

**FINDINGS AND RECOMMENDATION
OFFICE OF PLANNING AND ZONING
ANNE ARUNDEL COUNTY, MARYLAND**

APPLICANT: Style Works Design Build LLC

ASSESSMENT DISTRICT: 3rd

CASE NUMBER: 2025-0243-V

COUNCILMANIC DISTRICT: 5th

HEARING DATE: February 26, 2026

PREPARED BY: Donnie Dyott Jr. 
Planner

REQUEST

The applicant is requesting a variance to allow a dwelling and associated facilities with less setbacks and buffer than required and with disturbance to slopes of 15% or greater on property located at 870 Mill Creek Road in Arnold.

LOCATION AND DESCRIPTION OF SITE

The subject site consists of 14,536 square feet of land and is identified as Lot 1 of Parcel 4 in Block 17 on Tax Map 32. The subject property is zoned R5 - Residential District and is a non-waterfront property which lies within the Chesapeake Bay Critical Area and is split designated IDA - Intensely Developed Area and RCA - Resource Conservation Area. The site is currently unimproved.

APPLICANT'S PROPOSAL

The applicant proposes to construct a new two plus story single family detached dwelling (height less than 35 feet) and associated facilities. The dwelling will measure approximately 27' X 25' with an attached garage measuring approximately 21' X 24'.

REQUESTED VARIANCES

§ 17-8-201(a) and § 17-8-201(b) of the Code stipulates that development in the Resource Conservation Area (RCA) or Intensely Developed Area (IDA) may not occur within slopes of 15% or greater unless development will facilitate stabilization of the slope; is to allow connection to a public utility; or is to provide direct access to the shoreline. The proposed development will disturb steep slopes of 15% or greater, necessitating a variance for approximately 1,999 square feet of slope disturbance as shown on the site plan. Exact slope disturbance will be determined at the time of permit.

§ 18-13-104(a) of the Code requires that there shall be a minimum 100-foot buffer landward from the mean high-water line of tidal waters, tributary streams and tidal wetlands. § 18-13-104 (b) provides for an expanded buffer where there are contiguous steep slopes of 15% or more and is to be expanded by the greater of four feet for every 1% of slope or to the top of the slope and shall include all land within 50 feet from the top of the slopes. § 17-8-301 of the Subdivision Code states that development on properties containing buffers shall meet the requirements of Title 27 of the State Code of Maryland (COMAR). § 27.01.01 (B) (8) (ii) of COMAR states a buffer exists "to protect a stream tidal wetland tidal waters or terrestrial environment from human disturbance." § 27.01.09 E. (1) (a) (ii) of COMAR authorizes disturbance to the buffer for a new development activity or redevelopment activity by

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variance. The proposal includes approximately 4,205 square feet of stream buffer disturbance as shown on the site plan. Exact buffer disturbance will be determined at the time of permit.

§ 18-4-701 of the Code stipulates that principal structures in an R5 - Residential District shall be set back a minimum of 25 feet from the front lot line and 20 feet from a corner side lot line. The proposed dwelling will be located as close as 18 feet from the front lot line and as close as 7 feet from the corner side lot line, necessitating variances of 7 feet and 13 feet respectively.¹

AGENCY COMMENTS

The **Health Department** commented that they have no objection to the request as the property is served by public water and sewer facilities.

The **Critical Area Commission** did not take a position on the request but commented that extensive removal of vegetation on the steep slopes for stormwater management could increase erosive conditions on the slopes. Should the request be granted, appropriate mitigation is required.

The **Development Division (Critical Area Team)** provided the following comments:

The applicant has reduced the proposed development on the site. In order to provide a clear understanding of the conditions under which a decision will be made, clarification of certain statements by the applicant is provided below.

The applicant states that the proposed permanent lot coverage on the lot will be 1,647 square feet, which is below the 1,864 square feet of existing lot coverage. While this is true for the amount of coverage on the site itself, this figure does not include the 372 sq ft of proposed driveway coverage immediately offsite, within the adjacent road bed. The total proposed coverage for the development of this site as shown on the site plan is 2,019 sq ft.

The applicant states that the neighboring waterfront properties have the development benefits of being mapped as Buffer Modified, however the subject property does not. The Buffer/Buffer Modification designation does not serve to benefit/not benefit this application as a variance for slope disturbance would still be required as would a Buffer variance since the entire property falls within the Perennial Stream Buffer that is not affected by the Buffer/BMA designation.

The applicant states that as a legal buildable lot in the R5 zoning district, the intended use of a single-family residential dwelling is a permitted use by right. While the applicant is correct that this lot does meet the definition of a legal lot, the designation of buildable can only apply should the applicant demonstrate the ability to obtain the necessary permit(s) to build.

The applicant states that the surrounding properties are developed with similarly sized single family dwellings and that further reduction of the size of the proposed dwelling would result in a dwelling that is out of character with the community. The neighborhood and particularly the southern end of the street is populated with older shore homes and has not yet been developed. Many of these homes were

¹ While the application shows a dimension of 18 feet to the front lot line, the site plan shows a covered deck and steps that appear to be closer than 18 feet which will also require a variance. The applicant should provide these numbers to the Hearing Officer for clarification. Under Bill 72-24 the R5 setbacks were reduced however the subject property is the subject of an open grading permit (G02020213) which was applied for prior to July 1, 2025. As such, the prior R5 setbacks are applicable per 17-2-101(20).

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not constructed with attached garages although some have been able to add detached garages. Five of the existing 6 homes on the eastern side of Mill Creek Road, immediately adjacent to this site are one story homes with a foot print of 864 sq ft with off street parking pads/driveways and no garage structure.

Should the AHO make the determination that this revised proposal meets the approval standards for a variance to Critical Area regulations, the appropriate mitigation will be addressed with the applicable permits based on the approval conditions.

The **Department of Inspections and Permits (Engineering Division)** provided the following comments:

1. Identify whether the un-named and un-improved 30' ROW is privately-owned or publicly-owned.
2. If the un-named and un-improved 30' ROW is privately-owned, a grading easement will be needed as the LOD falls within its boundary. Address at Grading Permit.
3. Parking in front of the garage will not be allowed. Vehicles must not be parked within the ROW. Address at Grading Permit.
4. Bio-logs are prone to degrade over time. Stone check dams will need to be used for the infiltration berm. Address at Grading Permit.
5. The WHC needs to be shown as per the county details. Address at Grading Permit.
6. Refer to the county as-built plans. A stub connected to existing sewer manhole #9482 is present which may conflict with the SHC.

The **Department of Recreation and Parks** does not object to the request but commented that the site is contiguous to Mago Vista Park. The development shall not discharge runoff to the County's property at a rate greater than existing conditions. The drawing for the proposal shows a driveway apron extending into the adjacent ROW. The same drawing does not show the waterline that serves Mago Vista Park, The proposed development must not occlude the ROW or impact the existing utilities.

The **Department of Planning and Zoning (Cultural Resources Division)** commented that the property is adjacent to a historic structure documented on the Maryland Inventory of Historic Properties, the Issac and Aili Yrtimaa House (AA-2547). The property exhibits high archaeological potential. The Cultural Resources Division will require review of associated building/grading permits to determine compliance with Article 17-6-502 and 17-6-503. A site visit by a County archaeologist will be required at the time to complete the review.

FINDINGS

The site was the subject of two previous variance applications under case numbers 2018-0229-V and 2022-0009-V. Under the 2018 case, variance approval was granted to allow a dwelling and associated facilities but was subsequently denied by the Board of Appeals under case BA-73-18V. Under the 2022 case, variances for construction of a dwelling and associated facilities was denied.

According to the site plan, the total lot coverage after development will be 2,019 square feet. Exact lot coverage calculations will be determined at the time of permit.

For the granting of a critical area variance, a determination must be made on the following:

Because of certain unique physical conditions, such as exceptional topographical conditions peculiar to and inherent in the particular lot or irregularity, narrowness, or shallowness of lot size and shape, strict

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implementation of the County's critical area program would result in an unwarranted hardship. In this case the entire property is encumbered by the presence of steep slopes and the stream buffer. Due to these factors, developing the site with a single family dwelling would be impossible without relief from the Code.

A literal interpretation of the County's critical area program may deprive the applicant of rights that are commonly enjoyed by other properties in similar areas. The granting of the variances will not confer on the applicant a special privilege that would be denied by COMAR, Title 27. This request is not a result of actions by the applicant and does not arise from any condition relating to land or building use on any neighboring property. While appropriate mitigation can minimize or eliminate adverse effects to water quality, fish, wildlife or plant habitat, the proposal could be reduced to further minimize these impacts. As such, it is the opinion of this Office that the proposal as shown is not in harmony with the general spirit and intent of the County's critical area program.

With regard to the requirements for all variances:

While some relief is warranted to allow the applicant to avoid unwarranted hardship, the proposal is not considered to be the minimum necessary to afford relief from this Office. While it is true that the proposal has been reduced from the previous version in 2022, the dwelling footprint is still over 1,000 square feet with an integrated garage. A smaller dwelling could be proposed that would reduce impacts while still providing adequate relief from the Code. The integrated garage could be removed to increase the livable space of a smaller footprint as not all houses contain garages. The area contains dwellings of varying sizes and a smaller dwelling would still be in keeping with the character of the neighborhood.

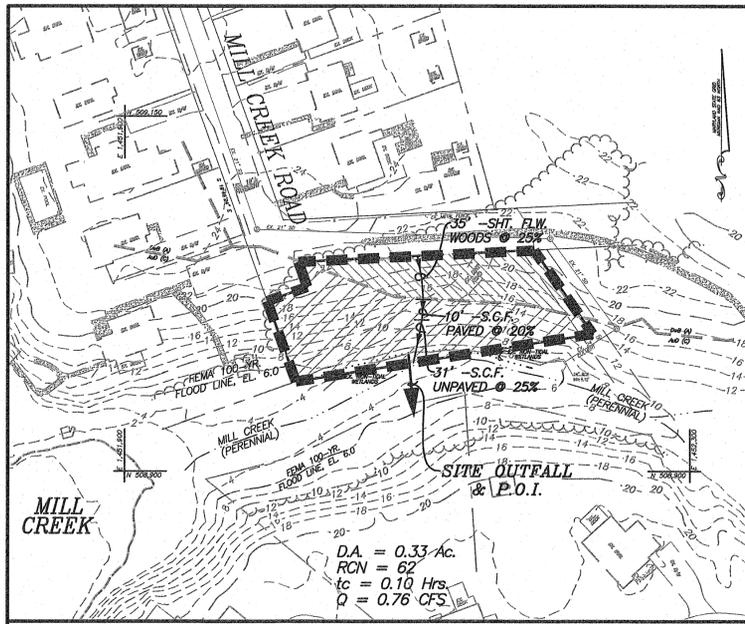
While the proposal could be reduced and therefore cannot be supported, this Office has no objection to the proposed setback variances. The proposed location of a dwelling within the setbacks pushes the improvements further away from the environmental features while still maintaining adequate distance from property lines.

At this time there are no comments or evidence received to indicate that the proposed variances would impair the appropriate use or development of adjacent property or be detrimental to the public welfare.

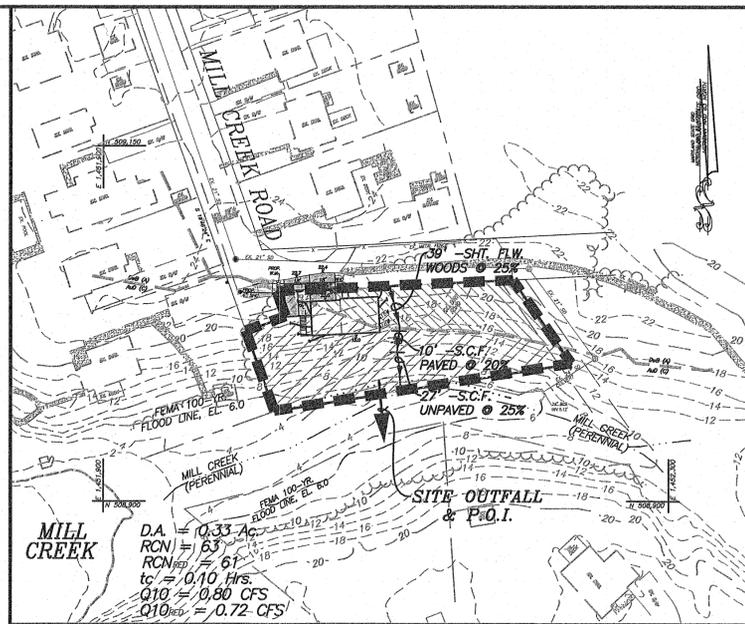
RECOMMENDATION

Based upon the standards set forth in § 18-16-305 under which a variance may be granted, this Office recommends *denial* of the proposed variances for the construction of the dwelling and associated facilities as shown on the site plan.

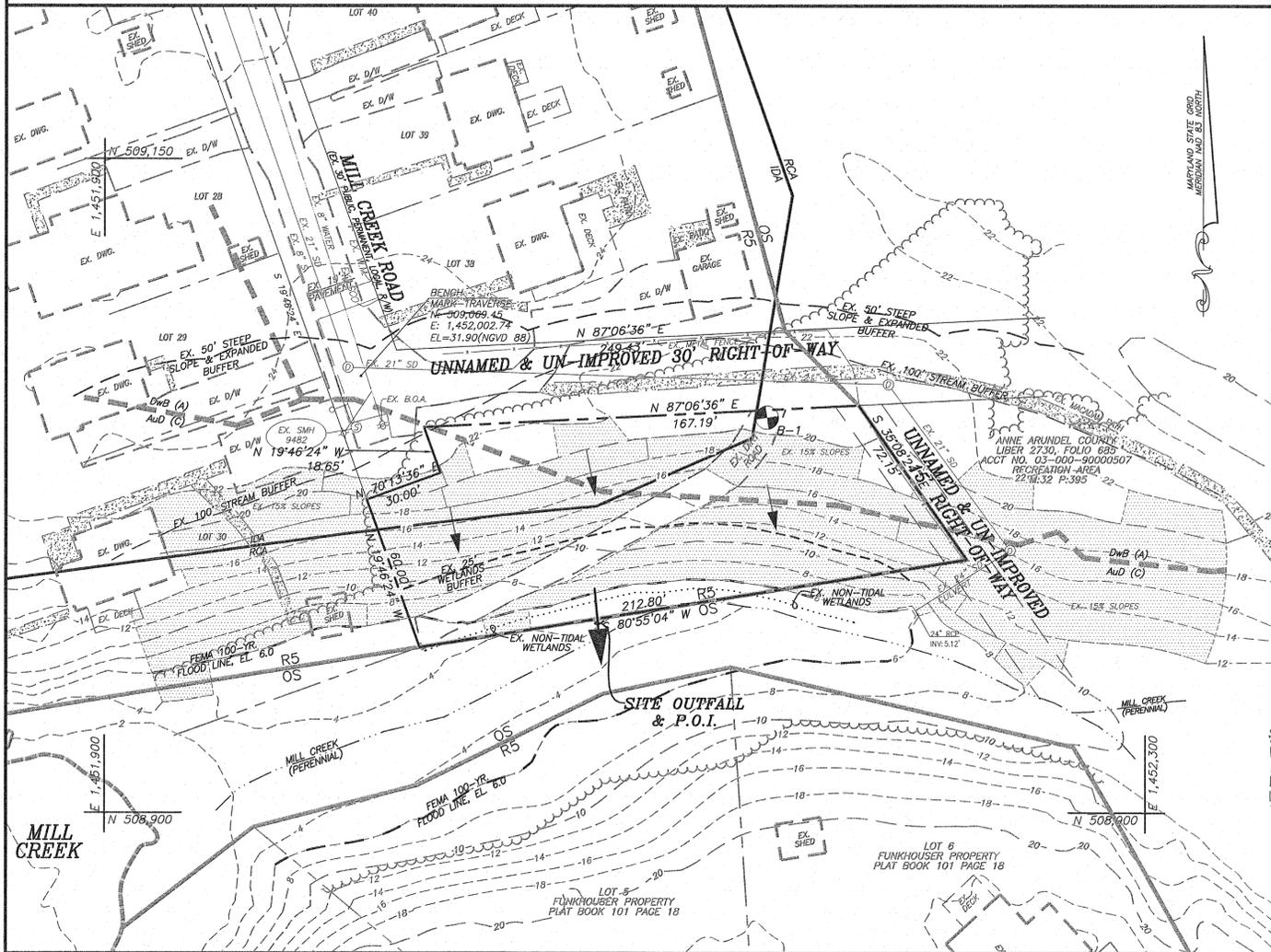
DISCLAIMER: This recommendation does not constitute a building permit. In order for the applicant(s) to construct the structure(s) as proposed, the applicant(s) shall apply for and obtain the necessary building permits and obtain any other approvals required to perform the work described herein. This includes but is not limited to verifying the legal status of the lot, resolving adequacy of public facilities, and demonstrating compliance with environmental site design criteria.



EXISTING DRAINAGE AREA MAP
SCALE: 1" = 60'



PROPOSED DRAINAGE AREA MAP
SCALE: 1" = 60'



RESOURCE/PRE DEVELOPMENT PLAN VIEW
SCALE: 1" = 30'

ADJOINING OWNERS

TAX MAP 32, BLOCK 17, PARCEL 798
LOT 30
JOHN JOHNSON
ANTONIA HOY
866 MILL CREEK ROAD
ARNOLD, MD 21012
TAX # 03-525-28061800
ZONING RS
L 37483 / F 25

TAX MAP 32, BLOCK 17, PARCEL 394
LOT 38
STEPHEN R. HUTCHINS
MARY A. HUTCHINS
867 MILL CREEK ROAD
ARNOLD, MD 21012
TAX # 03-525-22369050
ZONING RS
L 6861 / F 512

TAX MAP 32, BLOCK 17, PARCEL 395
ANNE ARUNDEL COUNTY
DEPT REC & PARKS
ANNAPOLIS, MD 21401
TAX # 03-000-90000507
ZONING RS
L 2739 / F 685

TAX MAP 32, BLOCK 17, PARCEL 797
LOT 5, FUNNHOUSER PROPERTY
PLAT BOOK 101 PAGE 18
MELANIE DANIS
202 PAULINE COURT
ARNOLD, MD 21012
TAX # 03-525-90050091
ZONING RS
L 13581 / F 33

TAX MAP 32, BLOCK 17, PARCEL 797
LOT 6, FUNNHOUSER PROPERTY
PLAT BOOK 101 PAGE 18
CHRISTOPHER SWIFFER
204 PAULINE COURT
ARNOLD, MD 21012
TAX # 03-000-90050092
ZONING RS
L 38855 / F 115

LEGEND

- Existing Curb
- Existing Contour
- Existing Wire Fence
- Existing Wood Fence
- Existing Woods line
- Existing Gas Line
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole
- Existing Sewer Manhole
- Existing Sewer Cleanout
- Existing Telephone Manhole
- Existing Utility Pole
- Existing Water Valve
- Existing Water Meter
- Prop/Post Development Discharge Point
- Flow Direction Arrow
- Ex. FEMA Line
- Ex. 15%+ Slopes
- Limits of Non-Tidal Wetlands

B-1 STANDARDS AND SPECIFICATIONS

- FOR**
SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS
- Definition**
The process of preparing the soils to sustain adequate vegetative stabilization.
- Purpose**
To provide a suitable soil medium for vegetative growth.
- Conditions Where Practice Applies**
Where vegetative stabilization is to be established.
- Criteria**
- A. Soil Preparation
 1. Temporary Stabilization
 - a. Specified preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - b. Apply fertilizer and lime as prescribed on the plans.
 - c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 2. Permanent Stabilization
 - a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - i. Soil pH between 6.0 and 7.0.
 - ii. Soluble salts less than 500 parts per million (ppm).
 - iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if foragegrass will be planted on a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - iv. Soil contains 1.5 percent minimum organic matter by weight.
 - v. Soil contains sufficient pore space to permit adequate root penetration.
 - b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - B. Topsoiling
 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or fertilis combining supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
 4. Areas having slopes steeper than 2:1 require special consolidation and design.
 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, shales, roots, snail or other material larger than 1/4 inches in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, biotic, or others as specified.
 - c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 6. Topsoil Application
 - a. Erosion and sediment control practices must be maintained when applying topsoil.
 - b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seedling can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or anally condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
 - C. Soil Amendments (Fertilizer and Lime Specifications)
 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Material to be substituted for fertilizer with prior approval from the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroxydizing) which contains at least 50 percent total oxides calcium oxide plus magnesium oxide. Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 95 to 100 percent will pass through a #20 mesh sieve.
 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

SOILS LEGEND

- DWB: Downer-hamontan-urban land complex, 0 to 5 percent slopes (A)
- Aud: Annapolis-urban land complex, 5 to 15 percent slopes (C)

NOTE: The property shown hereon is located within FEMA flood Zone AE El=6.0 as shown on F.E.M.A. Flood Insurance Rate Map, Community Panel No.24003C0159F of Anne Arundel County, Maryland. (Unincorporated Areas) dated 2/8/15.

HYDROLOGIC SOIL PROPERTIES CLASSIFIED BY SOIL TEXTURE*

TEXTURE CLASS	EFFECTIVE WATER CAPACITY (Cw) (INCH PER INCH)	MINIMUM INFILTRATION RATE (I) (INCHES PER HOUR)	HYDROLOGIC SOIL GROUPING
Sand	0.35	8.27	A
Loamy Sand	0.31	2.41	A
Sandy Loam	0.25	1.02	B
Loam	0.19	0.52	B
Silt Loam	0.17	0.27	C
Sandy Clay Loam	0.14	0.17	C
Clay Loam	0.14	0.09	D
Silty Clay Loam	0.11	0.06	D
Sandy Clay	0.09	0.05	D
Silty Clay	0.09	0.04	D
Clay	0.08	0.02	D

* Taken from the Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division Standards and Specifications for Infiltration Practices.

BOG PROTECTION NOTE

This site is not located within a bog, a bog buffer area or within a contributing drainage area of a bog, as determined by the Anne Arundel County Bog Protection Area Guidance Map, dated December, 2006.

SCENIC & HISTORIC ROAD NOTE

This site does not derive access from or abut a scenic or historic road as shown on Anne Arundel County Scenic and Historic Roads Map, dated 2006.

WATER & SEWER SERVICE AREA

WATER SERVICE AREA: BROADNECK - EXISTING SERVICE
SEWER SERVICE AREA: BROADNECK - EXISTING SERVICE

HISTORICAL ARCHAEOLOGICAL & CEMETARY NOTE

This site does not contain any historical or archaeological items, based upon a field observation by Boyd & Dowgiallo, P.A. and is not part of an existing cemetery.

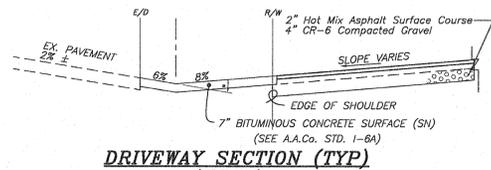
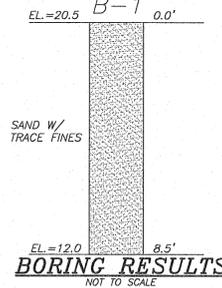
ZONING NOTE

This site is located within an R5 zoning district and an Intensely Developed Area (IDA) and a Resource Conservation Area (RCA) of the Chesapeake Bay Critical Area.

RESOURCE MAP CERTIFICATION NOTE

The property and topographic information shown hereon is based on surveys performed by Boyd & Dowgiallo, P.A. and the A.A.C. OS has been field verified.

Jerry E. Toadzicki, P.E. #19577



- NOTE: 1. FOR THE MINIMUM PAVING FOR DRIVEWAYS IN THE COUNTY RIGHT OF WAY, SEE LOCAL ROAD PAVING SECTIONS, DETAIL P-8.
2. DITCH LINING AND VELOCITY DISSIPATORS TO BE PROVIDED AS REQUIRED.
3. ALLOWING SURFACE DRAINAGE TO CROSS A PAVED DRIVEWAY ON THE SURFACE IS SUBJECT TO THE APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.
*4. MAXIMUM ALGEBRAIC GRADE DIFFERENCE IS 14%.

<p>OWNER/DEVELOPER STYLE WORKS DESIGN BUILD, LLC 204 SOUTH VILLA AVENUE ANNAPOLIS, MD 21401 786-391-5569 SIKORAINVESTMENT@GMAIL.COM</p>	<p>Maryland Professional Engineering Firm License No. 47570 BOYD & DOWGIALLO, P.A. ENGINEERS*SURVEYORS*PLANNERS 412 Headquarters Drive, Suite 5 Millersville, Maryland 21108 (410) 729-1234 (P) (410) 729-1243 (F) JERRY@BNDPA.COM</p>	<p style="text-align: center;">VARIANCE/GRADING & SEDIMENT CONTROL PLAN</p> <p style="text-align: center;">870 MILL CREEK ROAD TAX MAP 32 BLOCK 17, PARCEL 4 ZONED RS</p> <p>Sheet No.: 2 of 4 Checked By: JET DATE: NOVEMBER, 2025 Permit #G02020213 Proj. No. THIRD DISTRICT</p> <p style="text-align: right;">ANNE ARUNDEL COUNTY, MD 21012</p>
<p>NO. DATE BY REVISION APPROVED DATE</p>	<p>ANNAPOLIS, MD 21401 STATE OF MARYLAND LICENSE NO. 19577 EXPIRES 03-31-2028</p>	

TOPSOIL SPECIFICATIONS

B-1.2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- A. Soil Preparation
 - 1. Temporary Stabilization
 - a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - b. Apply fertilizer and lime as prescribed on the plans.
 - c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - 2. Permanent Stabilization
 - a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - i. Soil pH between 6.0 and 7.0.
 - ii. Soluble salts less than 500 parts per million (ppm).
 - iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if loess will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - iv. Soil contains 1.5 percent minimum organic matter by weight.
 - v. Soil contains sufficient pore space to permit adequate root penetration.
 - b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

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- d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
- e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

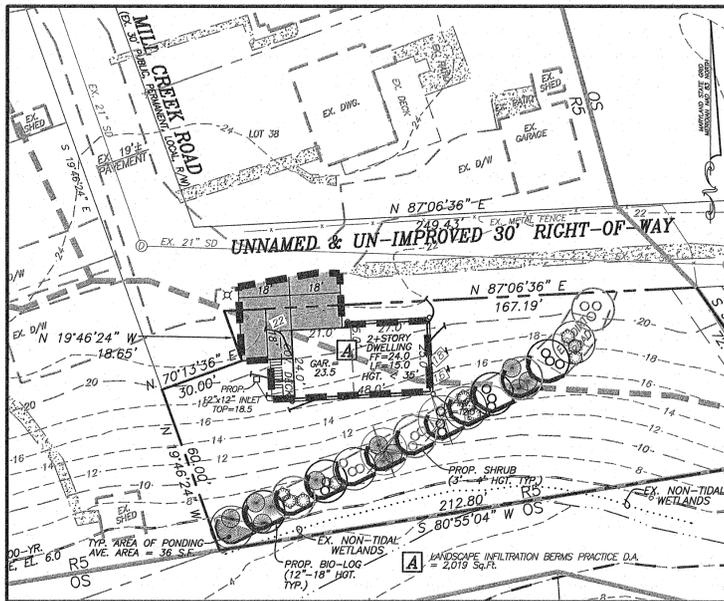
B. Topsoiling

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
- 4. Areas having slopes steeper than 2:1 require special consideration and design.
- 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- 6. Topsoil Application
 - a. Erosion and sediment control practices must be maintained when applying topsoil.
 - b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

B.13

C. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and inventory of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydrocedding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #200 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.



ESD PRACTICE MAP
SCALE: 1" = 30'

C. A. BUFFER TABULATION	
Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.±
Total Critical Area	14,536 Sq.Ft.±
Existing Coverage within 100' Buffer	1,864 Sq.Ft.*
Existing Coverage outside of 100' Buffer	0 Sq.Ft.
Proposed Lot Coverage within 100' Buffer	1,647 Sq.Ft.
Proposed clearing within 100' Buffer	4,205 Sq.Ft.
Permanent Buffer Disturbance @ 3:1	4,205 Sq.Ft. x 3 = 12,615 Sq.Ft.
Increase in Lot Coverage within 100' Buffer	2,019 Sq.Ft. - 1,864* Sq.Ft. = 155 Sq.Ft.
Buffer Mitigation for Lot Cover	310 Sq.Ft.
Prop. Clearing w/in Buffer	3,308 Sq.Ft.
Total Buffer Mitigation	12,615 + 310 + 3,308 = 16,233 Sq.Ft.
*Existing Dirt Road to be Removed	

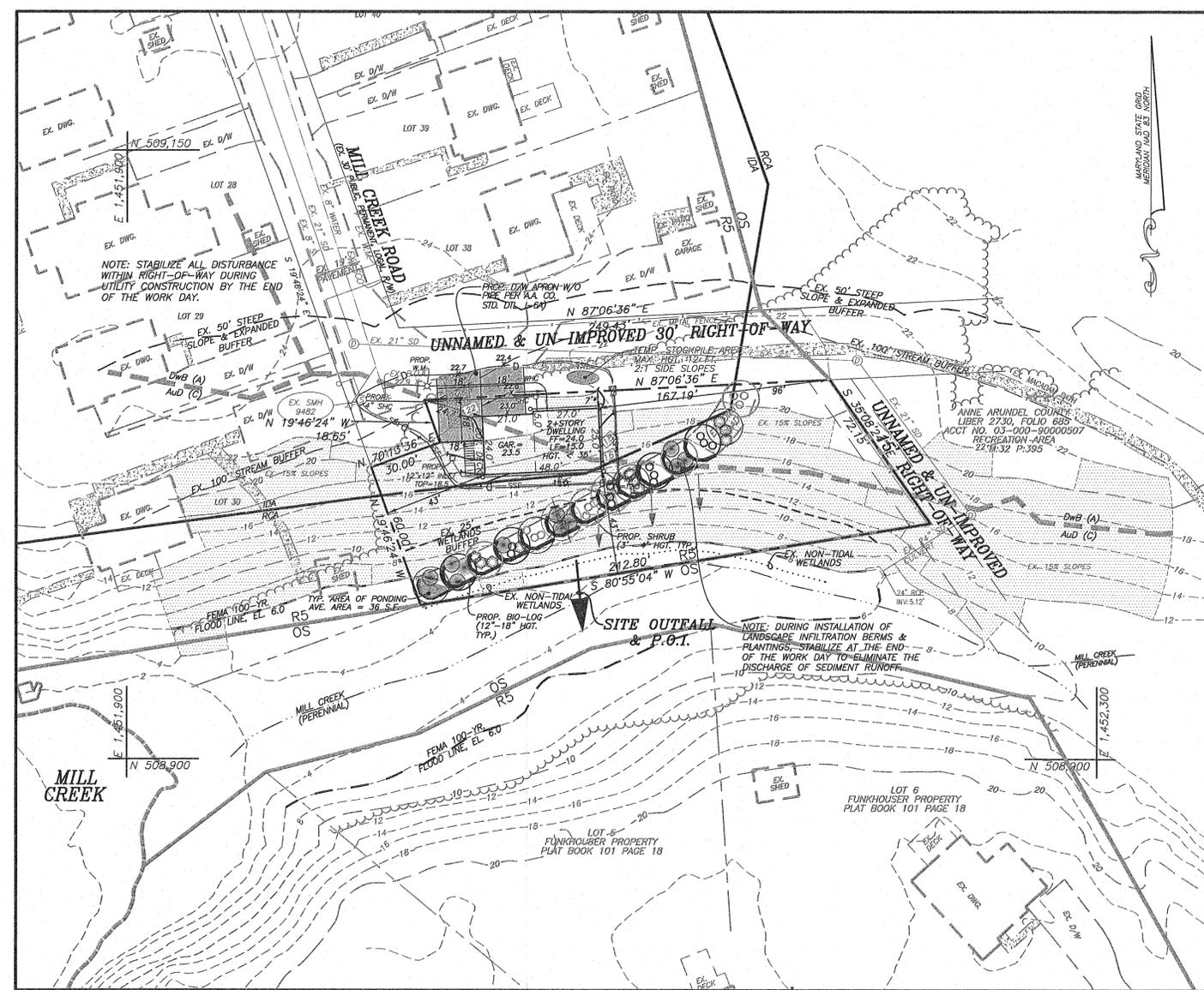
IDA CRITICAL AREA TABULATION	
Zoning	R5
Critical Area Classification	IDA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area-IDA	3,890 Sq.Ft.± (0.09 Ac.±)
Developed Woodlands (Within I.D.A.)	3,890 Sq.Ft.± (0.09 Ac.±) (Includes Ex. Dirt Road)
Maximum Clearing Allowed (Within C.A.)	N/A
Proposed Clearing (Within IDA C.A.)	3,050 Sq.Ft. (2,532 Sq.Ft. On-Site + 518 Sq.Ft. Off-Site)
Reforestation Required (Prop. Clearing x 1.0)	N/A
Afforestation Threshold	N/A
Reforestation Provided	N/A
Remaining Reforestation Remaining	N/A
Existing Lot Coverage	58 Sq.Ft. (Includes Ex. Dirt Road)
Maximum Lot Coverage (Within C.A.)	N/A
Proposed Lot Coverage (On-Site)	1,646 Sq.Ft.± (0.05 Ac.±) (1,178 Sq.Ft. DWG + 468 Sq.Ft. D/W)

RCA CRITICAL AREA TABULATION	
Zoning	R5
Critical Area Classification	RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area-RCA	10,646 Sq.Ft.± (0.24 Ac.±)
Developed Woodlands (Within R.C.A.)	10,646 Sq.Ft.± (0.24 Ac.±)
Maximum Clearing Allowed (Within C.A.)	6,534 Sq.Ft.
Proposed Clearing (Within RCA C.A.)	258 Sq.Ft.± (Excludes Ex. Dirt Rd.)
Reforestation Required (Prop. Clearing x 1.0)	258 Sq.Ft.±
Afforestation Threshold	1,596 Sq.Ft.± (15%)
Reforestation Provided	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Req'd. Buffer Mitigation	16,078 Sq.Ft.
Total Planting/Reforestation Req'd.	258 Sq.Ft. + 16,078 Sq.Ft. = 16,336 Sq.Ft.
Total Planting/Reforestation Prov'd.	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Remaining Mitigation Req'd.	16,336 Sq.Ft.± - 4,200 Sq.Ft. = 12,136 Sq.Ft.*
Existing Lot Coverage	1,864 Sq.Ft. (Ex. Dirt Road)
Maximum Lot Coverage (Within R.C.A.)	1,596 Sq.Ft.± (0.037 Ac.±)
Proposed Lot Coverage (Within RCA) (On-Site)	1 Sq.Ft.±
*to be provided via off-site mitigation	

SETBACKS (ZONED R5)	
Front	N/A*
Rear	20'
Side	7'
*Established by existing dwellings	

LEGEND

- Existing Curb
- Existing Contour
- Existing Wire Fence
- Existing Wood Fence
- Existing Woods line
- Existing Gas Line
- Existing Gas Valve
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole
- Existing Sewer Manhole
- Existing Utility Pole
- Existing Sewer Cleanout
- Existing Telephone Manhole
- Existing Water Valve
- Existing Water Meter
- Proposed Contour
- Proposed Reinforced Silt Fence
- Proposed Limit of Disturbance
- Stabilized Construction Entrance
- Proposed Reforestation Plantings (See Reforestation Plans for Details)
- Proposed Bio-Log
- Overland Relief Flow Path



DEVELOPED PLAN VIEW
SCALE: 1" = 30'

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

Maryland Professional Engineering Firm License No. 47570
BOYD & DOWGIALLO, P.A.
ENGINEERS*SURVEYORS*PLANNERS
412 Headquarters Drive, Suite 5
Millersville, Maryland 21108
(410) 729-1234 (P)
(410) 729-1243 (F)
JERRY@BNDPA.COM

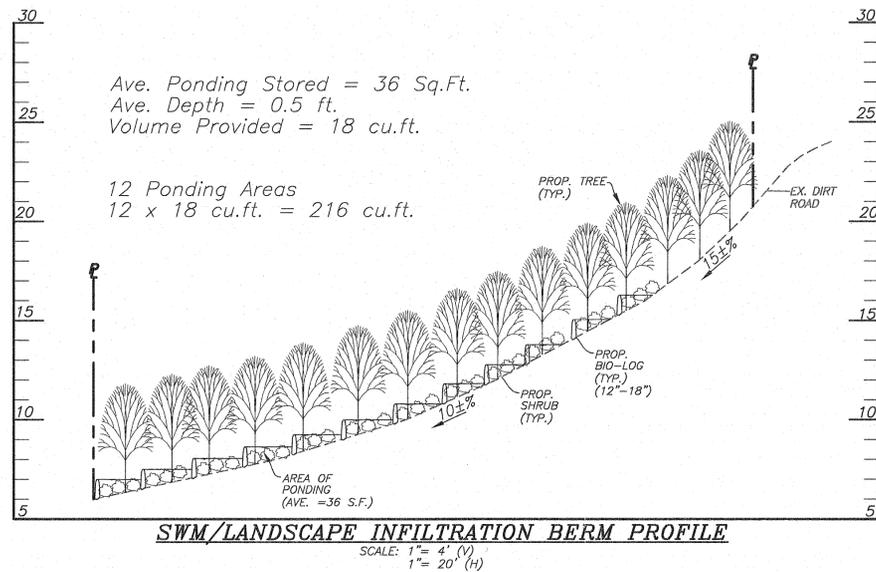


VARIANCE/GRADING & SEDIMENT CONTROL PLAN

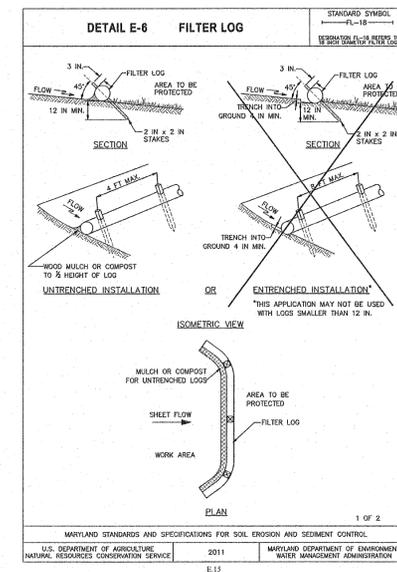
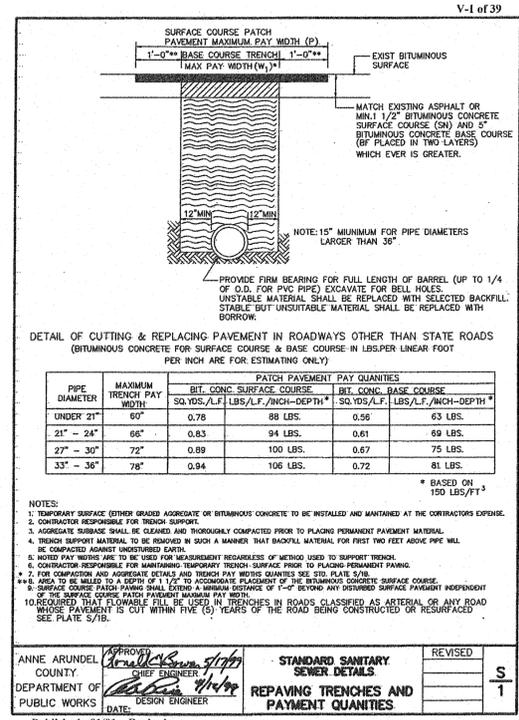
Job No.: 20-231
Sheet No.: 3 of 4
Checked By: JET
DATE: OCTOBER, 2025
Permit #G02020213
Proj. No.

870 MILL CREEK ROAD
TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

THIRD DISTRICT
ANNE ARUNDEL COUNTY, MD 21012

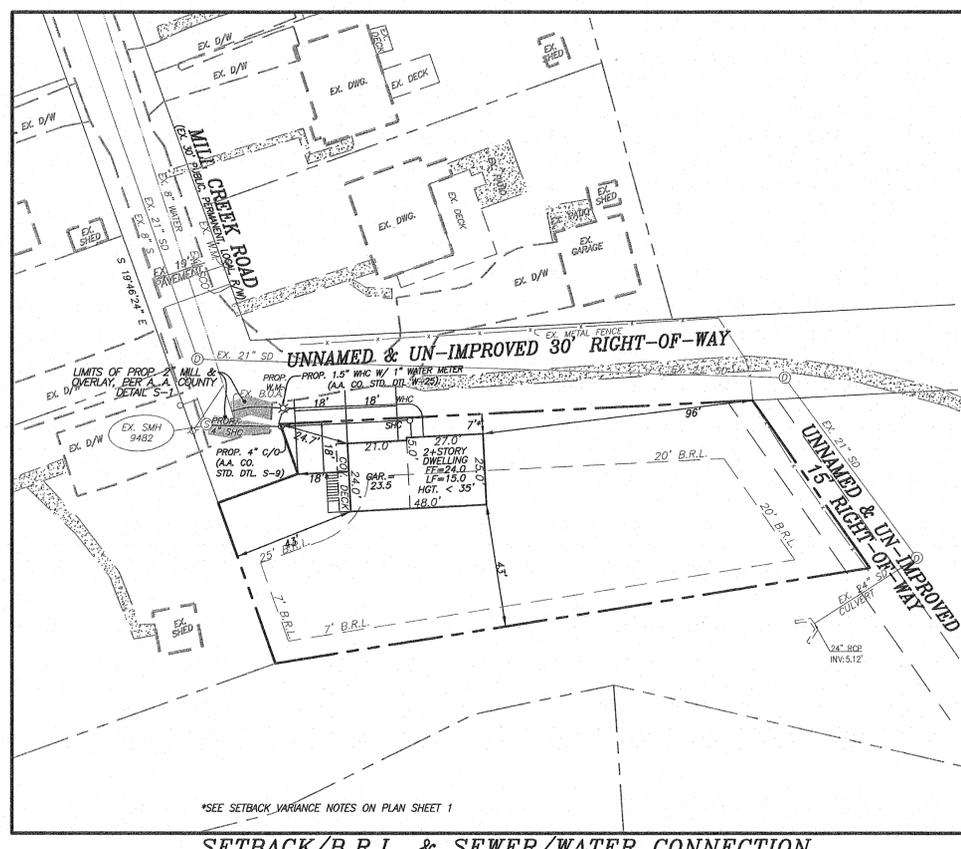
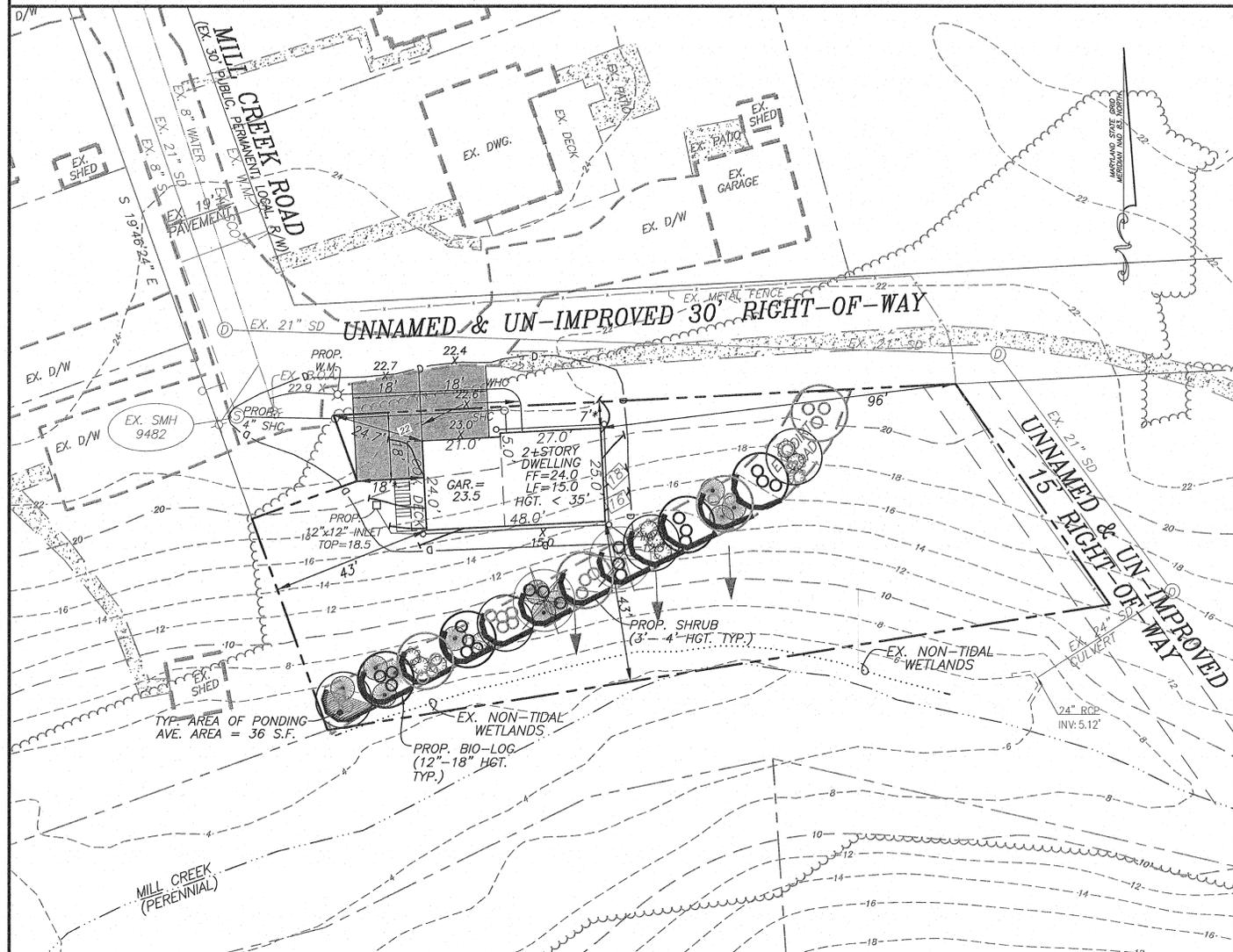


SWM/LANDSCAPE INFILTRATION BERM PROFILE



LEGEND

- Existing Curb
- Existing Contour
- Existing Wire Fence
- Existing Wood Fence
- Existing Woods Line
- Existing Gas Line
- Existing Gas Valve
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole
- Existing Sewer Manhole
- Existing Sewer Cleanout
- Existing Telephone Manhole
- Existing Utility Pole
- Existing Water Valve
- Existing Water Meter
- Proposed Contour
- Proposed Super Silt Fence
- Proposed Limit of Disturbance
- Proposed Reforestation Plantings (See Reforestation Plans for Details)
- Proposed Bio-Log
- Overland Relief Flow Path



NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

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412 Headquarters Drive, Suite 5
Millersville, Maryland 21108
(410) 729-1234 (P)
(410) 729-1243 (F)
JERRY@BNDPA.COM



VARIANCE/GRADING & SEDIMENT CONTROL PLAN

Job No.: 20-231
Sheet No.: 4 of 4
Checked By: JET
DATE: NOVEMBER, 2025
Permit #G02020213
Proj. No.

THIRD DISTRICT

870 MILL CREEK ROAD
TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

ANNE ARUNDEL COUNTY, MD 21012



SALLY V. BALDWIN
E-Mail: Baldwin@CouncilBaradel.com
Telephone Extension: 3462

December 9, 2025

Anne Arundel County
Office of Planning and Zoning
2664 Riva Road
Annapolis, Maryland 21401
Attn: Jennifer Lechner

Re: 870 Mill Creek Road, Arnold
Tax Map 32, Block 17, Parcel 4
Permit G02020213, Prefile 2025-0017-P
Letter of Explanation- variance application

Dear Ms. Lechner:

On behalf of our Client, Style Works Design Build, LLC, we are submitting this statement of justification in support of the application for variances to develop the above-referenced property with a single-family dwelling. The property is known as parcel 4, as shown on Anne Arundel County tax map 32 in block 17. The property, known as 870 Mill Creek Road, is a vacant lot located at the southern end of Mill Creek Road, in Arnold, MD 21012. The lot contains approximately 14,536 sq. ft. (0.33 ac.) of land zoned R5. The site is also located within an Intensely Developed Area (IDA) and a Resource Conservation Area (RCA) of the Chesapeake Bay Critical Area, due to its proximity to Mill Creek.

The parcel is traversed by an abandoned dirt and gravel access road, but is otherwise unimproved and forested. The property is impacted by a tidal flood zone at elevation 6.0, as shown on F.E.M.A. flood map 24003C0159F, and abuts Mill Creek, a perennial stream. Although the majority of the shoreline of Mill Creek west of the subject property has been developed and is now deemed Buffer Modified (due to the location of the existing dwellings along Mill Creek Road), the presence of the existing perennial stream near the southern end of Mill Creek Road terminates the Buffer Modified area, which provides for the expansion of the 100' Buffer to tidal waters to fully encompass the subject property, despite the presence of waterfront homes between the subject property and Mill Creek.

The proposed improvements include the construction of a single-family dwelling, driveway, public utility connections, and stormwater management practices, as shown on the attached grading plans. The current proposal addresses stormwater via the installation of multiple infiltration berms and native planting; the stormwater management plan has been reviewed and only requires the requested variances for final approval. The proposed dwelling

125 West Street, 4th Floor, Annapolis, Maryland 21401
T 410-268-6600 F 410-269-8409 CouncilBaradel.com

will derive access near the southern terminus of Mill Creek Road, from an unnamed right-of-way that connects Mill Creek Road to Mago Vista Park and which is currently improved with existing public utilities. Since a previous variance submission in 2021, and following meetings with the County's engineering and permit representatives, the owner has re-designed the plan to reduce the size of the proposed dwelling. The property owner has developed a plan that minimizes environmental impacts to the greatest extent possible. Importantly, the proposed permanent lot coverage on the lot will be 1,647 square feet, which is below the 1,864 square feet of existing lot coverage (the gravel road currently traversing the property).

The current proposal meets all critical area requirements regarding water quality, clearing and lot coverage; however, due to the presence of existing steep slopes in the area and the expansion of the Critical Area Buffer, variance relief is required prior to approval of the permit. Thus, in order to develop the residential lot with a single family dwelling the applicant seeks the following variances:

1. A Variance to allow the disturbance of 1,999 sq ft. of steep slopes within the Critical Area in accordance with Article 17, Section 8-201 of the Code.
2. A Variance to allow the disturbance of 4,205 sq ft. of expanded Critical Area Buffer in accordance with Article 17, Section 8-301 of the Code.
3. A Variance of 7' to the minimum 25' front setback in an area zoned R5 to allow a front setback of 18' in accordance with Article 18, Section 4-601 of the Code.
4. A Variance of 13' to the minimum 20' side yard setback to a right-of-way in an area zoned R5 to allow a side setback of 7' in accordance with Article 18, Section 4-601 of the Code.

Pursuant to Anne Arundel County Code § 18-16-305, the subject property has unique physical characteristics as it is entirely encompassed by the expanded buffer, despite not being a waterfront property. The neighboring waterfront properties have the development benefits of being mapped as Buffer Modified, however the subject property does not. Further, its steep slopes, perennial stream (with associated buffer) and existing dirt road constitute exceptional topographical conditions.

As a legal buildable lot in the R5 zoning district, the intended use of a single-family residential dwelling is a permitted use by right. Without the variances, an unwarranted hardship would result because the applicants would be deprived of reasonable and significant use of their property: development with a single-family dwelling in an R5 residential zone. The surrounding properties are developed with similarly sized single family dwellings and thus the denial of the variance would also deprive the applicants of rights commonly enjoyed by others. The granting of the variance would not confer on the applicant any special privilege for the same reasons. The variance request is not based on conditions or circumstances that are the result of actions by the applicant; the variances are requested due to the conditions on the property that limit the development area.

Because this request proposes stormwater management where none presently exists, and reduces the overall lot coverage while providing steep slope stabilization, environmental impact

has been reduced to the greatest extent possible. The granting of the variance would not adversely affect water quality, or fish, wildlife or plant habitat, as set forth in the attached Critical Area report. For the reasons set forth above, the applicant has overcome the presumption in the Natural Resources Article, § 8-1808, of the State Code. As demonstrated with the prior submissions, the applicant has evaluated other site planning alternatives and has determined that the proposed plan would involve the minimum variance necessary to afford the requested relief. The improvements are for a modest dwelling, that has been reduced in size to the greatest extent possible, but not so much that it is out of character with the community. Granting the variance would not alter the essential character of the neighborhood, nor would it impair the use or development of the adjacent property. Mitigation is being provided for any clearing, so overall the proposal would not reduce forest cover. Approval of the variance would also not be detrimental to the public welfare for the reasons stated herein.

Thank you for considering this variance request and please let me know if you have any questions.

Very truly yours,



Sally N. Baldwin

Anne Arundel Cty Cir Crt	
IMP FD SURE	\$40.00
RECORDING FEE	\$20.00
TR TAX STATE	\$400.00
TOTAL	\$460.00
SAP SG	
Jul 08, 2021	02:20 pm

REMIT TO:
 Xeisin Title LLC
 1300 Mercantile Lane, Suite 100-G
 Largo, MD 20774

File Name: XT-210082
 Tax ID No: 03-525-34191002
 Title Insurer: Fidelity National Title Insurance Company

DEED

THIS DEED, made June 30, 2021, by and between

David Fields and Susan Zellers (collectively, if more than one, "Grantor"); and

Style Works Design Build, LLC (collectively, if more than one, "Grantee"),

WITNESSES THAT:

IN CONSIDERATION of the sum of EIGHTY THOUSAND AND 00/100 (\$80,000.00) and other good and valuable consideration, the Grantor does grant and convey unto the Grantee in fee simple, as sole owner, all the property situate in Anne Arundel County, Maryland, described as:

BEGINNING FOR THE SAME ON THE WEST SIDE OF THE 30 FOOT ROAD AS SHOWN ON PLAT OF MAGOTHY SHORES PREPARED BY J. SPENCE HOWARD AND RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY IN CABINET NO. 2, ROD E, SAID POINT BEING SITUATED SOUTH 13 DEGREES 19 MINUTES EAST 100 FEET ALONG THE WEST SIDE OF SAID ROAD FROM THE CORNER OF LOT NO. 29 AS SHOWN ON THE ABOVE MENTIONED PLAT AND AT THE END OF SAID ROAD; THENCE RUNNING AND BINDING ALONG THE SOUTHERNMOST END OF SAID ROAD NORTH 76 DEGREES 41 MINUTES EAST 30 FEET TO THE EAST SIDE OF SAID 30 FOOT ROAD; THENCE BINDING ALONG THE EAST SIDE NORTH 13 DEGREES 19 MINUTES WEST 18.65 FEET TO THE SOUTH SIDE OF A 30 FOOT ROAD; THERE LAID OUT; THENCE BINDING ALONG THE SOUTH SIDE OF SAID 30 FOOT ROAD WITH THE USE THEREOF IN COMMON SOUTH 86 DEGREES 26 MINUTES EAST 167.19 FEET TO THE CENTER OF A 15 FOOT ROAD; THENCE ALONG THE CENTER OF SAID 15 FOOT ROAD WITH THE USE THEREOF IN COMMON SOUTH 28 DEGREES 41 MINUTES EAST 72.15 FEET; THENCE LEAVING SAID 15 FOOT ROAD AND RUNNING FOR A LINE OF DIVISION SOUTH 88 DEGREES WEST 214.83 FEET TO A POINT 'N LINE WITH THE WEST SIDE OF THE ABOVE MENTIONED 30 FOOT ROAD; THENCE NORTH 13 DEGREES 19 MINUTES WEST 60 FEET TO THE PLACE OF BEGINNING. CONTAINING 0.396 ACRES, MORE OR LESS. ACCORDING TO SURVEY OF J.SPENCE HOWARD, CIVIL AND CONSULTING ENGINEER, IN DECEMBER, 1945.

SUBJECT TO THE RESERVATION OF CHARLES F. OBRECHT UNTO HIMSELF, HIS SUCCESSORS AND ASSIGNS, IN FEE SIMPLE, AS THAT RESERVATION IS SET

ANNE ARUNDEL COUNTY CIRCUIT COURT (Land Records) SAP 37157, p. 0216, MSA_CE59_37599. Date available 07/27/2021. Printed 07/24/2024.

This document was received on or before June 30th DJB

ACCT. 03-525-34191002
 ALL LIENS ARE PAID AS
 OF 07-01-2021 A.A. COUNTY
 BY: DJB

Anne Arundel Cty Finance Office
 County Transfer Tax \$800.00
 County Recordation Tax \$560.00
 07/01/2021 09:32 AM DJB

ANNE ARUNDEL COUNTY CIRCUIT COURT (Land Records) SAP 37157, p. 0217, MSA_CE59_37599. Date available 07/27/2021. Printed 07/24/2024.

FORTH IN A DEED DATED JANUARY 21, 1946, AND RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY IN LIBER 352, FOLIO 18, OF ALL OF HIS RIGHT, TITLE AND INTEREST IN AND TO ANY ROADS, AVENUES, STREETS, ALLEYS, LANES, WAYS, ETC. MENTIONED IN THE DESCRIPTION OF PARCEL TWO ABOVE, OR ON WHICH PARCEL TWO BINDS, WHETHER THEN LAID OUT OR THEREAFTER LAID OUT

Address: Lot 1, Mill Creek Road, Arnold, MD 21012

By the execution of this Deed, the Grantor hereby certifies under the penalties of perjury that the actual consideration paid or to be paid, including the amount of any mortgage or deed of trust outstanding, is in the sum total of \$80,000.00.

Being the same property described in Book 10573, Page 34.

To have and to hold the Property, together with the building and improvements thereupon erected, made or being, and all and every, the rights, alleys, ways, water, privileges, appurtenances and advantages to the same belonging or in anywise appertaining, unto the said Grantee, and the Grantee's heirs, personal representatives, successors and assigns, in fee simple forever.

AND the Grantor covenants that the Grantor will warrant specially the property hereby conveyed and will execute such further assurances of said land as may be requisite.

IN WITNESS WHEREOF, the Grantor has executed, acknowledged, delivered and sealed these presents on the date first set forth above.

GRANTOR:

[Handwritten Signature]

David Fields

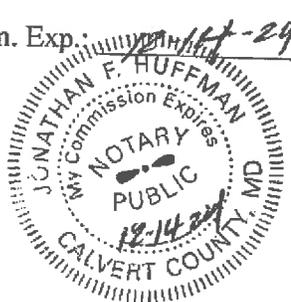
STATE OF *Maryland*
COUNTY OF *Calvert*

ss:

I Hereby Certify That on June 30, 2021, before me, a Notary Public in and for the State and County aforesaid, personally appeared David Fields, known to me or satisfactorily proven to be the person(s) whose name(s) is(are) subscribed to the within instrument, and acknowledged that s/he/they executed the foregoing instrument for the purposes therein contained.

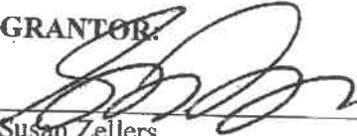
In Witness Whereof, I hereunto set my hand and official seal.

My Comm. Exp. 12-14-24



[Handwritten Signature]
Notary Public

GRANTOR:


Susan Zellers

STATE OF *Maryland*
COUNTY OF *Calvert*

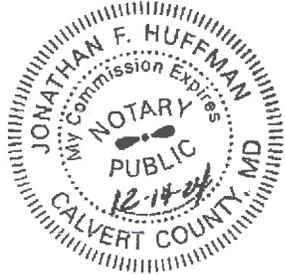
ss:

I Hereby Certify That on June 30, 2021, before me, a Notary Public in and for the State and County aforesaid, personally appeared Susan Zellers, known to me or satisfactorily proven to be the person(s) whose name(s) is(are) subscribed to the within instrument, and acknowledged that s/he/they executed the foregoing instrument for the purposes therein contained.

In Witness Whereof, I hereunto set my hand and official seal.

My Comm. Exp.: 12-14-24


Notary Public



I hereby certify that I am admitted to practice before the Court of Appeals of the State of Maryland, and that the within instrument was prepared under my supervision.



Byron L. Huffman, Esq.
(Xeisin File No. XT-210082)

Maryland
FORM
WH-AR

Certification of Exemption from Withholding Upon
Disposition of Maryland Real Estate Affidavit of
Residence or Principal Residence

2021

Based on the certification below, Transferor claims exemption from the tax withholding requirements of §10-912 of the Tax-General Article, Annotated Code of Maryland. Section 10-912 provides that certain tax payments must be withheld and paid when a deed or other instrument that effects a change

in ownership of real property is presented for recordation. The requirements of §10-912 do not apply when a transferor provides a certification of Maryland residence or certification that the transferred property is the transferor's principal residence.

1. Transferor Information

Name of Transferor Susan Zellers

2. Description of Property (Street address. If no address is available, include county, district, subdistrict and lot numbers).

Lot 1, Mill Creek Road, Arnold, MD 21012

3. Reasons for Exemption

Resident Status

As of the date this form is signed, I, Transferor, am a resident of the State of Maryland.

Transferor is a resident entity as defined in Code of Maryland Regulations (COMAR)03.04.12.02B(11), I am an agent of Transferor, and I have authority to sign this document on Transferor's behalf.

Principal Residence

Although I am no longer a resident of the State of Maryland, the Property is my principal residence as defined in IRC 121 (principal residence for 2 (two) of the last 5 (five) years) and is currently recorded as such with the State Department of Assessments and Taxation.

Under penalty of perjury, I certify that I have examined this declaration and that, to the best of my knowledge, it is true, correct, and complete.

3a. Individual Transferors

Witness

Susan Zellers
Name

Name

Signature

**Date

6-30-21

3b. Entity Transferors

Witness/Attest

Name of Entity

By

Name

**Date

Title

** Form must be dated to be valid.

Note: Form is only valid if it was executed on the date the Property was transferred and is properly recorded with the Clerk of the Court.

To the Clerk of the Court: Only an un-altered Form WH-AR should be considered a valid certification for purposes of Section 10-912.

Maryland FORM WH-AR

Certification of Exemption from Withholding Upon Disposition of Maryland Real Estate Affidavit of Residence or Principal Residence

2021

Based on the certification below, Transferor claims exemption from the tax withholding requirements of §10-912 of the Tax-General Article, Annotated Code of Maryland. Section 10-912 provides that certain tax payments must be withheld and paid when a deed or other instrument that effects a change

in ownership of real property is presented for recordation. The requirements of §10-912 do not apply when a transferor provides a certification of Maryland residence or certification that the transferred property is the transferor's principal residence.

1. Transferor Information

Name of Transferor David Fields

2. Description of Property (Street address. If no address is available, include county, district, subdistrict and lot numbers).

Lot 1, Mill Creek Road, Arnold, MD 21012

3. Reasons for Exemption

Resident Status [X] As of the date this form is signed, I, Transferor, am a resident of the State of Maryland.

[] Transferor is a resident entity as defined in Code of Maryland Regulations (COMAR)03.04.12.02B(11), I am an agent of Transferor, and I have authority to sign this document on Transferor's behalf.

Principal Residence [] Although I am no longer a resident of the State of Maryland, the Property is my principal residence as defined in IRC 121 (principal residence for 2 (two) of the last 5 (five) years) and is currently recorded as such with the State Department of Assessments and Taxation.

Under penalty of perjury, I certify that I have examined this declaration and that, to the best of my knowledge, it is true, correct, and complete.

3a. Individual Transferors

Witness [Signature]

David Fields Name [Signature] 6-30-21 **Date

3b. Entity Transferors

Witness/Attest

Name of Entity

By

Name **Date

Title

** Form must be dated to be valid.

Note: Form is only valid if it was executed on the date the Property was transferred and is properly recorded with the Clerk of the Court.

To the Clerk of the Court: Only an un-altered Form WH-AR should be considered a valid certification for purposes of Section 10-912.

State of Maryland Land Instrument Intake Sheet

Baltimore City County: Anne Arundel

Information provided is for the use of the Clerk's Office, State Department of Assessments and Taxation, and County Finance Office Only. (Type or Print in Black Ink Only--All Copies Must Be Legible)

Space Reserved for Circuit Court Clerk Recording Validation

Form with sections 1-11: Type(s) of Instruments, Conveyance Type, Tax Exemptions, Consideration and Tax Calculations, Fees, Description of Property, Transferred From, Transferred To, Other Names to Be Indexed, Contact/Mail Information, and Assessment Information.

ANNE ARUNDEL COUNTY CIRCUIT COURT (Land Records) Form 37-1, P. 0222, 08-CE59-07599, Date Available: 07/27/2024, Printed: 07/24/2024

Space Reserved for County Validation

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:

Tax Map #	Parcel #	Block #	Lot #	Section
32	4	17	N/A	N/A

FOR RESUBMITTAL ONLY

Corrections
Redesign
No Change
Non-Critical Area

*Complete Only Page 1
General Project Information

Tax ID: 3525-3419-1002

Project Name (site name, subdivision name, or other) 870 MILL CREEK RD

Project location/Address 870 MILL CREEK RD.

City ARNOLD Zip 21012

Local case number 2025-0017-P

Applicant: Last name SIKORA First name KENNETHA

Company STYLE WORKS DESIGN BUILD, 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 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:

PROPOSED SINGLE FAMILY DWELLING

Yes Intra-Family Transfer <input type="checkbox"/> Grandfathered Lot <input checked="" type="checkbox"/>	Yes Growth Allocation <input type="checkbox"/> Buffer Exemption Area <input type="checkbox"/>
--	---

Project Type (check all that apply)

Commercial <input type="checkbox"/> Consistency Report <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Mixed Use <input type="checkbox"/> Other <input type="checkbox"/>	Recreational <input type="checkbox"/> Redevelopment <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Shore Erosion Control <input type="checkbox"/> Water-Dependent Facility <input type="checkbox"/>
---	---

SITE INVENTORY (Enter acres or square feet)

	Acres	Sq Ft		Acres	Sq Ft
IDA Area	0.09	3,890	Total Disturbed Area	0.10	4,205
LDA Area	0.24	10,646			
RCA Area	0	0	# of Lots Created	0	
Total Area	0.33	14,536			

	Acres	Sq Ft		Acres	Sq Ft
Existing Forest/Woodland/Trees	0.33	14,536	Existing Lot Coverage	0.04	1,864
Created Forest/Woodland/Trees	0.10	4,200	New Lot Coverage	0.046	2,019
Removed Forest/Woodland/Trees	0.08	3,308	Removed Lot Coverage	0.04	1,864
<i>↓ INCLUDES OFF-SITE CLEARING</i>			Total Lot Coverage	0.046	2,019

VARIANCE INFORMATION (Check all that apply)

	Acres	Sq Ft		Acres	Sq Ft
Buffer Disturbance	0.10	4,205	Buffer Forest Clearing		
Non-Buffer Disturbance	0	0	Mitigation	0.046	4,200

<p><u>Variance Type</u></p> Buffer <input checked="" type="checkbox"/> Forest Clearing <input type="checkbox"/> HPA Impact <input type="checkbox"/> Lot Coverage <input type="checkbox"/> Expanded Buffer <input type="checkbox"/> Nontidal Wetlands <input type="checkbox"/> Setback <input checked="" type="checkbox"/> Steep Slopes <input checked="" type="checkbox"/> Other <input type="checkbox"/>	<p><u>Structure</u></p> Acc. Structure Addition <input type="checkbox"/> Barn <input type="checkbox"/> Deck <input type="checkbox"/> Dwelling <input type="checkbox"/> Dwelling Addition <input type="checkbox"/> Garage <input type="checkbox"/> Gazebo <input type="checkbox"/> Patio <input type="checkbox"/> Pool <input type="checkbox"/> Shed <input type="checkbox"/> Other <input type="checkbox"/>
---	---



Monthly Fees, Price
 December 2025
 Revised: October 1, 2025
 Approved by: Environmental Services
 County Operations, Inc.

ANN ARUNDEL COUNTY RECORDS DEPARTMENT

Your property is located within the Chesapeake Bay Critical Area, you are required to provide the appropriate Office with more information in order to process your request for review of your application, the Office of Planning and Zoning will determine the impact of your proposed development on stormwater runoff and other environmental impacts.

You are responsible for submitting copies of Critical Area Report with your application. Application Fee Schedule:

Application Fee Schedule

Application Fee Schedule by 2025
 B&D
 The site of the subject property shall be drawn to the engineers scale of 1"=20', and the site plan shall be submitted with the application. The site plan shall show the location of the subject property, street names, existing tree line, setbacks, and other information, proposed setbacks, and other structural information.

Application Fee Schedule by 2025
 B&D
 The site plan shall be submitted to the Planning Office of the County of Anne Arundel, 2000 Riverside Blvd.

The appropriate state or local sewerage district address shall be provided:

- Describe the proposed use of the subject property and include in the report if residential, commercial, industrial, or critical area.
- Describe the type of redwood trees and shrubs on the subject property and include in the report the square footage of the property that is vegetated with trees and shrubs, on the subject property will be disturbed by the proposed development, and how the disturbance will be mitigated.
- Describe the methods to minimize impacts on water quality and habitat from proposed construction and other development, sediment control, and site cleanup.
- Document the impacts prior to and after construction, including structural, driveway, and concrete areas.
- Additionally, describe any habitat protection areas on the subject property including existing buffers, steep slopes of 5% or greater, rare and endangered species, wetlands, riparian areas, coastal wetlands, bird nesting sites, historic structures and other features, riparian forests, other heritage areas, and other habitat features of local significance.

Chesapeake Bay Critical Area Report

Magothy Shores—Parcel 4 Tax Map: 32 Grid: 17 Parcel: 4

Arnold, MD

December 2021
Revised: October 2025

Prepared for:

Style Works Design Build, LLC
205 South Villa Avenue
Annapolis, MD 21401

Prepared by:

Holly Oak Consulting, LLC
303 Sycamore Rd
Severna Park, MD 21146
khaines@hollyoakconsulting.com

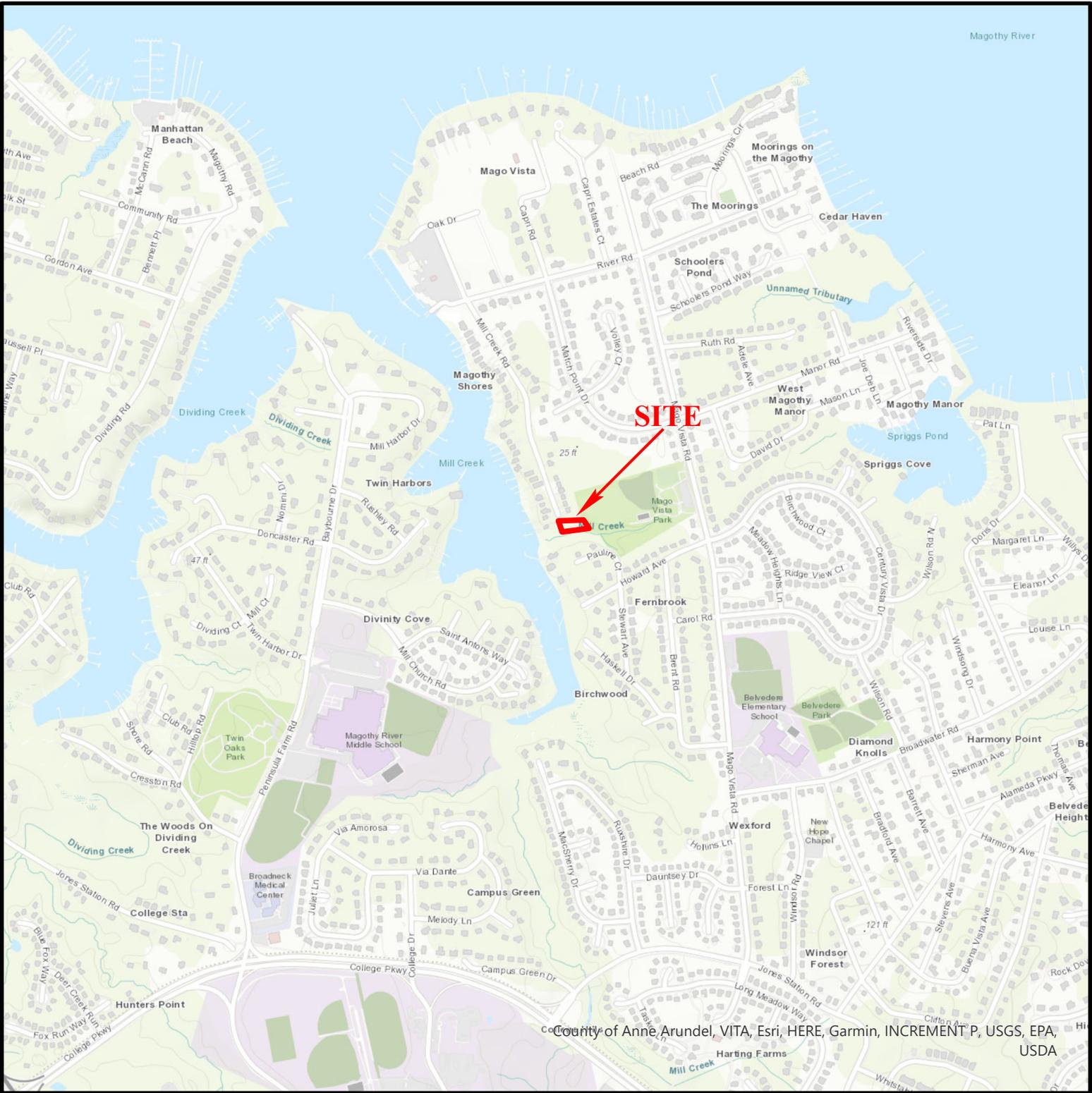


Kevin C. Haines

10/11/2025

Kevin C. Haines

Date



**Vicinity Map
Magothy Shores
Arnold, MD
Scale: 1" : 1,000'**



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1.0 - INTRODUCTION

The subject property is located at the terminus of Mill Creek Road, Maryland. The property is identified on Tax Map 32, Block 17, as Parcel 4. The site is zoned as R5 and OS per the Anne Arundel County Zoning Map. Field work for this report was completed on November 1, 2021 and a follow-up visit was made on September 24, 2025 by Kevin C. Haines of Holly Oak Consulting, LLC.

2.0 – EXISTING CONDITIONS

The site contains 0.33-acre all of which is within the Chesapeake Bay Critical Area. More specifically the site is mapped within the Limited Development Area (LDA) and the Resource Conservation Area (RCA). The site falls from north to south towards an intermittent stream channel, an unnamed tributary to Mill Creek. The site is entirely forested.

The site is bordered to the north by an unnamed and unimproved right-of-way, to the east by Mago Vista Park, to the south by undeveloped land, and to the west by a single-family residential property.

The United States Department of Agriculture Natural Resources Conservation Service has mapped the soils throughout Anne Arundel County and makes the mapped soils and descriptions available online through the Web Soil Survey. The data that was retrieved on October 26, 2021 and showed two (2) soil types exist in the study area. The soil type and description can be found below. A copy of the soil mapping can be found in [Appendix A](#).

<i>Map Unit Symbol</i>	<i>Map Unit Name</i>	<i>Hydric (%)</i>	<i>K-Factor (Whole Soil)</i>
AuB	Annapolis-Urban land complex, 5-15% slopes	0	0.24
DwB	Downer-Hammonton Urban land complex, 0-5% slopes	0	0.00

3.0 – AERIAL IMAGERY REVIEW & SITE HISTORY

This site is in Arnold, MD a suburb of the greater Baltimore-Annapolis area. The surrounding area was largely used as a summering location from the 1920s through the 1950s when the surrounding areas began to become developed with residential subdivisions.

Per aerial photos from 1970-2021 the site has remained in a similar vegetative state.

4.0 – PROPOSED CONDITIONS

The applicant proposes to construct a house with an attached garage. A retaining wall is proposed along the southern edge of the driveway and house. The project will be served by public water and sewer.

Developed woodland clearing of 4,205 square feet will be required for this project, and it will be mitigated as shown on the administrative site plan in conjunction with the buffer mitigation needed. In total, 7,499 sq. ft. of reforestation is required, and 4,200 sq. ft. of it will be replanted on site.

Stormwater management will comply with ESD as required during the building and/or grading permit review. With the current proposed plan, a series of landscape infiltration berms will be placed along the existing pathway of the road on the site. The road will be removed and the soil will be replaced as needed to promote the necessary infiltration. The project will require an

approved grading permit which will incorporate the required sediment controls (i.e. reinforced silt fence, stabilized constriction entrances, etc..).

5.0 – HABITAT PROTECTION AREAS

State and County Critical Area Law identifies certain areas of high environmental value as Habitat Protection Areas (HPA's). Below is a discussion of HPA's existing within the subject site.

5.1 - Steep Slopes

Anne Arundel County designates steep slopes within the Critical Area as a slope of 15% or greater that is at least 6' high. Most of the site is encumbered with steep slopes and much of the proposed development is occurring with steep slope areas. The slopes will be stabilized post-construction by the house foundation, a retaining wall, and vegetation.

5.2 - Rare, Threatened & Endangered Species

The site does not lie within the mapped FIDS habitat per MDDNR's MERLIN Online GIS Database. The on-site forest is not mapped as Forest Interior Dwelling Species (FIDS) habitat. Based on observations made during the field visit, the on-site forest does not provide an adequate area and composition to support FIDS.

5.3 - Wetlands, Streams, & 100-Year Floodplain

The site does contain non-tidal wetlands with a stream being located just to south of the property. The details of a wetland delineation may be found in a Wetland Delineation Report prepared by Holly Oak Consulting, LLC. the USFWS National Wetland Inventory (*Appendix A*) maps a stream within the site. The MD DNR Wetland Inventory does not indicate the presence of wetlands or streams within the boundary of the site.

The site is located within the Magothy River Watershed (MD 02131001 8-digit).

The majority of the site lies within Zone X (areas of minimal flood hazard) and a small portion lies within Zone AE (BFE – 6'), per FEMA Flood Insurance Rate Maps #24003C0159F (eff. 2/18/15) as shown in *Appendix A*.

5.4 – Buffer and Expanded Buffer

The site contains a 100' Buffer that extends into the property from intermittent stream located to the south of the property. The 100' buffer is expanded on this site because it is mapped by the steep slopes, as shown on the Administrative Site Plan. Permanent disturbance within the buffer and expanded buffer will require mitigation at a rate of 3:1 with temporary disturbance requiring mitigation at a rate of 1:1. The final amounts of disturbance and mitigation will be determined at the grading permit review phase.

5.5 – Other HPAs Not Contained within Study Area

Several HPAs are not mapped within or adjacent to the study area. MDDNR's MERLIN online mapping database was reviewed and showed that the following HPA's are not located within or near the study area: Submerged aquatic vegetation, shellfish beds, historical waterfowl staging and concentration areas, sensitive species project review areas, and natural heritage areas.

6.0 – EXISTING VEGETATION & WILDLIFE

The vegetation within this site is very common for sloped areas along the shores of the Magothy and Severn Rivers. The dominant tree species within the site is tulip poplar (*Liriodendron tulipifera*), southern red oak (*Quercus falcata*), and chestnut oak (*Quercus montana*). The 6-11.9” DBH size class contained most of the trees within the site. The understory of the site is comprised mostly of American holly (*Ilex oapca*) and black gum (*Nyssa sylvatica*). In the wetland areas along the southern property boundary sweetbay magnolia (*Magnolia virginiana*) was noted as occurring. The shrub and herbaceous layers are dominated by invasive species including wineberry (*Rubus phoenicolasius*), English ivy (*Hedera helix*), and oriental bittersweet (*Celastrus orbiculatus*).

The function of the existing vegetation is limited to soil stabilization as it provides very little in the way of wildlife habitat given its predominance of invasive species.

References

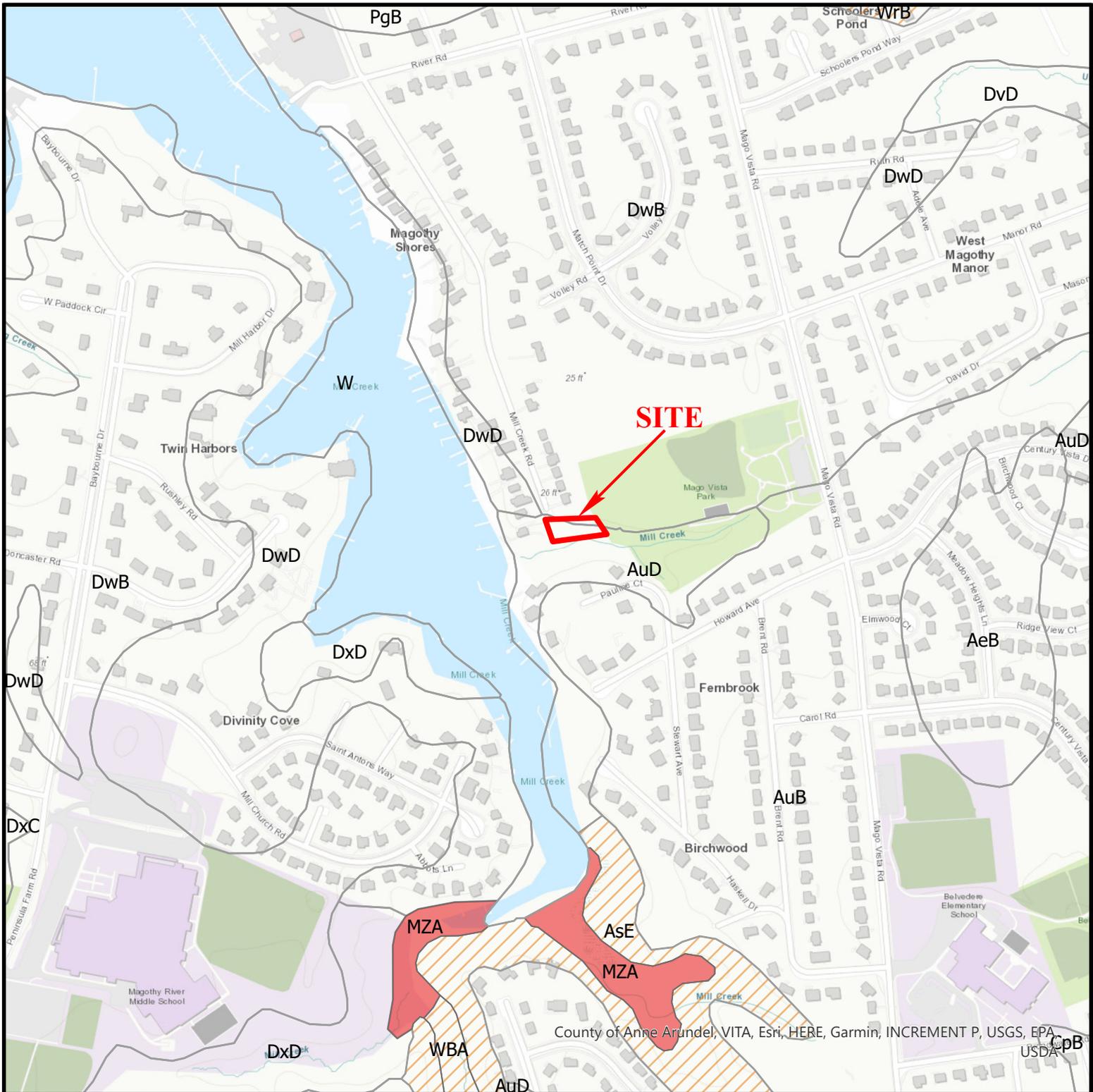
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- Jones, Claudia, McCann, Jim, & McConville, Susan. (2001). *A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area*.
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Appendix A:
Preliminary Mapping



USGS 24k Topographical Map
Magothy Shores
Arnold, MD
Scale: 1" : 500'





USDA NRCS Soil Survey (Anne Arundel Co., MD)

Magothy Shores

Arnold, MD

Scale: 1" : 500'

% Hydric Component

- 0
- 0.1-64.9%
- 65.0-100%

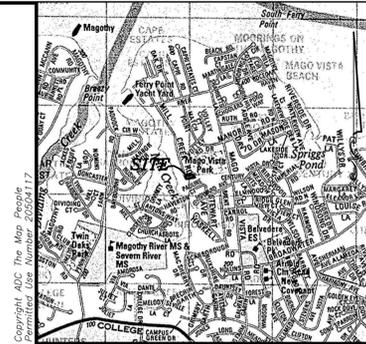


County of Anne Arundel, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA



FEMA Flood Insurance Rate Map
Magothy Shores
Arnold, MD
Scale: 1" : 500'





VICINITY MAP
SCALE: 1"=2000'

2.0 – EXISTING CONDITIONS

The site contains 0.33-acre all of which is within the Chesapeake Bay Critical Area. More specifically the site is mapped within the Limited Development Area (LDA) and the Resource Conservation Area (RCA). The site falls from north to south towards an intermittent stream channel, an unnamed tributary to Mill Creek. The site is entirely forested.

The site is bordered to the north by an unnamed and unimproved right-of-way, to the east by Mago Vista Park, to the south by undeveloped land, and to the west by a single-family residential property.

The United States Department of Agriculture Natural Resources Conservation Service has mapped the soils throughout Anne Arundel County and makes the mapped soils and descriptions available online through the Web Soil Survey. The data that was retrieved on October 26, 2021 and showed two (2) soil types exist in the study area. The soil type and description can be found below. A copy of the soil mapping can be found in Appendix A.

Map Unit Symbol	Map Unit Name	Hydric (%)	K-Factor (Whole Soil)
AuB	Annapolis-Urban land complex, 5-15% slopes	0	0.24
DwB	Downer-Hammonton Urban land complex, 0-5% slopes	0	0.00

LEGEND

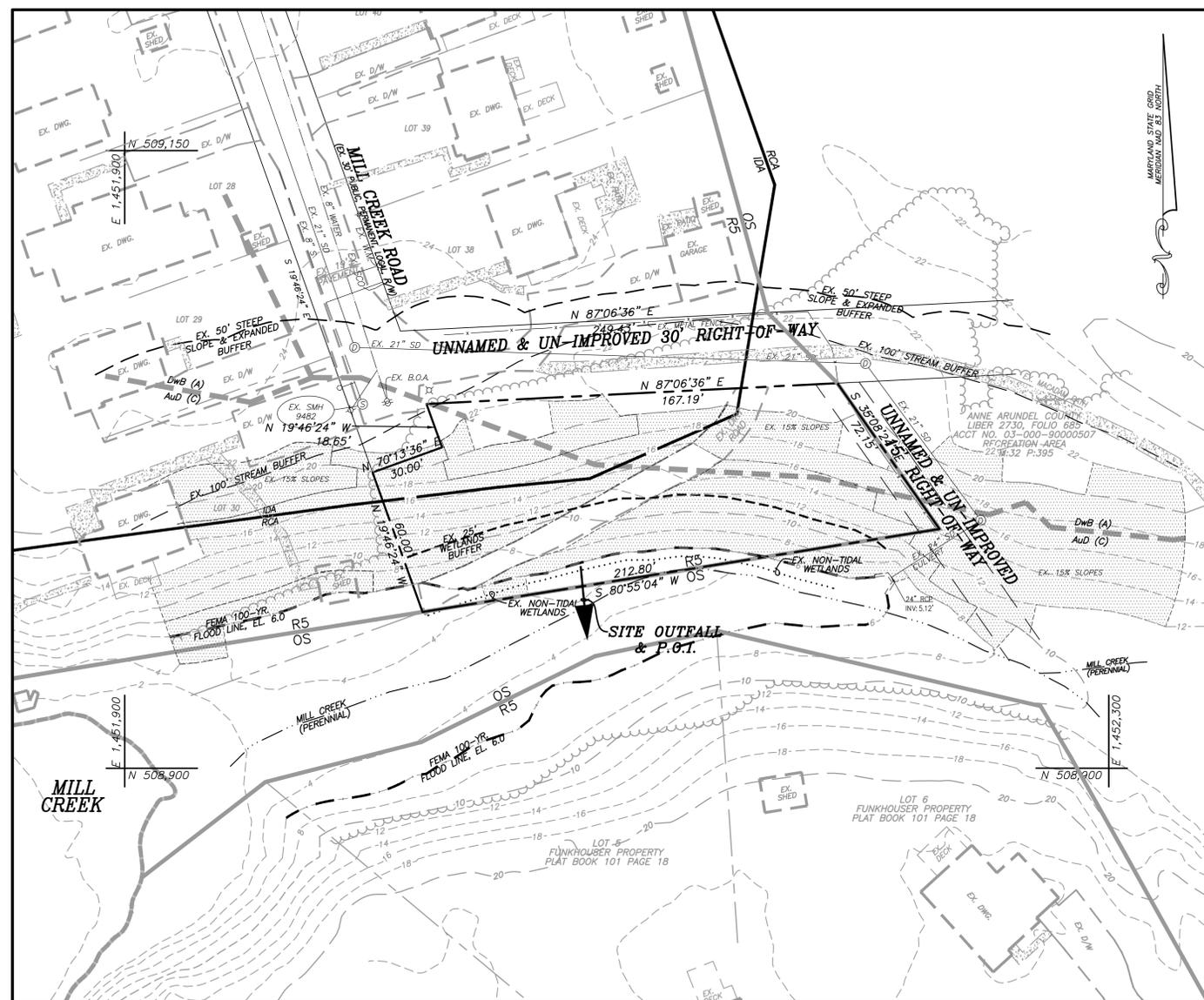
- Existing Curb
- Existing Contour
- Existing Wire Fence
- Existing Wood Fence
- Existing Woods line
- Existing Gas Line
- Existing Gas Valve
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole
- Existing Sewer Manhole
- Existing Sewer Cleanout
- Existing Telephone Manhole
- Existing Utility Pole
- Existing Water Valve
- Existing Water Meter
- Ex. FEMA Line
- Ex. 15%+ Slopes
- Limits of Non-Tidal Wetlands

SETBACKS (ZONED R5)

- Front N/A*
 - Rear 20'
 - Side 7'
- *Established by existing dwellings

SITE ANALYSIS

Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq. Ft. ± (0.33 Ac. ±)
Predominant Soil Type	DwB: Downer-Hammonton-Urban land complex, 0 to 5 percent slopes (HSG A) AuD: Annapolis-Urban land complex, 5 to 15 percent slopes (HSG C)
Existing Developed Woodlands	14,536 Sq. Ft. ± (0.33 Ac. ±)
Existing Lot Coverage	1,864 Sq. Ft. ± (0.04 Ac. ±) (Ex. Abandoned Road)



EXISTING PLAN VIEW
SCALE: 1" = 30'

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

Maryland Professional Engineering Firm License No. 47570
BOYD & DOWGIALLO, P.A.
ENGINEERS*SURVEYORS*PLANNERS
412 Headquarters Drive, Suite 5
Millersville, Maryland 21108
(410) 729-1234 (P)
(410) 729-1243 (F)
JERRY1@BNDPA.COM

Job No.: 20-231
Sheet No.: 1 of 1
Checked By: JET
DATE: SEPTEMBER, 2025
Permit #G02020213
Proj. No.

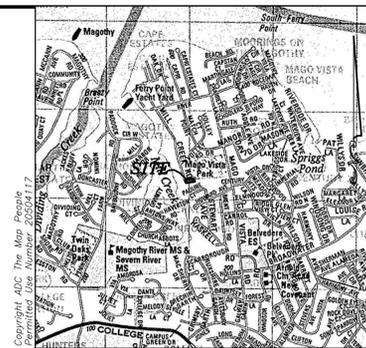
PRE CRITICAL AREA PLAN

870 MILL CREEK ROAD
TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

THIRD DISTRICT

ANNE ARUNDEL COUNTY, MD 21012

NO.	DATE	BY	REVISION	APPROVED	DATE



VICINITY MAP
SCALE: 1"=2000'

LEGEND

Existing Curb	=====
Existing Contour	---51---
Existing Wire Fence	---#---
Existing Wood Fence	---x---
Existing Woods line	---w---
Existing Gas line	---g---
Existing Gas Valve	---v---
Existing Stormdrain Inlet	---s---
Existing Stormdrain Manhole	---m---
Existing Sewer Manhole	---n---
Existing Sewer Cleanout	---c---
Existing Telephone Manhole	---t---
Existing Utility Pole	---u---
Existing Water Valve	---w---
Existing Water Meter	---m---
Proposed Contour	---p---
Proposed Reinforced Silt Fence	---r---
Proposed Limit of Disturbance	---d---
Stabilized Construction Entrance	---s.c.e.---
Proposed Reforestation (See Reforestation Plans for Details)	---r---
Proposed Bio-Log	---b---
Overland Relief Flow Path	---o---

SETBACKS (ZONED R5)

Front 10' N/A*
Rear 20'
Side 7'

*Established by existing dwellings

VARIANCE NOTES:

- In accordance with Article 17, Section 8-201 of the Anne Arundel County Code, a variance is required to allow the disturbance* of 1,999 Sq.Ft. of 15%+ steep slopes within the Critical Area and allow the construction of a dwelling and driveway.
 - In accordance with Article 18, Section 4-601 of the Anne Arundel County Code, a 7 foot variance to the required 25 foot setback of an abutting right-of-way to allow a side setback of 7 feet.
 - In accordance with Article 17, Section 8-301 of the Anne Arundel County Code, a variance is required to allow the disturbance of 4,205 Sq.Ft. of expanded buffer within the Critical Area and allow the construction of a dwelling and driveway.
 - In accordance with Article 18, Section 4-601 of the Anne Arundel County Code, a 7 foot variance to the required 25 foot front setback to allow a front setback of 18 feet.
- *Excluding removal of ex. abandoned road and prop. SWM Plantings.

SITE ANALYSIS

Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Disturbed Area	4,205 Sq.Ft.± (0.10 Ac.±)
Vegetative Area	2,186 Sq.Ft.± (0.05 Ac.±)
Predominant Soil Type	DwB: Downer-Hammonton-Urban land complex, 0 to 5 percent slopes (HSG A) Aud: Annapolis-Urban land complex, 5 to 15 percent slopes (HSG C)
Existing Developed Woodlands	14,536 Sq.Ft.± (0.33 Ac.±)
Total Proposed Clearing	3,308 Sq.Ft.± (0.08 Ac.±) (518 Sq.Ft. Off-Site + 2,790 Sq.Ft. On-Site)
Existing Lot Coverage	1,864 Sq.Ft.± (0.04 Ac.±) (Ex. Abandoned Road)
Proposed Lot Coverage	2,019 Sq.Ft.± (1,179 Sq.Ft. House + 468 Sq.Ft. On-Site D/W + 372 Off-Site D/W)
Grading Quantities	200 cu. yds. Cut 150 cu. yds. Fill

QUALIFIED PROFESSIONAL CERTIFICATION

POST CRITICAL AREA CERTIFIED BY:

SIGNED: _____ DATE: _____

KEVIN C. HAINES
HOLLY OAK CONSULTING, LLC
303 SYCAMORE RD
SEVERNA PARK, MD 21146
PHONE: (443) 906-3419
KHAIN@HOLLYOAKCONSULTING.COM

BUFFER TABULATION

Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.±
Total Critical Area	14,536 Sq.Ft.±
Existing Coverage within 100' Buffer	1,864 Sq.Ft.*
Existing Coverage outside of 100' Buffer	0 Sq.Ft.
Proposed Lot Coverage Within 100' Buffer	1,647 Sq.Ft.
Permanent Buffer Disturbance @ 3:1	1,647 Sq.Ft. X 3 = 4,941 Sq.Ft.
Temporary Buffer Disturbance	2,558 Sq.Ft. X 1 = 2,558 Sq.Ft.
Increase in Lot Coverage within 100' Buffer	1,647 Sq.Ft. - 1,864* Sq.Ft. = -217 Sq.Ft.
Total Buffer Mitigation	2,558 Sq.Ft. + 4,941 Sq.Ft. = 7,499 Sq.Ft.

*Existing Dirt Road

IDA CRITICAL AREA TABULATION

Zoning	R5
Critical Area Classification	IDA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area-IDA	3,890 Sq.Ft.± (0.09 Ac.±)
Developed Woodlands (Within I.D.A.)	3,890 Sq.Ft.± (0.09 Ac.±) (Includes Ex. Dirt Road)
Maximum Clearing Allowed (Within C.A.)	N/A
Proposed Clearing (Within IDA C.A.)	3,050 Sq.Ft. (2,532 Sq.Ft. On-Site + 518 Sq.Ft. Off-Site)
Reforestation Required (Prop. Clearing x 1.0)	N/A
Afforestation Threshold	N/A
Reforestation Provided	N/A
Remaining Reforestation Remaining	N/A
Existing Lot Coverage	58 Sq.Ft. (Includes Ex. Dirt Road)
Maximum Lot Coverage (Within C.A.)	N/A
Proposed Lot Coverage (On-Site)	1,646 Sq.Ft.± (0.05 Ac.±) (1,178 Sq.Ft. DWG + 468 Sq.Ft. D/W)

RCA CRITICAL AREA TABULATION

Zoning	R5
Critical Area Classification	RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area-RCA	10,646 Sq.Ft.± (0.24 Ac.±)
Developed Woodlands (Within R.C.A.)	10,646 Sq.Ft.± (0.24 Ac.±)
Maximum Clearing Allowed (Within C.A.)	6,534 Sq.Ft.
Proposed Clearing (Within RCA C.A.)	258 Sq.Ft.± (Excludes Ex. Dirt Rd.)
Reforestation Required (Prop. Clearing x 1.0)	258 Sq.Ft.±
Afforestation Threshold	1,596 Sq.Ft.± (15%)
Reforestation Provided	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Req'd. Buffer Mitigation	7,499 Sq.Ft.
Total Planting/Reforestation Req'd.	258 Sq.Ft. + 7,499 Sq.Ft. = 7,757 Sq.Ft.
Total Planting/Reforestation Prov'd.	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Remaining Mitigation Req'd.	7,757 Sq.Ft. - 4,200 Sq.Ft. = 3,557 Sq.Ft.*
Existing Lot Coverage	1,806 Sq.Ft. (Ex. Dirt Road)
Maximum Lot Coverage (Within R.C.A.)	1,596 Sq.Ft.± (0.037 Ac.±)
Proposed Lot Coverage (Within RCA) (On-Site)	1 Sq.Ft.±

*to be provided via off-site mitigation



DEVELOPED PLAN VIEW
SCALE: 1"=30'

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

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JERRY.T@BNDPA.COM

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POST CRITICAL AREA PLAN
870 MILL CREEK ROAD
TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5
THIRD DISTRICT
ANNE ARUNDEL COUNTY, MD 21012



ANNE
ARUNDEL
COUNTY

MARYLAND
DEPARTMENT OF HEALTH

J. Howard Beard Health Services Building
3 Harry S. Truman Parkway
Annapolis, Maryland 21401
Phone: 410-222-7095 Fax: 410-222-7294
Maryland Relay (TTY): 711
www.aahealth.org

Tonii Gedin, RN, DNP
Health Officer

MEMORANDUM

TO: Sadé Medina, Zoning Applications
Planning and Zoning Department, MS-6301

FROM: Brian Chew, Program Manager *BC*
Bureau of Environmental Health

DATE: January 13, 2026

RE: Style Works Design Build, LLC
870 Mill Creek Road
Arnold, MD 21012

NUMBER: 2025-0243-V

SUBJECT: Variance/Special Exception/Rezoning

The Health Department has reviewed the above referenced variance to allow a dwelling and associated facilities with less setbacks and buffer than required and with disturbance to slopes of 15% or greater.

The Health Department has reviewed the above-referenced request. The property is served by public water and sewer facilities. The Health Department has no objection to the above-referenced request.

If you have further questions or comments, please contact Brian Chew at 410-222-7413.

cc: Sterling Seay



Jamileh Soueidan -DNR- <jamileh.soueidan@maryland.gov>

CAC Comments: 2025-0249-V; Caine (AA 0004-26) & 2025-0243-V; Style Works Design Build (AA 0003-26)

1 message

Jamileh Soueidan -DNR- <jamileh.soueidan@maryland.gov>
To: Sadé Medina <pzmedi22@aacounty.org>

Thu, Jan 22, 2026 at 3:28 PM

Good afternoon,

Our office has reviewed the above-referenced variance and provide the following comments:

- **2025-0249-V; Caine (AA 0004-26):** Appropriate mitigation is required.
- **2025-0243-V; Style Works Design Build (AA 0003-26):** The project proposes the development of a vested lot with a single-family dwelling and associated amenities, with disturbance to the Critical Area Buffer, which is expanded for steep slopes. The proposed improvements will result in 2,019 square feet of lot coverage and 3,308 square feet of forest clearing within the Buffer. Our office notes that extensive removal of vegetation on the steep slopes for stormwater management could increase erosive conditions on the slopes. The Administrative Hearing Officer (AHO) must find that each and every one of the Critical Area Variance standards have been met, including that the proposal meets unwarranted hardship and that this variance would not adversely affect water quality and wildlife or plant habitat. If the AHO finds that each and every one of the Critical Area variance standards have been addressed, then appropriate mitigation is required.

These comments have been entered into the County's online portal.

Sincerely,
Jamileh Soueidan

--

Critical Area Commission for the
Chesapeake & Atlantic Coastal Bays
dnr.maryland.gov/criticalarea

Jamileh Soueidan (she/her)
Natural Resources Planner
1804 West Street, Suite 100
Annapolis, MD 21401
Office: [410-260-3462](tel:410-260-3462)
Cell: [667-500-4994](tel:667-500-4994) (preferred)
jamileh.soueidan@maryland.gov

2025-0243-V

Menu Cancel Help

Task Details OPZ Critical Area Team

Assigned Date

12/23/2025

Assigned to

Kelly Krinetz

Current Status

Complete w/ Comments

Action By

Kelly Krinetz

Comments

The applicant has reduced the proposed development on the site. In order to provide a clear understanding of the conditions under which a decision will be made, clarification of certain statements by the applicant is provided below.

The applicant states that the proposed permanent lot coverage on the lot will be 1,647 square feet, which is below the 1,864 square feet of existing lot coverage. While this is true for the amount of coverage on the site itself, this figure does not include the 372 sq ft of proposed driveway coverage immediately offsite, within the adjacent road bed. The total proposed coverage for the development of this site as shown on the site plan is 2019 sq ft.

The applicant states that the neighboring waterfront properties have the development benefits of being mapped as Buffer Modified, however the subject property does not.

The Buffer/Buffer Modification designation does not serve to benefit/not benefit this application as a variance for slope disturbance would still be required as would a Buffer variance since the entire property falls within the Perennial Stream Buffer that is not affected by the Buffer/BMA designation.

The applicant states that as a legal buildable lot in the R5 zoning district, the intended use of a single-family residential dwelling is a permitted use by right. While the applicant is correct that this lot does meet the definition of a legal lot, the designation of buildable can only apply should the applicant demonstrate the ability to obtain the necessary permit(s) to build.

The applicant states that the surrounding properties are developed with similarly sized single family dwellings and that further reduction of the size of the proposed dwelling would result in a dwelling that is out of character with the community.

The neighborhood and particularly the southern end of the street is populated with older shore homes and has not yet been developed. Many of these homes were not constructed with attached garages although some have been able to add detached garages. Five of the existing 6 homes on the eastern side of Mill Creek Road, immediately adjacent to this site are one story homes with a foot print of 864 sq ft with off street parking pads/driveways and no garage structure.

Should the AHO make the determination that this revised proposal meets the approval standards for a variance to Critical Area regulations, the appropriate mitigation will be addressed with the applicable permits based on the approval conditions.

End Time

Billable

No

Time Tracking Start Date

In Possession Time (hrs)

Estimated Hours

0.0

Comment Display in ACA

- All ACA Users
- Record Creator
- Licensed Professional
- Contact
- Owner

Task Specific Information

Due Date

01/13/2026

Assigned to Departm

OPZ Critical Area

Status Date

01/06/2026

Overtime

No

Start Time

Hours Spent

0.0

Action by Departm

OPZ Critical Area

Est. Completion D.

Display E-mail

Display Comm

Expiration Date

Reviewer Phone Number

Review Notes

Reviewer Email

Reviewer Name

2025-0243-V

Menu Cancel Help

Task Details I and P Engineering

Assigned Date

01/05/2026

Assigned to

Natalie Norberg

Current Status

Complete w/ Comments

Action By

Natalie Norberg

Comments

1. Identify whether the un-named and un-improved 30' ROW is privately-owned or publicly-owned.
- 2.If the un-named and un-improved 30' ROW is privately-owned, a grading easement will be needed as the LOD falls within its boundary. Address at Grading Permit.
3. Parking in front of the garage will not be allowed. Vehicles must not be parked within the ROW. Address at Grading Permit.
4. Bio-logs are prone to degrade over time. Stone check dams will need to be used for the infiltration berm. Address at Grading Permit.
5. The WHC needs to be shown as per the county details. Address at Grading Permit.
6. Refer to he county as-built plans. A stub connected to existing sewer manhole #9482 is present which may conflict with the SHC.

End Time

Billable

No

Time Tracking Start Date

In Possession Time (hrs)

Estimated Hours

0.0

Comment Display in ACA

- All ACA Users
- Record Creator
- Licensed Professional
- Contact
- Owner

Task Specific Information

Expiration Date

Reviewer Phone Number

Review Notes

Reviewer Email
ipnorb81@aacounty.org

Due Date

01/13/2026

Assigned to Depart

Engineering

Status Date

01/12/2026

Overtime

No

Start Time

Hours Spent

0.0

Action by Departm

Engineering

Est. Completion D

- Display E-mail
- Display Comm

Reviewer Name

Natalie Norberg



STUART PITTMAN, COUNTY EXECUTIVE
JESSICA LEYS, DIRECTOR
RECREATION AND PARKS
1 HARRY S. TRUMAN PKWY
ANNAPOLIS, MD 21401
A.ACOUNTY.ORG/RECPARKS



MEMORANDUM

TO: Sadé Medina, Zoning Division
Office of Planning and Zoning

FROM: Pat Slayton
Capital Projects Division

SUBJECT: Variance Case 2025-0243-V

DATE: January 9, 2026

The Department of Recreation and Parks has reviewed the above plans to determine if there may be impacts to the Anne Arundel County Green Infrastructure Network, parks, and trails. Please note our recommendations according to those findings below.

- This site is contiguous to Mago Vista Park. This development shall not discharge runoff to the County's property at a rate greater than existing conditions. The drawing for the proposed development shows a driveway apron extending into the adjacent ROW. The same drawing does not show the waterline that serves Mago Vista Park. The proposed development must not occlude the ROW or impact the existing utilities.

The Department of Recreation and Parks grants conditional approval.

cc: File

2025-0243-V

Menu Cancel Help

Task Details OPZ Cultural Resources

Assigned Date

12/23/2025

Assigned to

Stacy Poulos

Current Status

Complete w/ Comments

Action By

Stacy Poulos

Comments

This property is adjacent to a historic structure documented on the Maryland Inventory of Historic Properties, the Issac and Aili Yrttimaa House (AA-2547). The property exhibits high archaeological potential. The Cultural Resources Section will require review of associated building/grading permits to determine compliance with Article 17-6-502 and -503. A site visit by a County archaeologist will be required at the time to complete the review.

End Time

Billable

No

Time Tracking Start Date

In Possession Time (hrs)

Estimated Hours

0.0

Comment Display in ACA

- All ACA Users
- Record Creator
- Licensed Professional
- Contact
- Owner

Due Date

01/13/2026

Assigned to Depart

OPZ Cultural Resou

Status Date

01/16/2026

Overtime

No

Start Time

Hours Spent

0.0

Action by Departm

OPZ Cultural Resou

Est. Completion D

- Display E-mail
- Display Comm

Task Specific Information

Expiration Date

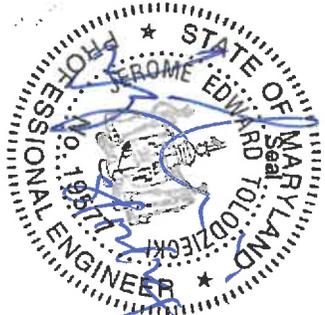
Reviewer Phone Number

Review Notes

Reviewer Email

Reviewer Name

Anne Arundel County Office of Planning and Zoning
 Individual Single Family Dwelling (SFD) Engineering Review Checklist

Project Name-Number	870 Mill Creek Ln	
Design Professional	Design Professional Certification (Seal, Signature and expiration information)	
Instructions: 1. The checklist must be submitted with the first submittal. 2. Packages submitted without the completed checklist will not be reviewed and will be returned to the applicant. 3. Design Professional (Des.) should insert into each box either of the following: a. ✓ This item has been addressed b. N This item does not apply to this project 4. All boxes must be checked. 5. The review engineer (Rev.) will upon review of the plans verify by inserting either of the following: a. ✓ This item has been adequately addressed or agree that it does not apply. b. X This item has not been adequately addressed. (Use the remarks column to indicate via letter designation, which item needs to be addressed or if a more detailed response is required then indicate in the remarks column that the item is addressed in the comment letter). 6. <u>A copy of the checklist will be returned to the applicant with the comment letter.</u> 7. <u>The checklist must be returned with the second submittal utilizing the same check format indicated in item 3 above</u>		
▶ This checklist is being provided as a general guide for identifying the minimum features that should be addressed prior to submitting the plans for engineering review is to be used in conjunction with the site development plan checklist for Single Family Dwellings (SFD).		 P2AKS 3/16/24
▶ The design consultant by assigning his/her seal and signature certifies that the plans were completed in accordance with all currently applicable design standards.		
▶ Plans that are incomplete as per the checklist items will result in an incomplete review and will be returned to the consultant. The resubmittal will be considered a first submittal in the review process.		
▶ The Stormwater Management Concept items will be reviewed with the first submittal. If based on the review, this office determines that SWM is being addressed using Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP), then the engineering review of the final details will be completed.		
▶ If this office determines that SWM is NOT being addressed using Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP), then the engineering review of the final details will NOT be completed. The applicant will then address the comments that are required to demonstrate that ESD to the MEP has been addressed prior to commencement of final plan review.		

First Submittal		Second Submittal		Engineering Review for Single Lot Grading Permit Plans	Remarks
Des.	Rev.	Des.	Rev.		
Stormwater Management Concept Review					
Drainage Area Maps					
1				Provide the following drainage area maps: A) Entire drainage area to site and or affecting site. B) On site drainage areas to SWM devices	
2	✓			All Drainage area maps: A) Contours numbered with legible lettering B) contour lines extend at least 200' beyond drainage area boundaries C) Travel path for Tc shown with segments labeled (distance, slope and "n" factor) D) Hydrologic soil groups delineated and shaded E) Acreage shown for entire drainage area and each sub area used in computations for curve number or "C" factor F) North arrow shown G) Scale shown.	
3	✓				
4	✓			Soils: A) Labeled and shaded based on Hydrologic Soil Group (A, B, C, D). B) Indicate highly erodible soils by separate shading.	
5	✓			If all of the required information required to be shown, such as soil and zoning etc. cannot be shown on the overall map then the information may be shown on a separate map. These maps must be shown at same scale as overall map.	
6	✓			Scale shall be 1" = 100' for sites with acreage ≤ 25 acres, or 1" = 200' for sites with acreage > 25 acres.	
7				On Site Plans	
8	✓			North arrow/NAD 83:	
9	✓			Benchmark- BM NO., description and elevation. (Indicate vertical control used, NAVD 1929 or NAVD 1988):	
10				Pre Development	
11				Site outline showing bearings and distances.	
12	✓			Resource Mapping: Provide a composite map which allows clear depiction of the existing site resources and conditions.	
13	✓			Site resources include but are not limited to: A) Mature trees B) Tidal and Non tidal Wetlands (based on report) C) Floodplains D) Streams labeled as (Perennial, Intermittent, etc.), E) Slopes greater than 25% (15% in critical areas), F) Buffers to streams and wetlands, G) Historical and or archaeological resources	
14	✓			Highlight and shade the areas that should be protected from development: This includes site resources listed above and sensitive features such as steep slopes, flood plains, etc.	

Anne Arundel County Office of Planning and Zoning
Individual Single Family Dwelling (SFD) Engineering Review Checklist

	First Submittal		Second Submittal		Engineering Review for Single Lot Grading Permit Plans	Remarks
	Des.	Rev.	Des.	Rev.		
15	✓				Certification Note: Provide a note certifying that the location of features shown on the Resource map has been field verified. Note must be signed by design consultant.	
16	✓				Pre and Post development discharge points from the site shown and labeled	
17	NA				Indicate if site is within any Bog Drainage or impact areas	
18	✓				Provide a tabulation of sub drainage areas that provides a linkage with information used in computations. (I.e. any number used in curve number computations should be included in this table and clearly shown on the map.)	
19	✓				Provide the names of public or private roads that abut or traverse the site. B) Show right of way limits C) Indicate if road is on the scenic and historic road inventory.	
20	✓				Location of existing structures, septic areas, and water wells within 100 feet of site located on abutting and adjacent properties, as applicable; labeled "remain"; "to be removed", or "to be abandoned"	
21	✓				Property ownership and info- including the tax # for abutting and adjacent properties.	SHT. 2
22	✓				Limits of Critical Area designations- LDA, RCA, IDA.	
23					Proposed Development Plan	
24	✓				Site layout meets the criteria listed below:	
25	✓				Proposed imperviousness and disturbance is minimized to the maximum extent practicable	
26	✓				Protects conservation areas, and areas delineated in line 14 above, to the maximum extent practicable	
27	✓				SWM is addressed by utilizing non structural practices, natural areas, landscape features and micropractices to manage runoff from impervious surfaces.	Per n/c w/ LTP
28	✓				Site graded so that runoff flows from impervious areas directly to pervious areas or natural conveyance systems	
29	✓				Natural flow paths between the site and upstream and downstream systems are maintained	
30	✓				Sheet flow and natural overland flow processes maintained wherever it is feasible	
31	✓				Stable conveyance of runoff provided to offsite areas.	
32	✓				Structural BMPs are used only where absolutely necessary	
33	✓				Show and label proposed contour lines.	
34	NA				Easements provided for any work proposed on private offsite properties.	
End of Preliminary Plan Review						

Engineering Review for Single Lot Grading Permit Plans

Final Plan Review

Reports, Computations and Attachments

	First Submittal		Second Submittal		Remarks
	Des.	Rev.	Des.	Rev.	
36					
37	✓				All computations are provided in a booklet that is A) Bound B) Sheets numbered C) Signed and Sealed by design professional D) Contains a table of contents. PDF
38	✓				Provide a narrative that describes A) How natural features are protected and enhanced, B) How natural flow patterns are maintained, C) Measures taken to reduce impervious coverage.
39	✓				Address how the 10% pollutant reduction will be achieved if required.
40	✓				Study points: Provide pre and post development runoff for all study points.
41	✓				The same method of computation used when comparing runoff (i.e. if TR-55 used for post development runoff, it must be used for pre development as well)
42	✓				Compute rainfall amount treated in each facility and provide a table that shows the volume treated for each nonstructural method, micro practice and structural device and includes a summary of the total volume required and provided.
43	Roads				
44	NA				Road plan checklist included for any proposed road improvements.
45	Use this section of the checklist only for plans where road improvements are not required.				
46	✓				If road is not improved based on current classification and no improvements are proposed, then provide modification decision information on the plan.
47	✓				Bearing and distances shown on plan and DOT
48	✓				Right of way bearing and distances shown on both sides of each proposed or existing road that is part of contract shown in plan view; Limits defined via bearings and distance and/or complete curve information; Show maximum and minimum widths if ROW is variable.
49	✓				Existing roads that abut or traverse the site (improved and unimproved) show: A) Road name; classification of road; B) Ownership (SHA, County, Private); C) Surface type; D) Show curb and gutter or edge of pavement E) Indicate if road is scenic and historic.
50	✓				ROW labeled A) As Temporary or Permanent B) Public or Private GV.
51	NA				Proposed right of way widths shown if applicable
52	NA				Clear sight triangle at intersections
53	NA				Existing substandard roads: Based on road classification, either provide right-of-way dedication and/or frontage road improvements (as applicable) or, submit for a modification to current Article 17 Section 2-103:

Anne Arundel County Office of Planning and Zoning
Individual Single Family Dwelling (SFD) Engineering Review Checklist

	First Submittal		Second Submittal		Remarks
	Des.	Rev.	Des.	Rev.	
Engineering Review for Single Lot Grading Permit Plans					
Storm Drainage - Stormwater Management					
54					
55	NA				Storm Drainage checklist is required for any proposed public storm drainage improvements. Right to Discharge: Determine if any rights-to-discharge, on-site or off-site, are required.
	NA				Provide all necessary computations and plans to show how SWM is addressed. If disconnections are used, show the flow path on a plan that includes labeled contours.
56	✓				All SWM treatments must be covered under a Private SWM agreement to be executed with the grading permit.
57	Water and Sewer				
58	NA				If public water and or sewer is being extended then please supply the completed water and sewer checklist with the necessary public plans.
59					This portion of the checklist is to be used only if water and or sewer system extensions are not proposed
60	✓				Label all existing mains along the property frontage showing A) Sizes and types, B) As-built tracing numbers.
61	✓				Meters, cleanouts etc. located outside of driveways.
62	NA				Easement provided where: A) Water meter, B) Cleanout, C) Fire hydrant, D) Grinder pump, and or E) Mayo tank, is not located within public right-of-way
63	✓				Indicate current water and sewer service areas and category (existing, planned, no-planned service, etc.)
64	NA				Mains extended to limits of property and through the property frontage, if lot is located within the required extension distance (RED) as per the current water and sewer master plan.
65	✓				If site is within existing or planned service and utilities are not being extended, indicate the distance between the property line and the closest public utility.
66	✓				Show location of water and sewer connections to public utilities.
67	Flood Plain				
68	✓				Flood plain: A) Determine if flood plain exists on site. B) If flood plain exists use simplified method to determine water surface elevations on site
69	NA				For previously platted flood plain: Flood plain limits shown, and flood plain source referenced.
70	NA				For flood plains computed with this project: A) Cross sections shown and labeled on the site development plan B) Q100, Elevation and station shown for each cross section
71	NA				Floodplain drainage area information used in computations clearly depicted on drainage area maps
72	NA				Runoff computations for flood plains based on ultimate development of the drainage area based on zoning. No reductions based on storage in ponds, oversized pipes and undersized culverts.
73					Miscellaneous
74	NA				Provide any necessary plats for easements, dedication etc.

Per FEMA, note

**STORMWATER MANAGEMENT
COMPUTATIONS**

For

870 MILL CREEK ROAD

G02020213

Tax Map 32, Block 17, Parcel 4
ARNOLD, MD 21012



Nov., 2025

*"PROFESSIONAL CERTIFICATION. 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. 19577,
EXPIRATION DATE 3-16-2026"*

by

Boyd & Dowgiallo, P.A.
412 Headquarters Drive
Suite 5
Millersville, MD 21108
410/729-1234

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STORMWATER MANAGEMENT STATEMENT

As stated in Article 16 of the Anne Arundel County Code, the purpose of Stormwater Management is “to protect and promote public health, safety and general welfare through the management of stormwater, to protect public and private property from damage, to reduce the effects of land use changes on stream channel erosion, to maintain and assist in the improvement of water quality, to preserve and enhance the environmental quality of streams and stream valleys, and to minimize adverse impacts on water quality and conserve plant, fish, and wildlife habitat.”

In accordance with the General Performance Standards, outlined in the 2010 Anne Arundel County Stormwater Practices and Procedures Manual, the use of Environmental Site Design Practices (ESD) shall be provided as necessary to address the required performance standards, to prevent adverse impacts from stormwater runoff.

As defined, in Chapter 6, Section 6.1.5, the MEP standard is met when:

- I. channel stability is maintained and
- II. predevelopment groundwater recharge is replicated and
- III. non-point source pollution is maintained and
- IV. regenerative step pool conveyance systems are employed wherever practicable on all public stormwater systems.

INTRODUCTION

The subject property is known as Parcel 4, as shown on tax map 32, block 17 of the of tax maps of Anne Arundel County, Maryland. The lot is located in the Magothy Shores section of Arnold, Maryland 21012 at the southern end of Mill Creek Road and contains approximately 14,536 sq. ft. of land zoned R5. The site is also located within a Chesapeake Bay Intensely Developed Critical Area (IDA) due to its close proximity to Mill Creek, a tributary of the Magothy River. The ground cover on the lot is predominantly woods but also contains a dirt/gravel access road from Mill Creek Road to the shoreline along Mill Creek.

Ground slopes on the site vary from approximately 0.5% near Mill Creek to 25% near the center of the parcel. The entire site drains southerly directly into Mill Creek. As shown on the F.E.M.A. flood map 24003C00159F, the lot is impacted by a 100 year tidal flood zone at elevation 6.0. The remainder of the lot is located within Zone "X"- an area of minimal flooding. The site is also located within a 100' buffer to Mill Creek. Steep slopes greater than 15% are present and cover most of the lot. An area of tidal wetlands is present near the property's southern, as well as a 25 wetlands buffer. The property is not known to contain any rare, threatened or endangered species of plants, animals, and no wildlife habitat areas have been identified. The site is not known to contain any historical or archaeological artifacts or other items of historical or archaeological interest.

Planned development of the site includes the construction of a single-family residential dwelling, sidewalk, driveway, sewer connection, water connection, and stormwater management practices. The proposed improvements will result in the disturbance of approximately 4,205 sqft. and result in a lot coverage of 2,019 sqft., including the driveway aprons within the existing rights-of-way.

CONSIDERATION OF SWM PRACTICES & ALTERNATIVES

Stormwater design for the proposed improvements was provided in accordance with Chapter 5 of the 2009 M.D.E. where three general types of stormwater methods are used to provide the required ESD volume at a site:

1. Alternative Surfaces

Listed under Section 5.3, these surfaces include green roofs, permeable pavements and reinforced turf. The feasibility of using a green roof on a residential residence is an unappealing option to a homeowner since it involves an increased structural design of the roof, which makes increases the cost of construction. Furthermore, maintenance of a green roof is tedious and required an extra-ordinary amount of effort that many homeowners do not wish to be bothered with. Therefore, a green roof was not chosen as a stormwater management practice. The second alternative, permeable pavement was selected due to its return of a sizeable amount of ESD volume for a small area and was used for the surface of the driveway. A reinforced turf microscale practice was not used due to its high maintenance requirement and is primarily used in commercial site applications. Therefore, for this project, only a permeable pavement practice was selected as an alternative surface to provide a portion of the ESD volume.

2. Non-structural Practices

Listed under Section 5.4.2 of the 2009 M.D.E. Manual, these practices include disconnection of rooftop runoff, disconnection of non-rooftop runoff, and sheetflow to

conservation area. A disconnection of rooftop or non-rooftop runoff practice was not utilized due to the existing slopes present, making the required disconnection lengths unobtainable. A sheetflow to conservation area practice was not utilized due to the lack of existing woodlands present that qualify as forest conservation easement areas. Therefore, for this project, no non-structural practices are being utilized.

3. *Micro-scale Practices*

Listed under Section 5.4.3 of the 2009 M.D.E. Manual, these practices include small water quality treatment devices to capture runoff from small, discrete areas. Out of the nine options listed under this category, those that provided the most effective treatment were the use of landscape infiltration berms. This practice was utilized to capture and treat runoff from the roof area of the dwelling.

PROTECTION OF NATURAL RESOURCES

The property is pre-dominantly covered by woodlands. The limit of disturbance has been made as small as possible to minimize any disturbance to natural areas on site.

RETENTION OF NATURAL FLOW PATTERNS

Through the use of grading techniques that mimic the existing site grades, no disturbance to existing flow patterns will occur and the direction of rainwater runoff flow will remain largely unaffected.

REDUCTION OF IMPERVIOUS SURFACES

Through the use of a relatively modest house footprint, the amount of impervious cover is being reduced beyond what is currently allowed by zoning.

POLLUTANT REDUCTION & REMOVAL

Given that the site is *partly* located within a Chesapeake Bay IDA critical area, it is mandatory that the proposed stormwater management techniques address the “Critical Area 10% Rule Guidance Manual” and provide a 10% pollutant removal reduction. The ESD practices being utilized to provide the water quality, ESD and Cpv volumes also help to reduce the amount of phosphorus to downstream receiving waters.

IMPLEMENTATION OF SEDIMENT & EROSION CONTROL

Given the relatively small size of the site, it is not possible to implement sediment control measures to provide in the stormwater management design of the site. The only sediment control measures used are those provided to capture sediment laden runoff from leaving the site.

SOIL & FACILITY INVESTIGATION

The Anne Arundel County Soil Survey indicates that the site is underlain by soils of the Downer-Hammonton Urban Land complex (DwB), 0 to 5% slopes and the Annapolis Urban Land complex (AuD) 5-15% slopes. The Downer-Hammonton soils have a hydrologic rating of “A” and are usually very conducive to infiltration. The Annapolis soils have a hydrologic rating of “C” and are only marginally conducive to infiltration. The proposed method of stormwater management for the improvements on the parcel will be through the planting of trees – so both soil types should be suitable for planting.

SUMMARY OF CONCLUSIONS

In accordance with the 2009 Maryland Department of the Environment (M.D.E.) Stormwater Design Manual and the 2017 Anne Arundel County Storm Water Management Practices and Procedures Manual, the water quality, recharge, channel protection, overbank flood protection, and extreme flood protection volumes were considered in the overall stormwater management design for this site.

ESDv volume is required in the amount of 206 cu. ft. and will be provided by a landscape infiltration berm practice. The recharge volume is required in the amount of 47 cu. ft. and is automatically provided through the utilization of the ESD practices being utilized on-site. The channel protection volume is being provided since the environmental site design target rainfall amount is being met through the use of ESD practices, in accordance with the 2009 M.D.E. Manual. The overbank flood protection volume is being provided by a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

The extreme flood protection volume is not required since the site has a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

OUTFALL STATEMENT

Runoff from the site flows over woods in a southerly direction directly to a tidal floodplain of Mill Creek, a tributary to the Magothy River. Although not needed, a sufficient amount of ESDv volume is being provided on site to reduce the 10-year post-development discharge to its pre-development rate and minimize any impacts to existing steep slopes.

Given that the site discharges directly to a tidal floodplain, and the required ESD volume is being provided on site, the site outfall & point-of-investigation (P.O.I.) is a point along the southernmost boundary line where runoff leaves the property and enters the floodplain of Mill Creek.

The site outfall, and P.O.I. were inspected on a field investigation by an employee of Boyd & Dowgiallo, P.A., in May, 2024, and were found to be vegetated, stable and in good condition, with no signs of erosion, flooding, or sediment accumulation present.

Given that the ESD, recharge, channel protection volumes and overbank flood protection volumes are being provided, there should not be an increase in runoff as a result of the proposed improvements, no adverse effects should occur to the site outfall or P.O.I.

***STORMWATER MANAGEMENT
COMPUTATIONS***

ENVIRONMENTAL SITE DESIGN

In Section 5.2.2 of the revised Chapter 5 of the 2000 M.D.E. Stormwater Design Manual, it is stated, “the criteria for sizing ESD practices are based on capturing and retaining enough rainfall so that the runoff leaving a site is reduced to a level equivalent to a wooded site in good condition as determined using U.S.D.A’s Natural Resource Conservation Service methods...”the goal is to provide enough treatment using ESD practices to address C_p requirements by replicating an RCN for woods in good condition for the 1-year rainfall event. In accordance with the “Stormwater Management Act of 2007” and Table 5.3 of the revised Chapter 5 M.D.E. Manual, the environmentally sensitive runoff volume, ESD_v , is equal to,

$$ESD_v = P_E \times R_v \times A$$

Where, P_E = the rainfall target from Table 5.3

R_v = the volumetric runoff coefficient

A = drainage area

Site area = 14,536 sq. ft.

Total Proposed Impervious Cover = 2,019 sq. ft.

$\%I = 2,019/14,536 = 13.9\%$ (proposed)

$R_v = 0.05 + 0.009(13.9) = 0.17$

Existing soil types present = HSG “A” & “C”

From Table 5.3 of Chapter 5 of the M.D.E. Manual, the target rainfall based upon the impervious cover proposed and the soil types present is equal to 1.0”.

and the ESD_v volume becomes,

$$ESD_v = (1.0'')(0.17)(14,536)/12 = 206 \text{ cu. ft.}$$

This is the *total* ESD_v volume required for the proposed improvements to return the site back to a state of “woods in good condition”.

This volume will be provided on-site within ESD practices as described below.

***STORMWATER
MANAGEMENT DESIGN
With
ESD, PRACTICES***

MICRO-SCALE PRACTICES

Microscale Practices – Landscape Infiltration Berms

In accordance with discussions between the design consultant and the Engineering Manager, stormwater management for the proposed improvements is to be addressed via a series of bio-logs (acting as landscape infiltration berms) and the installation of native trees/shrubs within the existing abandoned road traversing the lot. Through the installation of a series of bio-logs and associated plantings within the abandoned road, the required ESDv for the improvements will be provided. The provided ESD volume from the series of bio-logs can be computed as follows:

- Average Ponding Area = 36 sqft. (approx. 4' x 9' W)
- Height of bio-log (berm) = 1', resulting in an average depth of 0.5
- ESDv for ponding area = 36 sqft. x 0.5' = 18 cu.ft. ESDv per bio-log

By installing 12 rows of bio-logs in a “step” design along the dirt road provides a total ESD volume of 12 x 18 cu.ft. = 216 cu.ft. of ESD volume (See Landscape Infiltration Berm profile on plan sheet 4 for additional information).

Total ESD volume provided through landscape infiltration berms = 216 cu. ft.

SUMMARY OF ESD VOLUMES

Total Required ESD volume	= 206 cu. ft.
Microscale Practice – Infiltration Berm ESD volume prov'd.	= 216 cu. ft.
Total ESD volume provided	= 216 cu. ft.

II. RECHARGE VOLUME

The required recharge volume (Re_v) for the proposed development is determined in accordance with the following equation, as stated in Section 2.2 of the MDE Stormwater Design Manual:

$$\text{Re}_v = \frac{(S)(R_v)(A)}{12} \text{ ac-ft, where A and R}_v \text{ are as defined above, and}$$

S = soil specific recharge factor;

= 0.42 for type "A" soil

= 0.14 for type "C" soil

$$S = (2,051 \text{ s.f.} \times 0.42) + (9,653 \text{ s.f.} \times 0.14) / 14,536 \text{ s.f.} = 0.23$$

The required volume is calculated as follows:

$$\text{Re}_v = (0.23)(0.17)(14,536)/12 = 47 \text{ cu. ft.}$$

This is the required recharge volume required for the proposed improvements. The recharge volume will be provided through the use of environmental site design practices, as described in this report.

III. CHANNEL PROTECTION VOLUME

The channel protection volume for this lot is being provided through the use of environmental site design practices that provide the target rainfall value of 1.0", as specified in Table 5.3 of the revised M.D.E. Manual and return the site back to a "pre-development state of woods in good condition".

V. OVERBANK FLOOD PROTECTION VOLUME

The overbank flood protection volume is being provided by a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

V. EXTREME FLOOD PROTECTION

The extreme flood protection volume is being provided by a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

SOILS & VICINITY MAPS
(See GSC Plans)

TR-55 COMPUTATIONS

WinTR-55 Current Data Description

--- Identification Data ---

User: TFJ Date: 10/13/2025
 Project: MAGOTHY SHORES Units: English
 SubTitle: 10 YR Areal Units: Acres
 State: Maryland
 County: ANNE ARUNDEL
 Filename: C:\TR55\20-231 10yr.w55

--- Sub-Area Data ---

Name	Description	Reach	Area (ac)	RCN	Tc
PRE		Outlet	0.33	62	0.1
POST		Outlet	0.33	63	0.1
REDUCED		Outlet	0.33	61	0.100

Total area: .99 (ac)

--- Storm Data ---

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.3	.0	5.2	.0	.0	7.4	.0

Storm Data Source: User-provided custom storm data
 Rainfall Distribution Type: Type II
 Dimensionless Unit Hydrograph: <standard>

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.3	.0	5.2	.0	.0	7.4	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)

SUBAREAS	
PRE	0.76
POST	0.80
REDUCED	0.72
REACHES	
OUTLET	2.28

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Hydrograph Peak/Peak Time Table

Sub-Area Peak Flow and Peak Time (hr) by Rainfall Return Period
or Reach 10-Yr
Identifier (cfs)
 (hr)

SUBAREAS

PRE 0.76
 11.94

POST 0.80
 11.94

REDUCED 0.72
 11.95

REACHES

OUTLET 2.28

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
PRE	.33	0.100	62	Outlet	
POST	.33	0.100	63	Outlet	
REDUCED	.33	0.100	61	Outlet	

Total Area:	.99 (ac)				

TFJ

MAGOTHY SHORES
10 YR
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)

PRE							
SHEET	35	0.2500	0.400				0.055
SHALLOW	10	0.2000	0.025				0.000
SHALLOW	31	0.2500	0.050				0.001
					Time of Concentration		0.1
							=====
POST							
SHEET	39	0.2500	0.011				0.003
SHALLOW	10	0.2000	0.050				0.000
SHALLOW	27	0.2500	0.050				
					Time of Concentration		0.1
							=====
REDUCED							
User-provided							0.100
					Time of Concentration		0.100
							=====

TFJ

MAGOTHY SHORES
10 YR
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
PRE	Paved parking lots, roofs, driveways	A	.014	98
	Paved parking lots, roofs, driveways	C	.029	98
	Woods (good)	A	.098	30
	Woods (good)	C	.192	70
	Total Area / Weighted Curve Number		.33	62
		===	==	
POST	Open space; grass cover > 75% (good)	A	.037	39
	Open space; grass cover > 75% (good)	C	.026	74
	Paved parking lots, roofs, driveways	A	.018	98
	Paved parking lots, roofs, driveways	C	.019	98
	Woods (good)	A	.057	30
	Woods (good)	C	.176	70
	Total Area / Weighted Curve Number		.33	63
			===	==
REDUCED	CN directly entered by user	-	.33	61
	Total Area / Weighted Curve Number		.33	61
			===	==

Maryland ESD Calculations and 10% Phosphorus Removal

Project Name:			Last Update:	12/2/2013	
Date:					
data input cells calculation cells					
Step 1: Complete ESD Implementation Checklist					
Check all of the following ESD Practices that were implemented at Site					
Environmental Mapping Was Conducted at Site Prior to Layout	Yes	No	N/A		
Natural Areas Were Conserved (e.g., forests, wetlands, steep slopes, floodplains)	NA				
Stream Wetland and Shoreline Buffers Were Reserved	NA				
Disturbance of Permeable Soils Was Minimized	YES				
Natural Flow Paths Were Maintained Across the Site	YES				
Building Layout Was Fingerprinted to Reduce Clearing and Grading at Site	YES				
Site Grading Promoted Sheetflow from Impervious Areas to Pervious Ones	YES				
Site Design Was Evaluated to Reduce Creation of Needless Impervious Cover	YES				
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover	YES				
Site Design Was Evaluated to Identify Potential Hotspot Generating Area for Stormwater	NA				
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Incorporated into a Comprehensive Plan	NA				
Tree Planting Was Used at the Site to Convert Turf Areas into Forest	NA				
Step 2: Calculate Site Imperviousness and Water Quality Volume, WQV (for redevelopment)					
Site Area, A (acres)	0.33				
Existing Impervious Surface Area (acres)	0.30				
Proposed Impervious Surface Area (acres)	0.64				
Rainfall Depth, P (in)	1.0				
Proposed Imperviousness, I _p	0.0%				
Proposed Imperviousness, I _r	19.3%				
Water Quality Calculation for Redevelopment Only	0.00				
Required Treatment Area (acres)	0.85				
Rainfall Coefficient, R _v	0				
Water Quality Volume, WQV (cf)	0				
Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_z					
Development Category (for ESD)					
Development Category (for ESD)	New Development				
Soil Type A	30%				
Soil Type B	0%				
Soil Type C	6%				
Soil Type D	1%				
Pre-Manicured Condition, R _{0.05}	57.75				
Soil Type A ESD Rainfall Target, P _z (in)	0.33				
Soil Type B ESD Rainfall Target, P _z (in)	0.00				
Soil Type C ESD Rainfall Target, P _z (in)	0.68				
Soil Type D ESD Rainfall Target, P _z (in)	0.00				
Minimum P _z (in)	2.7				
Site ESD Rainfall Target, P _z (in)	0.81				
ESD Runoff Depth, Q _z (in)	0.17				
ESD Runoff Volume, ESDV (cf)	301				
Total Treatment Volume (cf)	301				
Step 3: Calculate Phosphorous Removal Requirement, RR for Critical Area Sites					
Development Category (for 10%)					
New Development					
Average Annual Phosphorous Load, L _{in} (lbs P / yr)	0.17				
Redevelopment:					
Proposed Annual Phosphorous Load, L _{out} (lbs P / yr)	0.05				
Proposed Mean Concentration, C _{out} (ppb)	0.9				
Average Annual Phosphorous Load, L _{out} (lbs P / yr)	0.04				
Post-Development Phosphorous Coefficient, R _{phos}	0.17				
Average Annual Post-Development Load, L _{out} (lbs P / yr)	0.14				
Removal Requirement, RR (lbs P / yr)	0.01				

Step 5: Select Nonstructural Practices to Treat the ESD Rainfall Target

Micro-Scale Practices	P _t Credit Description	Contributing Drainage Area (sf)	Direct WQV or ESDv Received by Practice (cf)	WQV or ESDv from Up-Gradient Practices (cf)	P _t Credit (in)	WQV or ESDv credit (cf)	Runoff Volume Remaining (cf)	Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Disconnection of Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0	5%	0%	0.00	0.00	0.00
Disconnection of Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0	25%	0%	0.00	0.00	0.00
Disconnection of Non-Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow length.	0	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Disconnection of Non-Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow length.	0	0	0	0	0	0	25%	0%	0.00	0.00	0.00
Sheetflow to Conservation Areas (A/B Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Sheetflow to Conservation Areas (C/D Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0	25%	0%	0.00	0.00	0.00

Step 6: Select Micro-Scale Practices to Treat the ESD Rainfall Target

Micro-Scale Practices	P _t Credit Description	Contributing Drainage Area (sf)	Direct ESDv Received by Practice (cf)	WQV or ESDv from Up-Gradient Practices (cf)	WQV or ESDv credit (cf)	Runoff Volume Remaining (cf)	Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Green Roof (Level 1)	ESDv credit is based on roof thickness	0	0	N/A	0	0	45%	0%	0.00	0.00	0.00
Green Roof (Level 2)	ESDv credit is based on roof thickness	0	0	N/A	0	0	60%	0%	0.00	0.00	0.00
Permeable Pavement (A Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	80%	0%	0.00	0.00	0.00
Permeable Pavement (B Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	80%	0%	0.00	0.00	0.00
Permeable Pavement (C Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	40%	0%	0.00	0.00	0.00
Rainwater Harvesting	ESDv credit is based on design storage volume and annual use	0	0	0	0	0	45%	0%	0.00	0.00	0.00
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	0	0	0	0	0	60%	0%	0.00	0.00	0.00
Micro-Infiltration	ESDv credit is based on design storage volume	993	212	0	212	0	65%	85%	0.05	0.05	0.01
Rain Gardens (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	65%	0%	0.00	0.00	0.00
Rain Gardens (C/D Soils)	ESDv credit is based on design storage volume	1,249	3,173	0	261	2,912	25%	13%	0.79	0.10	0.69
Micro-Bioswales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	75%	0%	0.00	0.00	0.00
Micro-Bioswales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Landscaping Infiltration	ESDv credit is based on design storage volume	1,618	410	0	216	194	75%	83%	0.10	0.09	0.02
Grass Swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	40%	0%	0.00	0.00	0.00
Grass Swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	20%	0%	0.00	0.00	0.00
Bio-swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	75%	0%	0.00	0.00	0.00
Bio-swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Urban Swales	ESDv credit is based on design storage volume	0	0	0	0	0	40%	0%	0.00	0.00	0.00

Step 7: Check for ESDV to MEP compliance and revise site if necessary

Drainage Area Treated (cf)	4,100	WQV or ESDV Treated (cf) P _e achieved (inches)	669 0.38	Total Load Reduction (lbs P / year)	0.24
Entire ESDV Treated Through Environmental Site Design? If ESDV is not fully treated, is ESD to MEP achieved?	YES 0	WQV Remaining (cf)	0	Total Load Reduction Remaining (lbs P / yr)	0.00
Redevelopment WQV Requirements Met Through Environmental Site Design? WQV Remaining (cf)	N/A 0				
New Development WQV Requirements Met Through Environmental Site Design? WQV Remaining (cf)	0				

Step 8: Determine Reduced RCN and Volume Management Requirements Based Upon P_e Achieved

Reduced RCN for Type A Soils	N/A
Reduced RCN for Type B Soils	N/A
Reduced RCN for Type C Soils	N/A
Reduced RCN for Type D Soils	N/A
Composite Reduced RCN	N/A
Q ₁ (cf) for Reduced RCN	0.17
V ₁ (ft ³) for Reduced RCN	148
Volume Management Required (cf)	0

Step 9: Select Structural Practices to Meet Volume Management Requirements

Structural Practice	Contributing Drainage Area (cf)	% Impervious Cover	Direct ESDV Received by Practice (cf)	ESDV from Upstream Practices (cf)	Treatment Volume (cf)	Phosphorus Removal Efficiency	Phosphorus Removal Efficiency	P Load to Practices (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Stormwater Ponds (Level 1)	0	0%	0	0	0	50%	0%	0.00	0.00	0.00
Stormwater Ponds (Level 2)	0	0%	0	0	0	75%	0%	0.00	0.00	0.00
Stormwater Wetlands (Level 1)	0	0%	0	0	0	50%	0%	0.00	0.00	0.00
Stormwater Wetlands (Level 2)	0	0%	0	0	0	60%	0%	0.00	0.00	0.00
Stormwater Filtering Systems (Level 1)	0	0%	0	0	0	65%	0%	0.00	0.00	0.00
Stormwater Filtering Systems (Level 2)	0	0%	0	0	0	80%	0%	0.00	0.00	0.00
Stormwater Infiltration (Level 1)	0	0%	0	0	0	60%	0%	0.00	0.00	0.00
Stormwater Infiltration (Level 2)	0	0%	0	0	0	80%	0%	0.00	0.00	0.00
Total Structural CPV provided			0	0	0			0.00	0.00	0.24
Management Requirement Met?			YES	YES	0					0.00
Volume Remaining (cf)			0	0	0					0.00

Critical Area Credits

Actuals

Phosphorus Removal Efficiency

0%

0%

0%

0%

0%

0%

0%

0%

0%

0%

0%

0%

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Maryland ESD Calculations and 10% Phosphorus Removal

Project Name: 870 Mill Creek Road
Date: August, 2024
 data input cells
 calculation cells

Step 1: Complete ESD Implementation Checklist

Check all of the following ESD Practices That Were Implemented at Site

Practice	Yes - No - N/A
Environmental Mapping Was Conducted at Site Prior to Layout	N/A
Neutral Areas Were Contained (e.g., forests, wetlands, steep slopes, floodplains)	N/A
Stream, Wetland and Shoreline Buffers Were Reserved	N/A
Disturbance of Permeable Soils Was Minimized	YES
Drainage Flow Paths Were Maintained Across the Site	YES
Site Grading Was Optimized to Reduce Erosion and Grading at Site	YES
Site Grading Was Optimized to Reduce Runoff from Impervious Areas to Permeable Ones	YES
Site Design Was Evaluated to Reduce Runoff from Impervious Areas to Permeable Ones	YES
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover	YES
Site Design Was Evaluated to Identify Potential Hotspot Generating Areas for Stormwater Treatment	N/A
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Implemented into a Comprehensive Plan	N/A
Tree Planting/Was Used at the Site to Convert Turf Areas into Forest	N/A

Step 2: Calculate Site Imperviousness and Water Quality Volume, WQV (for redevelopment)

Site Area, A (acres)	0.39
Existing Impervious Surface Area (acres)	0.00
Proposed Impervious Surface Area (acres)	0.04
Rainfall Depth, P (in)	1.0
Existing Imperviousness, I_{ex}	0.0%
Proposed Imperviousness, I_{pro}	10.3%
Water Quality Calculation for Redevelopment Only	
Required Treatment Area (acres)	0.00
Rainfall Coefficient, Rv	0.95
Water Quality Volume, WQV (cf)	0

Step 3: Calculate Phosphorous Removal Requirement, RR for Critical Area Sites

Development Category (for RR)	New Development
Average Annual Phosphorous Load, L_{phos} (lbs P / yr)	0.17
Redevelopment:	
Phosphorous Input Coefficient, R_{phos}	0.05
Phosphorous Mean Concentration, C (mg/L)	0.3
Average Annual Phosphorous Load, L_{phos} (lbs P / yr)	0.04
Redevelopment Input Coefficient, R_{phos}	0.17
Average Annual Phosphorous Load, L_{phos} (lbs P / yr)	0.14
Removal Requirement, RR (lbs P / yr)	-0.01

Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_e

Development Category (for ESD)	New Development
% Soil Type A	0%
% Soil Type B	0%
% Soil Type C	0%
% Soil Type D	0%
Pre-Developed Condition, R _{CD}	57.75
ESD Type A ESD Rainfall Target, P _e (in)	0.39
ESD Type B ESD Rainfall Target, P _e (in)	0.00
ESD Type C ESD Rainfall Target, P _e (in)	0.66
ESD Type D ESD Rainfall Target, P _e (in)	0.00
Maximum P _e (in)	2.7
Site ESD Rainfall Target, P _e (in)	0.99
ESD Runoff Depth, Q _e (in)	0.17
ESD Runoff Volume, ESDv (cf)	201
Total Treatment Volume (cf)	201

Step 5: Select Nonstructural Practices to Treat the ESD Rainfall Target												
Nonstructural Practices	P _c Credit Description	Contributing Drainage Area (sf)	Direct WQv or ESDv Received by Practices (cf)	WQv or ESDv from Up-Gradient Practices (cf)	P _c Credit (in)	WQv or ESDv credit (cf)	Runoff Volume Remaining (cf)	Baseline Phosphorus Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Disconnection of Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0	50%	0%	0.00	0.00	0.00
Disconnection of Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0	25%	0%	0.00	0.00	0.00
Disconnection of Non-Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow length.	0	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Disconnection of Non-Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow length.	0	0	0	0	0	0	25%	0%	0.00	0.00	0.00
Shedflow to Conservation Areas (A/B Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Shedflow to Conservation Areas (C/D Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0	25%	0%	0.00	0.00	0.00
Step 6: Select Micro-Scale Practices to Treat the ESD Rainfall Target												
Micro-Scale Practices	P _c Credit Description	Contributing Drainage Area (sf)	Direct ESDv Received by Practices (cf)	WQv or ESDv from Up-Gradient Practices (cf)	WQv or ESDv credit (cf)	Runoff Volume Remaining (cf)	Baseline Phosphorus Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)	
Green Roof (Level 1)	ESDv credit is based on roof thickness	0	0	N/A	0	0	45%	0%	0.00	0.00	0.00	
Green Roof (Level 2)	ESDv credit is based on roof thickness	0	0	N/A	0	0	65%	0%	0.00	0.00	0.00	
Permeable Pavement (A Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	80%	0%	0.00	0.00	0.00	
Permeable Pavement (B Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	80%	0%	0.00	0.00	0.00	
Permeable Pavement (C Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	40%	0%	0.00	0.00	0.00	
Stormwater Harvesting	ESDv credit is based on design storage volume and annual use	0	0	0	0	0	45%	0%	0.00	0.00	0.00	
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	0	0	0	0	0	80%	0%	0.00	0.00	0.00	
Micro-Infiltration	ESDv credit is based on design storage volume	993	212	0	212	0	65%	85%	0.05	0.04	0.01	
Rain Gardens (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	85%	0%	0.00	0.00	0.00	
Rain Gardens (C/D Soils)	ESDv credit is based on design storage volume	1,249	3,173	0	3,81	2,812	25%	13%	0.79	0.10	0.69	
Micro-Biorevention (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	75%	0%	0.00	0.00	0.00	
Micro-Biorevention (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	50%	0%	0.00	0.00	0.00	
Landscaping Infiltration	ESDv credit is based on design storage volume	1,918	419	0	210	164	75%	83%	0.10	0.09	0.02	
Grass Swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	40%	0%	0.00	0.00	0.00	
Grass Swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	20%	0%	0.00	0.00	0.00	
No-swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	75%	0%	0.00	0.00	0.00	
No-swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	30%	0%	0.00	0.00	0.00	
Wet Swales	ESDv credit is based on design storage volume	0	0	0	0	0	40%	0%	0.00	0.00	0.00	

Step 7: Check for ESDv to MEP compliance and Revise Site if Necessary

Drainage Area Treated (a.d)	4,160	WQv or ESDv Treated (cf) P ₁ achieved (Inches)	889 3.38	Total Load Reduction (lbs P / year)	0.24
Entire ESDv Treated Through Environmental Site Design? If ESDv is not fully treated, is ESD to MEP achieved?	YES 0	WQv Remaining? (cf)	0	Total Load Reduction Remaining (lbs P / year)	0.00

New Development Water Quality Volume Requirements

Required Treatment Area (acres)	0.33
Runoff Coefficient, Rv	0.17
Water Quality Volume, WQv (cf)	264

Redevelopment WQv Requirements Met Through Environmental Site Design?

WQv Remaining? (cf)	N/A
0	0

New Development WQv Requirements Met Through Environmental Site Design?

WQv Remaining? (cf)	0
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Step 8: Determine Reduced RCN and Volume Management Requirements Based Upon P₂ Achieved

Reduced RCN for Type A Soils	N/A
Reduced RCN for Type B Soils	N/A
Reduced RCN for Type C Soils	N/A
Reduced RCN for Type D Soils	N/A
Composite Reduced RCN	N/A
Q ₁ (in) for Reduced RCN	0.12
V ₁ (in) for Requested RCN	148
Volume Management Requirement (cf)	0

Step 9: Select Structural Practices to Meet Volume Management Requirements

Structural Practices	Contributing Drainage Area (cf)	% Impervious Cover	Direct ESDv Received by Practice (cf)	ESDv from Upstream Practices (cf)	Treatment Volume (cf)	Phosphorus Removal Efficiency	Adjusted Phosphorus Removal Efficiency	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Stormwater Ponds (Level 1)	0	0%	0	0	0	50%	0%	0.00	0.00	0.00
Stormwater Ponds (Level 2)	0	0%	0	0	0	75%	0%	0.00	0.00	0.00
Stormwater Wetlands (Level 1)	0	0%	0	0	0	50%	0%	0.00	0.00	0.00
Stormwater Wetlands (Level 2)	0	0%	0	0	0	75%	0%	0.00	0.00	0.00
Stormwater Filtration Systems (Level 1)	0	0%	0	0	0	80%	0%	0.00	0.00	0.00
Stormwater Filtration Systems (Level 2)	0	0%	0	0	0	85%	0%	0.00	0.00	0.00
Stormwater Infiltration (Level 1)	0	0%	0	0	0	80%	0%	0.00	0.00	0.00
Stormwater Infiltration (Level 2)	0	0%	0	0	0	85%	0%	0.00	0.00	0.00
Total Structural Practices Management Requirement Met?			0	0	0			0.00	0.00	0.24
Volume Management Requirement Met?			0	0	0			0.00	0.00	0.00

Critical Area Credits

Total Load Reduction (lbs P / year)	0.24
Total Load Reduction Remaining (lbs P / year)	0.00