



State of Rhode Island and Providence Plantations  
**Coastal Resources Management Council**  
 Oliver H. Stedman Government Center  
 4808 Tower Hill Road, Suite 3  
 Wakefield, RI 02879-1900

(401) 783-3370  
 Fax (401) 783-2069

## APPLICATION FOR STATE ASSENT

To perform work regulated by the provisions of Chapter 279 of the Public Laws of 1971 Amended.

Project Location <u>585 Atlantic Avenue, Westerly, RI</u> <small>No. Street City/Town</small>	File No. (CRMC USE ONLY)  <div style="text-align: center; color: blue; font-weight: bold; font-size: 1.2em;">2025-09-101</div>
Owner's Name <u>Bruce H Moeckel Revocable Family Trust</u>	Plat: 156 Lot(s): 12
Mailing Address <u>Attn: Carol Moeckel, 585 Atlantic Ave., Westerly, RI 02891</u> <small>Address City/Town, State Zip Code</small>	Owner's Contact: Number: 860-916-7864 Email Address: <u>dunetop@att.net</u>
Contractor RI Reg. # <u>TBD</u> Address <u>TBD</u>	Email address: <u>TBD</u> Tel. No. <u>TBD</u>
Designer <u>Joe Casali Engineering</u> Address <u>300 Post Road, Warwick, RI 02888</u>	Tel. No. <u>401-944-1300</u>
Name of Waterway <u>Providence River</u>	Estimated Project Cost (EPC): <u>\$100,000</u> Application Fee: <u>\$1,000</u>
<b>Provide Below a Description of Work As Proposed (required).</b> Structural shoreline protection (infill) and stone steps.	

**Have you or any previous owner filed an application for and/or received an assent for any activity on this property?**  
 (If so please provide the file and/or assent numbers): See Attachment - Previous Permit List

**Is this site within a designated historic district?**       YES       NO

**Is this application being submitted in response to a coastal violation?**       YES       NO

If YES, you must indicate NOV or C&D Number: \_\_\_\_\_

**Name/mailling addresses of adjacent property owners whose property adjoins the project site.** Accurate mailing addresses will insure proper notification. CSM Applicant **must** initial to certify accuracy of adjacent property owners and accuracy of mailing addresses.

Map 156, Lot 10: (597 Atlantic Ave.): Weekapug Realty Trust, 19 Mayfield Terr., E. Lyme, CT 06333

Map 156, Lot 13 (577 Atlantic Ave.): Five7seven LLC, 112 Mountain Rd., W. Hartford, CT 06107

**STORMTOOLS ([Http://www.beachsamp.org/resources/stormtools/](http://www.beachsamp.org/resources/stormtools/))** is a planning tool to help applicants evaluate the impacts of sea level rise and storm surge on their projects. The Council encourages applicants to use STORMTOOLS to **help them understand the risk that may be present at their site and make appropriate adjustments to the project design.**

NOTE The applicant acknowledges by evidence of their signature that they have reviewed the Rhode Island Coastal Resources Management Program, and have, where possible, adhered to the policies and standards of the program. Where variances or special exceptions are requested by the applicant, the applicant will be prepared to meet and present testimony on the criteria and burdens of proof for each of these relief provisions. The applicant also acknowledges by evidence of their signature that to the best of their knowledge the information contained in the application is true and valid. If the information provided to the CRMC for this review is inaccurate or did not reveal all necessary information or data, then the permit granted under this application may be found to be null and void. Applicant requires that as a condition to the granting of this assent, members of the CRMC or its staff shall have access to the applicant's property to make on-site inspections to insure compliance with the assent. This application is made under oath and subject to the penalties of perjury.

08.04

Carol Moeckel  
 Owner Name (PRINT)

Carol Moeckel  
 Owner's Signature (SIGN)

PLEASE REVIEW REVERSE SIDE OF APPLICATION FORM



**STATEMENT OF DISCLOSURE AND APPLICANT AGREEMENT AS TO FEES**

The fees which must be submitted to the Coastal Resources Management Council are based upon representations made to the Coastal Resources Management Council by the applicant. If after submission of this fee the Coastal Resources Management Council determines that an error has been made either in the applicant's submission or in determining the fee to be paid, the applicant understands that additional fees may be assessed by the Coastal Resources Management Council. These fees must be paid prior to the issuance of any assent by the Coastal Resources Management Council.

The applicant understands the above conditions and agrees to comply with them.

Carol Moeckel  
Owner Signature

9/18/25  
Date

Carol Moeckel, 585 Atlantic Ave, Westerly, RI 02891  
Print Name and Mailing Address





# Town of Westerly, R. I.

Town Assessor's Office 45 Broad St Westerly RI 02891  
Tel (401) 348-2541 Fax (401) 348-2616

COASTAL RESOURCE MANAGEMENT COUNCIL  
STEDMAN GOVERNMENT CENTER  
TOWER HILL ROAD  
WAKEFIELD, RI 02879

TO WHOM IT MAY CONCERN:

RECORDS AT THE ASSESSOR'S OFFICE, TOWN OF WESTERLY, RI, INDICATE THAT THE FOLLOWING OWN PROPERTY IN SAID TOWN:

NAME: BRUCE H MOECKEL 2015 REV FAM TRUST  
ADDRESS: PO BOX 30151  
SEA ISLAND, GA 31561  
PROPERTY LOCATION: 585 ATLANTIC AVENUE  
WESTERLY, RI 02891  
PLAT/LOT: 156/12  
LAND EVIDENCE RECORDS: BOOK 2017 PAGE 2155  
DATE OF ISSUE: August 13, 2024

SINCERELY,

DAVID B. THOMPSON  
TOWN ASSESSOR



# JOE CASALI ENGINEERING, INC.

CIVIL • SITE DEVELOPMENT • TRANSPORTATION • DRAINAGE • WETLANDS • ISDS • TRAFFIC • FLOODPLAIN  
300 POST ROAD • WARWICK, RI 02888 • (401) 944-1300 • (401) 944-1313 (FAX) • [WWW.JOECASALI.COM](http://WWW.JOECASALI.COM)

September 24, 2025

Coastal Resources Management Council  
Stedman Government Center, Suite 3  
4808 Tower Hill Road  
Wakefield, RI 02879-1900

**RE: Proposed Shoreline Protection**  
**585 Atlantic Avenue, Westerly, RI**  
***Category B Assent Application***

To Whom It May Concern:

On behalf of the Bruce H. Moeckel Revocable Family Trust and Ms. Carol Moeckel, Joe Casali Engineering, Inc. (JCE) is respectfully filing the enclosed materials for an Application for State Assent to perform work regulated by the provisions of Chapter 279 of the Public Laws of 1971 Amended; specifically, to construct a riprap revetment along the coastal frontage of the subject property. The subject property is known as Assessor's Plat (AP) 156, Lot 12, located at 585 Atlantic Avenue in Westerly, Rhode Island. The existing waterfront single-family dwelling is serviced by an individual OWTS and public water.

The subject property has approximately 157 linear feet of shoreline in an east-west orientation along Mean High Water of the Block Island Sound. The waters are classified as Type 1 - Conservation Areas. The shoreline in this region is exposed to severe weather conditions that originate from a south and southeasterly direction. The property experienced many stones being displaced from the revetment over that last two (2) winter seasons. Issues are starting to arise with the structural stability of the dwelling which could be exacerbated during winter storms unless the revetment is maintained. Per the Report of Findings – Preliminary Determination by the Rhode Island Coastal Resources Management Council, the adjacent shoreline area consists of an existing revetment extending approximately 100 feet protecting the dwelling, and an approximately 50 feet section of unprotected dike/dune. The properties to the east and west of the subject property are protected by rip rap revetments. Furthermore, this section of shoreline consists of 0.35 miles of hardened shoreline with the exception of the gap on the subject property. The Executive Director has determined that the circumstances of the site and the immediate surrounding area qualify the subject property to be considered “infill” and man-made shoreline, thus allowing for a request for structural shoreline protection. Structural shoreline protection is not prohibited on Type 1 Manmade Shorelines.



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Accordingly, please find the following included with this letter:

- One (1) check for the Application Fee of \$1,000.00,
- One (1) original signed Application for State Assent and Coastal Hazard Worksheet,
- One (1) Building Official Form (signed)
- One (1) Proof of Ownership Form, and
- Four (4) packets containing the following:
  - Copy of the Application for State Assent (signed),
  - CRMC Assent Checklist with Attachments,
  - Site Photographs
  - Listing of Old Permits
  - Project Plans (24"x36"), dated September 2025, and
  - Project Narrative, dated September 2025.

If you should have any questions or would like to meet to discuss this application, please call either myself or Joseph Casali at 401-944-1300.

Sincerely,  
JOE CASALI ENGINEERING, INC.



Daniel R. DeCesaris, P.E.  
*Project Manager*

xc: C. Moeckel, via e-mail; file



TO: Coastal Resources Management Council  
4808 Tower Hill Road Suite 3  
Wakefield, RI 02879  
Phone: (401) 783-3370 / Fax: (401) 783-2069



FROM: Building Official

DATE: September 10, 2025

SUBJ: Application of: Bruce H Moeckel Revocable Family Trust, Attn: Carol Moeckel

Location: \_\_\_\_\_

Address: 585 Atlantic Avenue, Westerly, RI

Plat(s): 156 Lot(s): 12

To Construct: Infill structural shoreline protection (revetment).

I hereby certify that I have reviewed \_\_\_\_\_ foundation plan(s).

plan(s) for entire structure  
 site plans

Titled: \_\_\_\_\_

Date of Plan (last revision): \_\_\_\_\_

and find that the issuance of a local building permit is not required as in accordance with Section \_\_\_\_\_ of the Rhode Island State Building Code.

and find that the issuance of a local building permit is required. I hereby certify that this permit shall be issued once the applicant demonstrates that the proposed construction/activity fully conforms to the applicable requirements of the RISBC, and all other local, state and federal regulations are met.

and find that a Septic System Suitability Determination (SSD) must be obtained from the RI Dept. of Environmental Management.

and find that a Septic System Suitability Determination (SSD) need not be obtained from the RI Dept. of Environmental Management.

and find NO structural or non-structural fill is proposed in a FEMA-designated V-Zone or Coastal A-zone.

and find that the proposed fill is considered non-structural fill and meets FEMA NFIP guidelines.

and find that said plans conform with all elements of the zoning ordinance, and that if said plans require zoning board approval, that the applicant has secured such approval and that the requisite appeal period has passed with no appeal filed or appeal is final. The Zoning Board approval shall expire on: \_\_\_\_\_

*David M. Pyle* 9/11/25  
State/Municipal Building Official's Signature Date

and find that said plans conform with all elements of the zoning ordinance, and that if said plans require zoning board approval, that the applicant has secured such approval and that the requisite appeal period has passed with no appeal filed or appeal is final.

*Yamara Patton* 9.11.25  
Zoning Officer's Signature Date

rev. 2/21/2025



# RICRMC COASTAL HAZARD ANALYSIS WORKSHEET

**APPLICANT NAME:** Bruce H. Moeckel Revocable Family Trust, Attn: Carol Moeckel

**PROJECT SITE ADDRESS:** 585 Atlantic Ave., Westerly, RI 02891

**STEP 1. PROJECT DESIGN LIFE**

- A. For properties in a FEMA-designated **A**, or **X** Zone, provide the first floor elevation (FFE) of the proposed structure referenced to NAVD88, **OR** For properties in a FEMA-designated **V** or **Coastal A** Zone, please provide the elevation of the lowest horizontal structural member (LHSM) referenced to NAVD88. FFE 18.5 ft  
OR  
LHSM elevation ft
- B. How long do you want your project to last? Identify the expected design life for the project (CRMC recommends a minimum of 30 years) Design Life: 50 yrs
- C. Add the number of years you identified in 1B to the current year. (For example, if you are completing this form in the year 2020, and you want your project to last 30 years, your design life year will be 2050.) Design Life Year: 2075

D. CHECK beneath the sea level rise (SLR) projection that matches or comes closest to project design life year.

Year	2030	2040	2050	2060	2070	2080	2090	2100
SLR	0.71	1.11	1.60	2.29	3.17	4.19	5.35	6.47
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Source: Sea Level Rise (SLR) Projections (Feb. 2022) NOAA High Curve, Newport, RI Tide Gauge. All values are expressed in feet relative to NAVD88 [https://sealevel.nasa.gov/task-force-scenario-tool?psmsl\\_id=351](https://sealevel.nasa.gov/task-force-scenario-tool?psmsl_id=351)

*NOTE: The present National Tidal Datum Epoch (NTDE) is 1983 through 2001. The NOAA 2017 data use a baseline starting at 2000, and the NOAA 2022 data use a baseline starting at 2020. Between 1991 and 2020 there was an annual average of 4.03 mm/year of sea level rise at the Newport (8452660) tide station based on the trends data from the Permanent Service for Mean Sea Level (<https://www.psmsl.org/products/trends/>). Because the PSMSL trends are based on a minimum 30 years of data we will assume a similar trend applies to the shorter 20 year period of 2000 to 2020. Thus, there was approximately 8.06 cm (3.39 inches) of sea level rise during the period 2000 to 2020. Accordingly, the MHHW elevation of 3.85 feet at the Newport station (Epoch 1983-2001) would be adjusted an additional 3.39 inches to 4.13 feet MHHW. For reference, NAVD88 at Newport is 2.04 feet.*

**STEP 2. SITE ASSESSMENT**

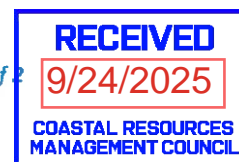
- A. Open [RICRMC Coastal Hazard Mapping Tool](#). Following the tutorial along the left side of the screen, enter the project site address and turn on the sea level layer closest to the number you circled in 1D.
- B. **ENTER** the STORMTOOLS SLR map layer closest to the SLR value you checked in Step 1D above. If the value falls between the available STORMTOOLS SLR map layers, round up to the closest of these sea level rise (SLR) numbers: 1ft, 2ft, 3ft, 5ft, 7ft, 10ft, or 12ft 5 ft
- C. Does the STORMTOOLS SLR map layer you circled above expose your project site to future tidal inundation? **CHECK YES or NO**  YES  
 NO
- D. List any **roads or access routes** that are potentially inundated from SLR. To do this, ZOOM OUT from your project location, change BASEMAP on the viewer to "street view" – see Step 2A.

Atlantic Ave. and Weekapaug Rd.

**\*\*Please be advised that CRMC staff may also review the implications of sea level rise in combination with nuisance storm flooding and discuss these potential project concerns with the applicant. Nuisance flooding impacts may be viewed in STORMTOOLS [here](#).**

**STEP 3. STORMTOOLS DESIGN ELEVATION (SDE)**

- A. Follow the tutorial included along the left panels of the viewer to enter the address of your project site. Select the tab across the top that corresponds to the sea level rise projection you identified in STEP 1
- B. Click on the map at project site to identify **STORMTOOLS Design Elevation (SDE)** from the pop up box. Enter the SDE value: 28.5 ft



# RICRMC COASTAL HAZARD APPLICATION WORKSHEET

## STEP 4. SHORELINE CHANGE

A. Using the CRMC Shoreline Change maps, indicate the transect number closest to your site, and erosion rate listed for that transect. **Transect Number:** 236  
**Erosion Rate:** -1.0 ft/year

B. CHECK below the Projected Erosion Rate that corresponds to the design life you identified above.

Year	2050	2060	2070	2080	2090	2100
Projected Future Erosion Multiplier	1.34	1.45	1.57	1.70	1.84	2.00
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Source: Projected Shoreline Change Rate multipliers. (Oakley et al., 2016)*

### C. COMPLETE EROSION SETBACK CALCULATION:

Historic shoreline change rate, STEP 4A	Design Life, STEP 1C	Projected Future Erosion Multiplier, STEP 4B	Erosion Setback (ft) 4A x 1C x 4B
-1.0	X 50	X 1.7	= -85

**NOTE:** Setbacks are required per the CRMC Red Book, Section 1.1.9. A minimum setback of 50-feet is required, but a greater setback may be necessary and/or desirable based on this analysis.

## STEP 5. OTHER SITE CONSIDERATIONS: CER I & SLAMM

A. Use the **Coastal Environmental Risk Index (CERI) map** (See Tab 5A on the viewer) to enter your address and CHECK the level of projected damage to your location, as indicated on the map that corresponds to the design life identified in STEP 1.

**CERI Level:**    Moderate    High    Severe    Extreme    Inundated by 2100    Not applicable

B. **Sea Level Affecting Marshes Model (SLAMM)** (See Tab 5B on the Viewer) - This step is for Large Projects and Subdivisions only, six (6) or more units, as defined by the CRMC Red Book Section 1.1.6.1(1)(f). This step may be skipped for other projects. Use the Sea Level Affecting Marshes Model (SLAMM) Maps to assess potential impacts to large projects and subdivisions from salt marsh migration resulting from projected sea level rise. CRMC SLAMM maps can be accessed [here](#). The CRMC recommends using the 3-foot SLR projection within SLAMM to assess future potential project impacts on migrating marshes. Does the SLAMM map that corresponds to the design life you identified in STEP 1 expose your project site to future salt marsh migration? CHECK YES or NO

YES     NO

C. Consider and discuss with your design consultant other forces or factors that might impact the development, such as coastal habitats, shoreline features, public access, wastewater, storm water, depth to water table/groundwater dynamics, saltwater intrusion, or other issues not listed above. In addition, pressure from rising sea levels will result in rising subsurface groundwater levels ultimately effecting wells and septic systems.

## STEP 6: DESIGN EVALUATION

A. Using Chapter 7 of the RI Shoreline Change SAMP as a guide, investigate mitigation options for the exposure identified above and include that in the final application.

This fully completed Coastal Hazard Application Guidance worksheet must accompany the application. If you are a design or engineering professional, please print and sign here that you have discussed the findings of this worksheet with the Owner.

DESIGN/ENGINEER SIGNATURE: 

DATE: 9/15/25

OWNER'S SIGNATURE: 

DATE: 9/18/25



# Project Narrative

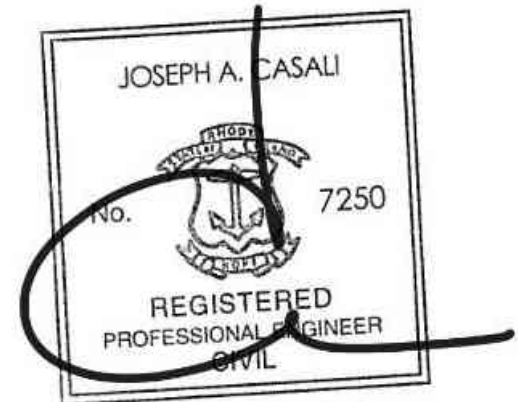
for a

## Category "B" Council Assent for Structural Shoreline Protection

585 Atlantic Avenue  
Westerly, Rhode Island  
AP 157, Lot 12

**Prepared for:**

Bruce H Moeckel 2015 Rev. Fam. Trust  
c/o Carol Moeckel  
585 Atlantic Avenue  
Westerly, RI 02891

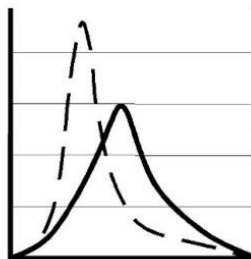


**Submission Date:**  
September 2025

**Submitted by:**

# JCE

JOE CASALI ENGINEERING, INC.  
CIVIL · SITE DEVELOPMENT · TRANSPORTATION  
DRAINAGE · WETLANDS · ISDS · TRAFFIC · FLOODPLAIN  
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9/24/2025  
CASALI ENGINEERING  
MANAGEMENT COUNCIL

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## APPENDICES

- Appendix A: RICRMC Preliminary Determination Report of Findings
- Appendix B: RIDEM OWTS Permit



## 1 INTRODUCTION

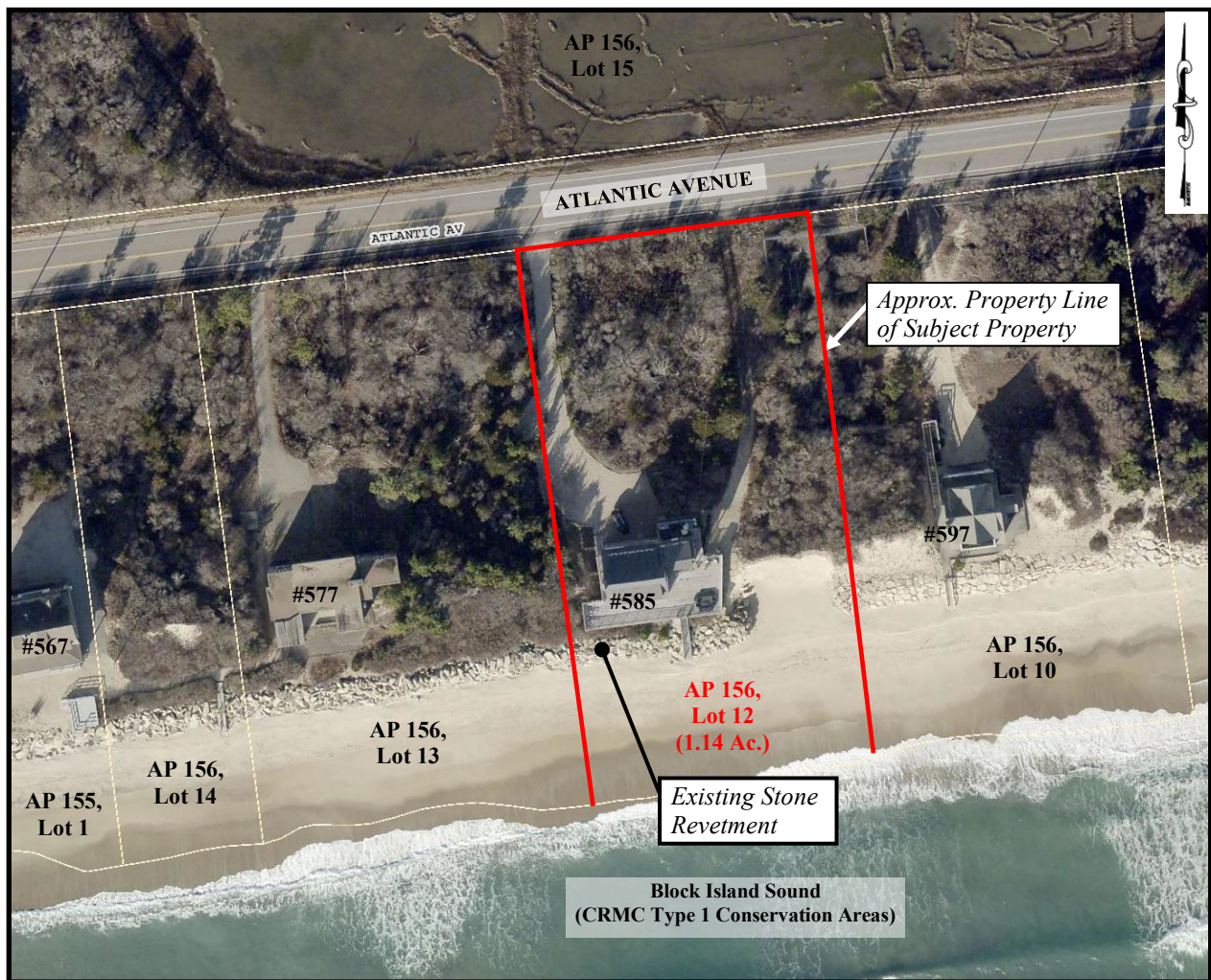
On behalf of the Bruce H. Moeckel Revocable Family Trust c/o Ms. Carol Moeckel, Joe Casali Engineering, Inc. (JCE) has prepared a Category B Assent for AP 156, Lot 12, 585 Atlantic Avenue, Westerly, Rhode Island for the purposes of constructing an infill structural shoreline protection device (revetment). JCE has prepared this narrative in accordance with the standards outlined in the Coastal Resources Management Program (CRMP) Title 650-RICR-20-00-1.

Within Section 1.1.3E of the CRMP are the requirements for a Category B application. The standard requirements under Section 1.3.1A for a Category B application are addressed within this project narrative. The requirements under 1.3.1G pertaining to the Shoreline Protection Standards are also addressed within this project narrative.



## 2 PROJECT LOCATION

The project location can be identified as Assessor’s Plat (AP) 156, Lot 12 also known as 585 Atlantic Avenue in Westerly, Rhode Island. The waterfront single-family dwelling is serviced by individual onsite wastewater treatment system (OWTS) and public water. The property is accessed via a crushed stone driveway along the western property line. The general project location is shown in Figure 1 below.



**Figure 1 - Locus Map**

NOT TO SCALE

### 2.1 Background and Existing Conditions

The subject property has approximately 160 linear feet of shoreline, oriented in an east-west direction along the Block Island Sound. These waters are classified as Type 1 Conservation Areas. The properties in this area are exposed to severe weather conditions, specifically from storms that originate from the southeastly direction. The existing dwelling on the property is protected by an approximately 110-ft long stone structural shoreline protection device. The remainder of the property consists of an unprotected dune/dike. Adjacent properties to the west and east are



protected by a continuous stone structural shoreline protection device. The coastal feature was taken at the top of the existing riprap revetment

Over the years, particularly the winter of 2024-2025, the existing stone revetment and dune/dike have been subject to severe damage from storm events. Multiple stones have been knocked loose, and the existing timber steps from the deck down to the beach have been partially destroyed and washed away. The existing dune/dike has been severely eroded. The Applicant has recently submitted for and received an approved maintenance assent (File No. 2024-11-011) for repair of the existing structural shoreline protection. That work has not yet occurred but is anticipated to be completed as part of this project.

In a review of the RI Department of Environmental Management (RIDEM) Environmental Resource Mapping Database, it was noted that the project area is within AE and VE flood zones (based on RIEMA and FEMA). Below is a summary of additional resource layers that were analyzed as part of the existing conditions review.

<b>Data Layer ID</b>	<b>Identified on Subject Property</b>	<b>Identified within 500-ft of Subject Property</b>	<b>Details/Notes</b>
CERCLIS <sup>(1)</sup>	No	No	NA
Environmental Land Use Restriction	No	No	NA
EPA Superfund Site	No	No	NA
RIEMA/FEMA Flood Zone	Yes	Yes	AE/VE (See Plans)
Stormwater Outfall(s)	No	No	NA
Storage Tanks (UST/AST)	No	No	NA
Storage Tanks (Leaking)	No	No	NA
Cesspool Phaseout	Yes	Yes	OWTS #1136-0895
OWTS Critical Resource Area	No	No	NA
Critical or Uncommon Habitat	No	No	NA
Important Coastal Habitat	No	No	NA
Habitat Corridor	No	No	NA
High Value/Vulnerability Habitat	No	Yes	Winnapaug Pond
Natural Heritage Area	Yes	Yes	ID 217
Unfragmented Forest Blocks (>500 ac.)	No	No	NA
Unfragmented Forest Blocks (250-500 ac.)	No	No	NA
Core Forest	No	No	NA

Notes: 1. Comprehensive Environmental Response, Compensation, and Liability Information System.

## 2.2 Project Description

The proposed project consists of the construction of a structure shoreline protection device, mimicking the size and shape of the existing shoreline protection device, along the length of the existing dune/dike area on the subject parcel. The structure will consist of an approximately 55



linear foot riprap revetment of similar size and shape to the existing revetments. In October/November of 2024, the Applicant submitted a Request for Preliminary Determination associated with the proposed structural shoreline protection (File No. D2024-08-066). The Report of Findings is included in Appendix A. As discussed within the PD Report of Findings, the RICRMC has determined that the project qualifies to be considered “infill” along a man-made shoreline, allowing for the proposed structural shoreline protection.

### 3 CRMC STANDARDS

#### 3.1 Section 1.3.1 (A) Criteria – Category B Requirements:

**1. *The requirements herein for a Category B Assent are necessary data and information for the purposes of federal consistency reviews. All persons applying for a Category B Assent are required to:***

**a) *Demonstrate the need for the proposed activity or alteration;***

The existing shoreline feature consist of an existing revetment existing approximately 100-ft along the shoreline protecting the existing dwelling, along with a 50-ft section of unprotected dike/dune. The adjacent properties (approximately 0.35-miles) contain hardened structural shoreline with the exception of the 50-ft section of unprotected dike/dune within the property. This existing 50-ft section is subject to severe erosion, putting the structural integrity of the existing dwelling in jeopardy.

**b) *Demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, and environmental requirements have or will be met; local approvals are required for activities as specifically prescribed for nontidal portions of a project in Sections 1.3.1(B), (C), (F), (H), (I), (K), (M), (O) and (Q) of this Part; for projects on state land, the state building official, for the purposes of this section, is the building official;***

The Applicant has included the required Building Official form and the required Coastal Hazard Worksheet, therefore meeting the requirements of this Standard.

**c) *Describe the boundaries of the coastal waters and land area that is anticipated to be affected;***

The proposed project involves infilling the existing stone revetment on the subject parcel, stabilizing the shoreline along the coastal feature. The project area generally includes the area between the toe of the existing revetment and the existing dike/dune. Disturbed areas of the existing dike/dune will be restored and replenished with additional sand and native plantings.



***d) Demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition processes along the shore and in tidal waters;***

The proposed infill structure will enhance the shoreline's ability to prevent bank loss and erosion brought on by severe coastal storm conditions. The inherent goal of this project is to limit the severe erosion already occurring. It is anticipated that these actions will have a significantly positive impact upon the tidal waters by removing a source of significant coastal erosion.

***e) Demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life;***

The site generally lacks plant diversity and abundance. The existing dike/dune is severely eroded with limited plant and animal life. Continued erosion of this area will only further degrade the existing plant and animal life. The proposed project includes restoring disturbed areas of the existing dike/dune with sand and native plantings.

***f) Demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal waters and/or the shore;***

The proposed activities will not inhibit public access to the beach area in any way. The proposed alterations are limited at the seaward extent to the toe of the existing stone revetment and do not extend beyond this point. The proposed activities in no way alter the access or use of tidal waters.

***g) Demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation;***

The proposed project inherently stabilizes the shoreline, naturally resulting in reduced erosion and sedimentation. The reduction in sediment will inherently reduce the turbidity of the adjacent tidal waters. The proposed project will have a positive impact on water circulation and flushing, as the proposed work serves to reduce turbidity and improving water quality.

***h) Demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;***

There will be no significant deterioration of water quality as part of the proposed project. The proposed project purpose is to limit erosion, naturally enhancing and improving water quality in the immediate area, as a potential pollutant source (sediment) is eliminated.



- i) Demonstrate that the alteration or activity will not result in significant impacts to areas of historic or archaeological significance;***

The subject property does not contain any known historical or archaeologically significant areas. Should any artifacts be identified during the site work, construction will be immediately halted until confirmation that the artifacts are not historically or archaeologically significant.

- j) Demonstrate that the alteration will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;***

The proposed activity will be constructed significantly upland from navigable waters. The proposed project will not inhibit fishing, recreational boating, swimming, navigation and/or commerce.

- k) Demonstrate that measures have been taken to minimize any adverse scenic impact (see Section 1.3.5).***

The proposed activity will have no adverse scenic impact on the surrounding area. The design of the revetment structure is very similar to adjacent revetment structures in the vicinity of the site. The proposed project will likely enhance the aesthetic value of the property and surrounding areas.

- 2. Each topic shall be addressed in writing and include detailed site plans and a locus map for the proposed project.***

The topics required to be addressed in writing are included above. The Site Plans, prepared by Joe Casali Engineering, Inc., including locus map, are included under separate cover.

- 3. Additional requirements are listed for specific Category B activities and alterations in the sections that follow.***

The additional requirements for structural shoreline protection (Section 1.3.1.G.4.b) are addressed within the following section of this report.

### **3.2 Section 1.3.1.G.4.b: Additional Category B Requirements:**

***Applicants for structural shoreline protection measures to control erosion shall, on the basis of sound professional information, demonstrate in writing the following:***



**1. *An erosion hazard exists due to natural erosion processes and the proposed structural shoreline protection has a reasonable probability of controlling this erosion problem;***

The shoreline, specifically the unprotected 50-ft dike/dune section, is subject to severe erosion during significant storm events. The adjacent areas, protected by existing structural shoreline protection, have not exhibited evidence of severe erosion during these same storm events. As such, there is a clear history of similarly sized revetments adequately controlling the erosion problem in the immediate area of the proposed revetment. The proposed structural shoreline protection has a high probability of controlling the ongoing erosion problem.

**2. *Nonstructural and hybrid shoreline protection has not worked in the past or will not work in the future because these methods are not suitable for the present site conditions;***

Non-structural and/or hybrid shoreline protection is not practical in this area. The areas immediately to the west and east of the proposed revetment are full riprap revetments, with a history of adequate shoreline protection. The project considers “infilling” this existing 50-ft gap with structural shoreline protection similar in size and shape to the adjacent revetments.

**3. *There are no practical or reasonable alternatives to the proposed activity such as the relocation of structures that mitigate the need for structural shoreline protection;***

Relocation of the Applicant’s residence is not practicable and would be a significant financial hardship. There are no practical or reasonable alternatives that will serve to better stabilize the shoreline. It is expected that the stabilization of the shoreline supports the goals of the CRMC in reducing coastal erosion, and improving water quality by removing a source of sedimentation.

**4. *The proposed structure is not likely to increase erosion or disrupt shoreline sediment dynamics that sustain adjacent natural shoreline features, or adversely affect the stability of the shoreline on either side of the project;***

The proposed project will serve to directly reduce erosion. The erosion that is currently occurring is due to the lack of shoreline protection within this 50-ft dike/dune area; this erosion is occurring at an unnatural rate. In order to restore natural erosion rates and natural shoreline sedimentation dynamics, the unprotected 50-ft area is proposed to be infilled with structural shoreline protection of similar size and shape to the adjacent 0.35-mile section of coastline. The proposed shoreline protection will enhance the stability of the shoreline on either side of the project.



5. *(Noted as Item 6 in the Regulations) Describe the long-term maintenance program for the structure including storm damage, the ability to rebuild the structure following storm damage and financial commitments to pay for said maintenance; and*

If constructed consistent with the project plans and specifications, the proposed revetment will have very limited long-term maintenance costs and should be extremely resistant to storm damage. Any damage from storms will be addressed to be consistent with the proposed plans after obtaining an emergency assent from the CRMC. All materials used to stabilize and reestablish the shoreline protection structure should be consistent with the appropriate CRMC approved plan.

6. *(Noted as Item 7 in the Regulations) New structural shoreline protection shall be designed and certified by a registered professional engineer; and*

The proposed structure provided herein was planned according to standards outlined in the CRMC’s Management Procedures, designed in accordance with the United States Army Corps of Engineers (USACE) Engineer’s Manual (EM) 1110-2-1614 “Design of Coastal Revetments, Seawalls, and Bulkheads”, and prepared by a Rhode Island licensed Professional Engineer. The Site Plans, prepared by Joe Casali Engineering, Inc., including locus map, are included under separate cover.

7. *(Noted as Item 8 in the Regulations) Describe all likely impacts that the structural shoreline protection may have on continued public lateral beach access. If lateral public access will be impacted at any time, a lateral public access plan shall be provided, except where preempted by federal law (e.g., U.S. Coastal Guard Maritime Security (MARSEC)).*

The proposed structural shoreline protection is not anticipated to have any impact on public lateral beach access.

### 3.3 Section 1.3.1.G.5: Standards

- a) *All applicable standards for earthwork in § 1.3.1(B) of this Part shall be met. The base of the seawall, bulkhead, revetment or toe-of-slope protection for hybrid shoreline protection must be located as close as practicable to the shoreline feature it is designed to protect. Nonstructural, hybrid and structural shoreline protection shall be placed landward of coastal wetlands unless the project is a marsh sill designed for wave attenuation as part of a marsh creation, enhancement, or restoration project.*

All applicable standards in RICRMP §1.3.1(B) shall be adhered to. JCE designed the structure to have a slope of 1V:3H to marry into the similarly sized revetments to the immediately west and east.



- b) The ends of nonstructural, hybrid and shoreline protection structures shall be tied into adjacent structures. Where there are no adjacent structures, the new structure shall gradually return to the slope of the feature and be so designed to minimize erosion around the back of the structure.***

The proposed shoreline protection is of similar size, shape and geometry to the existing shoreline protection revetment at the two ends. Tie-in to the existing structure will be seamless post-construction; there will be no erosion around the back of the structure as currently designed.

- c) For a practice to be considered hybrid shoreline protection, stone may only be used for toe-of-slope protection or intertidal sill creation. For the purposes of this section, toe-of-slope protection shall not extend more than two (2) feet vertically from the bottom of the bank or scarp along low energy shorelines (i.e., fetch less than 1.5 miles) and four (4) feet vertically from the bottom of the bank or scarp along high energy shorelines (i.e., fetch greater than 1.5 miles). Stone may be gathered from the coastal beach directly in front of and no more than twenty-five (25) feet seaward of the proposed hybrid shoreline protection to be used for toe-of-slope protection or intertidal sill construction. However, no materials may be gathered seaward of the mean high water elevation.***

Not Applicable

- d) All anchoring and connecting components of non-structural, hybrid and structural shoreline protection shall be clearly shown on site plans. All anchoring and connecting components shall be removed upon exposure unless being repaired or replaced as part of CRMC approved maintenance.***

There are no structural anchoring or connecting components associated with the stone revetment. The structure relies on gravity and the weight of the various armor stones to protect the existing shorelines.

- e) The base of all shoreline protection built on unconsolidated sediments shall extend to a depth equivalent to mean low water or to an appropriate depth as determined by the methods detailed in the most recent version of the U.S. Army Corps of Engineers Coastal Engineering Manual. Where practicable, the base shall extend to a depth of three (3) feet below the area of disturbance.***

The approximate MHW line for the site was determined to be -0.91-ft (NAVD88). The toe of slope for the proposed stone revetment is designed at elevation 9.0-ft (NAVD88). The bottom of the toe stone is proposed at elevation 2.0-ft, approximately 3 feet above the MHW. These elevations were developed based on United States Army Corps of Engineers



(USACE) Engineer’s Manual (EM) 1110-2-1614 “Design of Coastal Revetments, Seawalls, and Bulkheads”.

- f) To promote good drainage behind seawalls and bulkheads, and to minimize the flow of sediment into waterways and avoid the loss of backfill, all backfill must contain less than ten percent (10%) silt. If sediment in the area is fine grained, a filtering layer shall be placed behind and/or beneath the structure, consisting of suitably graded stone or rock chips or geotextile filter fabric. Weep holes shall be provided for drainage in sea walls and bulkheads. The use of grout or concrete within, behind, or over revetments is not permitted.***

The proposed structure includes a non-woven geotextile (Mirafi FW700) placed between the stone bedding layer and native material for the purpose of preventing fine material loss or migration of fines into the underlying soils. This will help prevent any potential future settling of the structure and loss of retained soil landward of the revetment via sinkholes or the like.

- g) Where feasible, the areas in back of the structural shoreline protection shall be level for a distance equivalent its height.***

The proposed revetment extends to a height of 8-ft (vertically) above the toe. In the area of the proposed infill revetment, the existing dike/dune is proposed to be replenished and and planted with native grasses.

- h) The slope of revetments shall not exceed 1:1 and the slope of non-structural and non-structural components of hybrid shoreline protection and associated foil shall not exceed 2:1.***

The proposed revetment has been designed with an average 3H:1V slope, mimicking the slope of the adjacent revetments.

- i) Riprap revetments shall be constructed of angular stone with a minimum unit weight of 165 lbs./cubic foot (such as granite). The size of stone shall be dependent upon the site’s exposure to wave energy in accordance with the US Army Corps of Engineers Coastal Engineering Manual.***

Construction plans specify that the riprap stone be angular with a minimum unit weight of 165 pcf.

- j) Applications for structural shoreline protection shall be designed and stamped by a registered professional engineer.***



The revetment design plans along with this narrative report have been designed by a RI Registered Professional Engineer. The Site Plans, prepared by Joe Casali Engineering, Inc., including locus map, are included under separate cover.

- k) Applicants for hybrid shoreline protection, as provided for in § 1.3.1(G)(4)(a) of this Part, and include small-scale toe-of-slope protection project shall be designed by an appropriate design professional (e.g., registered professional engineer, landscape architect or land surveyor).***

Not Applicable

- l) Concrete used for sea wall construction along the shore and in tidal waters shall be resistant to the sulfate attack of seawater; Type 2 or Type 5 air entraining Portland cement or an equivalent shall be used.***

Not applicable; there is no concrete required to construct the project.

- m) All shoreline protection construction activities shall minimize any adverse impact to water quality such as disturbance of sediment.***

Construction will be completed by a licensed contractor exhibiting familiarity and experience in seawall and stone revetment construction. Construction activities will be observed and documented by a RI Registered Professional Engineer to ensure compliance with the approved design plans. Soil erosion and sediment controls are proposed and will be maintained at all times during construction to ensure water quality.

- n) Applicants shall provide appropriate on-site lateral shoreline access of a similar type and level to that which will be impacted by the proposed project. Applicants shall submit a plan detailing the lateral public access over or around the landward side of the proposed structure.***

Not Applicable

- o) The seaward extent of the toe of shoreline protection shall be tied into an existing shoreline feature (e.g., bluff, revetment, seawall, etc.) within the applicant's property boundary and depicted on the site plan.***

The proposed revetment is tied into pre-existing revetments on the eastern and western limits of the project area.



- p) All previously required coastal buffer zones or existing areas of natural vegetation landward of the shoreline protection structure must be preserved, or replaced where disturbed, and retained in an undisturbed condition.***

Areas landward of the proposed shoreline protection device are proposed to remain in their natural state to the maximum extent practicable. The only disturbance, besides the revetment area, includes the construction access to the project site, which is specified to be restored to mimic pre-construction conditions.

- q) Where no buffer zone or natural vegetation exists, an area no less than fifteen (15) feet wide immediately landward of the shoreline protection structure shall be restored to native, deep-rooted (i.e., tree or shrub) vegetation to minimize erosion from upland stormwater flows and overtopping storm surge.***

In general, the 15-ft area landward of the western portion of the revetment is proposed to include sand replenishment and new native plantings. Erosion control measures will remain in place until vegetation in this area is fully established.

- r) A twenty-five (25) foot setback shall be maintained between the buffer zone or natural vegetation and nearby structures, excluding any associated residential structures as defined in § 1.1.2 of this Part.***

No new structures are proposed as part of this project and no modifications to the existing residential structure are proposed as part of this project.

#### **4 CONCLUSIONS**

The Applicant is proposing to construct a new “infill” stone revetment along the shoreline of their property at 585 Atlantic Avenue in Westerly, Rhode Island. The existing shoreline protection currently consists of a 100-ft structural shoreline protection device (stone revetment) and a 50-ft section of unprotected dune/dike that is severely eroded with significant erosion ongoing as of the date of this report. This unprotected section of shoreline is affecting the stability of the Applicant’s property and dwelling with each storm that passes. As described throughout this report, the proposed stone revetment has been designed in accordance with all applicable RI Coastal Resources Management Council Rules and Regulations, as well as the United States Army Corps of Engineers (USACE) Engineer’s Manual (EM) 1110-2-1614 “Design of Coastal Revetments, Seawalls, and Bulkheads”. The design mimics nearby similar stone revetments, which have clearly exhibited the ability to protect their respective shorelines from severe New England storms.

The proposed revetment has been designed to protect the property from significant storms that frequently impact New England, prevent the potential loss of land, and protect and maintain water quality in the area of the project. The proposed revetment will have no negative impacts on waters of the State and will improve the quality and protective ability of the shoreline in the area.



# **Appendix A**

Rhode Island Coastal Resources Management Council  
Report of Findings – Preliminary Determination  
CRMC File No. D2024-08-066





State of Rhode Island  
**Coastal Resources Management Council**  
 Oliver H. Stedman Government Center  
 4808 Tower Hill Road, Suite 3  
 Wakefield, RI 02879-1900

(401) 783-3370  
 Fax (401) 783-2069

**RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL  
 REPORT OF FINDINGS -- PRELIMINARY DETERMINATION**

**STATEMENT OF LIMITATIONS**

The contents of this staff determination report shall be valid only for the period on and preceding the date of this report. This report is neither an approval nor denial of the subject proposal. It is an evaluation of CRMC regulations in effect as of November 26, 2024 as they pertain to the below stated proposal, including preliminary staff recommendations.

Modifications to the below stated proposal may, upon the discretion of the CRMC, render this determination null and void.

**APPLICANT INFORMATION**

**NAME: Bruce H Moeckel 2015 Rev. Fam. Trst. CRMC FILE NO. D2024-08-066**  
**LOCATION/POLE: 585 Atlantic Avenue**  
**CITY/TOWN: Westerly PLAT: 156 LOT: 12**

**CONTACT PERSON(S) & ADDRESS:**

**Bruce H Moeckel 2015 Rev. Fam. Trst**  
**c/o Carol Moeckel**  
**585 Atlantic Avenue**  
**Westerly, RI 02891**

**PRELIMINARY REVIEW INFORMATION**

**PROPOSAL: Determination of Man-made Shoreline**

**PLAN(S) REVIEWED: "585 Atlantic Ave Plat 157 Lot 12 Westerly Rhode Island" 2 sheets dated June 6, 2024, prepared by Cherenzia & Associates , Ltd.**

<b><u>INVESTIGATOR</u></b>	<b><u>DATE</u></b>	<b><u>TIME</u></b>
Ross Singer	11/6/2024	10:00

**MEASUREMENTS & OBSERVATIONS: General**

**PREVIOUS CRMC ACTIONS FOR SITE: 2011-11-098 2012-11-168 2012-11-318 2014-10-101  
 2022-11-104 2023-01-068**

**Preliminary Buffer and Setback Requirements:**

**SETBACK (ref. Section 1.1.7 Red Book) NA**



NAME: **Bruce H Moeckel 2015 Rev. Fam. Trst.**  
CRMC FILE NUMBER: **D 2024-08-066**

**BUFFER** (ref. Section 1.1.9 Red Book) NA

Note: **Setbacks** apply to “construction related activities” including filling, removing, and grading (ref: Section 1.3.1(B) Red Book). The coastal program requires a minimum setback of either 50’, or the buffer zone width plus 25’ (whichever is greater). Work within this minimum setback will require a variance per Section 1.1.5 of the Red Book. All variances must be requested in writing. No construction or construction related work shall occur within the required setback (exemptions include structural shoreline protection, outfalls and water dependant uses). Work within the required setback may require a Category “B” review (public notice and decision by the full coastal council) and would likely result in adverse CRMC staff recommendations to the Coastal Council during the review process.

**Buffer zones** are areas that must be retained in, or allowed to revert to, “an undisturbed natural condition.” All structures (excluding accessory structures) should be setback a minimum of 25’ from the buffer zone to allow for access, fire protection and maintenance without infringement into the buffer.

**If applicable**, the plan must show “area of land within 50 feet” in accordance with Rule 5.04 of The Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast (the Rules), and label this area as a “buffer zone” in accordance with Rule 5.14. In addition, no activities (such as: drainage, grading, filling, etc.) may affect the freshwater wetland or the buffer zone. Where such alterations occur, or are proposed, an application shall be submitted in accordance with CRMC’s Freshwater Wetland Rules.

**Coastal Hazard:** In accordance with Section 1.1.10, the applicant is encouraged to utilize CRMC’s “STORMTOOLS” mapping feature to better understand the impact of current and future Sea Level Rise and Storms on the subject property. Also, in accordance with Section 1.1.6(I), the applicant is required to complete a “Coastal Hazards Worksheet” to further understand the impact of climate change on a proposal (<http://www.crmc.ri.gov/coastalazardapp.html>). While the RICRMP does not yet require structures to be designed for SLR scenarios, the applicant should consider SLR, Climate Change, and design life expectations in design planning.

Coastal feature verification shall be valid for one-year from the date of this Determination or until an erosion event (e.g., due to storm event, landslide, man-induced alteration, etc.) occurs that alters the coastal feature.

**SUMMARY OF FINDINGS**

**CRMC JURISDICTION:** YES NO  
**TYPE WATER:** Type 1, Block Island Sound

For the purpose of this review the coastal feature(s) shall be the developed barrier with coastal beach backed by rip rap revetment and coastal headland, dike/dune and the inland edge of coastal(s) feature shall be the top of the revetment, dike/dune

**Applicability of Red Book and SAM Plans (as amended):**

Red Book Sections: 1.2.1(B) 1.2.2(A) 1.2.2(B) 1.2.2(F) 1.2.2(G) 1.3.1(G)



NAME: **Bruce H Moeckel 2015 Rev. Fam. Trst.**  
CRMC FILE NUMBER: **D 2024-08-066**

**STAFF CONCERNS/COMMENTS/INFORMATION REQUIREMENTS:**

The subject property consists of a single family dwelling with a partial riprap revetment adjacent to Type 1 waters. The shoreline feature consists of an existing revetment extending approximately 100ft protecting the dwelling, and an approximately 50ft section of unprotected dike/dune. The properties to the east and west of the subject property are protected by rip rap revetments. Furthermore, this section of shoreline consists of 0.35miles of hardened shoreline with the exception of the gap on the subject property. The Executive Director has determined that the circumstances of the site and the immediate surrounding area qualify the subject property to be considered “infill” and man-made shoreline, thus allowing for a request for structural shoreline protection. Structural shoreline protection is not prohibited on Type 1 Manmade shorelines.

SIGNATURE: \_\_\_\_\_



STAFF ENGINEER



## **Appendix B**

Rhode Island Department of Environmental Management  
OWTS File No. 1136-0895





**OWTS Permit#: 1136-0895**

Location: **585 Atlantic Avenue, Westerly**

Plat/Lot: **156/12**

Owner: **Bruce Moeckel**

Designer: **William Dowdell**

Total Daily Flow: **575 gallons**

For residential use, calculate approved number of bedrooms by dividing the Total Daily Flow by 150 gallons/bedroom for systems approved before 2008 or by 115 gallons/bedroom for systems approved in or after 2008.

Conformed File: **No conformed file is available for download for this permit.**

### Historical Information:

10/27/2011	Bottomless Sand Filter
10/27/2011	ADVANTEK AX-20 FILTER
07/01/2018	Application Expiration Date
11/01/2011	Approval Mailed
10/27/2011	Application Approved
10/27/2011	Review Application Resubmission
10/21/2011	Response to Unacceptable Received
10/14/2011	Unacceptable Form Mailed to Applicant
10/12/2011	Application Found Unacceptable
10/12/2011	Application Review
09/29/2011	Alteration Application Received
09/01/2011	Site Evaluation Report Mailed



08/31/2011	Site Evaluation Approved
08/31/2011	Site Evaluation Form Review
08/25/2011	Site Evaluation Form Received
08/23/2011	Soil Evaluation - CONCUR
08/22/2011	Dry Season Inspection for Alteration
08/03/2011	Dry Season Application Received

Last Updated: 07/31/2025 7:16 PM

SEARCH AGAIN

To schedule a DEM File Review, email a Request for Records Form to [DEM.FileReview@dem.ri.gov](mailto:DEM.FileReview@dem.ri.gov)



Official State of Rhode Island Online Service



**ATTACHMENT – SITE PHOTOGRAPHS**



**Photo 1:** Aerial image of project site (www.nearmap.com, dated March 27th, 2025).



**Photo 2:** Existing top of revetment and buffer (looking west).

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COASTAL RESOURCES  
MANAGEMENT COUNCIL

**ATTACHMENT – SITE PHOTOGRAPHS (continued)**



**Photo 3:** Existing revetment; taken from existing stairs looking west.



**Photo 4:** Existing revetment; taken from existing stairs looking east.

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COASTAL RESOURCES  
MANAGEMENT COUNCIL

**ATTACHMENT – SITE PHOTOGRAPHS (continued)**

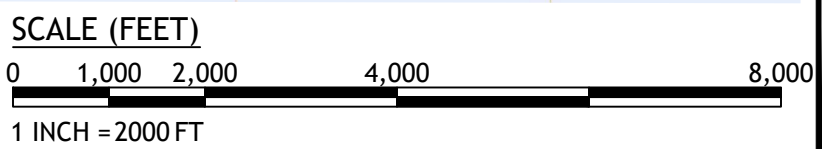
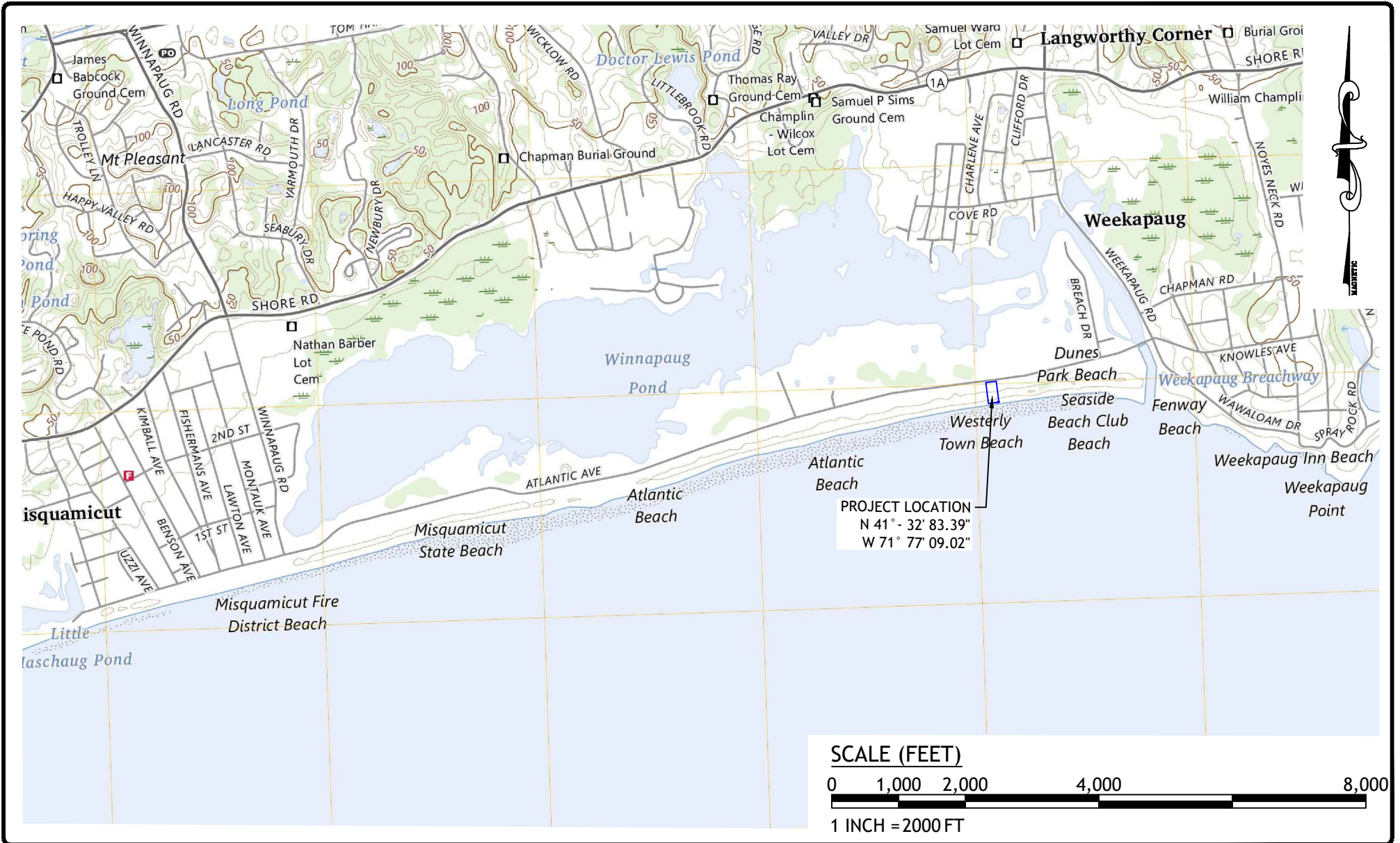


**Photo 5:** Existing stairs looking west.



**Photo 6:** Existing area of proposed infill structural shoreline protection.

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COASTAL RESOURCES  
MANAGEMENT COUNCIL



PRELIMINARY, NOT FOR CONSTRUCTION

**USGS MAP**

**SHEET 1 OF 1**

REVISIONS:	NO.	DATE	DESCRIPTION

DESIGNED BY:	DRD
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	SEPT. 2025
PROJECT NO.:	25-65

**PROPOSED SHORELINE PROTECTION**  
 585 ATLANTIC AVENUE  
 WESTERLY, RHODE ISLAND  
 AP 156, LOT 12

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**JCE**

JOE CASALI ENGINEERING, INC.  
 CIVIL · SITE DEVELOPMENT · TRANSPORTATION  
 DRAINAGE · WETLANDS · ISDS · TRAFFIC · FLOODPLAIN  
 300 POST ROAD, WARWICK, RI 02888  
 (401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

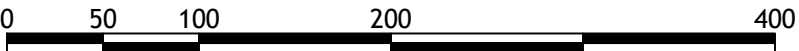


SUBJECT PROPERTY  
LINE (TYP.)

ATLANTIC AVE.

BLOCK ISLAND SOUND

SCALE (FEET)



1 INCH = 100 FT

PRELIMINARY, NOT  
FOR CONSTRUCTION

**AERIAL  
MAP**

**SHEET  
1 OF 1**

REVISIONS:	
NO.	DESCRIPTION

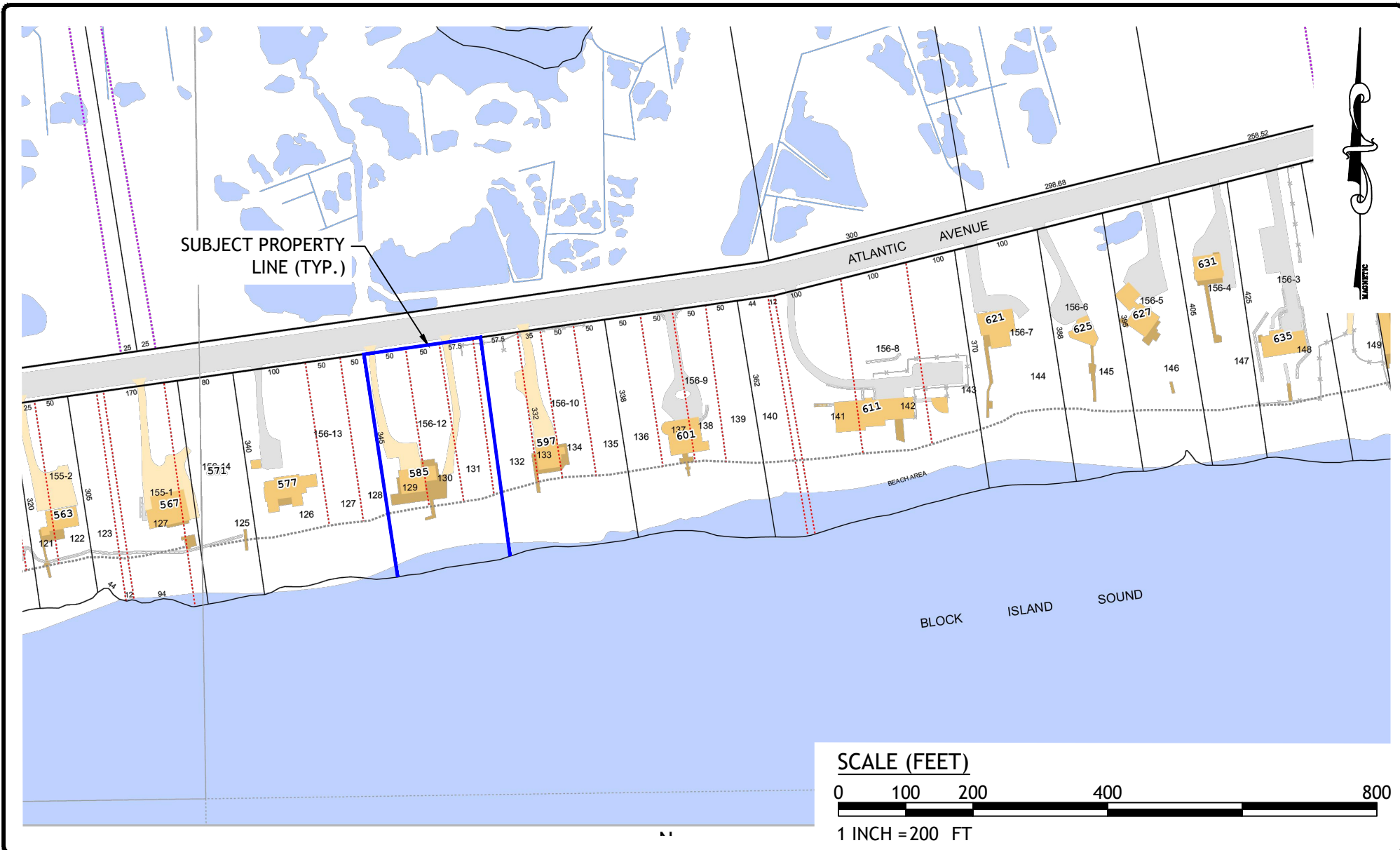
DESIGNED BY:	DRD
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	SEPT. 2025
PROJECT NO.:	25-65

**PROPOSED SHORELINE PROTECTION**

585 ATLANTIC AVENUE  
WESTERLY, RHODE ISLAND  
AP 156, LOT 12

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**9/24/2025**  
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PRELIMINARY, NOT FOR CONSTRUCTION

**PORTION OF ASSESSOR'S PLAT MAP 156**

**SHEET 1 OF 1**

REVISIONS:		
NO.	DATE	DESCRIPTION

DESIGNED BY: DRD
DRAWN BY: SEP
CHECKED BY: JAC
DATE: SEPT. 2025
PROJECT NO: 25-65

**PROPOSED SHORELINE PROTECTION**  
 585 ATLANTIC AVENUE  
 WESTERLY, RHODE ISLAND  
 AP 156, LOT 12

**RECEIVED**  
 9/24/2025  
 COASTAL RESOURCES  
 MANAGEMENT COUNCIL

**JCE**

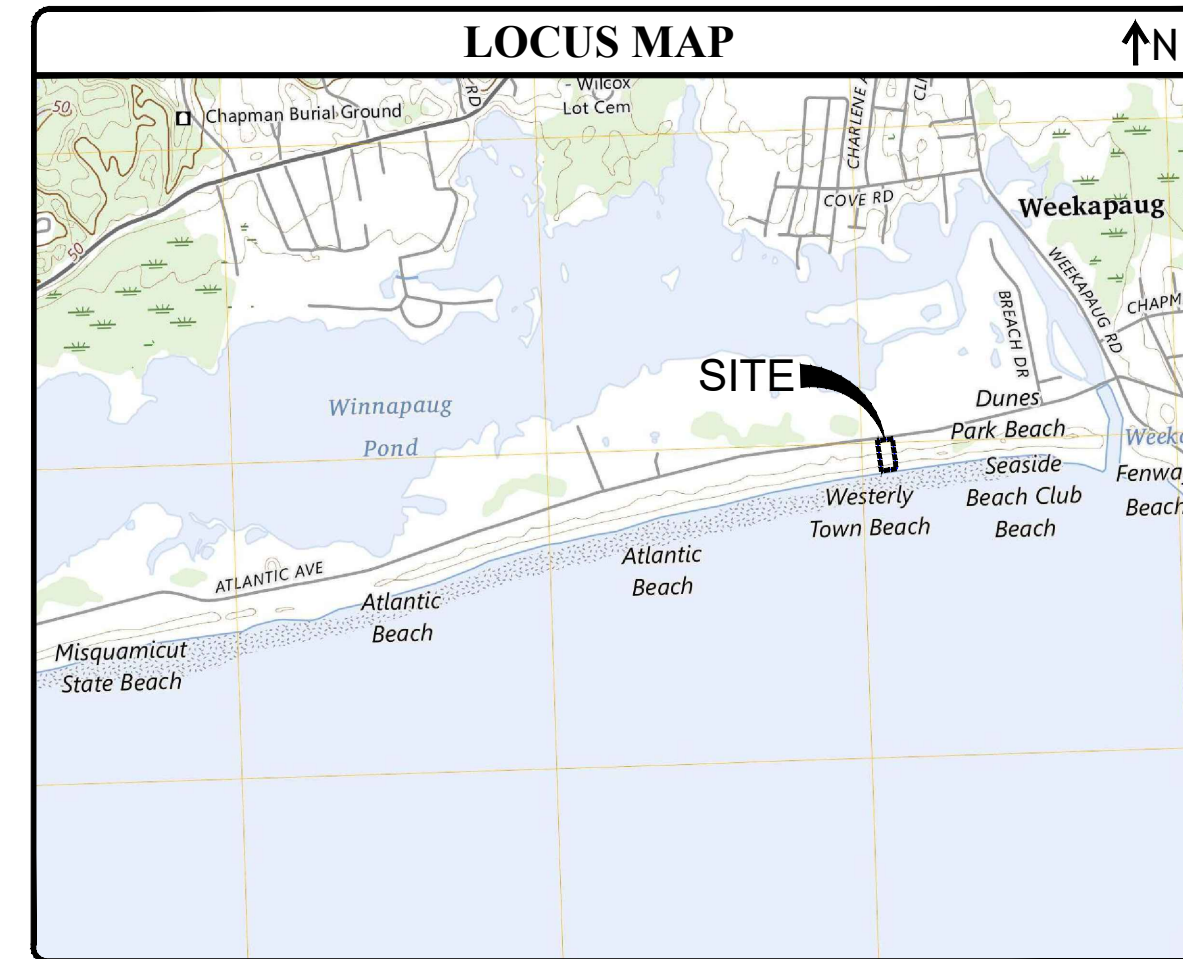
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 (401) 944-1300 (401)944-1313 FAX WWW.JOECASALI.COM

SITE IMPROVEMENT PLANS for PROPOSED

# INFILL SHORELINE PROTECTION

585 ATLANTIC AVENUE  
WESTERLY, RHODE ISLAND  
AP 156, LOT 12

ZONING DISTRICT: HDR-10 HIGH DENSITY RESIDENTIAL



OWNER/APPLICANT	CIVIL ENGINEER	SURVEYOR
BRUCE H MOECKEL 2015 REV FAM TRUST C/O CAROL MOECKEL P.O. BOX 30151 SEA ISLAND, GA 31561	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 (401) 944-1300 phone (401) 944-1313 fax	CHERENZIA & ASSOCIATES, LTD 99 MECHANIC STREET PAWCATUCK, CT 06379 46 SUTTON AVENUE WARWICK, RI 02888 (401) 860-6500 phone

**GENERAL NOTES:**

- CLASS I COMPREHENSIVE BOUNDARY AND PARTIAL CLASS III TOPOGRAPHIC/EXISTING CONDITIONS SURVEY COMPLETED BY CHERENZIA & ASSOCIATES, LTD., 99 MECHANIC STREET, PAWCATUCK, CT 06379 IN JUNE 2024 (SEE REFERENCE PLAN 1).
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL UTILITY COMPANIES AND/OR TOWN STAKEHOLDERS, WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK, TO BE PERFORMED BY THE CONTRACTOR, ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- ALL ELEVATIONS REFERENCE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE HORIZONTAL DATUM FOR THIS PROJECT IS RHODE ISLAND STATE PLANE COORDINATE SYSTEM (NAD 83).
- THIS SITE LIES WITHIN FEMA FLOOD HAZARD ZONE VE (BFE 15) AND AE (BFE 13), AS DESIGNATED ON THE "NATIONAL FLOOD INSURANCE PROGRAM, FIRM FLOOD INSURANCE RATE MAP, WASHINGTON COUNTY, RHODE ISLAND (ALL JURISDICTIONS) PANEL 259 OF 368, TOWN OF WESTERLY, MAP NO. 445410, PANEL NO. 0259, SUFFIX J, MAP REVISED OCTOBER 16, 2013. FEDERAL EMERGENCY MANAGEMENT AGENCY.
- SOILS EXISTING ON THE SITE CONSIST OF SUCCOTASH SAND, 0-3% SLOPES (SHA), HOOKSAN SAND, 3-8% SLOPES (Hsb) AND BEACHES, SAND (Ba).

**LEGEND:**

- EXISTING PROPERTY LINE
- WETLAND EDGE
- WF-B8 WETLAND FLAG
- 50' PERIMETER WETLAND
- 100' RIVERBANK WETLAND
- EXISTING EASEMENT
- 163.Bx EXISTING SPOT ELEVATION
- 100' EXISTING CONTOUR
- FLOOD PROPOSED CONTOUR
- EXISTING STONE WALL
- EXISTING CURB
- PROPOSED CURB
- EXISTING FENCE
- EXISTING DRAIN LINE
- PROPOSED DRAIN LINE
- EXISTING DRAINAGE MANHOLE
- PROPOSED DRAINAGE MANHOLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- UP#T2 EXISTING UTILITY POLE
- W EXISTING WATER LINE
- WG WATER GATE
- N/F NOW OR FORMERLY
- TREELINE
- SILT FENCE/STRAW WATTLE
- LOD LIMIT OF DISTURBANCE

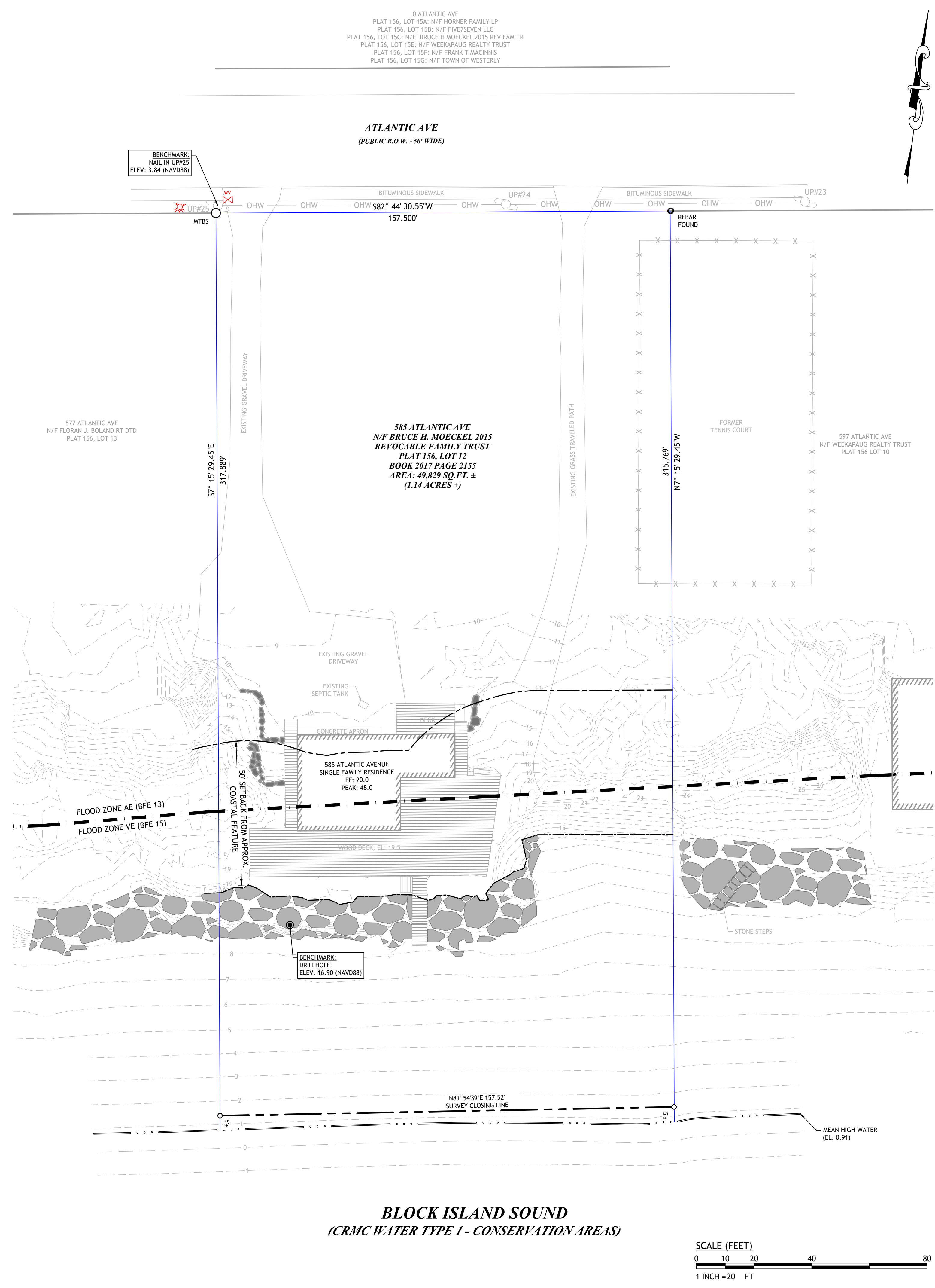
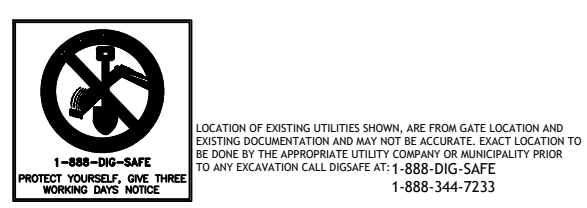
BENCHMARK	ELEVATION (FT-NAVD88)
MEAN LOW WATER (MLW)	-1.66 <sup>(1)</sup>
MEAN HIGH WATER (MHW)	0.91 <sup>(1)</sup>
10-YEAR STILLWATER EL.	5.1 <sup>(2)</sup>
50-YEAR STILLWATER EL.	7.9 <sup>(2)</sup>
100-YEAR STILLWATER EL.	10.0 <sup>(2)</sup>

- NOTES:
- TIDAL BENCHMARKS OBTAINED CLASS I COMPREHENSIVE BOUNDARY AND PARTIAL CLASS III TOPOGRAPHIC/EXISTING CONDITIONS SURVEY COMPLETED BY CHERENZIA & ASSOCIATES, LTD., 99 MECHANIC STREET, PAWCATUCK, CT 06379 IN JUNE 2024 (SEE REFERENCE PLAN 1).
  - STORM SURGE ELEVATIONS OBTAINED FROM FLOOD INSURANCE STUDY, FEDERAL EMERGENCY MANAGEMENT AGENCY, WASHINGTON COUNTY, RHODE ISLAND, FLOOD INSURANCE STUDY NUMBER 44009CV01D, DATED JULY 19, 2023.

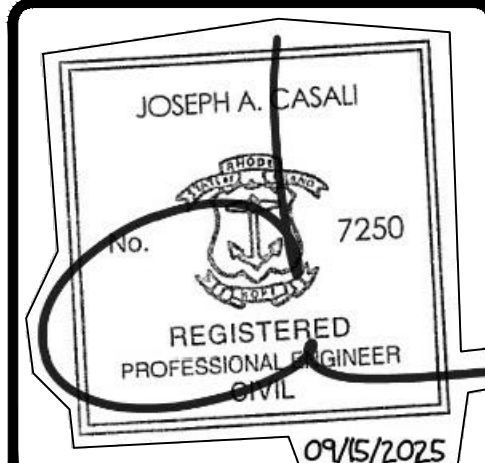
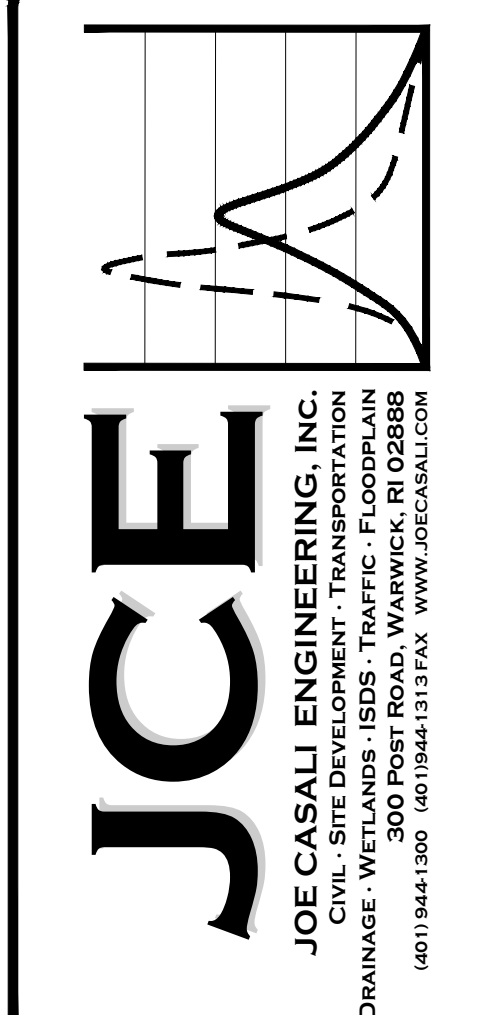
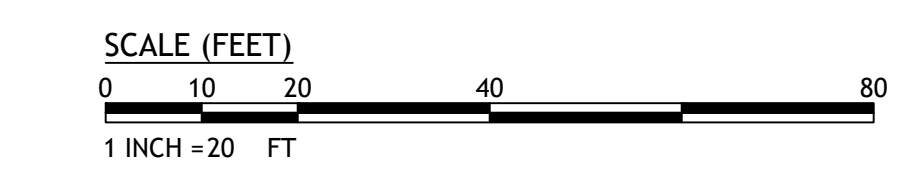
SHEET NO.	PLAN
1	OVERALL EXISTING CONDITIONS PLAN
2	SITE PREPARATION PLAN
3	PROPOSED REVETMENT PLAN

1 & 2 of 2	LIMITED CONTENT BOUNDARY & TOPOGRAPHIC SURVEY, PREPARED BY CHERENZIA & ASSOCIATES, LTD., JUNE 2024.
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BLOCK ISLAND SOUND  
(CRMC WATER TYPE 1 - CONSERVATION AREAS)



**PROPOSED INFILL SHORELINE PROTECTION**  
585 ATLANTIC AVENUE  
WESTERLY, RHODE ISLAND  
AP 156, LOT 12

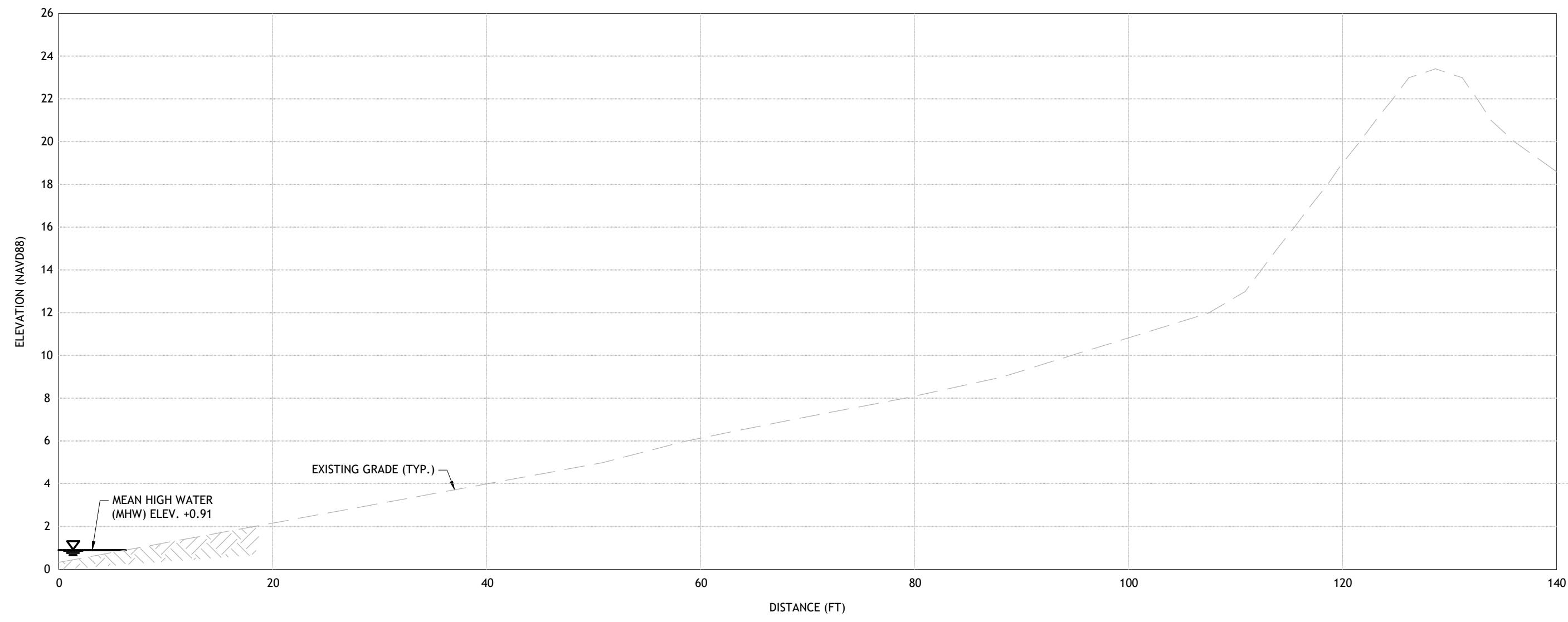
NO.	DATE	DESCRIPTION
1	9/24/2025	RECEIVED COASTAL RESOURCES MANAGEMENT COUNCIL

DESIGNED BY:	DRD
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	AUG. 2025
PROJECT NO.:	25-65

PRELIMINARY, NOT FOR CONSTRUCTION

**OVERALL EXISTING CONDITIONS PLAN**

**SHEET 1 OF 3**



**EXISTING SHORELINE CROSS SECTION A-A**  
 HORIZONTAL: 1" = 10'  
 VERTICAL: 1" = 5'

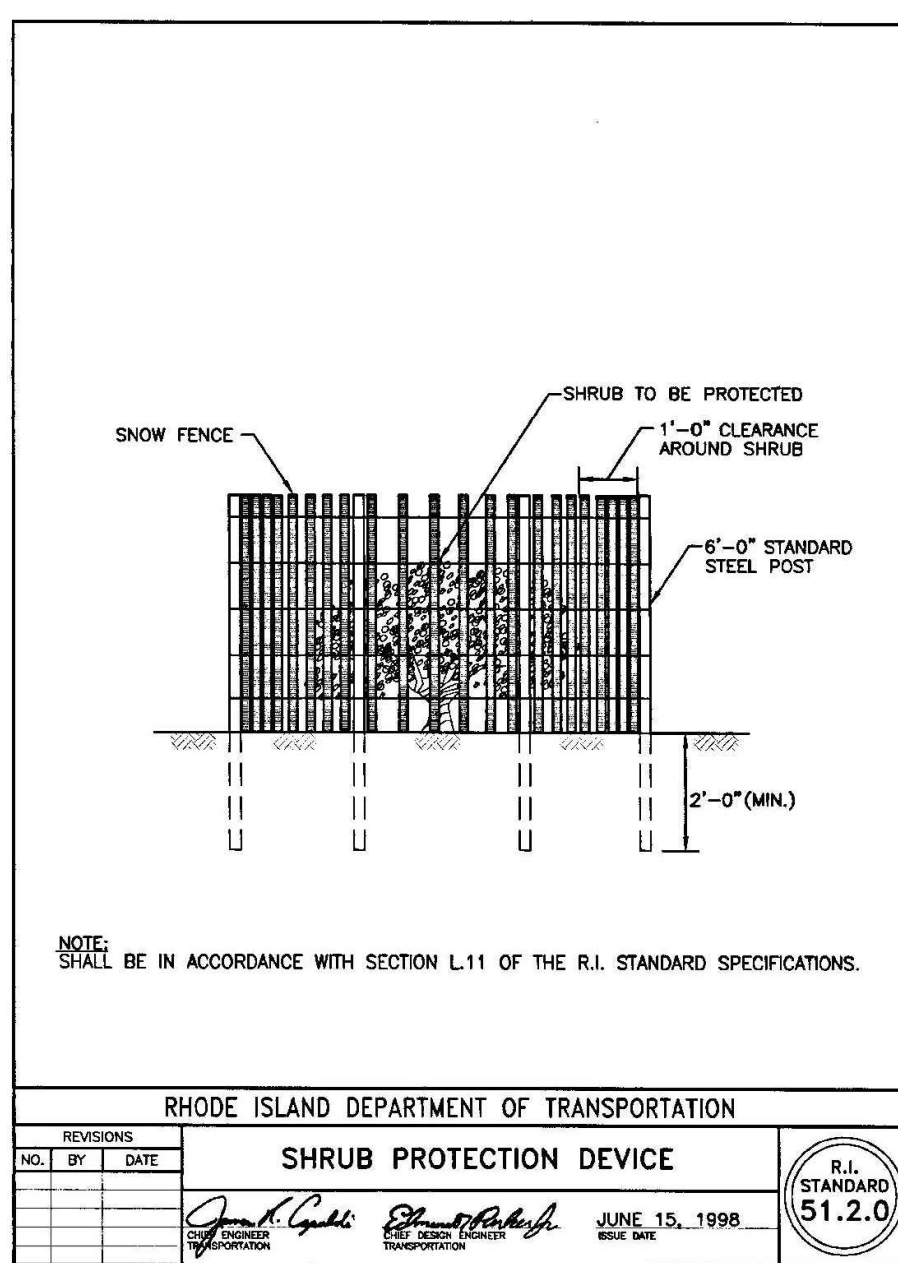
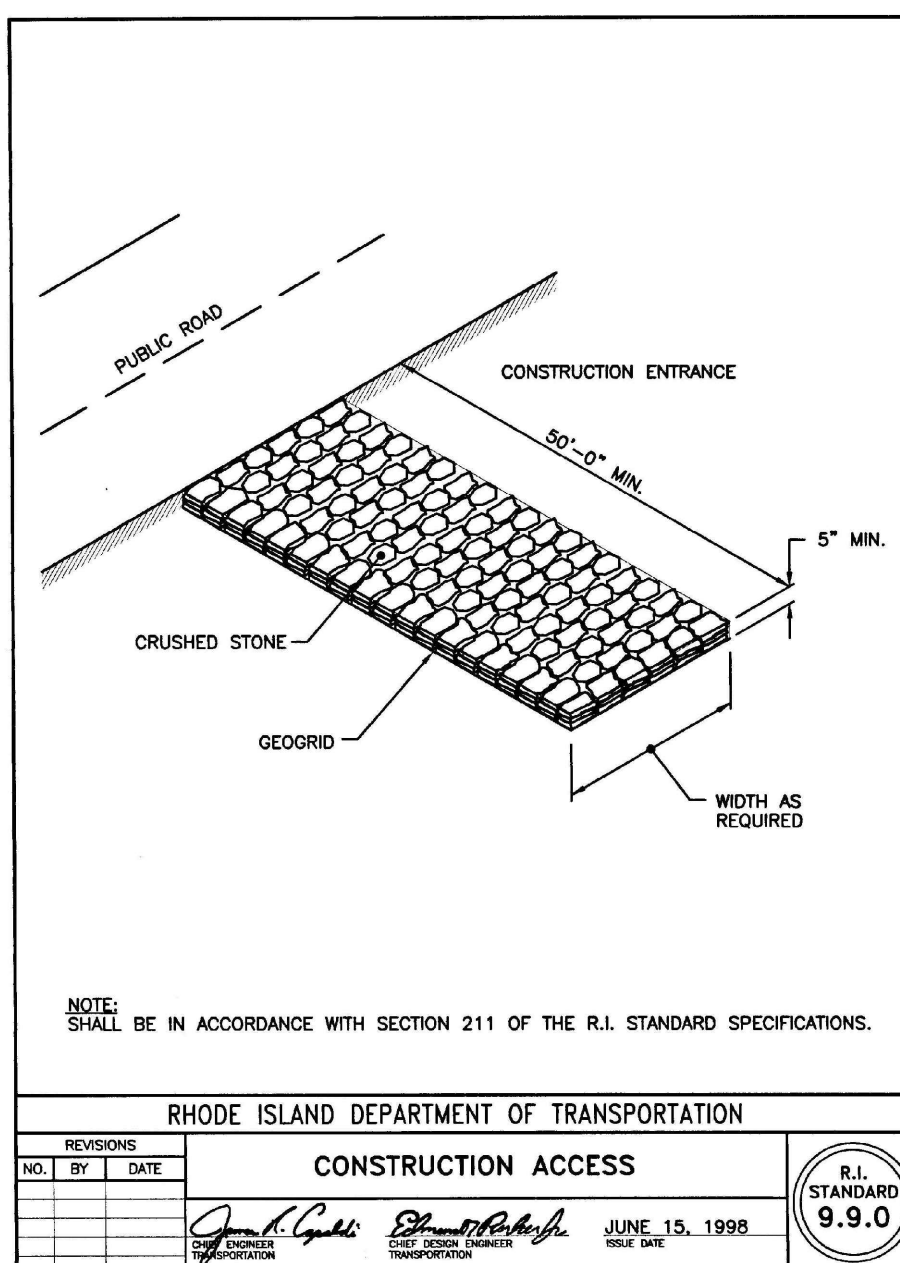
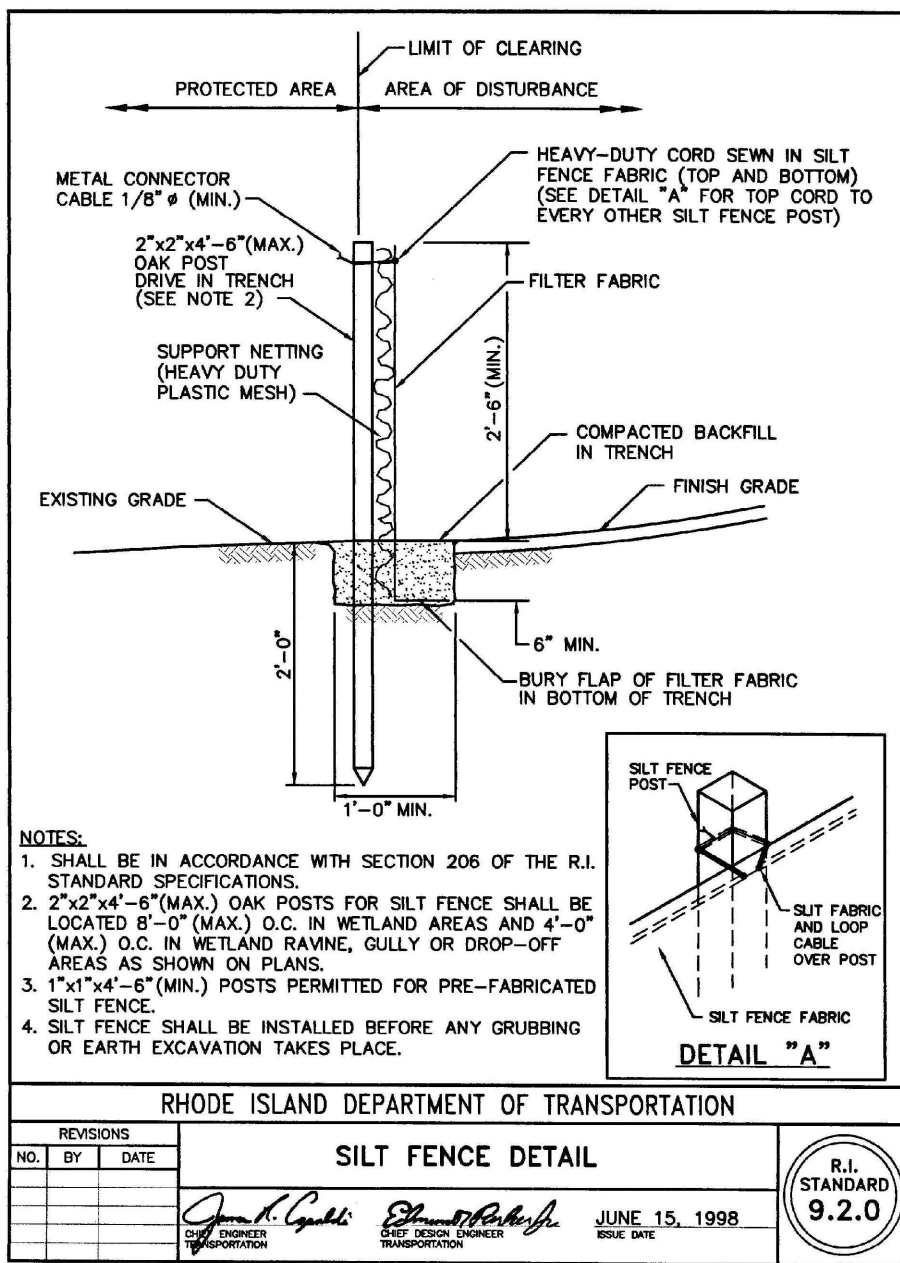
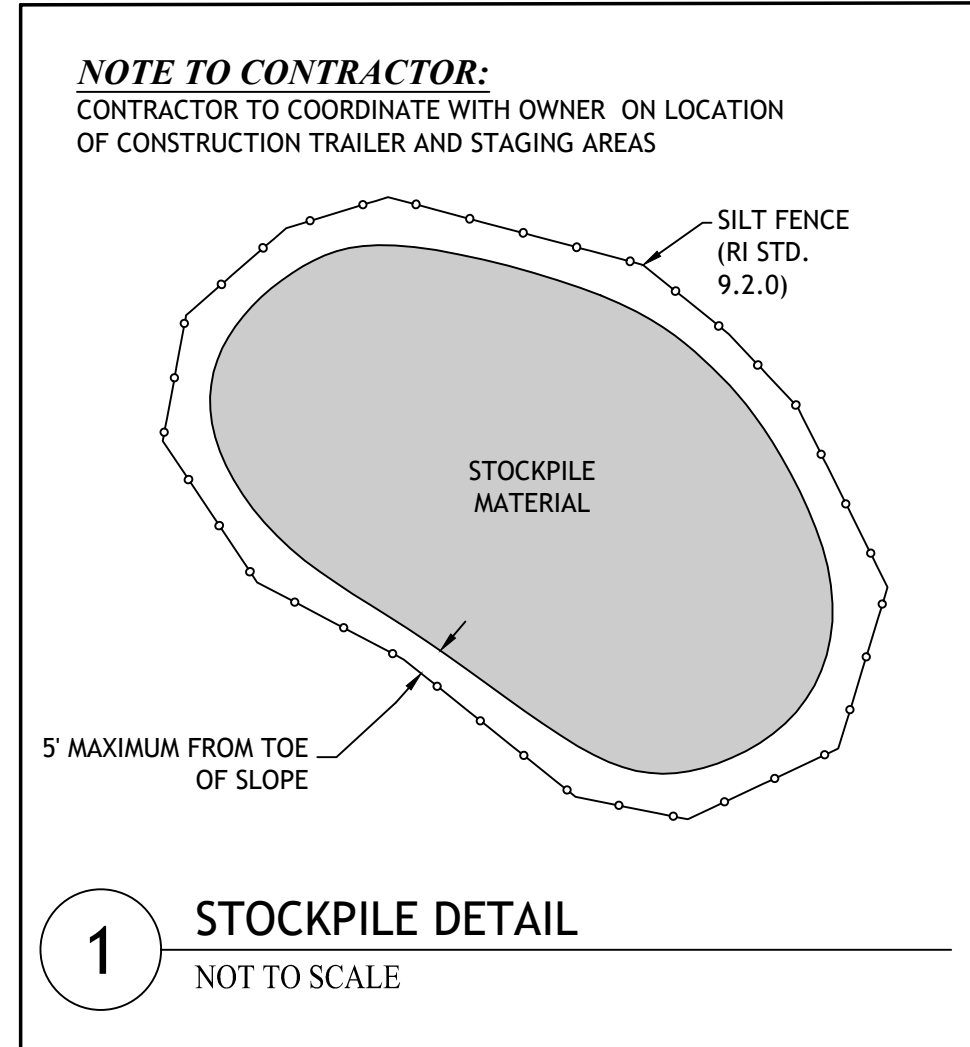
**SOIL EROSION AND SEDIMENTATION CONTROL NOTES:**

1. THE SILT FENCE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT.
2. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
3. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STANDING OF VEGETATION IS MAINTAINED.
4. ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
5. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
6. THE SILT FENCE/HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE/HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER, TOWN ENGINEER, OR OWNER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
8. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993 AMENDED 2014.

**SEQUENCE & STAGING OF PROPOSED CONSTRUCTION ACTIVITIES:**

THIS IS A GENERAL SEQUENCE AND STAGING OF CONSTRUCTION ACTIVITIES. A DETAILED SEQUENCE WITH TIME LINES SHALL BE ESTABLISHED BY THE CONTRACTOR IN COORDINATION WITH THE OWNER AND ENGINEER PRIOR TO THE START OF CONSTRUCTION.

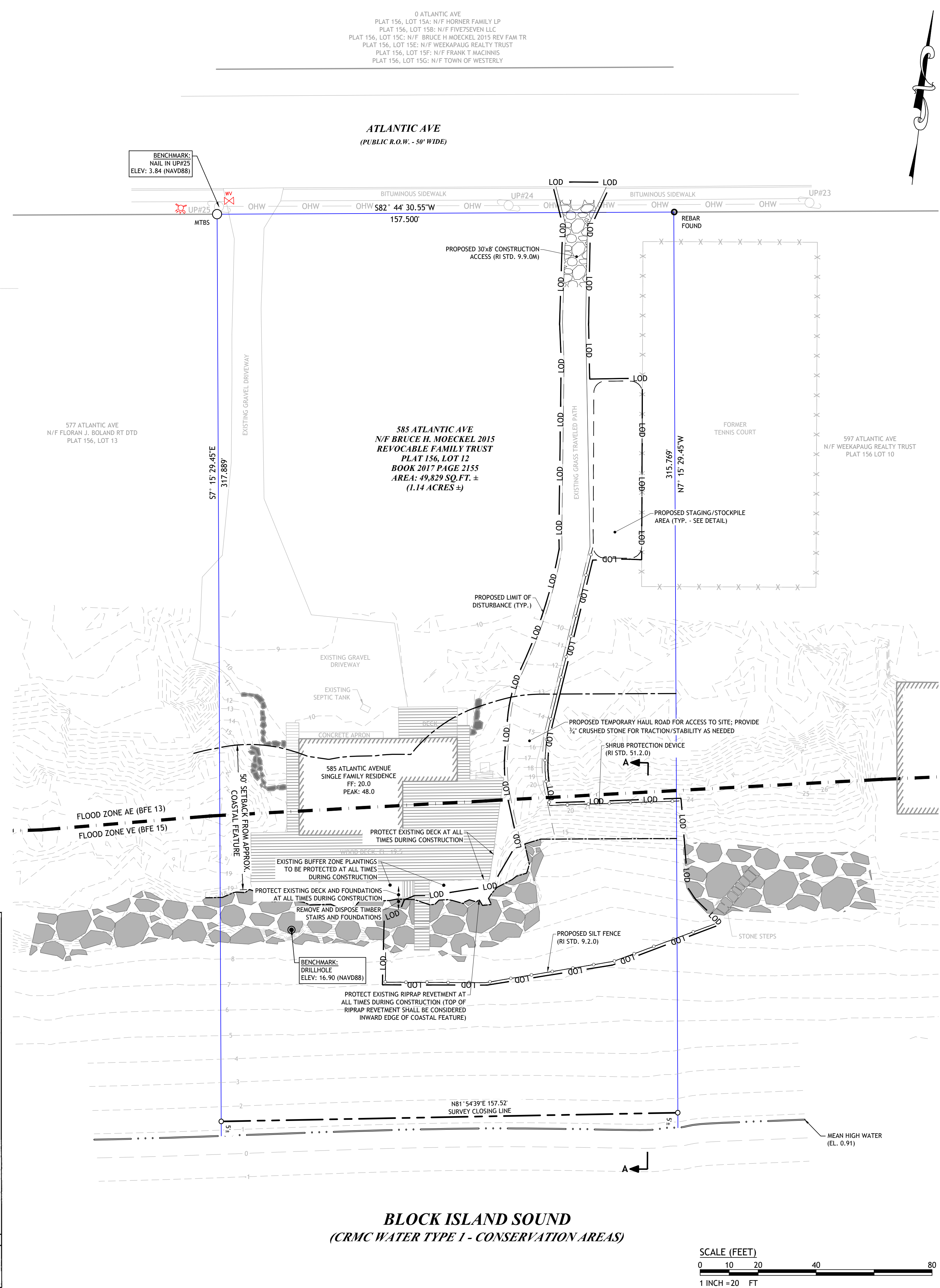
1. PLACE SEDIMENTATION BARRIERS (SILT FENCE) AS SHOWN ON THE PLANS AND AS STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
2. BEGIN SITE WORK (CLEARING AND GRUBBING, EXCAVATING AND GRADING ETC.). ANY TOPSOIL IS TO BE STRIPPED AND STOCKPILED WITHIN DISTURBANCE LIMITS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIERS. STOCKPILES TO BE COVERED OR TEMPORARILY SEEDED.
3. PERFORM DEMOLITION AS DEPICTED ON THE SITE PREPARATION PLAN. DIVERT ALL STORMWATER RUNOFF AWAY FROM DISTURBED AREAS.
4. BEGIN PROPOSED GRADING; BRING RELEVEMENT TO BOTTOM OF BEDDING LAYER.
5. INSTALL GEOTEXTILE FILTER FABRIC, STONE BEDDING AND ARMOR STONE.
6. INSTALL ADDITIONAL DUNE SAND.
7. MAINTAIN SEDIMENT AND EROSION CONTROLS THROUGHOUT CONSTRUCTION, UNTIL PERMANENT STABILIZATION IS ACHIEVED.
8. FINISH LANDSCAPING AND PERMANENT STABILIZATION.
9. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE VEGETATION HAS BEEN ESTABLISHED TO ALL DISTURBED AREAS.



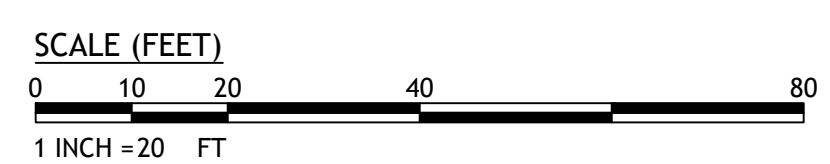
REVISIONS	NO.	BY	DATE
	1	JAC	JUNE 15, 1998

REVISIONS	NO.	BY	DATE
	1	JAC	JUNE 15, 1998

REVISIONS	NO.	BY	DATE
	1	JAC	JUNE 15, 1998



**BLOCK ISLAND SOUND**  
 (CRMC WATER TYPE 1 - CONSERVATION AREAS)



**JCE**  
 JOE CASALI ENGINEERING, INC.  
 CIVIL ENGINEERING, SITE PREPARATION  
 300 POST ROAD, WARWICK, RI 02888  
 (401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI  
 No. 7250  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL  
 09/15/2025

**PROPOSED INFILL SHORELINE PROTECTION**  
 585 ATLANTIC AVENUE  
 WESTERLY, RHODE ISLAND  
 AP 156, LOT 12

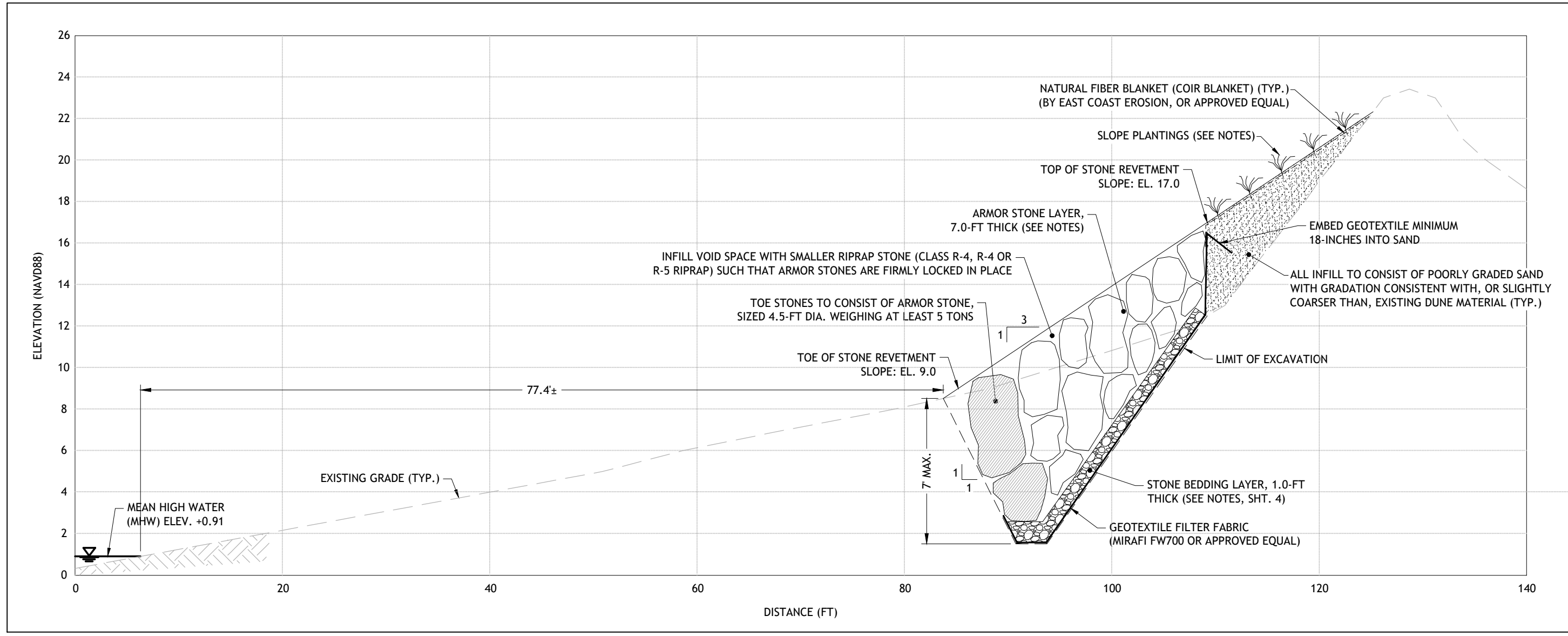
REVISIONS	NO.	DATE	DESCRIPTION
	1	9/24/2025	RECEIVED

DESIGNED BY:	DRD
DRAWN BY:	SEP
CHECKED BY:	JAC
DATE:	AUG. 2025
PROJECT NO.:	25-65

PRELIMINARY, NOT FOR CONSTRUCTION

**SITE PREPARATION PLAN**

**SHEET 2 OF 3**



**PROPOSED SHORELINE CROSS SECTION B-B**  
 HORIZONTAL: 1" = 5'  
 VERTICAL: 1" = 5'

**LOADING & SEEDING NOTES:**

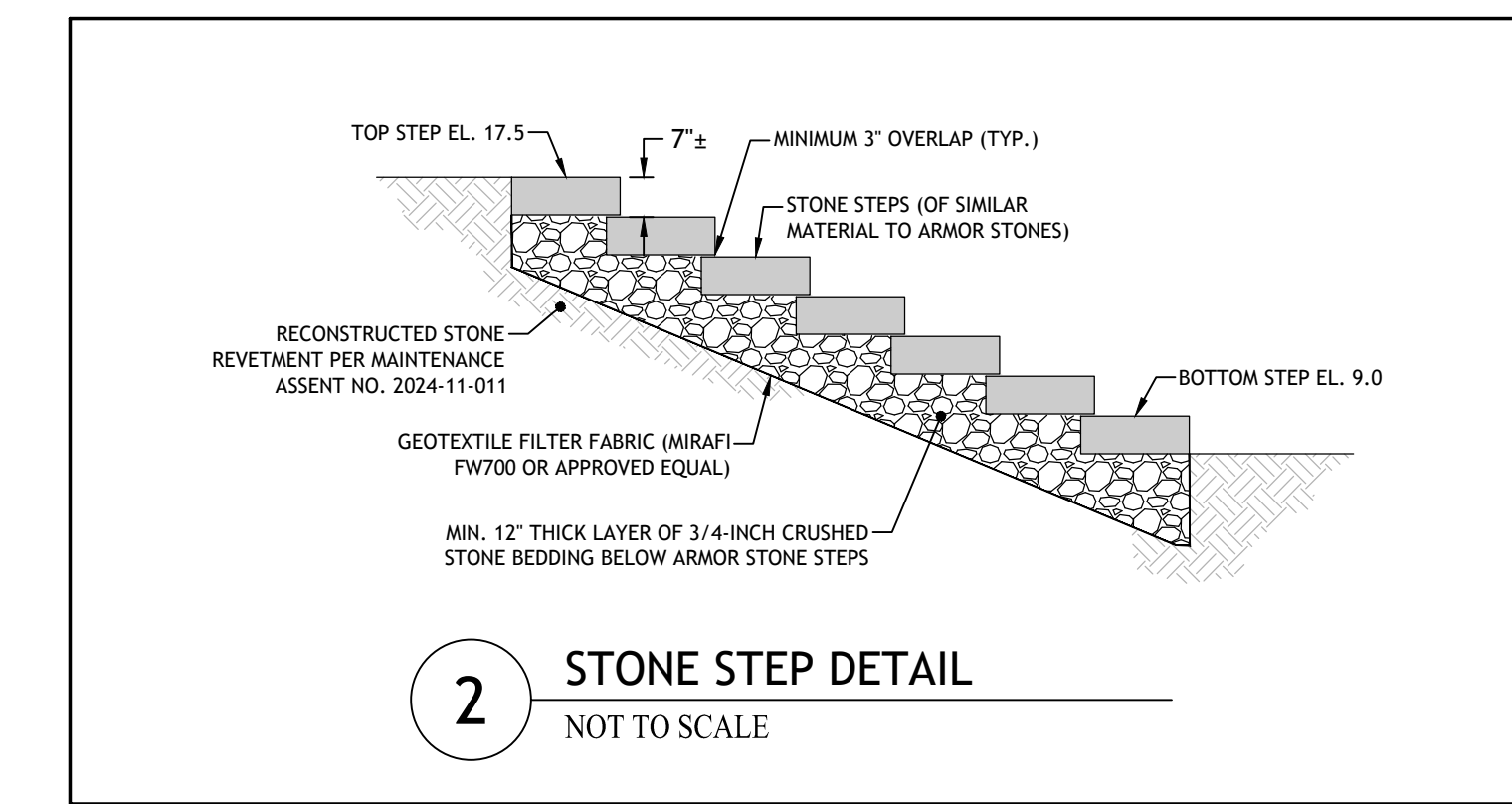
- SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
- THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
- PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS, AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
- APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
- SEEDING:**
  - AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL.
  - SEED FOR REVETMENT SLOPE SHALL CONSIST OF COASTAL/SALT TOLERANT SEED MIX, BY ALLEN'S SEED, 693 SOUTH COUNTY TRAIL, EXETER, RI. % BY WEIGHT AS FOLLOWS, APPLY AT A RATE OF 3-5 POUNDS PER 1,000 SQ. FT. OR AS OTHERWISE DIRECTED BY THE MANUFACTURER:
    - 20% HEATHLAND CHEWINGS FESCUE
    - 18% CREEPING RED FESCUE (COATED)
    - 15% SALTY ALKALIGRASS
    - 12.5% HARPOON HARD FESCUE
    - 12.5% QUATTRO SHEEP FESCUE
    - 12% GINGER KENTUCKY BLUEGRASS
    - 10% ANNUAL RYE
  - SEED FOR ALL OTHER AREAS TO CONSIST OF URI #2 IMPROVED SEED MIX, % BY WEIGHT AS FOLLOWS, APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER:
    - 40% CREEPING RED FESCUE
    - 20% IMPROVED PERENNIAL RYEGRASS
    - 20% IMPROVED KENTUCKY BLUEGRASS
    - 20% KENTUCKY BLUEGRASS
- RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15. ALTERNATIVE DATES ARE SEPTEMBER 15 TO NOVEMBER 15; HOWEVER ADDITIONAL EROSION CONTROLS MAY BE REQUIRED. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

**ARMOR STONES NOTES:**

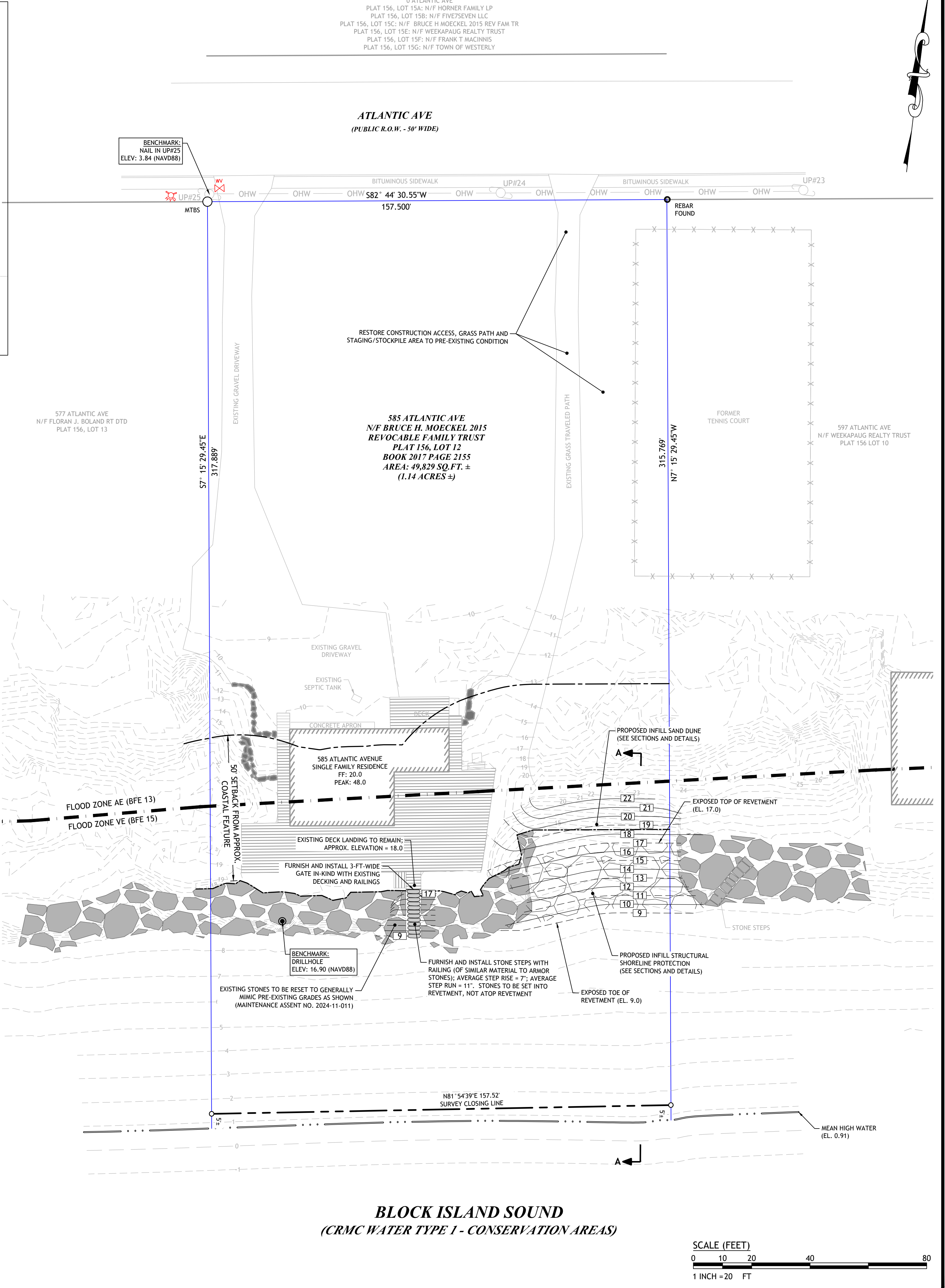
- THE CONTRACTOR SHALL LIMIT THE AMOUNT OF EXPOSED SHORELINE DURING CONSTRUCTION SO AS TO MINIMIZE THE CHANCE OF SHORELINE RECESSON SHOULD A LARGE STORM EVENT OCCUR DURING THE CONSTRUCTION. IF SUCH AN EVENT IS FORECASTED, THE CONTRACTOR SHALL TEMPORARILY PLACE ARMOR STONE MATERIAL ALONG ANY EXPOSED AREA OF SHORELINE AS A TEMPORARY PROTECTION MEASURE.
- ARMOR STONE SHALL BE DENSE, SOUND GNEISS, DIORITE, OR BASALT, HAVING A MINIMUM DENSITY OF 165 POUNDS PER CUBIC FOOT.
- ARMOR STONES SHALL HAVE AN AVERAGE WEIGHT OF NO LESS THAN 7,500 POUNDS (3.75 TONS), WITH AN AVERAGE DIAMETER OF APPROXIMATELY 3.7-FT; 50-PERCENT OF STONES SHALL BE LARGER THAN THESE LIMITS. ARMOR STONES SHALL BE NO LESS THAN 5,000 POUNDS (2.5 TONS), AND NO LESS THAN ABOUT 3.0-FT IN DIAMETER. ARMOR STONES SHALL BE NO LARGER THAN 10,000 POUNDS (5 TONS), AND NO LARGER THAN ABOUT 4.5-FT IN DIAMETER.
- ARMOR STONE SHALL BE PLACED SUCH THAT THEY DO NOT PROTRUDE SHARPLY FROM THE SLOPE FACE; HOWEVER, THE SLOPE FACE SHALL NOT BE EXCESSIVELY FLAT AND STONES SHALL NOT BE EXCESSIVELY TIGHT.
- FILTER STONE SHALL CONSIST OF CRUSHED DURABLE STONE, HAVING A MINIMUM DENSITY OF 165 PCF. FILTER STONE SHALL CONFORM TO THE GRADATION REQUIREMENTS FOR NATIONAL STONE ASSOCIATION MODIFIED NSA NO. R-3 RIPRAP STONE, AS PER SECTION M.10.03 OF THE RHODE ISLAND STANDARD DETAILS FOR ROAD AND BRIDGE CONSTRUCTION, WITH ALL LATEST REVISIONS AND AMENDMENTS.
- THREE POINTS OF CONTACT ARE REQUIRED BETWEEN A STONE AND OTHER STONES WITHIN THE SAME LAYER. STONES SHOULD BE KEED AND FITTED, MAXIMIZING CONTACT ON ALL SIDES.
- CONTRACTOR MUST SUBMIT QUARRY SOURCE TO THE OWNER AND ENGINEER FOR ALL STONE MATERIALS PRIOR TO ORDERING OR SHIPPING TO THE SITE.
- FILTER FABRIC SHALL BE WRAPPED BACK INTO FILTER STONE AT ALL TERMINATIONS.

**SLOPE PLANTING NOTES:**

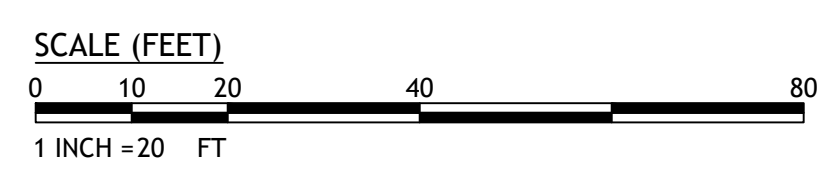
- PLANTINGS TO CONSIST OF BEACH GRASS (AMPHIPHILA BREVILIGULATA), INSTALLED 5-FT ON CENTER. SHRUB PLANTINGS FROM TRADITIONAL STOCK MAY ALSO BE PLANTED WITHIN THE SLOPE PLANTING AREA AND WITHIN THE COIR LOGS. TRADITIONAL NURSERY STOCK PLANTINGS SHALL BE OF THE SPECIES BAYBERRY (MYRICA PENNSYLVANICA) OR BEACH ROSE (ROSA RUGOSA).
- PLANTINGS THAT FAIL TO SURVIVE WITHIN THE FIRST YEAR OF PLANTING SHALL BE REPLACED IN KIND.



**2 STONE STEP DETAIL**  
 NOT TO SCALE



**BLOCK ISLAND SOUND**  
 (CRMC WATER TYPE 1 - CONSERVATION AREAS)



**JCE**  
 JOE CASALI ENGINEERING, INC.  
 CIVIL ENGINEERING ARCHITECTURE INTERIOR DESIGN  
 300 POST ROAD, WARWICK, RI 02888  
 (401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI  
 No. 7250  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL  
 09/15/2025

**PROPOSED INFILL SHORELINE PROTECTION**  
 585 ATLANTIC AVENUE  
 WESTERLY, RHODE ISLAND  
 AP 156, LOT 12

**REVISIONS:**

NO.	DATE	DESCRIPTION
1	9/24/2025	REVIEWED

DESIGNED BY: DRD  
 DRAWN BY: SEP  
 CHECKED BY: JAC  
 DATE: AUG. 2025  
 PROJECT NO: 25-65

PRELIMINARY, NOT FOR CONSTRUCTION

**PROPOSED REVETMENT PLAN**

**SHEET 3 OF 3**

MHW	0.91
NAVD 88	0.00
MSL	-0.31
MLW	-1.66

TIDAL DATUM CONVERSIONS



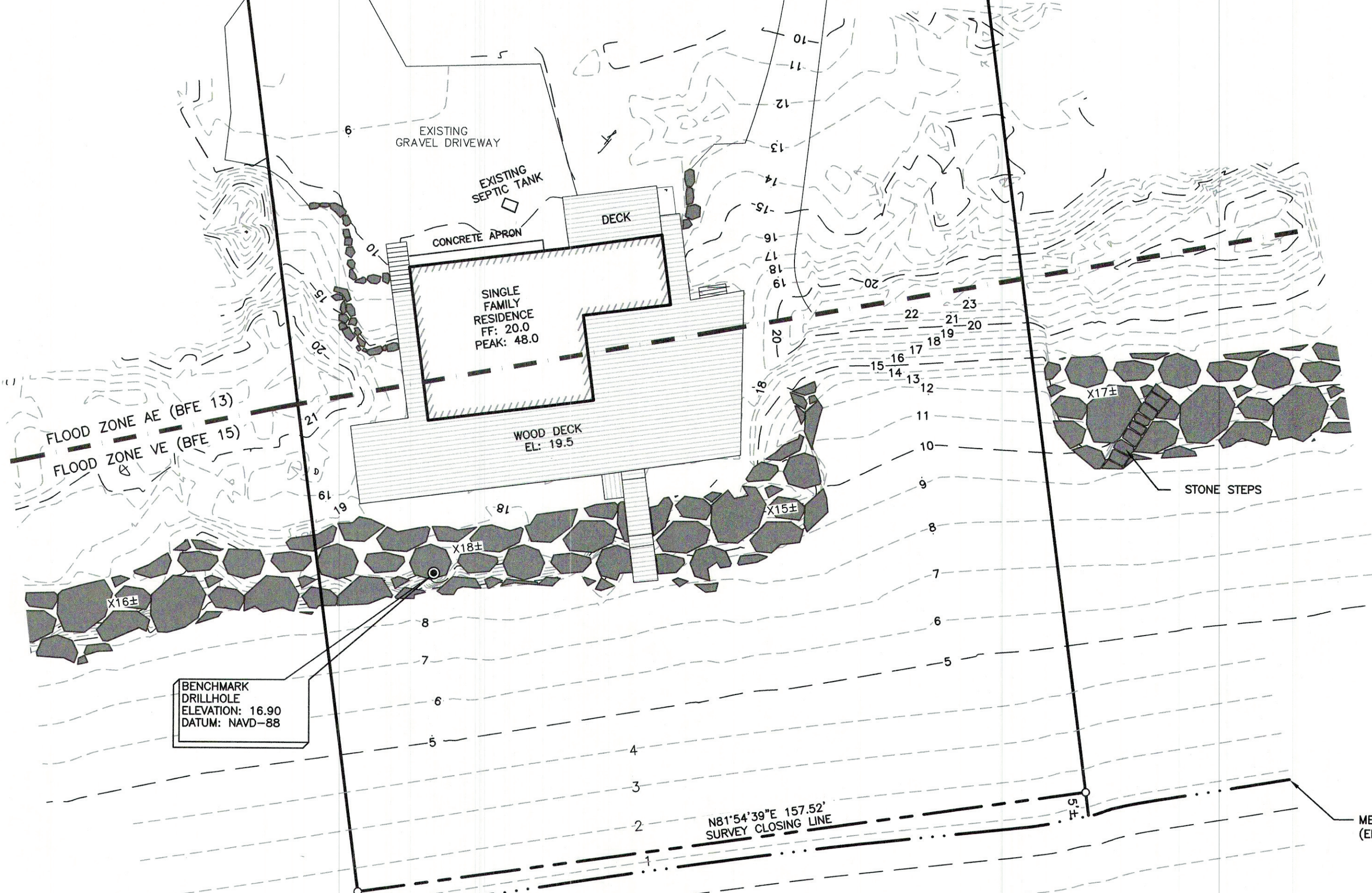
577 ATLANTIC AVE  
N/F  
FLORAN J. BOLAND RT DTD  
PLAT 156 LOT 13

BENCHMARK  
NAIL IN UP#25  
ELEVATION: 3.84  
DATUM: NAVD-88

ATLANTIC AVE  
(PUBLIC R.O.W. - 50' WIDE)

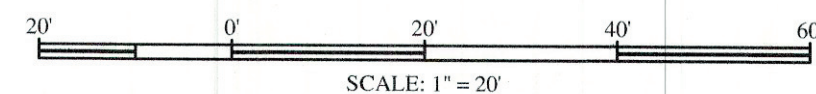
585 ATLANTIC AVE  
N/F  
BRUCE H. MOECKEL 2015  
REVOCABLE FAMILY TRUST  
PLAT 156 LOT 12  
BOOK 2017 PAGE 2155  
AREA: 49,829 SQ.FT. ±  
(1.14 ACRES ±)

597 ATLANTIC AVE  
N/F  
WEEKAPAUG REALTY TRUST  
PLAT 156 LOT 10



LEGEND

- IRON PIPE OR REBAR
- BOUND
- MTBS (MONUMENT TO BE SET)
- SURVEY TIE LINE INDICATOR
- x10± SPOT GRADE
- UTILITY POLE
- 5- MAJOR CONTOUR - 5' INTERVAL
- 3- MINOR CONTOUR - 1' INTERVAL
- o/h OVERHEAD WIRES
- ~ EDGE OF VEGETATION
- ~ RIPRAP (GRAPHICAL REPRESENTATION ONLY - SIZE MAY VARY)



STREET INDEX  
ATLANTIC AVE

DISTRICT DIMENSIONAL REGULATIONS

District	HDR-10 HIGH DENSITY RESIDENTIAL	RESIDENTIAL
USE		
MIN. LOT SIZE		10,000 SQ. FT.
MIN. LOT FRONTAGE		80 FEET
MAX. IMPERVIOUS SURF. %		35%
MAX. HGT. PRIN. BLDG.		35 FEET
MAX. HGT. ACCESS. BLDG.		20 FEET
MIN. FRONT YARD DEPTH		30 FEET
MIN. SIDE YARD DEPTH		15 FEET
MIN. CNR. SIDE YARD DEPTH		22.5 FEET
MIN. REAR YARD DEPTH		30 FEET
MIN ACCESS. BLDG SIDE		15 FEET
MIN. ACCESS. BLDG. REAR		20 FEET

PLAN REFERENCES:

- R1. EXISTING CONDITIONS SURVEY PREPARED FOR BRUCE & CAROL MOECKEL 585 ATLANTIC AVE PLAT 156 LOT 12 WESTERLY, RHODE ISLAND SCALE: 1" = 20' APRIL 8, 2011 CHERENZIA AND ASSOCIATES, LTD. NATE LAUDER PLS #1842
- R2. PLAN OF PLEASANT VIEW BEACH LOTS TOWN OF WESTERLY, R.I. SCALE: 200 FEET TO THE INCH BY C.E. CHANDLER AND S.B. PALMER, ENGR'S NORWICH, CONN. 1909

NOTES:

1. REFERENCE IS HEREBY MADE TO A TRUSTEES DEED FROM CAROL S. MOECKEL AND PETER D. HERSHMAN, CO-TRUSTEES OF THE BRUCE H. MOECKEL 2015 REVOCABLE FAMILY TRUST TO CAROL S. MOECKEL AND PETER D. HERSHMAN, CO-TRUSTEES OF THE BRUCE H. MOECKEL 2015 REVOCABLE FAMILY TRUST "MARITAL DEDUCTION SHARE" RECORDED IN THE TOWN OF WESTERLY LAND EVIDENCE RECORDS BOOK 2017 PAGE 2155, ON FEBRUARY 2, 2017.
2. BEARINGS AND NORTH ARROW ORIENTATION ARE REFERENCED TO THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM OF 1983.
3. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
4. THIS PARCEL IS WITHIN FEMA FLOOD HAZARD ZONE VE (BFE 15) AND AE (BFE 13). REFERENCE IS MADE TO MAP PANEL 44009C0259J, EFFECTIVE OCTOBER 16, 2013.
5. LIMITS OF FIELD TOPOGRAPHY SHOWN HEREON REPRESENT INFORMATION GATHERED FROM FIELD SURVEYS CONDUCTED BY CHERENZIA & ASSOCIATES, LTD ON APRIL 10, 2024.
6. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. CHERENZIA & ASSOCIATES IS NOT RESPONSIBLE FOR ANY UNKNOWN OR UNRECORDED EASEMENTS THAT A TITLE REPORT WOULD DISCLOSE.
7. THIS PARCEL IS SITUATED IN THE TOWN OF WESTERLY HDR-10 ZONING DISTRICT AND IS SUBJECT TO THE RESTRICTIONS THEREOF.

CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF SURVEY:

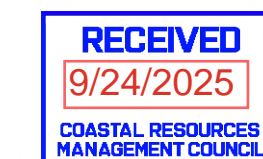
COMPREHENSIVE BOUNDARY  
DATA ACCUMULATION-PLANIMETRICS  
TOPOGRAPHY

MEASUREMENT

CLASS I  
CLASS III  
CLASS T-3

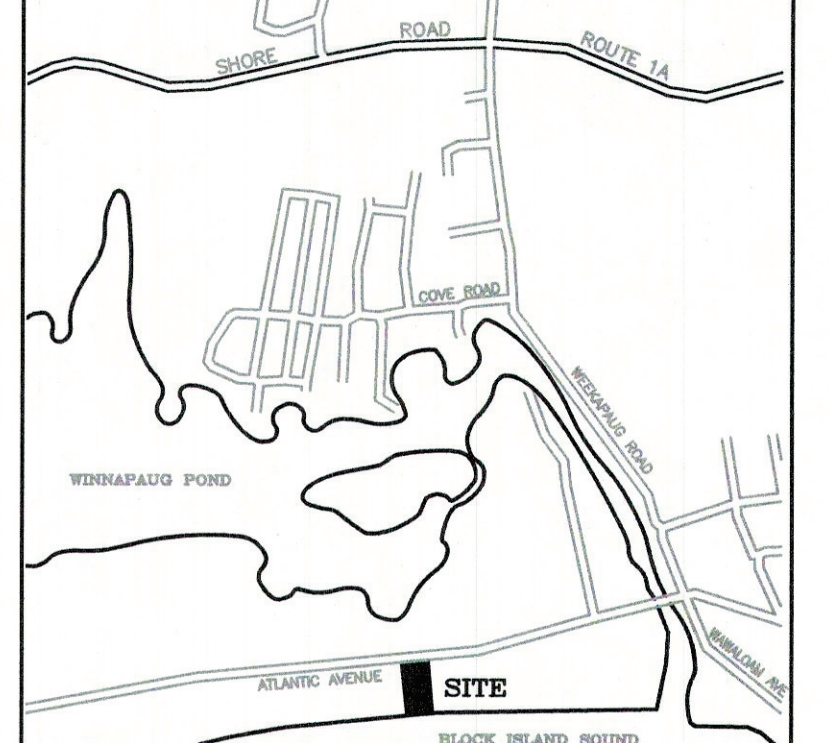
THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND THE PREPARATION OF THE PLAN IS TO SHOW EXISTING CONDITIONS TO SUPPORT REVETMENT IMPROVEMENTS.

BY: *MAC*  
PLS SIGNATURE  
MARK A. CASTELLANOS PLS #2511  
PRINTED PLS NAME & LICENSE NO.  
LS.000A133-COA



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LOCATION MAP

PLAN REVISIONS				
REV. NO.	DATE	DESCRIPTION	OWN BY	CHK BY

SCALE: 1"=20'  
CA JOB #211017-1  
DATE: JUNE 6, 2024  
DRAWN BY: JF  
CHECKED BY: MAC

EXISTING CONDITIONS PLAN  
LIMITED CONTENT  
BOUNDARY & TOPOGRAPHIC  
SURVEY

585 ATLANTIC AVE  
PLAT 157 LOT 12  
WESTERLY, RHODE ISLAND

PREPARED FOR  
CAROL MOECKEL

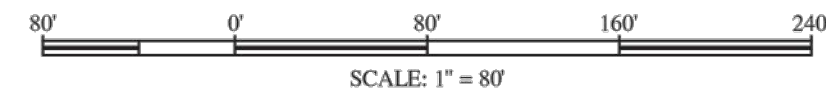
MARK A. CASTELLANOS  
No. 2511  
PROFESSIONAL  
LAND SURVEYOR  
**SV-1**



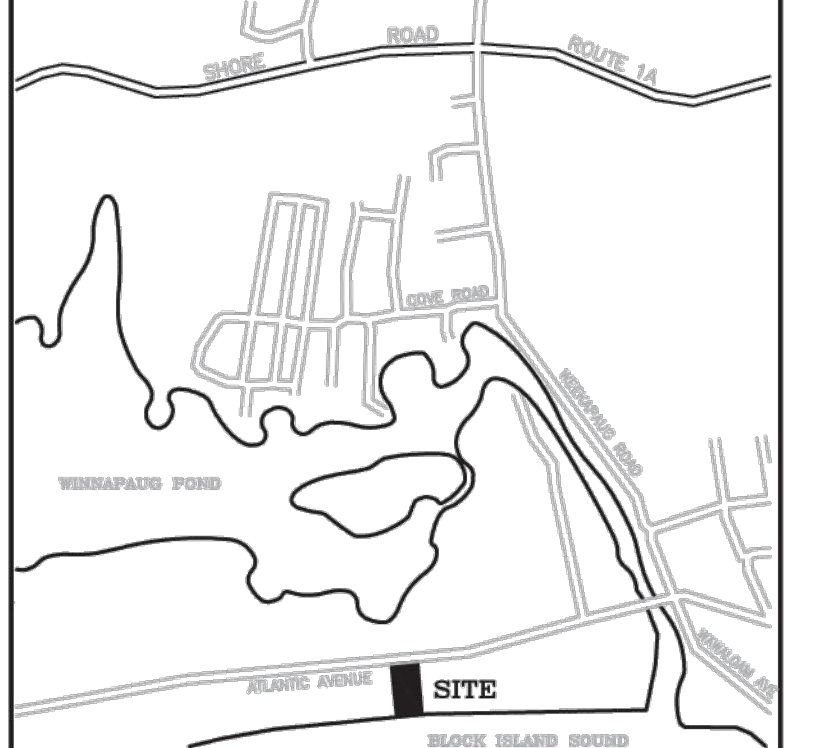
ATLANTIC AVE  
(PUBLIC R.O.W. - 50' WIDE)



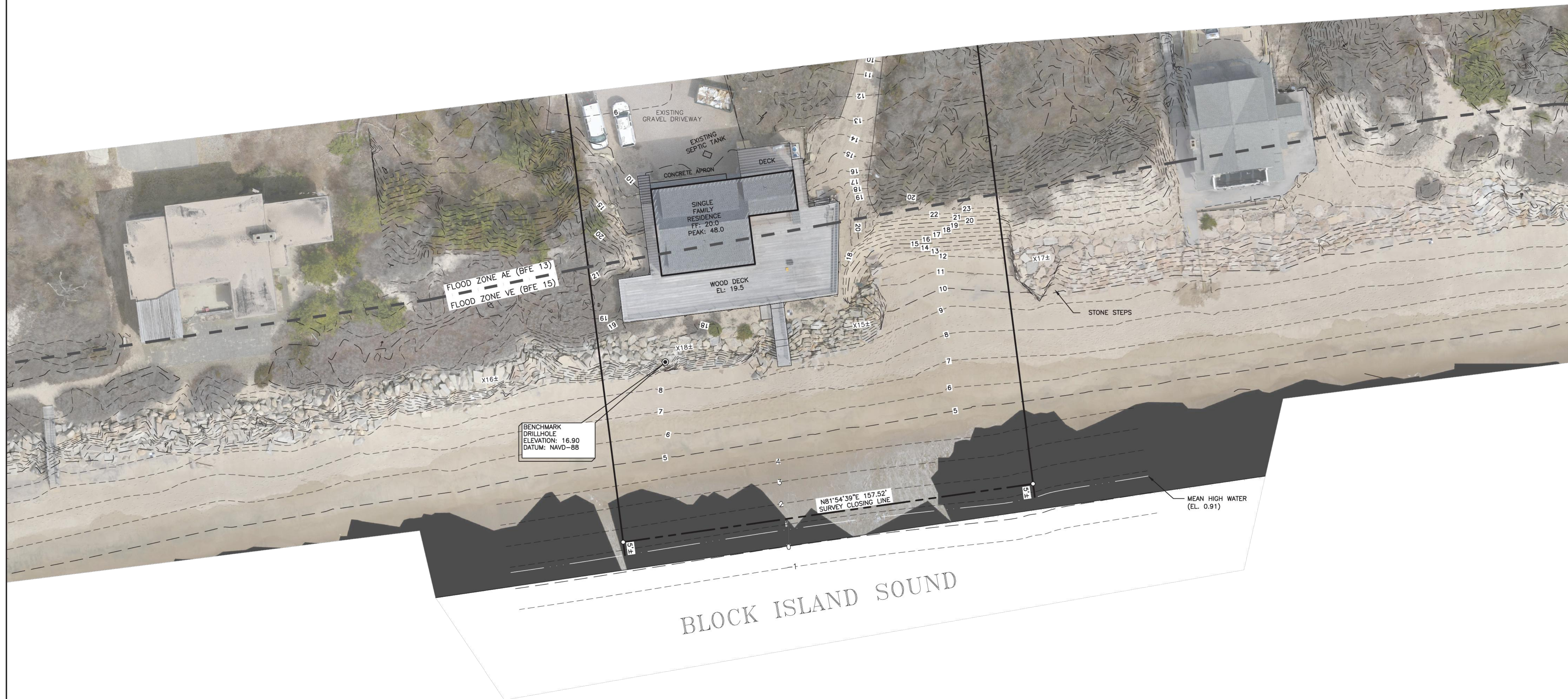
LIMITS OF SEAWALL AND REVETMENT  
SCALE 1"=80'



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LOCATION MAP



PLAN REVISIONS				
REV. NO.	DATE	DESCRIPTION	DWN BY	CHK BY

SCALE: AS NOTED  
CA JOB #211017-1  
DATE: JUNE 6, 2024  
DRAWN BY: JF  
CHECKED BY: MAC

EXISTING CONDITIONS PLAN

ORTHOMOSAIC AERIAL PHOTOS

585 ATLANTIC AVE  
PLAT 157 LOT 12  
WESTERLY, RHODE ISLAND

PREPARED FOR  
CAROL MOECKEL

MARK A. CASTELLANOS  
No. 2511  
PROFESSIONAL  
LAND SURVEYOR

RECEIVED  
9/24/2025  
COASTAL RESOURCE  
MANAGEMENT COUNCIL

SV-2

SHEET 2 OF 2

SUBJECT PARCEL  
SCALE 1"=20'

