

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 12/22/20 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: City of East Providence **CRMC FILE NO.** 2020-09-039
LOCATION/POLE: 0 Booth Ave
CITY/TOWN: East Providence **PLAT:** 13 **LOT:** 9

CONTACT PERSON(S) & ADDRESS:

City of East Providence
Steve Coutu, P.E.
Public Works Director
145 Taunton Ave
East Providence RI 02914

PRELIMINARY REVIEW INFORMATION

PROPOSAL: Construct shoreline protection

PLAN(S) REVIEWED: "City of East Providence, Booth Avenue Slope Stabilization..." dated July 2020. Sheets 1-4, By Wright Pierce.

INVESTIGATOR

Richard Lucia
Janet Freedman

DATE

6/23/2020

TIME

10:00 am

MEASUREMENTS & OBSERVATIONS:

PREVIOUS CRMC ACTIONS FOR SITE:

Preliminary Buffer and Setback Requirements:

SETBACK (ref. Section 1.1.7 CRMP)

BUFFER (ref. Section 1.1.9 CRMP)

Note: **Setbacks** apply to "construction related activities" including filling, removing, and grading (ref: Section 1.3.1(B) CRMP). 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 CRMP. 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

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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/coastal hazardapp.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, Conservation Area, Bullocks Cove**

For the purpose of this review the coastal feature(s) shall be the coastal bluff

Applicability of CRMP and SAM Plans (as amended):

CRMP Sections: §1.1.5.A, §1.1.5.F, §1.1.7, §1.1.8, §1.1.9, §1.1.10, §1.2.1.B, §1.2.2.C, §1.2.2.D, §1.3.1.A, § 1.3.1.B, §1.3.1.G, §1.3.1J, §1.3.1.M

SAMP: N/A

STAFF CONCERNS/COMMENTS/INFORMATION REQUIREMENTS:

Based on a site visit with the City of East Providence it is clear excessive erosion exists at the site and without some type of shoreline stabilization the road (Booth Avenue) will eventually fail. The shoreline consists of a sparsely vegetated bluff and is considered Type 1, Conservation Area, shoreline by the RICRMP. Staff agrees that the cause of the erosion is most likely the highly concentrated flow from the culvert under the bike path west of the eroded bluff. Not only is the roadway in jeopardy but all the existing utilities that exist in Booth Ave may fail, including the existing underground water and gas line.

The applicant has submitted preliminary design plans for the CRMC staff to review. One of the RICRMP regulations that is most relevant to this project is Section § 1.3.1.G, Shoreline Protection.

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Specifically, 1.3.1.G.3. Shoreline Protection, Prohibitions:

“a. The Council shall prohibit new hybrid and structural shoreline protection on barriers classified by the CRMC as undeveloped, moderately developed, and developed as well as shorelines abutting Type 1 waters, unless the shoreline is determined by the CRMC to be a manmade shoreline as defined within § 1.1.2 of this Part or is permissible under § 00-3.1.12 of this Chapter.
b. The Council shall prohibit the use of hybrid or structural shoreline protection to protect undeveloped land or structures not integral to the primary structure.
c. Filling on a coastal feature or tidal waters beyond that which is consistent with § 1.3.1(G)(5)(a) of this Part is prohibited.
d. Shoreline protection is prohibited when proposed to be used to regain property lost through historical erosion or storm events, unless the project is a marsh sill designed for wave attenuation as part of a marsh creation, enhancement, or restoration project.”

Based on the above the project will require a Special Exception. Please address in writing the criteria for the granting of a special exception §1.1.8.A. It is staff opinion that in general this project appears to meet the criteria for a special exception since it's an activity associated with public infrastructure. However, all environmental impacts will have been minimized to be minimized to the greatest extent practicable.

Additionally, this project will require Category B requirements be addressed:

“a. Applicants for new hybrid shoreline protection shall, on the basis of sound professional information, demonstrate in writing all of the following:
(1) An erosion hazard exists due to natural erosion processes and the proposed hybrid shoreline protection has a reasonable probability of controlling this erosion problem;
(2) Nonstructural shoreline protection has not worked in the past or will not work in the future because these methods are not suitable for the site conditions;
(3) There are no practical or reasonable alternatives to the proposed activity such as the relocation of existing structures that would relieve the need for hybrid shoreline protection;
(4) The proposed practice is not likely to increase erosion or disrupt shoreline sediment dynamics that sustain adjacent natural shoreline features and the stability of the shoreline on either side of the project;
(5) Describe the long-term maintenance plan for the hybrid shoreline protection project including addressing storm damage; and
(6) Plans for hybrid shoreline protection practices shall be prepared by an appropriate design professional (e.g., registered professional engineer, landscape architect or land surveyor).”

A construction plan that includes site access for both equipment and materials will need to be submitted as part of the application.

This permit will require an Army Corps of Engineers RI General Permit (PCN 9). It will likely need a Water Quality Certificate from RIDEM.

1.3.1(G)(2)(a): Permits for hybrid or structural shoreline protection projects with any portion of the project located below the high tide line must be obtained concurrently from the Army Corps of Engineers and the CRMC. Army Corps and CRMC requirements are designed to complement one another; applicants should consider the requirements of both agencies when beginning the permit process. In some cases, the CRMC may require an applicant to obtain applicable Army Corps of Engineers permits prior

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to applying to the Council. A CRMC Assent is not valid unless the applicant has received all required Army Corps of Engineers approvals. For purposes of federal consistency the CRMC shall require applicants to submit a copy of the completed Army Corps of Engineers application to the CRMC to partially fulfill the federal requirements pursuant to 15 C.F.R. § 930.

Some considerations for the City are:

- It was observed in the field that a fringe Phragmites marsh is found along much of the Bullocks Cove shoreline. There were a few patches of *Spartina alterniflora* so it is possible that a saltmarsh could be established here. It is recommended that the water salinity level should be measured to see the likelihood of marsh survival.
- It is recommended that current velocity at the proposed structure be measured in order to correctly size the rocks used for the sill.
- It is recommended that soil testing be done in the cove to determine the extent of subsidence, if any, expected for the rock sill.
- It is recommended that the fill on the slope be minimized (see 1.3.1(G)(3)(d) above). The slope gradient can be reduced if the fill is graded to meet the existing top of bank. Terracing with the coir logs could also work to reduce the volume of fill and increase slope stability.

In reviewing this project, the staff engineer and staff geologist have no objections to the Installation of a hybrid structure. It is the staff opinion that a strictly non-structural shoreline protection would have a short design life based on observation of the high flow occurring at the site. It is also observed although it would not alleviate the need for a hybrid structure, the possibility of relocating or increasing the size of the culvert on the bikepath should be explored with RIDOT. This may reduce the velocity of flow and thus reduce the erosion on the bluff. This section of the bikepath is vulnerable to sea level rise. Reconfiguration of the culvert should be considered if retrofits for sea level rise resilience are considered in the future.

Please note that a Climate Resilience Grant may be available for this type of project. Please contact Elizabeth Stone at RIDEM (Elizabeth.stone@dem.ri.gov) for further information on this matter. There may still be funds available, and the RFP deadline is spring from what we understand.

<http://www.dem.ri.gov/programs/environmentalprotection/climate-resilience-fund.php>

SIGNATURE:  STAFF GEOLOGIST

SIGNATURE:  STAFF ENGINEER