

# ENF Environmental Notification Form

*For Office Use Only*  
*Executive Office of Environmental Affairs*

EOEA No.: *14315*  
 MEPA Analyst: *Holly Johnson*  
 Phone: 617-626-*1623*

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Stacy Boulevard - Proposed Bulkhead Improvement Project		
Street: Western Avenue/Stacy Boulevard		
Municipality: Gloucester	Watershed: Gloucester (Western) Harbor	
Universal Transverse Mercator Coordinates:	Latitude: N42d-361-29.4" Longitude: W70d-40'-36.6"	
Estimated commencement date: Fall 2009	Estimated completion date: Spring 2010	
Approximate cost: \$3,000,000	Status of project design: 85%complete	
Proponent: City of Gloucester/ Massachusetts Department of Conservation and Recreation		
Street: 22 Poplar Street		
Municipality: Gloucester	State: MA	Zip Code: 01930
Name of Contact Person From Whom Copies of this ENF May Be Obtained: David A. Smith		
Firm/Agency: Vine Associates, Inc.	Street: 372 Merrimac Street	
Municipality: Newburyport	State: MA	Zip Code: 01950
Phone: 978-465-1428	Fax: 978-465-2640	E-mail: dsmith@vineassociates.net

- Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?  
 Yes  No
- Has this project been filed with MEPA before?  
 Yes (EOEA No. \_\_\_\_\_)  No
- Has any project on this site been filed with MEPA before?  
 Yes (EOEA No. \_\_\_\_\_)  No
- Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
- a Single EIR? (see 301 CMR 11.06(8))  Yes  No
  - a Special Review Procedure? (see 301CMR 11.09)  Yes  No
  - a Waiver of mandatory EIR? (see 301 CMR 11.11)  Yes  No
  - a Phase I Waiver? (see 301 CMR 11.11)  Yes  No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): Funding from the Massachusetts Department of Conservation and Recreation for design and permitting.

Are you requesting coordinated review with any other federal, state, regional, or local agency?  
 Yes (Specify \_\_\_\_\_ )  No

List Local or Federal Permits and Approvals:  
 Conservation Commission Notice of Intent, MA DEP Chapter 91 and Federal U.S. Army Corps of Engineers Permit

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- |                                 |                                       |  |
|---------------------------------|---------------------------------------|--|
| <input type="checkbox"/> Land   | <input type="checkbox"/> Rare Species | <input checked="" type="checkbox"/> Wetlands, Waterways, & Tidelands |
| <input type="checkbox"/> Water  | <input type="checkbox"/> Wastewater   | <input type="checkbox"/> Transportation                              |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Air          | <input type="checkbox"/> Solid & Hazardous Waste                     |
| <input type="checkbox"/> ACEC   | <input type="checkbox"/> Regulations  | <input type="checkbox"/> Historical & Archaeological Resources       |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
<b>LAND</b>				<input checked="" type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input checked="" type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/Extension Permit <input type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>
Total site acreage	0.83*			
New acres of land altered		0		
Acres of impervious area	0.25	0.25	0.50	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		0.02		
Acres of new non-water dependent use of tidelands or waterways		0		
<b>STRUCTURES</b>				
Gross square footage	N/A	N/A	N/A	
Number of housing units	N/A	N/A	N/A	
Maximum height (in feet)	N/A	N/A	N/A	
<b>TRANSPORTATION</b>				
Vehicle trips per day	N/A	N/A	N/A	
Parking spaces	N/A	N/A	N/A	
<b>WATER/WASTEWATER</b>				
Gallons/day (GPD) of water use	N/A	N/A	N/A	
GPD water withdrawal	N/A	N/A	N/A	
GPD wastewater generation/treatment	N/A	N/A	N/A	
Length of water/sewer mains (in miles)	N/A	N/A	N/A	

\*Site acreage is equal to project site area on Sheet 1 and 2.

**CONSERVATION LAND:** Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

- Yes (Specify \_\_\_\_\_)  No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

- Yes (Specify \_\_\_\_\_)  No

**RARE SPECIES:** Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify \_\_\_\_\_ )  No

**HISTORICAL /ARCHAEOLOGICAL RESOURCES:** Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify \_\_\_\_\_ )  No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify \_\_\_\_\_ )  No

**AREAS OF CRITICAL ENVIRONMENTAL CONCERN:** Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify \_\_\_\_\_ )  No

**PROJECT DESCRIPTION:** The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

The Massachusetts Department of Conservation and Recreation (DCR) and the City of Gloucester ("the proponent") are proposing to reconstruct the existing Stacy Boulevard stone masonry bulkhead within the basic footprint of the existing structure. The work includes reconstruction and extension of the concrete sidewalk, repairing the granite stairs, installation of sodding, installation of irrigation and other park improvements. The bulkhead reconstruction work will occur within the same footprint as the existing stone masonry bulkhead with the addition of a concrete footing base proposed along approximately 1,478 linear feet. In addition, a small 0 to 8 foot wide by 330 foot long (1,230 square foot) seaward extension of the bulkhead is proposed in the location of the Fishermen's Wives Memorial. Further information regarding alternatives and impacts to resource areas are included within the attached project narrative.

## **PROJECT NARRATIVE**

### **PROPOSED BULKHEAD IMPROVEMENT PROJECT STACY BOULEVARD WESTERN AVENUE GLOUCESTER, MASSACHUSETTS**

#### **A. INTRODUCTION**

Vine Associates, Inc. (VAI), on behalf of the Massachusetts Department of Conservation and Recreation (DCR), and the City of Gloucester, was retained to design and permit the proposed reconstruction of the existing partially failed and deteriorated stone bulkhead along Stacy Boulevard off Western Avenue in West Gloucester.

The limits of the project start at Station 0+00 located near Stage Fort Park extending northeastward to approximately Station 20+30 near the Blynman Canal (see attached Sheets 1 of 3 and 2 of 3 in Attachment 4). Reconstruction of the portion of bulkhead adjacent to the Blynman Canal (Station 20+30 to 23+09) was permitted and constructed under DEP File No.28-1488 and was completed in August 2003.

The bulkhead was originally constructed over 100 years ago and has undergone many repairs since. The bulkhead is constructed as a mortared cut stone seawall with a granite cap and steel pipe railings. The stone bulkhead provides shoreline stabilization for the protection of Stacy Boulevard/Lucy Davis walkways, park structures including the Fisherman's Wives Memorial and associated underground utilities that run along Western Avenue. The following narrative describes the current conditions at the site and proposed work plan.

The Massachusetts Department of Conservation and Recreation and the City of Gloucester ("the proponent") are proposing to reconstruct the existing Stacy Boulevard stone masonry bulkhead within the basic footprint of the existing structure, provide a concrete sidewalk, sod, and irrigation and park improvements (see the attached sheets in Attachment 4). The bulkhead reconstruction work will occur within the same footprint as the existing stone masonry bulkhead with the addition of a concrete footing base along approximately 1,680 linear feet. In addition, a 330 lf seaward extension of the bulkhead is proposed in the location fronting the Fishermen's Wives Memorial.

The following provides a detailed description of the current conditions and proposed project, as well as a description of the resource areas and any potential impacts to those resources that may result from this project.

## **B. EXISTING CONDITIONS**

Engineers from Vine Associates, Inc. (VAI) have performed a survey and inspection of the site to locate general site features including but not limited to; topography of the site and general site features of the subject property. The inspection included the areas as shown on the attached site plan from Station 0+00 (start of bulkhead at Stage Fort Park) to approximately Station 20+30 near the start of the “peninsula” adjacent to the Blynman Canal, at the southwestern limit of the prior reconstruction work.

The stone bulkhead is comprised of semi-dressed and dressed stones, typically ranging from an estimated 100 to 2,000 pound stone, with mortared joints. The top of the bulkhead varies in elevation from elevation 14.1 to 20.5 above mean low water datum (MLW) and is curved and wavy along its length. The existing grade along the beach side varies from elevation 3.9 to 17.8 MLW. Beach levels typically fluctuate and elevations stated represent that observed at the time of survey. The beach is comprised of a combination of a sandy, cobble and stone material.

Portions of the bulkhead from approximate Station 6+00 to 10+35 are fronted by a dumped stone revetment. Two cut granite stone stairways at Stations 10+30 and 19+10 provide pedestrian access to the beach and the water. There are three existing failed areas of the bulkhead where dumped stone was placed seaward to prevent further adjacent bulkhead erosion and collapse. Based on observing the construction of the failed bulkhead, it appears the bulkhead was constructed of entirely cut stone with mortared joints with no concrete fill observed behind the bulkhead or for use as a footing.

The bulkhead is abutted by a pedestrian walkway on the landside along its length. The walkway is comprised of a 10-foot wide concrete sidewalk from Station 10+95 to 20+30 and from Station 0+00 to 10+95, the walkway consists of a dense-graded gravel (stone dust) path of varying width. There is a deteriorated steel pipe railing located at the top of the bulkhead, set into a granite capstone, over the bulkhead length.

The general condition of the bulkhead from Station 0+00 to 20+30 was observed to be fair to poor. In addition to the failed areas, the seaward face of bulkhead was observed to have many areas of voids with missing stones and mortar. Several areas of the bulkhead along the length are bowed. Sinkholes were observed along the walkway landward of the bulkhead with evidence of voids located below the concrete sidewalk.

## **C. PROPOSED WORK**

Selection of the proposed improvement program considered cost, durability, construction conditions, minimization of disturbance to resource areas, disturbance to the area users and structures, public safety, potential for damage to occur during construction and the aesthetic and historic significance of the site. A series of meetings occurred within the preliminary design process, with representatives from DCR and the City Engineering Department. The City selected to rebuild the bulkhead within the same footprint utilizing

existing and supplemental cut stone in accordance with State standards for the construction of new stone bulkhead with reinforced concrete footings.

Bulkhead reconstruction work is to occur from Station 0+00 to 18+10. Reconstruction work is to include excavation, installation of the reinforced concrete footing, reconstruction of the mortared stone bulkhead, filter fabric with drainage system, backfilling, reconstruction of the existing stone revetment, resetting of existing or supplemental granite capstones, installation of new railings and concrete sidewalk, restoring landward park features including upgrades to lighting, irrigation, sod, benches and miscellaneous park features. It is assumed that the reconstructed bulkhead and associated concrete footing can be installed while working with the tides, and as conditions warrant using pumped / tremie concrete methods. Proposed work from Station 18+10 to 20+30 is to include bulkhead repointing as necessary and installation of new railings. The granite stairway at Station 10+30 will be repaired by mortaring of the granite stones and upgrading of the railing system. The stairway at Station 19+10 will be reconstructed.

Bulkhead reconstruction work seaward of the Fishermen's Wives Memorial cannot be performed using the same work procedures as along the majority of the work limits. With the approximate 13 to 14 foot exposed bulkhead face and the close proximity of the Memorial structure (within 10 feet) to the wall face, the excavation work could compromise the stability of the Memorial structure. VAI proposed three alternatives for reconstruction of the bulkhead within this area;

1. Remove the Memorial, perform the bulkhead reconstruction work and reconstruct Memorial in its original location.
2. Drive sheeting between the Memorial and the existing bulkhead to shore the Memorial during construction.
3. Extend the bulkhead seaward along 330 lf fronting the Memorial location.

In order to evaluate the viability of these alternates, VAI performed subsurface investigations and analyses within the general location of the Memorial structures. Borings indicated the subsurface conditions to include loose sands with lower medium to dense sands and gravel. These types of loose soils are prone to movement during construction vibration activities such as pile driving. VAI summarized the investigation findings by a report submitted to DCR and the City.

The City expressed strong concern that they do not want to remove the Memorial and subject the Memorial to potential damage as a result of reinstallation or associated vibrations with sheeting/shoring installation methods. Upon review of the report and discussions with both DCR and the City, it was determined that above Alternate 3, the bulkhead extension alternate represents the most cost effective appropriate alternate for the conditions encountered.

## D. RESOURCE AREAS

The resources areas at this site include work within the buffer zone, land subject to coastal storm flowage, coastal bank, and coastal beach. The coastal beach is comprised of fine to coarse sand with cobbles and dumped stone. The coastal bank at the site is the man-made bulkhead. Most of the construction activity will take place in this area.

The area comprised of Land Subject to Coastal Storm Flowage will be used for the temporary construction and temporary staging of materials and equipment. There was no sub-aquatic or salt marsh vegetation observed within the immediate area of the existing bulkhead. Eelgrass beds have been recently mapped offshore from this site in excess of 100 feet seaward of the wall in Land Under Ocean. Because of the phased approach the contractor will take during construction and in working the tides to minimize erosion, no impacts to the eelgrass beds will occur.

No permanent impacts to resource areas are proposed with this project with the exception of the approximate 1,230 square foot (0 to 8 foot wide by 330 foot long) of impact to the Coastal Beach due to the bulkhead seaward extension. Removal of the existing dumped stone along the coastal beach (2,240 sf) will result in a net impact of -1,010 sf. Any temporary impacts on shore that occur during construction will be restored in place to their original grade and condition. The following paragraphs will list and define the resource areas to be impacted by this project and describe measures to avoid and minimize any potential adverse impacts.

### *Land Subject to Coastal Storm Flowage*

Impacts to this area include possible temporary staging of equipment and materials. There will be no adverse impacts to the coastal storm flowage impacts to the site as work will be performed within the existing footprint as existing. Any work areas will be restored to their pre-construction condition.

### *Coastal Bank (310 CMR 10.30)*

The project is the reconstruction of the 1,810 lineal foot, existing, 100+ year old man-made coastal bank.

### *Coastal Beach (310 CMR 10.27)*

The coastal beach is comprised of fine to coarse sand with cobbles and dumped stone. Impacts to the Coastal Beach are limited to the proposed seaward extension of the bulkhead within the vicinity of the Fishermans Wives Memorial. This work will affect 1,230 square foot (0 to 8 foot wide by 330 foot long) of coastal beach. Mitigation for this impact will be provided with the removal of two of the areas of dumped stone equaling 2,240 square feet used to stabilize the failed bulkhead sections. Scattered stone will be strategically placed within these locations to maintain the rocky intertidal habitat that currently exists. In addition, flat stones will be placed at the base of the wall underneath

the proposed weepholes and existing outfall locations to minimize erosion from water runoff. There will be no beach nourishment proposed for this project.

Any areas of coastal beach temporarily affected by excavation, removal and resetting of revetment stones will be restored to the pre-construction condition. There is no sub-aquatic or salt marsh vegetation observed within the immediate area of the existing bulkhead. We anticipate this area is not utilized for any shellfishing activities and confirmation from the Shellfish Constable will be obtained.

## **E. CONCLUSIONS**

The proposed work is required to stabilize and improve the function the existing bulkhead in providing pedestrian access along the waterfront. The walkway and beach access structures have provided access and passive recreation for the community for many decades and the frequent damage the overall deteriorated present condition is prone to more catastrophic and costly damage if the structures are not rehabilitated in the near future. The present advanced deteriorated condition makes the reconstruction of the bulkhead with a new foundation and mortared stone the most appropriate improvement plan.

In addition, public safety, potential damage to the park structures, damage to the Fishermen's Wives Memorial and utility protection is compromised with the bulkhead in its current state. The proposed project for the most part is being reconstructed in-kind and is designed to minimize impacts to resource areas. Any impacts incurred through construction of this project will be temporary and will be restored in place.

The Fishermen's Wives Memorial is an important Memorial dedicated by the Gloucester Fishermen's Wives Association in 2001 that honors the wives, mothers, sisters and children of Gloucester fisherman. It is an important landmark for Gloucester and its preservation is essential for the City and the local fishing community.