



Maryland
Department of
the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

September 20, 2024

Anne Arundel County Department of Public Works
c/o Melissa Harlinski
2662 Riva Rd.
Annapolis, MD 21401

Via email: pwharl45@aacounty.org

Re: Agency Interest Number: 81024

Tracking Number: 202361192
Tidal Authorization Number: 23-WQC-0040

Dear Anne Arundel County Department of Public Works:

Your project did not qualify for approval under the Maryland State Programmatic General Permit (MDSPGP); therefore a separate review and issuance of the federal permit will be required by the U.S. Army Corps of Engineers. The federal permit is not attached.

Additionally, your project required a Wetlands License to be approved and issued by the Maryland Board of Public Works (BPW). The Wetlands License will be sent to you by BPW's Wetlands Administrator.

A project that does not qualify for approval under the MDSPGP requires an individual Water Quality Certification (WQC) to be issued by the Maryland Department of the Environment, which is attached. Please take a moment to read and review your WQC to ensure that you understand the limits of the authorized work and all of the general and special conditions.

You should not begin any work until you have obtained all necessary State, local, and federal authorizations. Please contact Kathryn Burcham at elisa.riley@maryland.gov or 410-537-3769 with any questions.

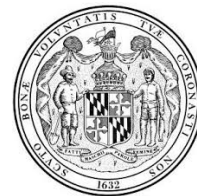
Sincerely,

Jon Stewart, Chief
Eastern Region
Tidal Wetlands Division

Corrected Copy: Address and c/o correction September 30, 2024



STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION
WATER QUALITY CERTIFICATION



23-WQC-0040

EFFECTIVE DATE: **September 23, 2024**
CERTIFICATION HOLDER: **Anne Arundel County Department of Public Works**
ADDRESS: **2662 Riva Rd, MS7301**
Annapolis, MD 21401
PROJECT LOCATION: **8311 John Downs Loop**
Pasadena, MD 21122

UNDER AUTHORITY OF SECTION 401 OF THE FEDERAL WATER POLLUTION CONTROL ACT AND ITS AMENDMENTS AND IN ACCORDANCE WITH § 9-313 THROUGH § 9-323, INCLUSIVE, OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND, THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER AND SCIENCE ADMINISTRATION HAS DETERMINED THAT THE REGULATED ACTIVITIES DESCRIBED IN THE REQUEST FOR CERTIFICATION FOR THE PROPOSED Downs Park Shoreline Improvement, AND AS DESCRIBED IN THE ATTACHED PLAN SHEETS DATED July 03, 2024, AND ANY SUBSEQUENT MODIFICATIONS APPROVED BY THE DEPARTMENT WILL NOT VIOLATE MARYLAND'S WATER QUALITY STANDARDS, IF CONDUCTED IN ACCORDANCE WITH THE CONDITIONS OF THIS CERTIFICATION.

THIS CERTIFICATION DOES NOT RELIEVE THE APPLICANT OF RESPONSIBILITY FOR OBTAINING ANY OTHER APPROVALS, LICENSES, OR PERMITS IN ACCORDANCE WITH FEDERAL, STATE, OR LOCAL REQUIREMENTS AND DOES NOT AUTHORIZE COMMENCEMENT OF THE PROPOSED PROJECT. A COPY OF THIS REQUIRED CERTIFICATION HAS BEEN SENT TO THE CORPS OF ENGINEERS. THE CERTIFICATION HOLDER SHALL COMPLY WITH THE CONDITIONS LISTED BELOW.

PROJECT DESCRIPTION

Construct an 87-foot long by 20-foot wide breakwater, a 160-foot long by 23-foot wide breakwater, a 160-foot long by 29-foot wide breakwater, and a 112-foot long by 29-foot wide breakwater; fill and grade with 2,328 cubic yards of sand along 480 feet of eroding shoreline and plant approximately 3,003 square feet of high marsh vegetation and 2,620 square feet of low marsh vegetation; install associated marsh protection fencing. Replenish 26,986 square feet of historical beach area with 3,626 cubic yards of clean sand fill along 361 feet of shoreline. Construct 7,794 square feet of upland/vegetated dune all within a maximum of 132 feet channelward of the mean high waterline. Construct a 25-square foot cobble pilot channel and a 178 square foot cobble pilot channel within a maximum of 24 feet channelward of the mean high waterline. Construct a 390-foot long by 14-foot wide revetment within a maximum of 14 feet channelward of the mean high waterline. Emplace 45 reef balls with a hazard sign to provide 2,702 square feet of mitigation for impacts to open water habitat within 279 feet channelward of the mean high waterline.

Corrected Copy: Project name correction September 30, 2024

The Administration satisfied statutory and regulatory public notice requirements by placing this WQC on Public Notice from May 01, 2024 to May 31, 2024 on the Maryland Department of the Environment's Public Notice webpage and advertising in The Capital on January 05, 2024.

GENERAL CONDITIONS

1. All water quality-related performance standards and conditions required by the Department in any state issued authorization for activities in tidal wetlands, nontidal wetlands, their 100-year floodplains, nontidal wetlands buffers, or nontidal wetland expanded buffers to ensure that any discharges will not result in a failure to comply with water quality standards in COMAR 26.08.02 or any other water quality requirements of state law or regulation shall be met.
2. This Certification does not obviate the need to obtain required authorizations or approvals from other State, federal or local agencies as required by law.
3. All additional authorizations or approvals, including self-certifying General Permits issued by the Department, shall be obtained and all conditions shall be completed in compliance with such authorizations.
4. The proposed project shall be constructed in accordance with the approved final plan by the Department, or, if Department approval is not required, the plan approved by the U.S. Army Corps of Engineers, and its approved revisions.
5. All fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.
6. This Certification does not authorize any injury to private property, any invasion of rights, or any infringement of federal, state, or local laws or regulations.
7. The Certification Holder shall allow authorized representatives of the Department access to the site of authorized activities during normal business hours to conduct inspections and evaluations of the operations and records necessary to assure compliance with this Certification.
8. No stockpiles of any material shall be placed in Waters of the U.S. or state or private tidal wetlands.
9. Temporary construction trailers or structures, staging areas and stockpiles shall not be located within tidal wetlands, nontidal wetlands, nontidal wetlands buffers, or the 100-year floodplain unless specifically included on the Approved Plan.
10. This Certification is valid for the project identified herein and the associated U.S. Army Corps of Engineers authorization NAB 2023-61195 until such time that it expires or is not administratively extended.

SPECIAL CONDITIONS

1. The Certificate Holder shall comply with all Critical Area requirements and obtain all necessary authorizations from local jurisdiction. This Certificate does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree or vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land disturbing activity, from local jurisdiction in the form of a Buffer Management Plan.
2. If the authorized work is not performed by the property owner, all work performed under Tidal Wetlands License 23-WL-0757 shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at 410-537- 3249, by e-mail at MDE.MCLB@maryland.gov or by accessing the Maryland Department of the Environment, Environmental Boards webpage.
3. The issuance of this certificate is not a validation or authorization by the Department for any of the existing structures depicted on the plan sheets on the subject property that is not part of the authorized work description, nor does it relieve the Certificate Holder of the obligation to resolve any existing noncompliant structures and activities within tidal wetlands.
4. The Certificate Holder shall conduct a benthic survey of the mitigation area prior to the placement of the reef balls.
5. The Certificate Holder shall monitor the mitigation site for five years following construction by conducting an annual benthic survey of the reef. No later than December 31 of each year, the Certificate Holder shall submit an annual report to the Tidal Wetlands Division documenting the evaluation of the biological assemblages using the reef post construction and include a survey depicting the reef ball location compared to the initial construction location. A project shall be considered successful if the reef is providing an increase in biomass and biodiversity and is stable at the Department's satisfaction.
6. The Certificate Holder shall perform all work under and in accordance with an approved Soil Erosion and Sediment Control Plan from the applicable sediment and erosion control agency.
7. The Certificate Holder shall design and construct the stone revetment and groin to prevent the loss of fill material to waters of the State of Maryland.
8. The Certificate Holder shall not use asphalt rubble in the revetment. Filter cloth shall be placed between the riprap and the soil. Prior to emplacement of the revetment, all rebar is to be cut off flush with the concrete. After emplacement of the revetment, any rebar exposed as a result of the concrete breaking during the emplacement is to be cut flush with the concrete. Except for the larger material placed along the leading edge of the revetment, the concrete shall be broken prior to emplacement so that random sized interlocking pieces are formed.

9. The Certificate Holder shall construct the beach nourishment area in accordance with the following conditions:
 1. The Certificate Holder shall use clean substrate fill material, no more than 10% of which shall pass through a standard number 100 sieve.
 2. If the fill is graded hydraulically, the Certificate Holder shall use a turbidity curtain around the perimeter of the instream work.
 3. If the existing bank is to be cleared or graded:
 - a) The Certificate Holder shall perform all work under and in accordance with an approved Soil Erosion and Sediment Control Plan from the applicable sediment and erosion control agency; and
 - b) The Certificate Holder shall perform all work under and in accordance with the Critical Area requirements of the local jurisdiction in the form of an approved Buffer Management Plan.
10. The Certificate Holder shall coordinate with the U.S. Coast Guard to ensure that all artificial reefs are marked with the appropriate aids to navigation.
11. No material other than that listed in the project description shall be used in any reef construction without advance approval of the Maryland Department of the Environment, Tidal Wetlands Division and a modification of the Tidal Wetlands License 23-WL-0757.
12. The Certificate Holder shall have all work proposed above the mean high water line reviewed and authorized by Anne Arundel County Office of Planning and Zoning.
13. The Certificate Holder shall construct the marsh establishment area in accordance with the following conditions:
 - A. The Certificate Holder shall use clean substrate fill material, no more than 10% of which shall pass through a standard number 100 sieve.
 - B. The marsh establishment area shall be planted within one year following completion of the filling operation.
 - C. The marsh establishment project shall be maintained as a wetland, with non-nuisance species' aerial coverage of at least 85% for three consecutive years. If 85% coverage is not attained, the reasons for failure shall be determined, corrective measures shall be taken, and the area shall be replanted.
 - D. If the fill is graded hydraulically, the Certificate Holder shall use a turbidity curtain around the perimeter of the instream work.
 - E. If the existing bank is to be cleared or graded:
 - a) The Certificate Holder shall perform all work under and in accordance with an approved Soil Erosion and Sediment Control Plan from the applicable sediment and erosion control agency; and
 - b) The Certificate Holder shall perform all work under and in accordance with the Critical Area requirements of the local jurisdiction in the form of an approved Buffer Management Plan.
14. The Certificate Holder shall accept the terms of the attached marsh maintenance plan by signing and returning the standard plan to the Water and Science Administration, Tidal Wetlands Division prior to commencement of any work authorized under this Certificate. If the Certificate Holder wishes to propose an alternative marsh maintenance plan, the alternative plan must be submitted to and approved by the Tidal Wetlands Division, Water and Science Administration, prior to commencement of any work authorized under this Tidal Wetland License 23-WL-0757. Any alternative plan must provide assurances of success that are at least equivalent to those of the

standard plan, in terms of the extent of native marsh plant coverage, elimination of invasive species and timeframe for plant establishment.

15. The Certificate Holder shall construct vents (opening in the stone edging), to facilitate marsh flushing and shall be located along the stone edging as depicted on the attached plans.
16. The mitigation project shall be constructed in accordance with the plans dated July 03, 2024.
17. The Certificate Holder shall perform all work in accordance with the Certification of Water Quality, including all General and Special Conditions, issued by the Maryland Department of the Environment, Tidal Wetlands Division.
18. The Certificate Holder shall not perform any construction from November 15th through March 1st of any year to protect wintering waterfowl. The proposed project site is located in a Historic Waterfowl Concentration Area.

CITATIONS AND STATEMENTS OF NECESSITY

1. Statement of Necessity for General Conditions 1, 2, 3, 4 and Special Conditions 1, 3, 9, 10, 11, 12, 13, 17: These conditions are necessary to ensure that water quality standards are met, and designated uses are maintained.

Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.10G(3); COMAR 26.23.02.06; COMAR 26.17.01; COMAR 26.23; COMAR 26.24

2. Statement of Necessity for General Conditions 5, 8, 9 and Special Conditions 6, 7, 8, 9, 11, 12, 13, 14: Fill or construction material within or adjacent to regulated resources may cause discharges resulting in turbidity in excess of water quality standards and interfere with designated uses of growth and propagation of fish, other aquatic life, wildlife; and other designated uses; and fail to meet general water quality criteria that waters not be polluted by substances in amounts sufficient to be unsightly or create a nuisance.

Citation: 26.08.02.03B(1)-B(2); COMAR 26.23; COMAR 26.24; COMAR 26.17.04

3. Statement of Necessity for General Condition 6: This condition is necessary to clarify the scope of this certification to ensure compliance with water quality regulations, without limiting restrictions through other requirements.

Citation: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08, COMAR 26.08.02.10E; COMAR 26.23.02.06; COMAR 26.17.04; COMAR 26.23; COMAR 26.24

4. Statement of Necessity for General Condition 7: Conditions of certification involve precise actions to comply with water quality standards. Site inspection may be necessary to ensure that limits, methods, and other requirements are met to ensure that water quality standards are met and designated uses are maintained. These conditions are necessary to ensure that the activity was conducted, and project completed according to terms of the authorization/certification, while allowing for review of in-field modifications which may have resulted in discharges to ensure that water quality standards were met. Designated uses include support of estuarine and marine aquatic life and shellfish harvesting and for growth and propagation of fish, other aquatic life, and wildlife.

Citation: Federal and state laws that authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.08.02.03B(1)(b); COMAR 26.08.02.03B(2); COMAR 26.23.02.06; COMAR 26.23; COMAR 26.24; COMAR 26.17.04

5. Statement of Necessity for General Condition 10: This condition is necessary to qualify the period of applicability of the terms and conditions of this Certification to be protective of Maryland water quality standards.

Citations: Federal and state laws which authorize this condition include but are not limited to: 33 U.S.C. § 1341(a), (b), & (d); 33 U.S.C. § 1251(b); 33 U.S.C. § 1370; 40 C.F.R. 121, 15 C.F.R. 930, Md. Ann. Code, Env. Article, Title 1, Subtitles 3 and 4; Md. Ann. Code, Env. Article, Title 5, Subtitles 5 and 9; Md. Ann. Code, Env. Article, Title 9, Subtitle 3; Md. Ann. Code, Env. Article, Title 16; COMAR 26.08; COMAR 26.17.04; COMAR 26.23; COMAR 26.24

6. Statement of Necessity for Special Condition 2: Expertise for conducting certain activities is required to ensure that there is no violation of water quality standards nor interference with designated uses. This condition is necessary to ensure that discharges will be conducted in a manner which does not violate water quality criteria nor interfere with designated uses.

Citation: COMAR 26.08.02.02B(2)- B(4); COMAR 26.08.02.03B(2)(d) – (e); COMAR 26.08.02.03B(1)(b); 26.08.02.03B(2); COMAR 23.02.04.04

7. Statement of Necessity for Special Conditions 4, 5, 16: This condition is necessary to offset the loss and impact of the activities within and over the water by providing compensation for the unavoidable alteration of the designated uses.

Citation: COMAR 23.02.04.11A-D; COMAR 23.02.04.12B; COMAR 23.02.04.12E COMAR 26.24.05.01B,

8. Statement of Necessity for Special Condition 15: Requirements to structures allow for tidal flushing through living shoreline which ensures that numeric standards for dissolved oxygen and temperature may be met. Failure to meet numeric standards for temperature and dissolved oxygen levels may result in conditions that do not support shallow water submerged aquatic vegetation, shellfish harvesting, fish spawning and nurseries, and fish and shellfish survival and growth.

Citation: COMAR 26.08.02.02.B.(3); COMAR 26.08.02.02-1; COMAR 26.08.02.03-3.C.(8)(d); COMAR 26.08.02.03-3.C.(3)(a)

9. Statement of Necessity for Special Condition 18: A time of year restriction is necessary to allow for wintering waterfowl to move from breeding areas to seasonally use suitable winter habitat. Breeding and wintering habitat are both essential to support waterfowl populations. Breeding habitat would not sustain waterfowl during winter. Disturbance during the closure period would interfere directly or indirectly with designated uses.

Citation: COMAR 26.08.02.02.B.(3); COMAR 26.08.02.02.B.(1)(d); COMAR 26.08.02.03.B.(1)(b); COMAR 26.08.02.03.B.(2)(e); COMAR 26.24

CERTIFICATION APPROVED



D. Lee Currey, Director
Water and Science Administration

Sep 30, 2024

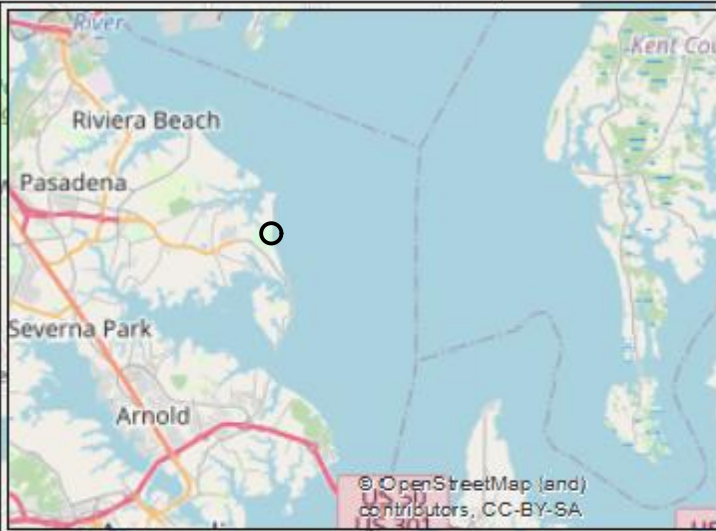
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Agency Interest Number: 81024

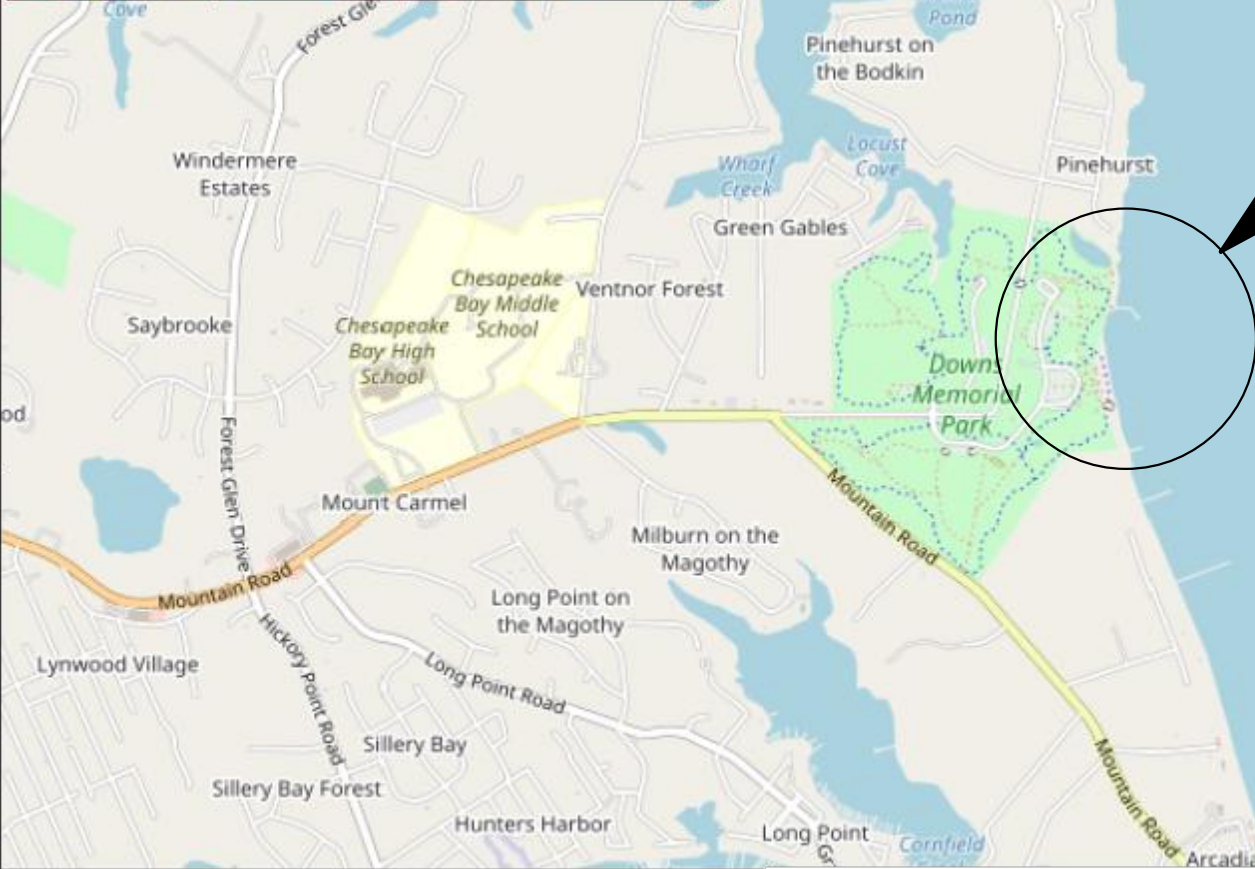
Effective Date: September 23, 2024

Enclosure: Plan Sheets dated July 03, 2024

cc: WSA Inspection & Compliance Program
Army Corps of Engineers

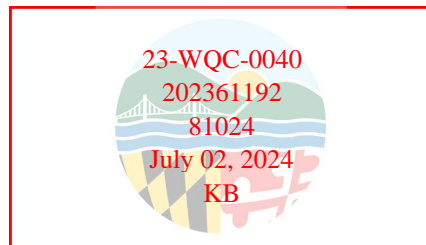


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SITE

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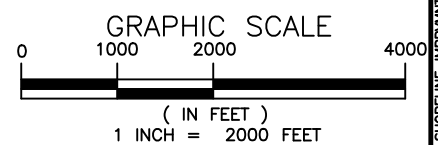


DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

VICINITY MAP

DATE: JULY 2024 SHEET 1 OF 15

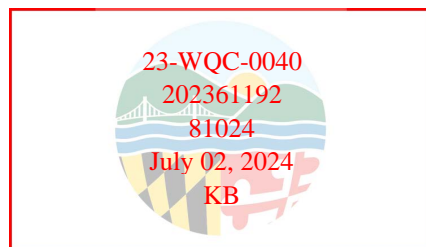
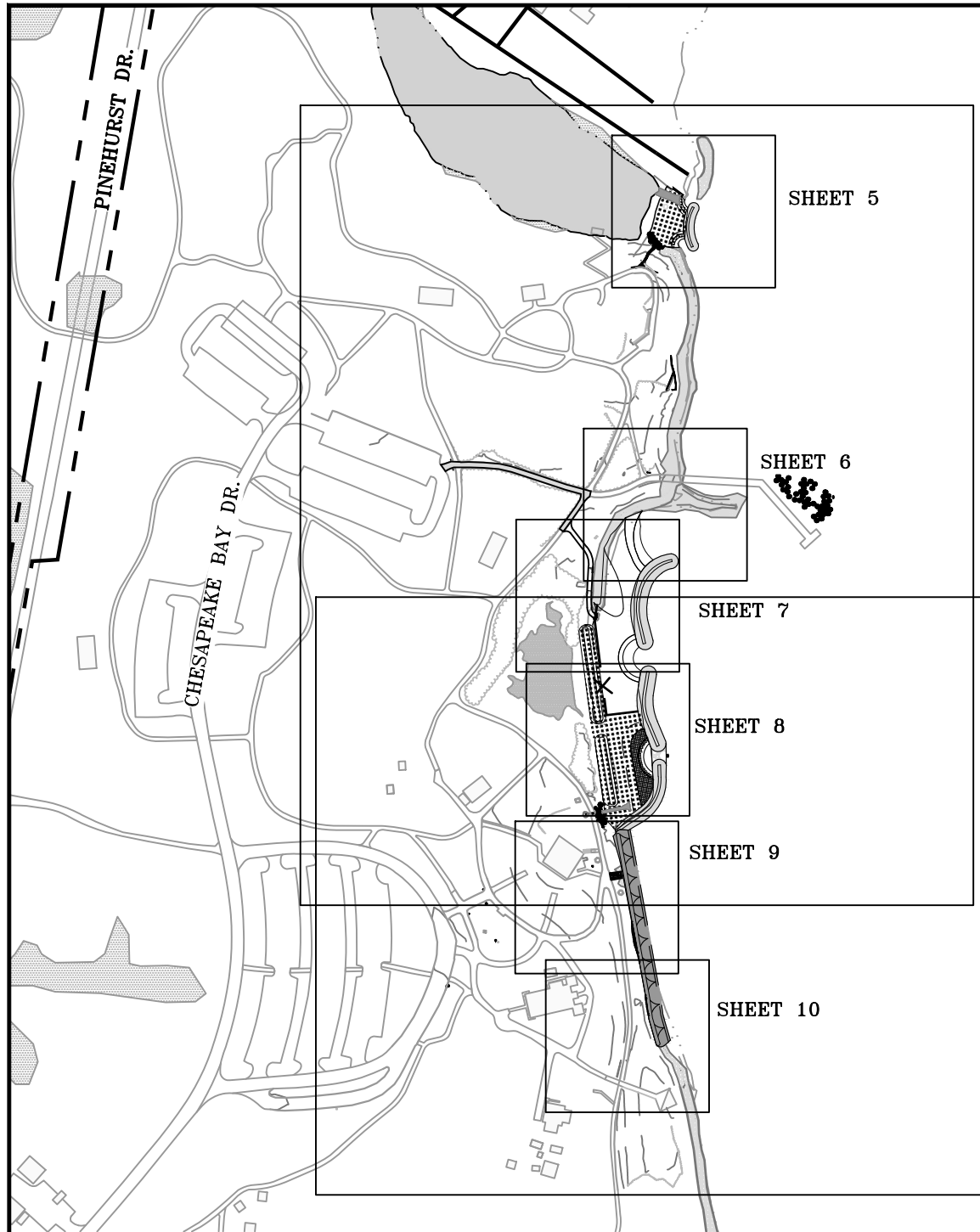


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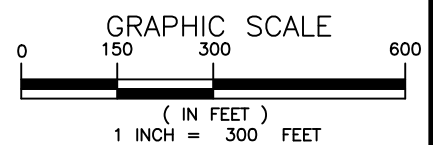


**DOWNSPARK SHORELINE
IMPROVEMENTS
ANNE ARUNDEL COUNTY**

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

KEY SHEET

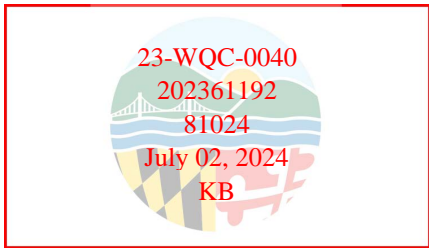
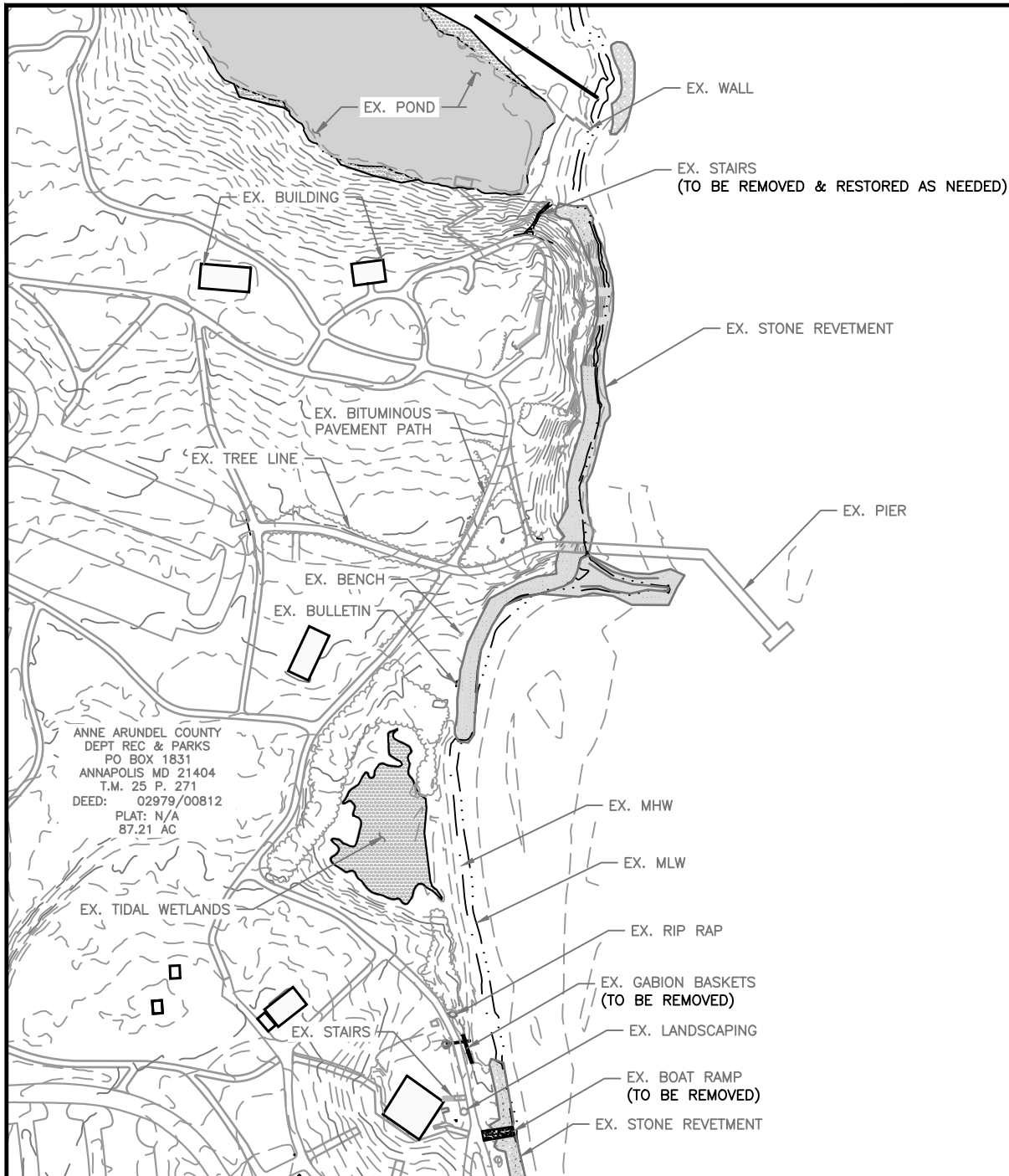
DATE: JULY 2024 SHEET 2 OF 15



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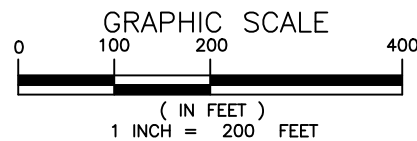


**DOWNS PARK SHORELINE
IMPROVEMENTS
ANNE ARUNDEL COUNTY**

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

EXISTING CONDITIONS

DATE: JULY 2024 SHEET 3 OF 15



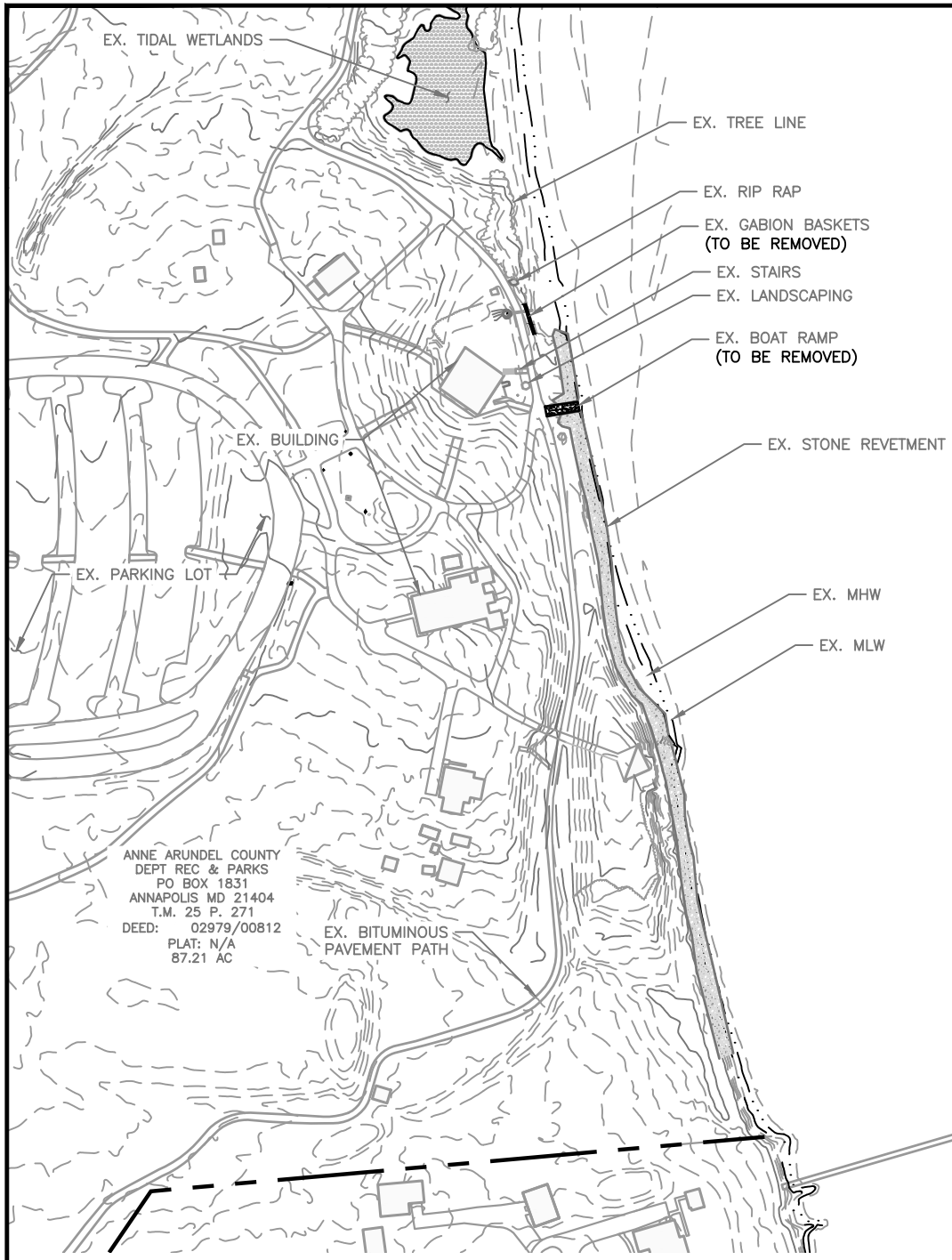
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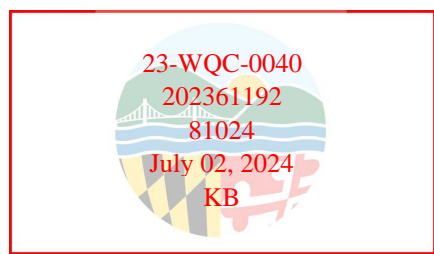
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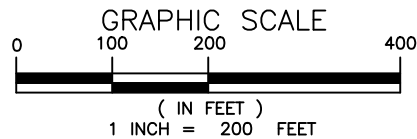


Downs Park Shoreline Improvements Anne Arundel County

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EXISTING CONDITIONS

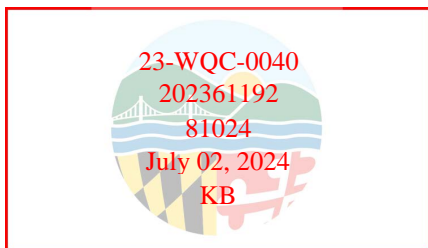
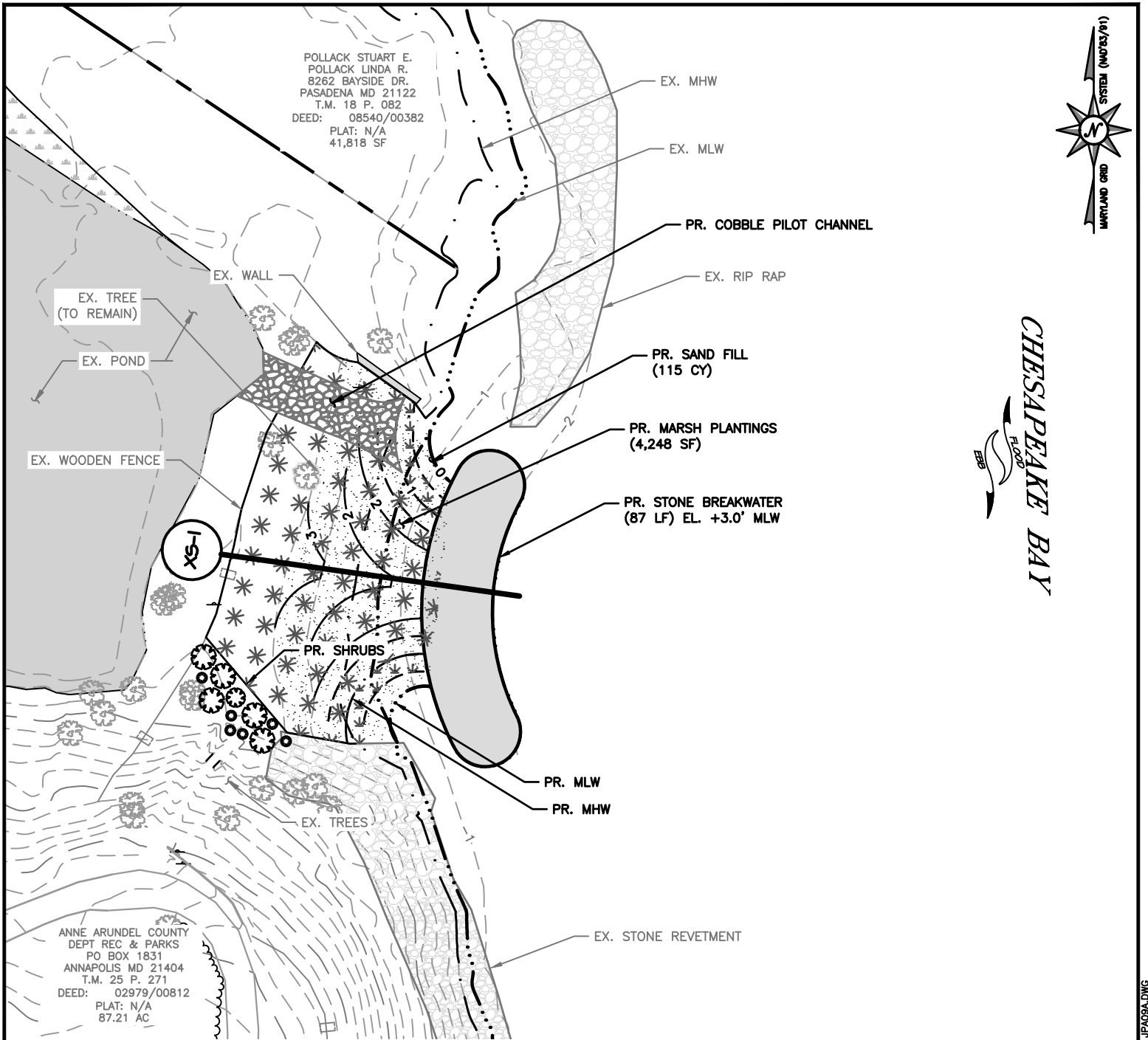
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DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

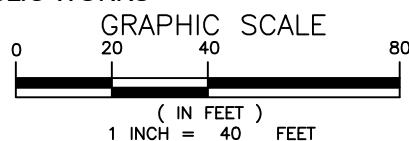
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SITE PLANS

DATE: JULY 2024 SHEET 5 OF 15

LEGEND

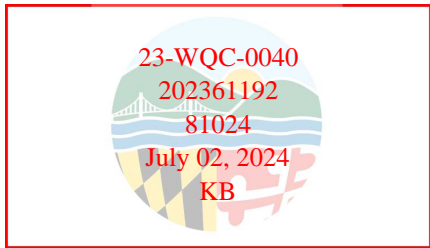
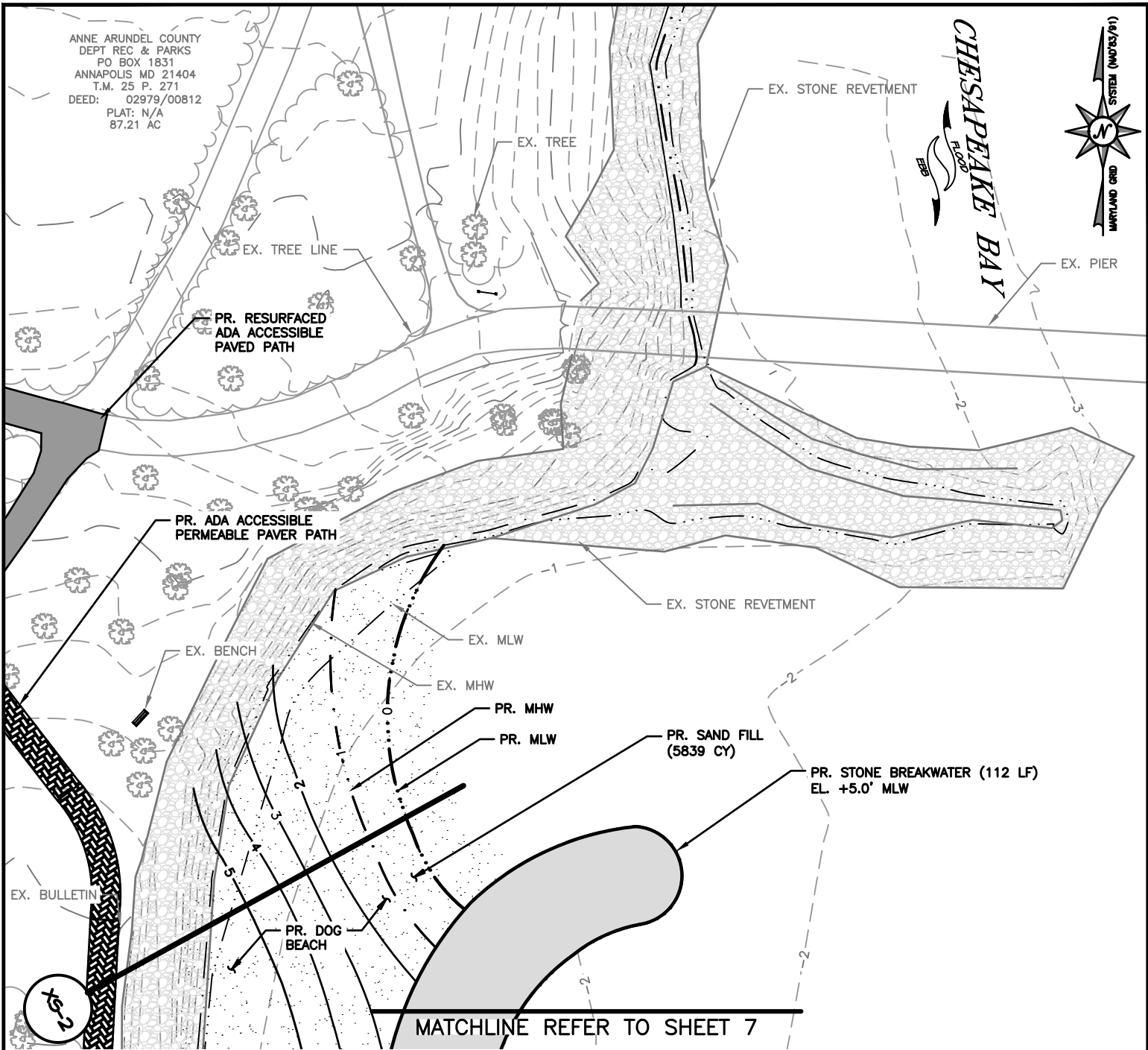
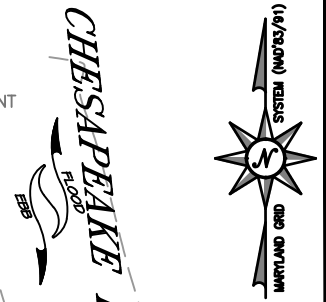
	EX. TREES		PR. STONE BREAKWATER
	EX. WETLANDS		PR. MARSH PLANTINGS
	EX. STONE REVETMENT		PR. SAND
			PR. COBBLE PILOT CHANNEL



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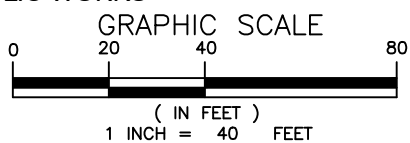
DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

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SITE PLANS

DATE: JULY 2024 SHEET 6 OF 15

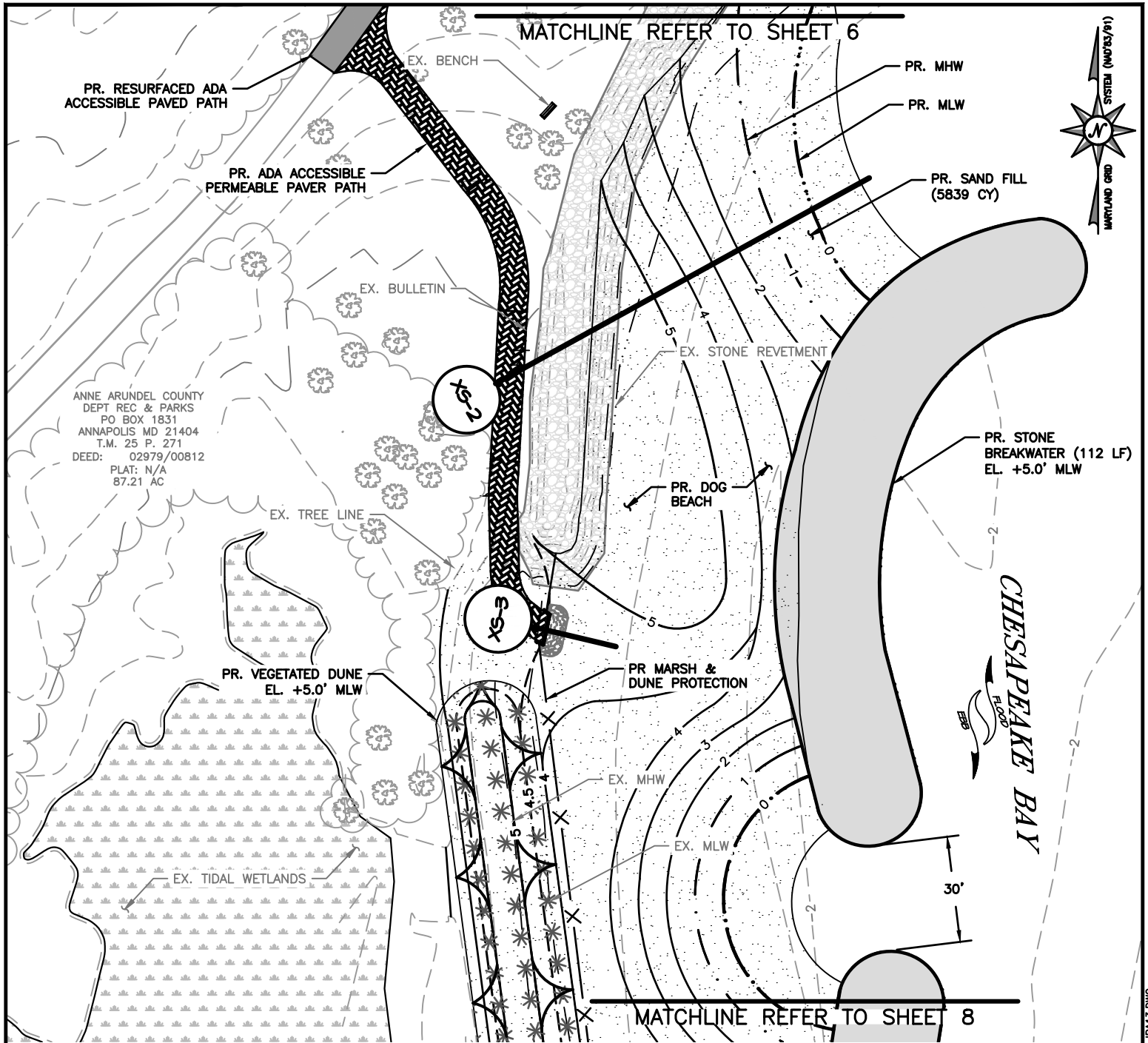
LEGEND	
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	EX. WETLANDS
	EX. STONE REVETMENT
	PR. RESURFACED ADA ACCESSIBLE PAVED PATH
	PR. ADA ACCESSIBLE PERMEABLE PAVER PATH
	PR. STONE BREAKWATER
	PR. SAND



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July 02, 2024
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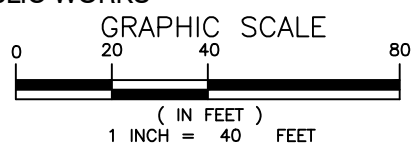
DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

SITE PLANS

DATE: JULY 2024 SHEET 7 OF 15

EX. TREES	PR. ADA ACCESSIBLE PERMEABLE PAVER PATH
EX. WETLANDS	PR. STONE BREAKWATER
EX. STONE REVETMENT	PR. MARSH PLANTINGS
PR. RESURFACED ADA ACCESSIBLE PAVED PATH	PR. SAND




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 Hanover, Maryland 21076 Fax: (410) 694-9405
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ANNE ARUNDEL COUNTY
DEPT REC & PARKS
PO BOX 1831
ANNAPOLIS MD 21404
T.M. 25 P. 271
DEED: 02979/00812
PLAT: N/A
87.21 AC

MATCHLINE REFER TO SHEET 7

PR. STONE
BREAKWATER (160 LF)
EL. +4.5' MLW

CHESAPEAKE BAY



PR. VEGETATED DUNE
EL. +5.0' MLW

EX. MHW

EX. MLW

PR. MARSH &
DUNE PROTECTION

EX. TREE LINE

PR. MHW

PR. MLW

PR. MARH PLANTINGS
(21,016 SF)

PR. VEGETATED DUNE
EL. +5.0' MLW

PR. OSPREY NEST
OBSTRUCTION SIGN

CHESAPEAKE BAY DR.

EX. TREE

EX. RIPRAP

EX. LANDSCAPE

EX. SWALE
(TYP.)

PR. COBBLE PILOT
CHANNEL

PR. STONE
BREAKWATER (160 LF)
EL. +4.0' MLW

MATCHLINE REFER TO SHEET 9

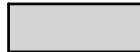
LEGEND



EX. TREES



EX. WETLANDS



PR. STONE BREAKWATER



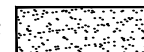
PR. STONE VENT



PR. HIGH MARSH
PLANTINGS



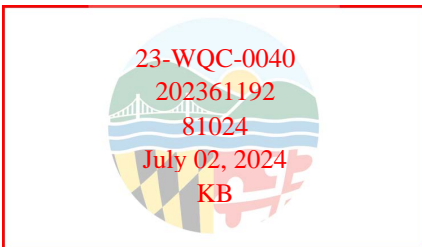
PR. LOW MARSH
PLANTINGS



PR. SAND



PR. COBBLE PILOT
CHANNEL



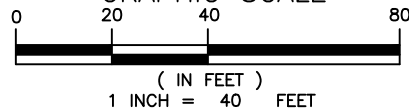
DOWNSPARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

SITE PLANS

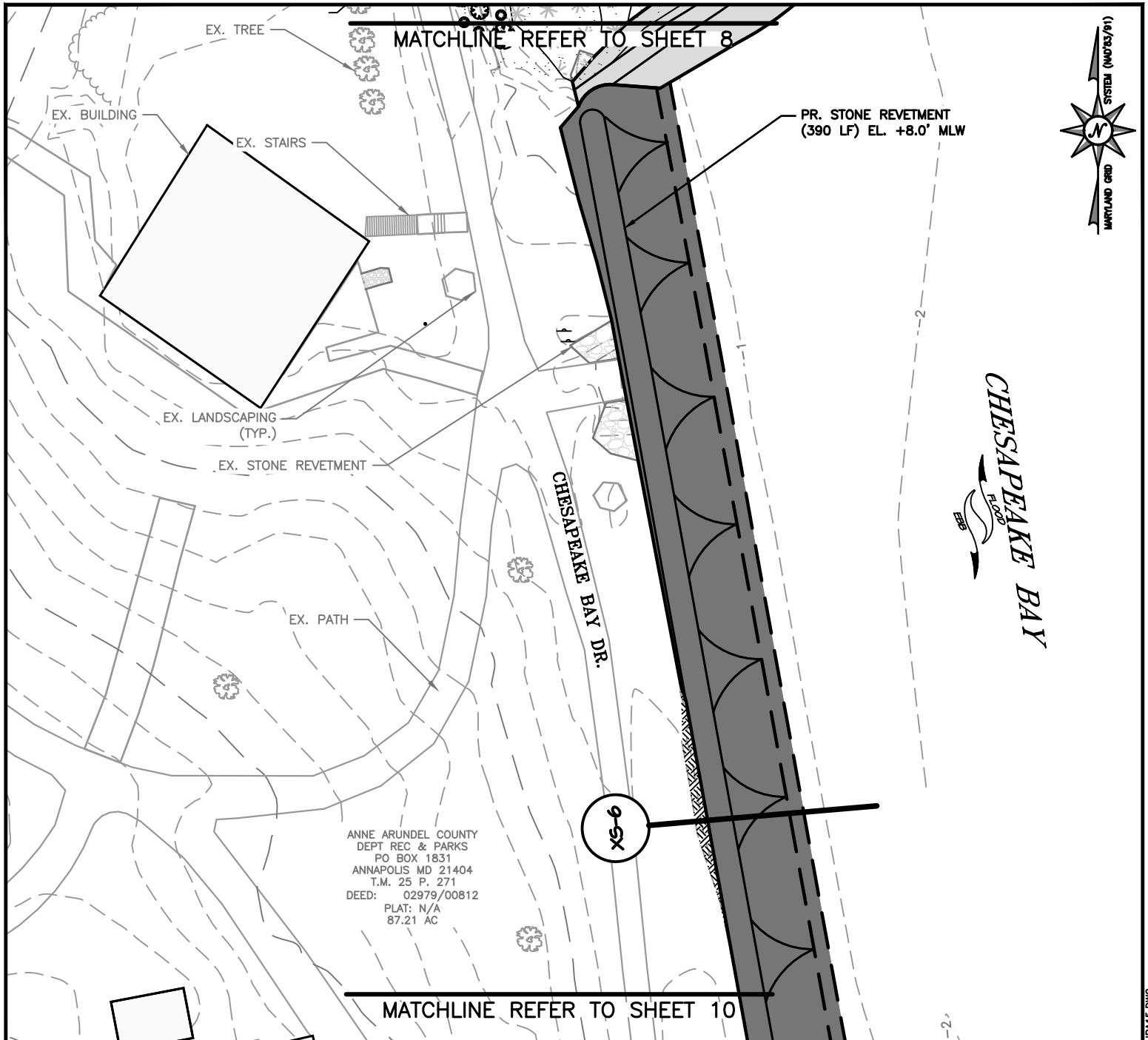
DATE: JULY 2024 SHEET 8 OF 15

GRAPHIC SCALE



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ANNE ARUNDEL COUNTY
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PO BOX 1831
ANNAPOLIS MD 21404
T.M. 25 P. 271
DEED: 02979/00812
PLAT: N/A
87.21 AC

CHESAPEAKE BAY
FLOOD

LEGEND



EX. TREES



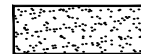
EX. STONE REVETMENT



PR. STONE REVETMENT



PR. STONE BREAKWATER



PR. SAND

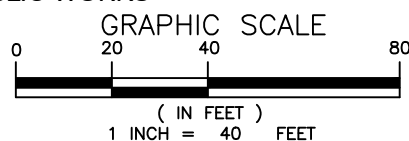
23-WQC-0040
202361192
81024
July 02, 2024
KB

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SITE PLANS

DATE: JULY 2024 SHEET 9 OF 15



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MATCHLINE REFER TO SHEET 10

PR. STONE REVETMENT
(390 LF) EL. +8.0' MLW



CHESAPEAKE BAY DR.

EX. BITUMINOUS
PAVEMENT PATH

EX. PATH

EX. TREE

EX. STONE REVETMENT

EX. MHW

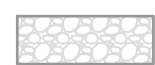
EX. MLW

EX. GAZEBO

LEGEND



EX. TREES



EX. STONE REVETMENT



PR. STONE REVETMENT

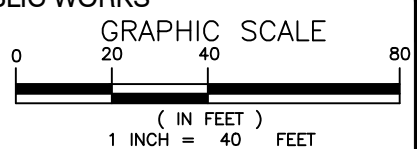
23-WQC-0040
202361192
81024
July 02, 2024
KB

DOWNSPARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

SITE PLANS

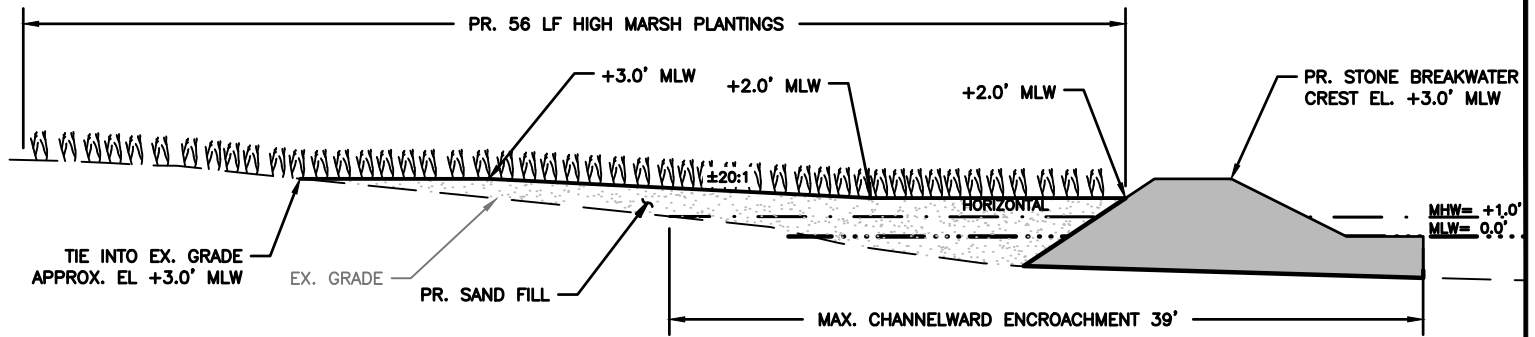
DATE: JULY 2024 SHEET 10 OF 15



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Consultants & Designers, Inc.
"Integrating Engineering and Environment"

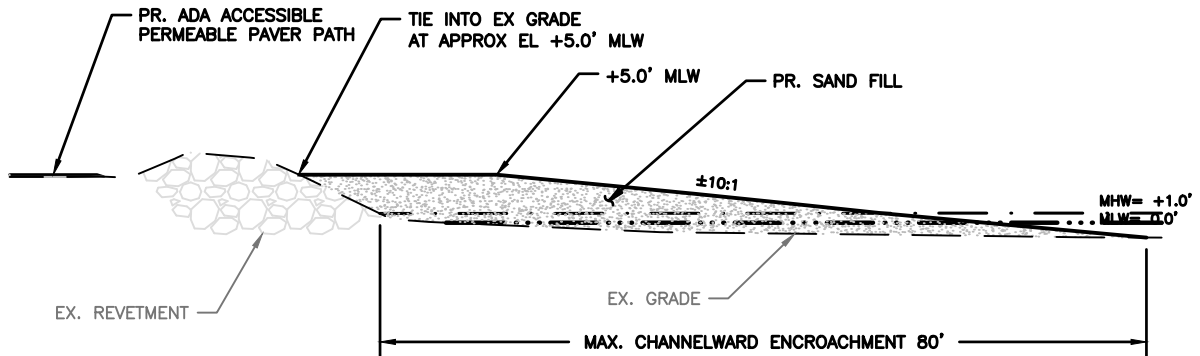
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Z:\5_13802_DOWNSPARK_SHORELINE_IMPROVMENTS\CAD FILES\SHEET FILES\JPA\5_13802_JPA16.DWG



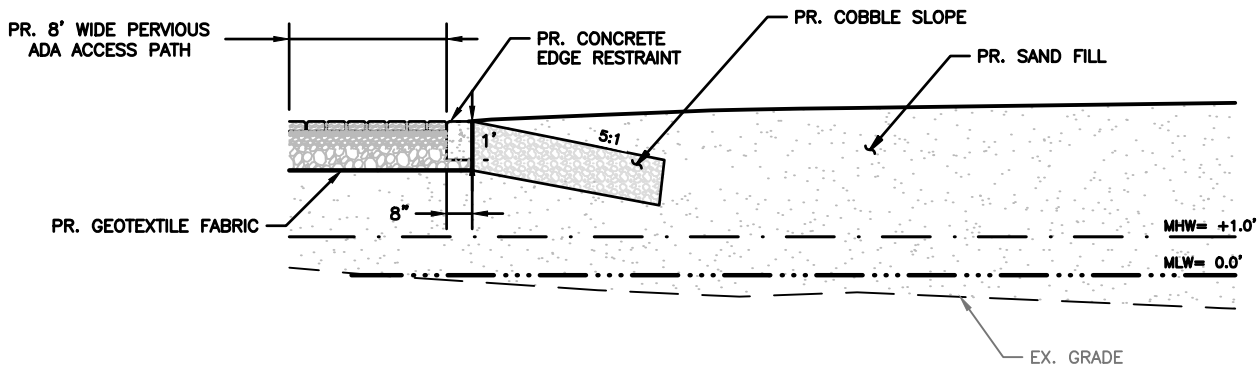
SECTION XS-1

SCALE: 1"=10'



SECTION XS-2

SCALE: 1"=20'



SECTION XS-3

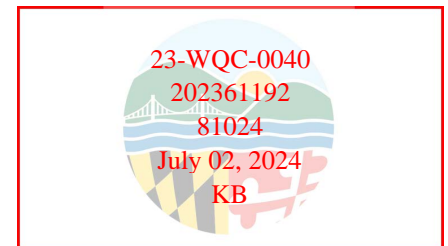
SCALE: 1"=5'

DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

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CROSS SECTIONS & TYPICALS

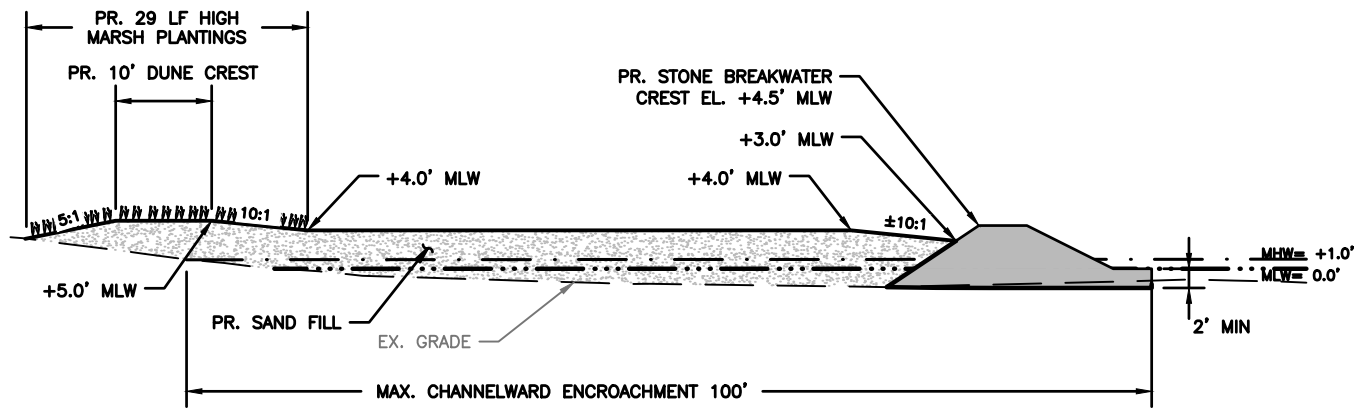
DATE: JULY 2024 SHEET 11 OF 15



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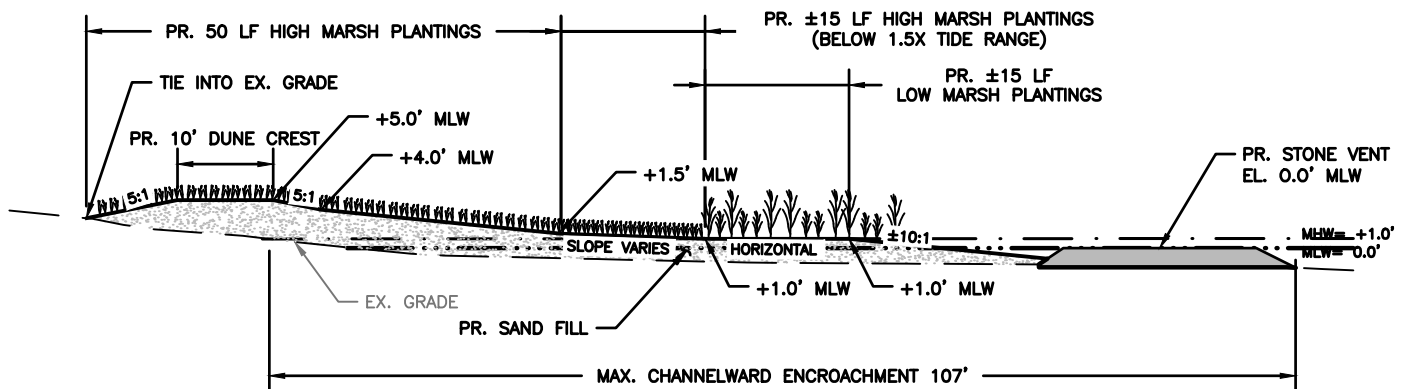
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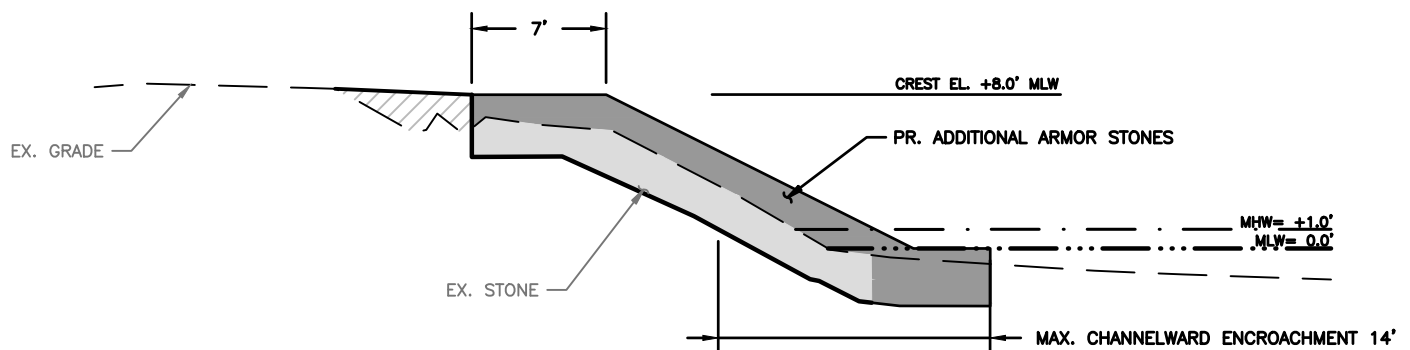
SECTION XS-4

SCALE: 1"=20'



SECTION XS-5

SCALE: 1"=20'



SECTION XS-6

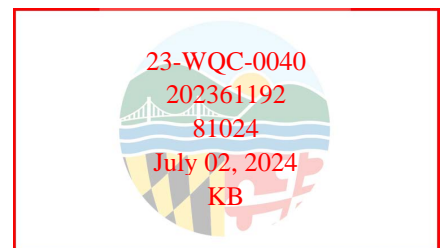
SCALE: 1"=10'

DOWNSPARK SHORELINE
IMPROVEMENTS
ANNE ARUNDEL COUNTY

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS & TYPICALS

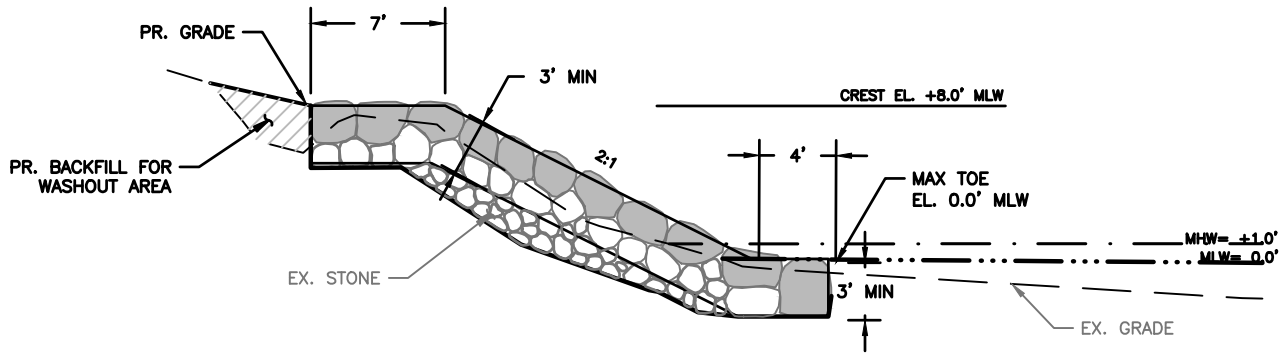
DATE: JULY 2024 SHEET 12 OF 15



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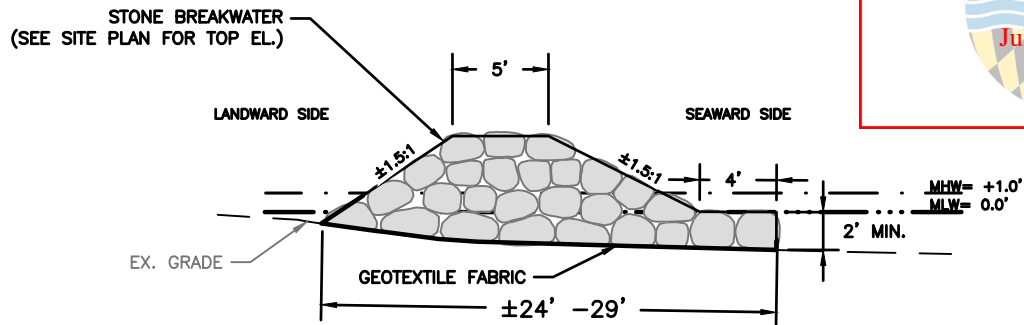
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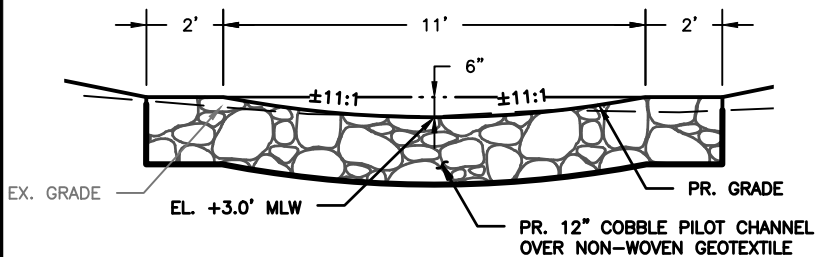
TYPICAL STONE REVETMENT

SCALE: 1" = 10'



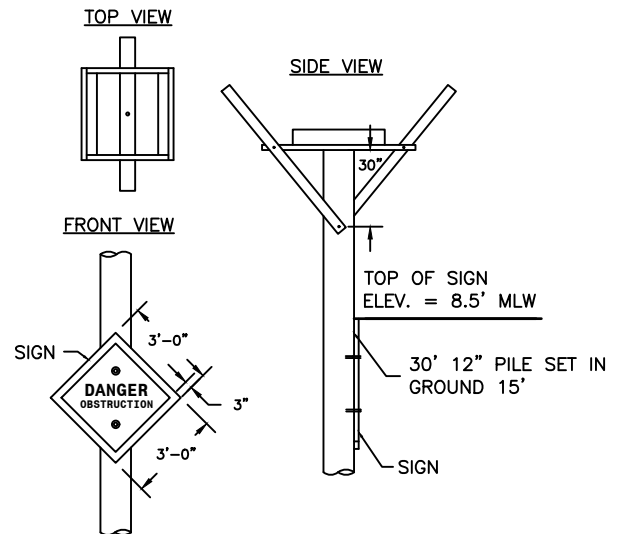
TYPICAL STONE BREAKWATER

SCALE: 1" = 10'



TYPICAL COBBLE PILOT CHANNEL

SCALE: 1" = 5'



TYPICAL OSPREY NEST OBSTRUCTION SIGN

NOT TO SCALE

DOWNSPARK SHORELINE
IMPROVEMENTS
ANNE ARUNDEL COUNTY

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CROSS SECTIONS & TYPICALS

DATE: JULY 2024 SHEET 13 OF 15



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PROJECT SUMMARY

PROPOSED STRUCTURES:

+3.0' STONE BREAKWATER - 1,746 SF (1 TOTAL)
TOTAL LENGTH : 87 LF
AVG. WIDTH : 20 FT
MAX. CHANNELWARD ENCROACHMENT - 39 LF

+4.0' STONE BREAKWATER - 5,810 SF (1 TOTAL)
TOTAL LENGTH : 160 LF
AVG. WIDTH : 23 FT
MAX. CHANNELWARD ENCROACHMENT - 107 LF

+4.5' STONE BREAKWATER - 4,615 SF (1 TOTAL)
TOTAL LENGTH : 160 LF
AVG. WIDTH : 29 FT
MAX. CHANNELWARD ENCROACHMENT - 100 LF

+5.0' STONE BREAKWATER - 3,679 SF (3,585 SF IMPACT BELOW MHW) (1 TOTAL)
TOTAL LENGTH : 112 LF
AVG. WIDTH : 29 FT
MAX. CHANNELWARD ENCROACHMENT - 132 LF

+8.0' STONE REVETMENT - 11,272 SF (3,353 SF IMPACT BELOW MHW)
TOTAL LENGTH : 390 LF
AVG. WIDTH OF IMPACT : 8 FT
MAX. CHANNELWARD ENCROACHMENT - 14 LF

STONE VENT - 523 SF (523 SF IMPACT BELOW MHW) (1 TOTAL)
TOTAL LENGTH : 15 LF
AVG. WIDTH : 25 FT
MAX. CHANNELWARD ENCROACHMENT - 107 LF

COBBLE PILOT CHANNEL
NORTH SITE - 610 SF (25 SF BELOW MHW)
TOTAL LENGTH : 43 LF
AVG. WIDTH : 15 LF
MAX. CHANNELWARD ENCROACHMENT - 4.5 LF

SOUTH SITE - 330 SF (178 SF BELOW MHW)
TOTAL LENGTH : 52 LF
AVG. WIDTH : 5.5 LF
MAX. CHANNELWARD ENCROACHMENT - 24 LF

LIVING SHORELINE (25,734 SF (15,676 SF BELOW MHW))
NORTH SITE - 4,248 SF (1,210 SF BELOW MHW)
TOTAL LENGTH : 100 LF
AVG. WIDTH : 45 LF
VOLUME : 95 CY (75 CY BELOW MHW)
MAX. CHANNELWARD ENCROACHMENT - 19 LF
TOTAL IMPACTS : 2,941 SF (RATIO OF TIDAL MARSH TO TIDAL IMPACTS - 1 : 4.2)
UPLAND CONVERSION : 777 SF
STONE (1,746 SF)
TOTAL LENGTH : 87 LF
AVG. WIDTH : 20 LF
AVG. HEIGHT : +3.0' MLW
TOTAL VENT LENGTH : 37 LF
TIDAL MARSH : 418 SF (418 SF HIGH MARSH; 0 SF LOW MARSH)

SOUTH SITE - 21,016 SF (14,447 SF BELOW MHW)
TOTAL LENGTH : 380 LF
AVG. WIDTH : 56 LF
VOLUME : 2,233 CY (1,801 CY BELOW MHW)
MAX. CHANNELWARD ENCROACHMENT - 79 LF
TOTAL IMPACTS: 20,340 SF (RATIO OF TIDAL MARSH TO TIDAL IMPACTS - 1 : 1.66)
UPLAND CONVERSION : 7,017 SF
STONE BREAKWATER (8,118 SF)
TOTAL LENGTH : 240 LF
AVG. WIDTH : 26 LF
AVG. HEIGHT : +4.25' MLW
STONE VENT (523 SF)
TOTAL LENGTH : 25 LF
AVG. HEIGHT : 0' MLW
TIDAL MARSH : 5,205 SF (2,585 SF HIGH MARSH; 2,620 SF LOW MARSH)

BEACH NOURISHMENT (26,986 SF (25,095 SF BELOW MHW))
SOUTH SITE - 26,986 SF (25,095 SF BELOW MHW)
TOTAL LENGTH : 361 LF
AVG. WIDTH : 75 LF
VOLUME : 3,626 CY (3,505 CY BELOW MHW)
MAX. CHANNELWARD ENCROACHMENT - 80 LF

OBSTRUCTION SIGN (2) - 2 SF
REEF BALLS (45) - 2,702 SF
MAX. CHANNELWARD ENCROACHMENT - 279 LF

MARSH PLANTINGS SEAWARD OF 1.5X TIDE RANGE - 5,623 SF
HIGH MARSH - 3,003 SF
LOW MARSH - 2,620 SF
SHRUB PLANTINGS - 165 SF

IMPACT SUMMARY

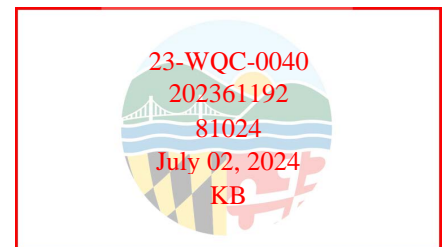
TOTAL AREA OF IMPACT FROM MHW INTO TIDAL WATERS = 63,242 SF (1.45 AC)
TOTAL AREA OF IMPACT FROM MHW INTO TIDAL WATERS (STONE STRUCTURES ONLY) = 19,630 SF (0.45 AC)
TOTAL AREA OF PERMANENT IMPACT TO SHALLOW WATER HABITAT = 63,242 SF (1.45 AC)
TOTAL AREA OF IMPACT TO PRIVATE TIDAL WETLANDS = 0 SF

DOWNS PARK SHORELINE IMPROVEMENTS ANNE ARUNDEL COUNTY

APPL. BY: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

SITE NOTES

DATE: JULY 2024 SHEET 14 OF 15



NOTES

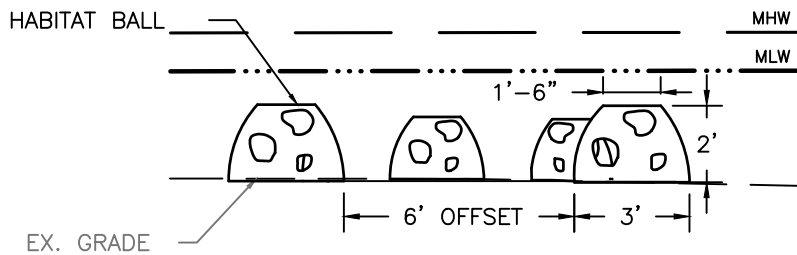
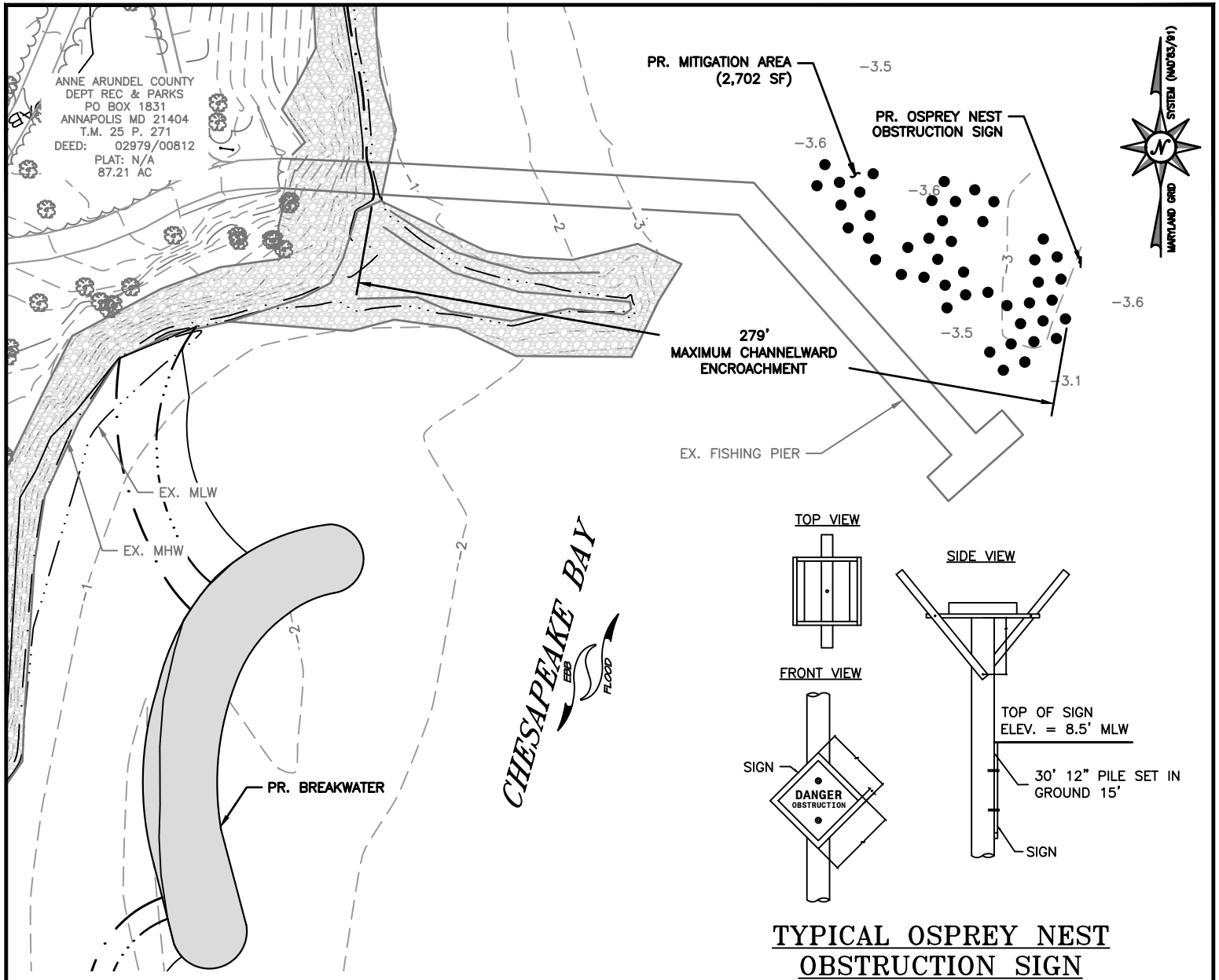
1. BASEMAP COMPILED FROM ANNE ARUNDEL COUNTY 2018 PLANIMETRICS AND AERIAL PHOTOGRAPHY.
2. SOUNDINGS AND CONTOURS ARE IN FEET AND REFER TO MLW.
3. TIDAL RANGE IS 1.00'
4. BATHYMETRIC & TOPOGRAPHIC SURVEY PERFORMED BY BAYLAND CONSULTANTS & DESIGNERS NOVEMBER 23, 2022.
5. THESE ARE PERMIT DRAWINGS ONLY AND SUBJECT TO CHANGE DURING THE PERMIT PROCESS. DESIGN DRAWINGS ARE TO BE PREPARED SEPARATELY.



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TYPICAL HABITAT BALL CLUSTER

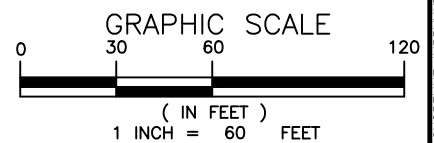
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**DOWNSPARK SHORELINE
IMPROVEMENTS
ANNE ARUNDEL COUNTY**

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REEF BALL MITIGATION

DATE: JULY 2024 SHEET 15 OF 15



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23-WQC-0040_Package

Final Audit Report

2024-09-30

Created:	2024-09-27
By:	Jonathan Stewart (jon.stewart@maryland.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAS7oSkOhR-mvp4Tev8oMUAmsAvKTidK6a

"23-WQC-0040_Package" History

-  Document created by Jonathan Stewart (jon.stewart@maryland.gov)
2024-09-27 - 1:13:26 AM GMT
-  Document emailed to mde.wsaepermits@maryland.gov for signature
2024-09-27 - 1:14:43 AM GMT
-  Email viewed by mde.wsaepermits@maryland.gov
2024-09-30 - 11:36:32 AM GMT
-  Signer mde.wsaepermits@maryland.gov entered name at signing as Matthew C. Rowe
2024-09-30 - 11:41:42 AM GMT
-  Document e-signed by Matthew C. Rowe (mde.wsaepermits@maryland.gov)
Signature Date: 2024-09-30 - 11:41:44 AM GMT - Time Source: server
-  Agreement completed.
2024-09-30 - 11:41:44 AM GMT