CAN BE CREATED BETWEEN THE FABRIC AND EXCAVATION SIDES AND SHOULD BE AVOIDED. REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOIDS. NATURAL SOILS SHOULD BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES. SOIL PIPING, FABRIC CLOGGING AND POSSIBLE SURFACE SUBSIDENCE WILL BE AVOIDED BY THIS REMEDIAL PROCESS.

UNSTABLE EXCAVATION SIDES

VERTICALLY EXCAVATED TRENCH WALLS MAY BE DIFFICULT TO MAINTAIN IN AREAS WHERE THE SOIL MOISTURE IS HIGH OR WHERE SOFT COHESIVE OR COHESIONLESS SOILS PREDOMINATE. THESE CONDITIONS MAY REQUIRE LAYING BACK OF THE SIDE SLOPES TO MAINTAIN STABILITY, TRAPEZOIDAL RATHER THAN RECTANGULAR CROSS SECTIONS MAY RESULT.

NON-ROOFTOP DISCONNECTION - CONSTRUCTION CRITERIA & MAINTENANCE NOTES

CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED NON-ROOFTOP DISCONNECTIONS:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN AREAS DESIGNATED FOR NON-ROOFTOP DISCONNECTIONS.
- SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOILS TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

MAINTENANCE CRITERIA:

MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT OF REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OF SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

NOTE: SEE DETAIL SHEET 6 FOR ADDITIONAL ESD CHARTS AND DATA

MESSICK & ASSOCIATES
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REVISION DESCRIPTION | BY | DATE

PROPSED CONDITIONS PLAN

KINCAD PROPERTY
SITE PLAN
1031 LANDON ROAD
ARNOLD, MD 21012
WEATHERLY
TAX MAP: 32 GRID: 22 PARCEL: 60 PT LOTS 8 ZONING: R1/LDA
TAX ACCOUNT: 03-695-27519700
THIRD ELECTION DISTRICT ANNE ARUNDEL COUNTY, MARYLAND
SCALE: AS SHOWN DATE: OCTOBER 2025 SHEET 5 OF 7

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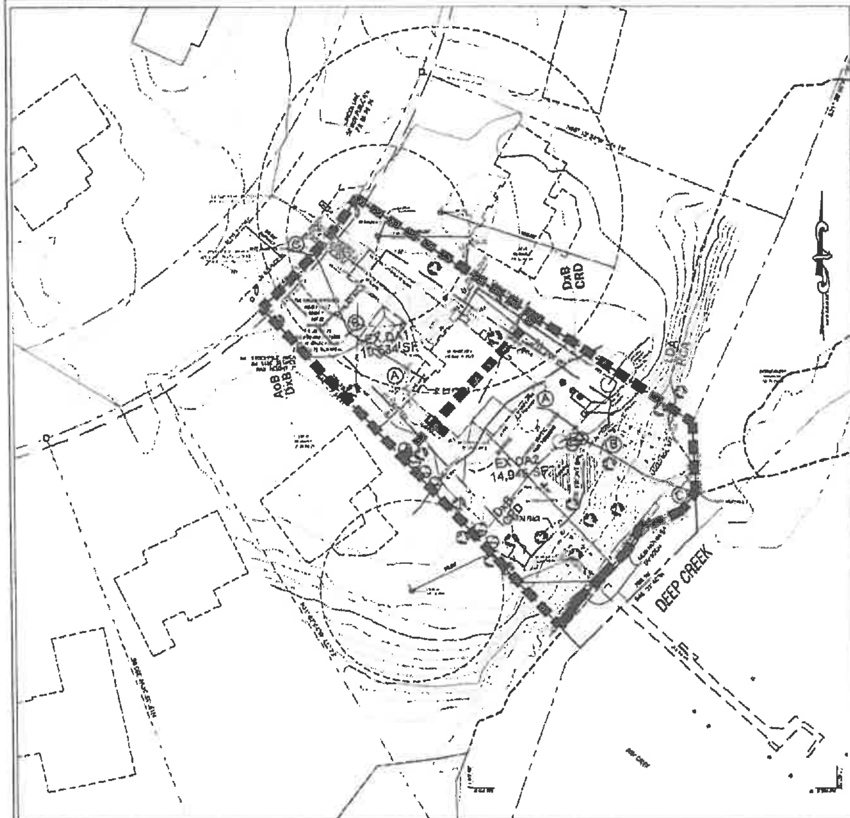

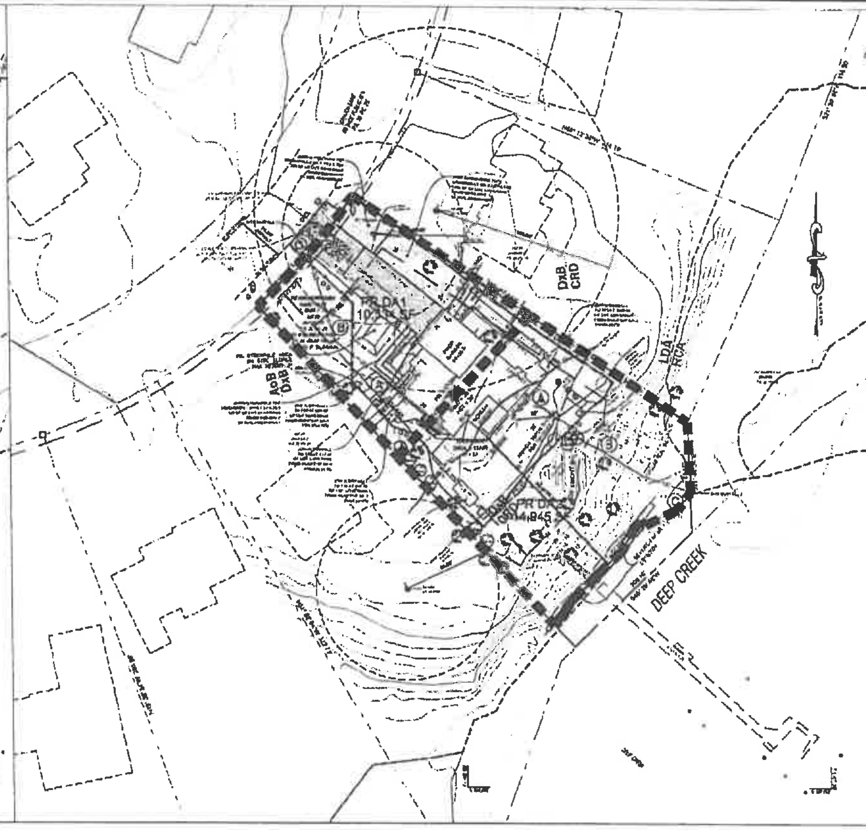

EXISTING CONDITIONS DRAINAGE AREA MAP

SCALE:1" = 30'

EXISTING CONDITIONS SITE DRAINAGE DA#1

EXISTING DRAINAGE AREA = 0.24 Ac.
RUNOFF CURVE NUMBER = 57
TIME OF CONCENTRATION = 0.01 Hrs.
SHEET FLOW A - B 50' @ 5.0%, n = 0.15, 0.064 Hrs.
SHALLOW CONC. B - C 41' @ 6.3%, UNPAVED, 0.003 Hrs.

Q_{10} = 0.41 cfs

PROPOSED CONDITIONS SITE DRAINAGE DA#2

EXISTING DRAINAGE AREA = 0.34 Ac.
RUNOFF CURVE NUMBER = 56
TIME OF CONCENTRATION = 0.01 Hrs.
SHEET FLOW A - B 50' @ 3.0%, n = 0.15, 0.077 Hrs.
SHALLOW CONC. B - C 92' @ 20.0%, UNPAVED, 0.003 Hrs.

Q_{10} = 0.53 cfs

DRAINAGE AREA LEGEND

PROPERTY LINE / RIGHT-OF-WAY
DRAINAGE AREA BOUNDARY LINE
DRAINAGE AREA DESIGNATION

PROPOSED CONDITIONS DRAINAGE AREA MAP

SCALE:1" = 30'

PROPOSED CONDITIONS SITE DRAINAGE DA#1

PROPOSED DRAINAGE AREA = 0.24 Ac.
RUNOFF CURVE NUMBER = 56
TIME OF CONCENTRATION = 0.01 Hrs.
SHEET FLOW A - B 44' @ 5.0%, n = 0.15, 0.052 Hrs.
SHALLOW CONC. B - C 53' @ 4.4%, UNPAVED, 0.004 Hrs.

Q_{10} = 0.44 cfs

PROPOSED CONDITIONS SITE DRAINAGE DA#2

EXISTING DRAINAGE AREA = 0.34 Ac.
RUNOFF CURVE NUMBER = 56
TIME OF CONCENTRATION = 0.01 Hrs.
SHEET FLOW A - B 50' @ 3.0%, n = 0.15, 0.077 Hrs.
SHALLOW CONC. B - C 92' @ 20.0%, UNPAVED, 0.003 Hrs.

Q_{10} = 0.53 cfs

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REVISION DESCRIPTION	BY	DATE

PROPOSED CONDITIONS PLAN
KINCAID PROPERTY
SITE PLAN
1001 LANDON ROAD
ARNOLD, MD 21012
WEATHERLY
THIRD ELECTION DISTRICT ANNE ARUNDEL COUNTY, MARYLAND
SCALE AS SHOWN DATE: OCTOBER 2025 SHEET 4 OF 7

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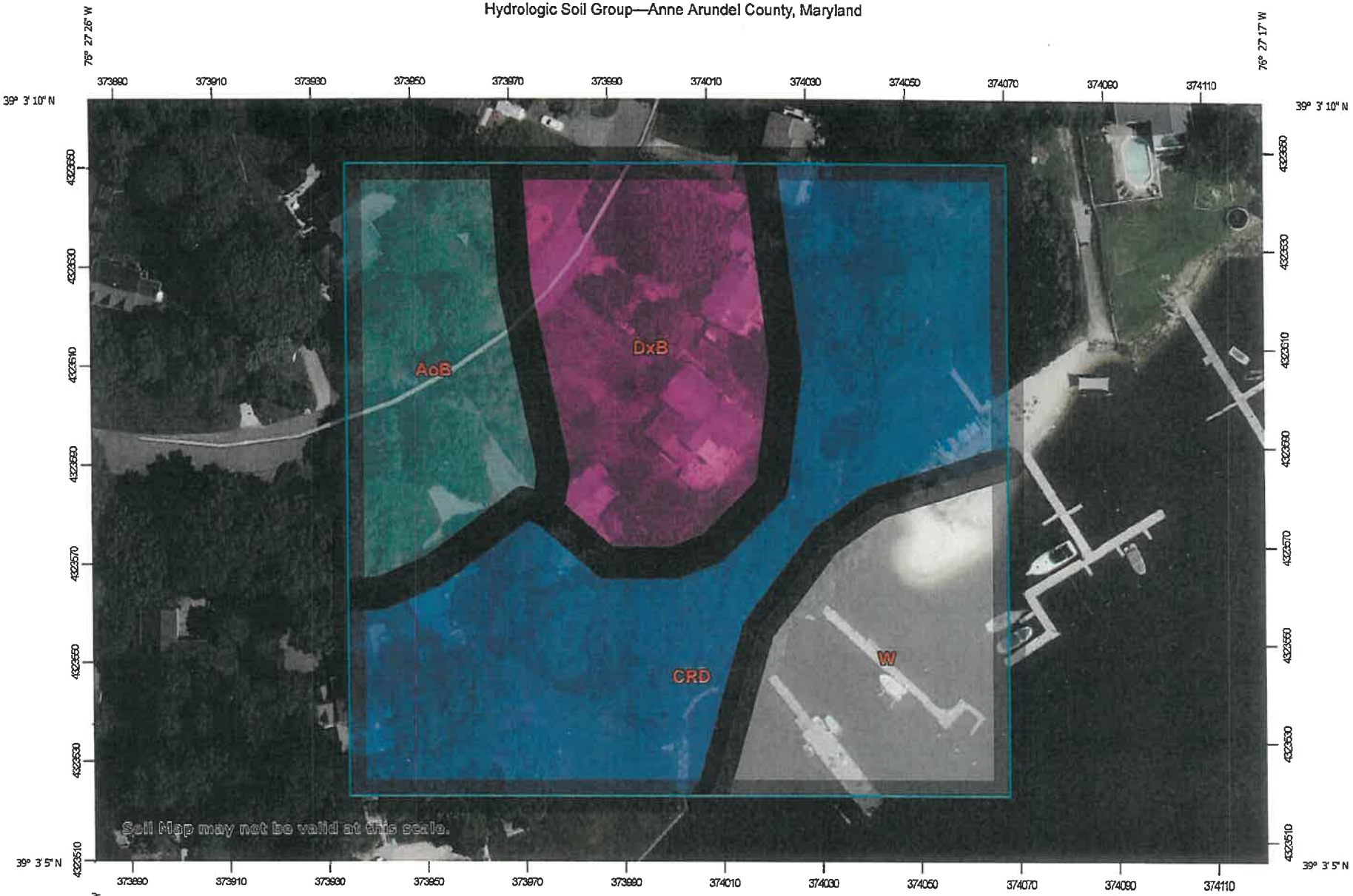

Map Scale: 1:1,090 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

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

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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 23, Sep 6, 2024

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.

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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AoB	Annapolis loamy sand, 2 to 5 percent slopes	C	0.7	17.2%
CRD	Collington and Annapolis soils, 10 to 15 percent slopes	B	1.8	43.0%
DxB	Downer-Phalanx complex, 2 to 5 percent slopes	A	0.9	22.2%
W	Water		0.8	17.7%
Totals for Area of Interest			4.3	**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.

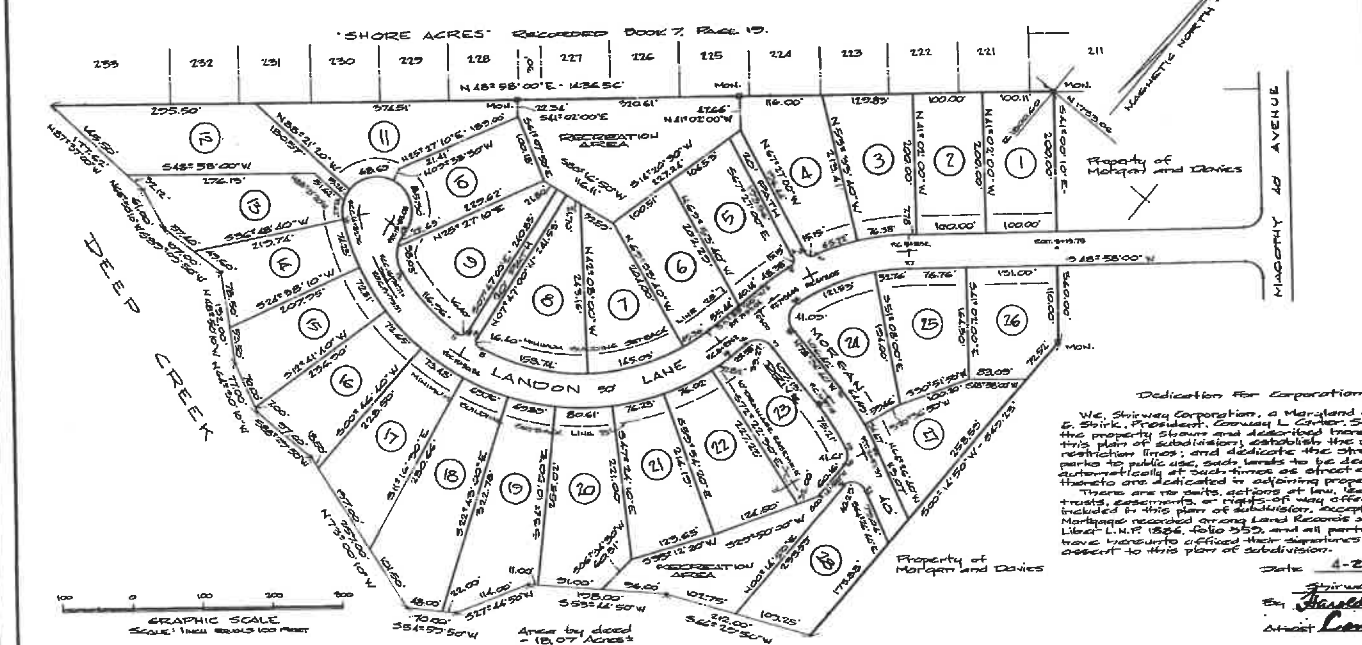
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

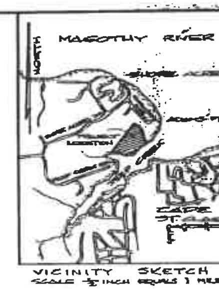
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher





CURVE DATA

LOT	Δ	RADIUS	LENGTH	TANGENT	CHORD
3	12°31'40"	[illegible]	76.38'	38.34'	S 42°42'10" W - 76.23'
4	10°41'50"	349.32'	65.22'	32.70'	S 31°05'25" W - 65.12'
4	[illegible]	10.00'	[illegible]	[illegible]	[illegible] - 13.74'
5	[illegible]	10.00'	[illegible]	9.46'	S 24°02'[illegible] E - 13.74'
5	07°52'10"	[illegible]	48.38'	[illegible]	[illegible]
6	08°41'00"	299.32'	45.36'	22.72'	S 15°45'50" W - 45.32'
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] - 45.61'
8	30°25'10"	299.32'	158.74'	81.28'	S 63°05'35" W - [illegible]
8	[illegible]	10.00'	[illegible]	10.72'	N 54°48'58" W - 14.63'
9	[illegible]	10.00'	16.40'	[illegible]	S 35°11'[illegible] W - 14.63'
9	22°13'20"	299.32'	116.36'	59.22'	N 84°57'50" W - 116.22'
9	[illegible]	50.00'	[illegible]	[illegible]	[illegible] - 57.12'
10	[illegible]	[illegible]	22.65'	[illegible]	[illegible] 15" W - 22.46'
10	[illegible]	[illegible]	85.30'	57.27'	[illegible] 00" W - [illegible]
11	[illegible]	50.00'	68.67'	41.01'	S 21° 00' 05" W - 63.41'
12	[illegible]	50.00'	15.11'	7.68'	S 07° 05' 05" E - 15.16'
13	[illegible]	50.00'	92.62'	[illegible]	[illegible] E - 92.04'
14	[illegible]	[illegible]	74.28'	[illegible]	[illegible] E - 74.05'
15	[illegible]	[illegible]	71.81	[illegible]	[illegible] E - [illegible]
16	[illegible]	349.32'	72.45'	36.46'	S 88° 15' 50" E - 72.52'
17	[illegible]	342.32'	75.48'	[illegible]	N 84° 45' 05" E - 75.38'
18	[illegible]	[illegible]	[illegible]	38.00'	N 75° 00' 15" E - [illegible]
19	[illegible]	[illegible]	[illegible]	35.00'	N 61° 33' 05" E - 69.78'
20	[illegible]	[illegible]	80.61'	40.47'	N 47° 12' 50" E - [illegible]
21	[illegible]	[illegible]	76.75'	[illegible]	N 36° [illegible] 45" E - 76.06'
22	12°28'10"	349.32'	76.02'	38.16'	N 24° 51' 35" E - 75.87'
23	[illegible]	349.32'	[illegible]	[illegible]	N 14° 51' [illegible] E - [illegible]
23	20°00'00"	25.00'	35.27'	26.00'	N 56° 23' 20" E - 85.56'
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] - [illegible]
23	[illegible]	20.00'	41.61'	13.22'	S 79° 12' 45" E - 22.06'
24	[illegible]	299.32'	121.53'	61.62'	N 27° 14' 05" E - 120.70'
24	[illegible]	401.77'	[illegible]	[illegible]	[illegible] W - [illegible]
24	[illegible]	25.00'	[illegible]	26.50'	N 51° 25' 15" W - 36.62'
25	10°02'00"	299.32'	[illegible]	26.45'	N [illegible] 55' 00" E - [illegible]
27	[illegible]	401.77'	34.67'	17.34'	[illegible] W - 34.66'
28	[illegible]	20.00'	[illegible]	[illegible]	[illegible] E - [illegible]

COORDINATES

NO.	LAT.	DEP.
1	1445.72	1775.08
2	1335.38	1689.74
3	1323.04	1674.71
4	1310.36	1663.21
5	1298.01	1674.84
6	1251.37	1661.01
7	1187.71	1665.08
8	923.96	1210.68
9	952.37	1328.67
10	927.86	1370.87
11	916.52	1367.63
12	959.24	1254.37
13	978.55	1220.52
14	737.31	1140.38
15	1147.81	1652.05
16	1172.88	1657.14
17	1172.44	1726.41
18	1171.21	1851.64
19	1148.75	1703.42
20	1130.36	1712.37
21	1102.18	1736.24
22	1120.14	1963.86
23	1173.06	1955.36
24	1210.42	1857.56
25	1231.50	1756.26
26	1263.73	1716.12
27	1408.00	1807.31

Notice to Title Examiners

1. This plat has been approved subject to an agreement recorded among Land Records A.A.Co. in Liber M.S.H. 2058, folio 385.
2. No sale or contract of sale of said lots shown hereon to be made until the necessary improvements have been satisfactorily completed or a contract guaranteed by a surety bond or a certified check has been entered into by the developer as provided in Section III D-1a or b of the Subdivision Regulations.
3. No building permits will be issued for any construction in this development until the requirements of (2) above have been complied with.
4. It is understood and agreed between the Developer and Owner of any lot shown hereon when improved with a residence will connect said residence to the public sewerage system as soon as he has received notification that such system is available.

See Trust Agreement recorded among Land Records of Anne Arundel County Liber M.S.H. 2055-427

Shirway Corporation
c/o Conway L. Carter, Jr.
5715 23rd. Avenue
Hyattsville, Maryland

Approval

The requirements of the Health Department of Anne Arundel County have been met in preparing this plat.

Date 3/29/67 [signature]
Health Officer

Approved for Recording
Date 4-20-67 [signature] Marion J. McCoy
Planning and Zoning Officer

Dedication For Corporation

We, Shirway Corporation, a Maryland corporation, by Harold G. Shirk, President, Conway L. Carter, Secretary, owners of the property shown and described hereon, hereby adopt this plan of subdivision; establish the minimum building restriction lines; and dedicate the streets, alleys, walks, and parks to public use, such lands to be deemed to be dedicated automatically at such times as street extensions adjacent thereto are dedicated in adjoining property.

There are no suits, actions at law, leases, liens, mortgages, trusts, easements, or rights-of-way affecting the property included in this plan of subdivision, except the following: Mortgage recorded among Land Records of Anne Arundel County Liber L.N.P. 1886, folio 559, and all parties in interest thereto have hereunto affixed their signatures, indicating their assent to this plan of subdivision.

Date 4-20-66

Shirway Corporation
By Harold G. Shirk Pres.
Attest Conway L. Carter, Jr. Secy.

Surveyors Certificate

I hereby certify that the plan shown hereon is correct; that it is a subdivision of all of the land conveyed by Elizabeth May Davies et al to Shirway Corporation by deed dated July 27, 1965 and recorded in the Land Records of Anne Arundel County in Liber L.N.P. 1886, folio 556; and that stones marked thus and iron pipe, marked thus have been placed as indicated to the approved finish grade.

Date 4-20-66 James D. Hicks
Registered Land Surveyor

Certificate of Requirements: The requirements of Sections 55-62 of Article 17 of the Annotated Code of Maryland 1957 Edition as far as they relate to the making of this plat and setting of the markers have been complied with.

Any lot transferred will have a minimum width and area substantially the same as those shown on this plat and only one principal building will be permitted on any such lot, however lots may be divided and added to other lots to make them larger.

Recreation

The Anne Arundel County Recreation Department Requirements as required by law have been met in preparing this plat. The recreational area shown hereon is for the use of the property owners in this subdivision, and will be deeded to an established community association within five years.

"WEATHERLY"	
3RD ELECT. DIST.	A.A. CO., MD.
SCALE 1"=100'	DATE 4-20-66
RECORD PLAT / BY: RGH	JAMES D. HICKS & ASSOC. 8-B BLADEN ST. ANNAPOLIS, MD. — FILE: 191

BOOK 35 FOLIO 26

OFFICE OF PLANNING AND ZONING

CONFIRMATION OF PRE-FILE

PRE-FILE #: 2025-0088-P
DATE: 10/01/2025
OPZ STAFF: Jennifer Lechner (ZA)
Kelly Krinetz (CA)
Stacy Poulos (CR)
I&P STAFF: Jean Janvier (ENG)

APPLICANT/REPRESENTATIVE: Tom Kincaid / Messick & Associates

EMAIL: tom@columbiaacademy.com / engr@messickandassociates.com

SITE LOCATION: 1031 Landon Lane, Arnold **LOT SIZE:** 25,480 square feet

ZONING: R1 **CA DESIGNATION:** LDA/RCA **BMA:** YES **BUFFER:** YES **APPLICATION TYPE:** Variance

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The applicant proposes to raze the existing dwelling and construct a new 2-story single-family dwelling with associated improvements. The dwelling is proposed in the same general area of the existing dwelling, which is located within the BMA and the buffer to tidal wetlands. The proposed dwelling is no closer to the shoreline than the facade of the existing dwelling.

The following variances are required:

- § 17-8-301, development on properties containing buffers shall meet the requirements of COMAR, Title 27.
- § 18-13-104 to allow disturbance to the buffer of tidal wetlands.

COMMENTS

Zoning Administration Section:

1. Accurately identify the zoning district throughout the Letter.
2. The variance could be eliminated, or greatly reduced, if the dwelling were shifted closer to the road.
3. Redevelopment is an opportunity to comply with the Code and not to create situations that require relief from the Code. There appears to be nothing preventing the new dwelling from being shifted closer to the road.
4. The applicant is reminded that, in order for the Administrative Hearing Officer to grant approval of the variances, the proposal must address and meet all of the applicable variance standards provided under § 18-16-305(a-c). The Letter of Explanation should address each of those standards and provide adequate justification for each of the variances required.

OPZ Critical Area Team:

While replacement in kind is allowed in the BMA, there is no provision that allows it in the buffer. Every effort must be made to minimize disturbance within the buffer. There is no mention of reasons why the buffer cannot be maximized by moving the dwelling further from the water.

OPZ Cultural Resources:

The Cultural Resources Section has no comments.

I&P Engineering:

1. The second paragraph of the Letter of Explanation (LOE) states the site is zoned R5, while page 2 of the LOE states the site is zoned R1. General Note 3 on the Site Plan states the site is zoned R1. Revise as needed.
2. Show and label any existing and proposed stormwater management devices. If there are not any, note so on the

Site Plan or in the Letter of Explanation.

3. Label the square located directly west of the proposed house, outside of the LOD. State whether or not it is to remain or to be removed.
4. On the Proposed Conditions Plan, the LOD appears excessive, extending into the Landon Lane ROW, while the existing asphalt driveway is shown to remain. Revise as needed.
5. On the Proposed Conditions Plan, the LOD cuts through the primary drywell. Revise as needed.
6. It appears only two primary drywells are shown on the plan. If backup drywells are required by the Health Department, show and label them on the plans.
7. On the Proposed Conditions Plan, along the site's southeastern boundary with Lot 21, the LOD is shown crossing an existing wooden fence. Indicate if this fence is to remain or to be removed and revise the LOD as needed.
8. On the Proposed Conditions Plan, show the proposed grading contours even if they are in the same location as the existing grading contours.
9. On the Proposed Conditions Plan, label the existing composite deck.
10. The existing 3" tree cluster shown to be removed on the Existing Conditions Plan is shown on the Proposed Conditions Plan in the middle of the bumpout of the proposed house. Remove it from the Proposed Conditions Plan.
11. Label the rectangle shown next to the existing septic tank and note it to be removed or to remain.
12. Label the width of the existing driveway.
13. Label the width of the proposed sidewalk.
14. The brick stoop and stairs noted to remain on the Existing Conditions Plan is not shown on the Proposed Conditions Plan. Revise the label as needed.
15. The ADC Permitted Use Number appears to be different from other Messick and Associates plans. Revise the number as needed.

INFORMATION FOR THE APPLICANT

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.

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.