Coastline Consulting & Development, LLC
Waterfront Planning, Permitting, and Development

October 20, 2010

Ross A. Singer, Engineer
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

2010 OCT 25 P 12:48
RECEIVED
DEM/OWM

RE: Request for Soil Disturbance Approval - Revised
434 Allens Avenue, Providence

Dear Mr. Singer:

Per your request, I have enclosed a revised Soil Management Plan and Project Narrative. As requested, the documents now specifically discuss the installation of the infiltration trench. The Soil Management Plan also details the plan to have all disturbed areas covered with two feet of clean material, and to ensure clean material within the infiltration trench to its juncture with the groundwater elevation.

Feel free to contact me if you have any questions or comments at 203/245.8138 or david@coastlineconsulting-ct.com. We appreciate your assistance and look forward to hearing from you.

Sincerely,

David R. Provencher
Coastline Consulting & Development, LLC

Enclosures:
Soil Management Plan (Revised)
Project Narrative (Revised)

cc:
Dan Goulet, CRMC
Ronald Gagnon, RIDEM
Eddie Sciaba

SOIL MANAGEMENT PLAN

434/444 Allens Avenue (Plat 47, Lot 601; Plat 55, Lot 10), Providence, RI

This Soil Management Plan (SMP) has been prepared to establish procedures that will be followed during the bulkhead installation at 434 & 444 Allens Avenue in Providence, Rhode Island. This proposed project requires the need to manage soils excavated from the subsurface. The plan serves to supplement, and will be initiated by, the RIDEM notification requirement established by the Environmental Land Use Restriction (ELUR) for the property.

Background

The property is located at 434 & 444 Allens Avenue in Providence. According to the U.S. EPA, Region 1 – New England, the site was formerly "...owned by various parties including U.S. Lumber Company and Putnam Lumber Company. From 1972 to 1979, the property was owned by Texaco, Inc. Refine Met International (Refine Met) acquired the property in 1979 and reportedly used the property as a resource recovery facility where scrap metal, computer parts, circuit boards, capacitors, radios, and selected electronic components were shredded. Capacitors manufactured prior to the 1970s frequently contained dielectric fluid composed of polychlorinated biphenyls (PCBs). On-site activities conducted while Refine Met occupied the property are unknown. Boliden purchased the property from Refine Met in 1983 and operated the site as a resource recovery facility engaged in the reclamation of precious metals and minerals from 1983 to 1989. Scrap metals were received in bulk form, shredded, sampled, categorized, and accumulated for shipment to smelters overseas. The property is currently inactive."

The property was found to contain PCBs during a site investigation performed at the property. More recently, the site has been remediated and been found in compliance with RIDEM's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases and has remained undeveloped since this time. The Department approved remedy apparently included the excavation of contaminated cells and filling with clean material. The regulated site soils are covered with Department approved engineered controls, consisting of clean soil and vegetation in order to prevent direct exposure to regulated soils and/or infiltration through soils which exceed the Department's Method 1 (GA or GB) Leachability Criteria.

Project Purpose

The purpose of this plan is to provide precautions and measures to be taken during and after construction to minimize soil erosion and sedimentation. The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the three tie-off piles, will be located landward of the mean high water line. The proposed bulkhead and tie-off piles, in conjunction with the dredging, will allow derelict vessels to temporarily berth in a perpendicular fashion directly along the property's shoreline. The redeveloped waterfront will serve to facilitate the dismantling of derelict vessels. The scrap metal produced during the dismantling process will then be transferred to the upland and transported off-site to an appropriate upland recycling facility. The proposed upland activities involve the

installation of the bulkhead deadman anchor & tie-rod system with associated infiltration trench, and installation of a low-profile concrete work pad. The proposed structures involve negligble change in grade landward of the bulkhead location and no construction of above-ground structures. As a result, the proposed project will maintain existing upland topography.

Applicable Area

This SMP and affiliated ELUR, which restricts the property to Industrial/Commercial use, pertain to the entire property.

Project Details

The proposed activities include installation of a steel sheetpile bulkhead with a deadman anchor and tie-rod system with associated infiltration trench and installation of a low profile concrete work pad. All components will be constructed landward of the mean high water line. The proposed activities involve negligble change in grade landward of the bulkhead location with no above-ground structures. As a result, the proposed project will maintain existing upland topography. The anticipated construction methodology and project sequencing is outlined in the following section. At this time, it is projected that a total of approximately 2,146 cubic yards of material will be temporarily excavated for the bulkhead tie-back system and infiltration trench in multiple stages. The limit of this temporary excavation is shown on the application drawings. Any excess soil will be analyzed to confirm that it is below RIDEM direct exposure criteria. If the excess material meets RIDEM requirements, it will be redeposited on-site. Any material not meeting minimum RIDEM requirements will be properly disposed of at a RIDEM approved facility. In addition, it is projected that a total of approximately 500 cubic yards of material will be excavated waterward of the bulkhead down to the MHW elevation of +4.4' MLW. The limit of this excavation is shown on the application drawings. Any excavated soil will also be tested and either redeposited on-site or transported off-site per RIDEM instruction and approval. The project is anticipated to take approximately 90 working days to complete.

Construction Methodology & Project Sequencing

The installation of the above noted componants will be conducted in multiple stages as outlined below.

1. The first phase of the project will consist of installing the steel sheeting. The bulkhead location will be properly staked with survey equipment prior to the initiation of construction activities. The installation of the sheeting will be conducted from a land based crane using a vibratory hammer. No excavation is planned with this phase, as the contractor will install the sheeting by ground penetration. The contractor will start at the northerly end of the property and work in a southerly direction, installing all sheeting in its entirety prior to installation of the deadman system.

2. Next, the contractor will begin installation of the tie-back system and infiltration trench by excavating the soil on the landward side of the new steel sheeting. The work will be conducted from the upland, landward of the mean high water line, and will not impact coastal resources. This work will be accomplished by use of a

backhoe stationed on the upland. The contractor will temporarily stockpile the backfill material on an upland portion of the site. A silt fence will be installed around the perimeter of all stockpiled material.

3. Next, the contractor will begin installing the upland concrete deadmen. Temporary timber framing will be constructed to form the concrete deadman. The deadman will be then poured by machinery stationed from the upland. Once the concrete has cured, the timber forms will be removed.

4. Next, the Contractor will begin installing the walers and tie-rods. Twelve-inch walers will be installed on the landward face of the new steel sheeting. Tie-rods will then be connected from the deadman system to the whalers on the backside of the new steel sheeting.

5. Once the steel tie-rods are connected, the infiltration trench will be lined with geotextile fabric and backfilled with clean crushed stone obtained from an approved offsite location. The trench will be covered with a layer of geotextile fabric and topped with clean soil. A backhoe and skid steer will return the ground to existing grade.

6. The contractor will then excavate the area waterward of the new steel bulkhead down to the MHW elevation of +4.4' MLW. Excavation will be conducted using an upland based excavator. This material will be disposed of on the project site landward of the proposed bulkhead or transported off site to an appropriate upland facility per RIDEM instruction and approval.

7. As the final step before the dredging project, the contractor will then install the low profile concrete work pad. The pad will be located within the area already disturbed by the installation of the deadman system.

Soil Management

The direct exposure pathway is the primary concern at the site. Individuals engaged in activities at the site may be exposed through incidental ingestion, dermal contact, or inhalation of vapors or entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

1. All standards and specifications set forth in the most recent RI Soil Erosion and Sediment Control Handbook (RISESCH) will be strictly adhered to. Control measures will follow the specifications depicted in the attached R.I. Standards drawings from the Rhode Island Department of Transportation.

2. Hay bales will be toed in to a depth of 3 to 4 inches and maintained by replacing bales where necessary until permanent re-vegetation of the site is completed.

3. Where natural or manmade slopes are or have become susceptible to erosion, the slopes will be graded to a suitable slope and re-vegetated with thick rooting brush vegetation. Mulch will be applied as necessary to provide protection against erosion until the vegetation is established.

4. Construction will be timed to accommodate runoff flow and to allow flows over exposed, un-stabilized soils, or into or through the area of temporary excavation.

5. During site work, the appropriate precautions will be taken to restrict unauthorized access to the property.

6. During all site/earth work, dust suppression (i.e. watering, etc) techniques must be employed at all times. If it is anticipated due to the nature of the contaminants of concern that odors may be generated during site activities, air monitoring and means to control odors will be utilized, as appropriate (i.e. odor-suppressing foam, etc).

7. In the event that an unexpected observation or situation arises during site work, such activities will immediately stop. Workers will not attempt to handle the situation themselves but will contact the appropriate authority for further direction.

8. In the event that certain soils on site were not previously characterized, these soils are presumed to be regulated until such time that it is demonstrated to the Department, through sampling and laboratory analysis that they are not regulated. (For example, presumptive remedies or locations of previously inaccessible soil.)

9. The excess soil generated/excavated from the property will remain on-site for analytical testing, to be performed by an environmental professional, in order to determine the appropriate disposal and/or management options. The soil will be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against storm-water and / or wind erosion (i.e. hay bales, silt fencing, rocks, etc).

10. Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (i.e., away from public roadways/walkways).

11. In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (i.e. drum or lined roll-off) or secondary containment will be utilized.

12. Soils excavated from the site will not be re-used as fill on residential property. Temporarily excavated fill material will be backfilled or redeposited on-site following completion of earthwork activities.

13. Although it is not anticipated at this time, site soils that are to be disposed of off-site will be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the material shipping records associated with the disposal of the material will be maintained by the site owner and included in the annual inspection report for the site.

14. Best soil management practices will be employed at all times and regulated soils will be segregated into separate piles (or cells or containers) as appropriate based upon the results of any necessary analytical testing for reuse on-site.

15. All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the site. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the site.

16. At the completion of site work, all exposed soils will be recapped with Department approved engineered controls (2 ft of clean fill or 1 foot of clean fill underlain with a geotextile liner) consistent or better than the site surface conditions prior to the work that took place. These measures will be consistent with the Department approved ELUR recorded on the land records. The clean fill material brought on site will meet the Department's Method 1 Residential Direct Exposure Criteria or be designated by an Environmental Professional as Non-Jurisdictional under the Remediation Regulations. The Annual Inspection Report for the site, or Closure Report if applicable, will either include analytical sampling results from the fill demonstrating compliance or alternatively include written certification by an Environmental Professional that the fill is not jurisdictional.

Groundwater Management

In accordance with the ELUR, groundwater under the property will not be used for potable purposes. The temporary excavation necessary to install the bulkhead tie-back system, infiltration trench, and low profile concrete work pad will not affect groundwater. However, any unanticipated pumping of groundwater, which may be necessary for de-watering, will be discharged into sediment traps consisting of a minimum of staked hay bale rings enclosing crushed stone or trap rock of a size sufficient to disperse inflow velocity. Hay bales encircling these traps will be recessed 4 to 6 inches into the soil and maintained.

In order to ensure that water passing through the infiltration trench contacts only clean materials, the infiltration trench will extend to the juncture with groundwater. The trench will be lined with a geotextile fabric and filled using clean crushed stone.

Worker Health and Safety

To ensure the health and safety of on-site workers, persons involved in the excavation and handling of the material on site will wear a minimum of Level D personal protection equipment, including gloves, work boots and eye protection. Workers will also be required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site.

PROJECT INFORMATION

Proposed Filing Category

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create a deep water berthing area. As a result, this proposed project should qualify for the RI Coastal Resource Management Program Category B Assent Application Section 300.1

Proposed Project Description & Scope of Authorization

The applicant proposes to install a new steel bulkhead along the property's waterfront and to conduct improvement dredging waterward of the new bulkhead. The complete proposed Scope of Authorization is outlined below and is shown on application Figures 1-14.

1. Install a new ***steel bulkhead*** landward of the MHW line that measures 355 linear feet and is comprised of steel sheeting. The steel sheeting will have two (2) 12" x 12" whalers installed on the landward side.

2. Install a ***deadman and tie-back system***, consisting of 355 linear feet of 4' x 4' concrete anchor with steel rod tie-backs installed approximately every 9 feet.

3. Install an ***infiltration trench*** along the landward face of the proposed bulkhead measuring 10 feet deep, 5 feet wide and 355 feet in linear length, resulting in 17,750 cubic feet of trenching.

4. Remove the ***derelict timber structures*** located along the waterside area.

5. Remove an area of ***riprap*** measuring 244' long, 31' at its widest point, covering 4,602 square feet, and consists of approximately 512 cubic yards of material.

6. Consolidate an area of ***riprap*** measuring 115' long, 21' wide, covering 1,780 square feet, and consists of approximately 198 cubic yards of material. Remove any foreign objects which have become lodged within the riprap.

7. ***Excavate*** 500 cubic yards of sediment from an area that is irregular in shape and measures approximately 33' at its widest point, 244' in length, and covers 3,813 square feet. This material will be excavated down to the MHW elevation of +4.4' MLW.

8. Install an upland ***concrete work/storage pad*** measuring 80' wide, 120' long, and 10" deep.

9. Conduct ***improvement dredging*** of 48,000 cubic yards of sediment from an area that is roughly rectangular in shape and measures approximately 350' at its widest point, 670' in length, and covers 212,775 square feet. Dredging within this footprint is proposed to a control depth of –14.0' MLW (+ 1.0' overdredge), dredged in a box-cut fashion with an inadvertent 3:1 side slope.
10. Install three new ***timber dolphin pile clusters*** consisting of seven (7) piles each.

Construction Methodology & Project Sequencing

The proposed project will be conducted in multiple stages as outlined below.

1. The first phase of the project will consist of installing the steel sheeting. The bulkhead location will be properly staked with survey equipment prior to the initiation of construction activities. The installation of the sheeting will be conducted from a land-based crane or waterside barge using a vibratory hammer. If conducted from a barge, all work will take place during periods of high water. At no time will the barge rest on the harbor substrate. No excavation is planned with this phase, as the contractor will install the sheeting by ground penetration. The contractor will start at the northerly end of the property and work in a southerly direction, installing all sheeting in its entirety prior to installation of the deadman system.

2. Next, the contractor will begin installation of the tie-back system with associated infiltration trench by excavating the soil on the landward side of the new steel sheeting. The work will be conducted from the upland, landward of the mean high water line, and will not impact coastal resources. This work will be accomplished by use of a backhoe stationed on the upland. The contractor will temporarily stockpile the backfill material on an upland portion of the site. Erosion and sedimentation controls will be installed around the perimeter of all stockpiled material.

3. Next, the contractor will begin installing the upland concrete deadman anchor. Temporary timber framing will be constructed to form the concrete deadman. The deadman will be then poured by machinery stationed from the upland. Once the concrete has cured, the timber forms will be removed.

4. Next, the contractor will begin installing the walers and tie-rods. Twelve-inch walers will be installed on the landward face of the new steel sheeting. Tie-rods will then be connected from the deadman system to the whalers on the backside of the sheeting.

5. Once the steel tie-rods are connected, the infiltration trench will be lined with geotextile fabric and backfilled with clean crushed stone obtained from an approved offsite location. The trench will be covered with a layer of geotextile fabric and topped with clean soil. A backhoe and skid steer will return the ground to existing grade.

6. Once the bulkhead is in place the contractor will begin removing the derelict timber structures located along the waterside area. Working from a either a land-based or waterside mounted crane, the contractor will lift the structures from the substrate and place them into trucks waiting just landward of the newly constructed bulkhead. The material will be properly disposed of at an appropriate upland facility. At no time will the barge rest on the harbor substrate.

7. Next, the contractor will work on removal of the riprap. Working from a either a land-based or waterside mounted crane, the contractor will extract the riprap stones and lift them into trucks waiting along the waterside. The material will be properly disposed of at an appropriate upland facility.

8. Next, the contractor will work on consolidating the area of riprap which is to remain. First, the contractor will remove any foreign material which has become lodged in the riprap. The material will be removed by hand or using a land-base/barge mounted crane as appropriate. All material will be properly disposed of at an appropriate upland facility. The contractor will then proceed by strategically stacking and interlocking appropriately sized stones within the existing riprap until the dislodged stones have been completely relocated. All of these activities will be conducted during periods of low water from a land-base/barge mounted crane as appropriate. No new stone material is proposed for this activity.

9. The contractor will then excavate the area waterward of the new steel bulkhead down to the MHW elevation of +4.4' MLW. Excavation will be conducted using an upland based excavator. This material will be analyzed, and if below RIDEM direct exposure criteria, will be disposed of on the project site landward of the proposed bulkhead. If the material does not meet minimum requirements, it will be transported off site to an appropriate upland facility per RIDEM instruction and approval.

10. Next, the contractor will install the upland concrete work/storage pad. The area will be temporarily excavated with a small skid steer and hand tools as appropriate. Temporary timber forms will then be secured to form the shape of the pad. Reinforcing rebar will then be tied in place on the interior of the form. Concrete will then be fed into the form. Once the concrete has cured, the temporary timber forms will be removed and clean soil will be backfilled against the sides of the pad.

11. Next, the contractor will work on the dredging portion of the project. Dredging and disposal operations are proposed to be conducted using the mechanical clam-shell and/or barge based excavator method. A dredge window of October 1 through January 1 is being proposed, as per Dan Goulet in a phone conversation on January 27, 2010. A thorough disposal alternatives analysis will be performed following the completion of the sediment sampling investigation to evaluate the potential uses and/or methods of disposal. However, it is anticipated that dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River. Dredging will be conducted in phases, based upon funding at the time. Given the lack of dredging in the immediate area, accretion rates cannot be determined, and therefore maintenance dredging will be performed as needed.

12. Lastly, the contractor will install the dolphin pile clusters. Pile driving will be conducted using a barge mounted crane and pneumatic/vibratory hammer. For each dolphin cluster, the king pile will be driven first, and the battered piles will then be installed around it. Once the final battered pile is installed, the battered piles will be affixed to the king pile using steel cable.

SECTION 300.1 – CATEGORY B REQUIREMENTS

Need For Proposed Activity

The applicant wishes to develop this vacant lot into a scrap metal transfer facility. This operation will require the installation of a new steel bulkhead along the property shoreline, removal of various shoreline structures, improvement dredging to create deep-water access and berthing, and installation of dolphin pile clusters. The property is located at 434 & 444 Allens Avenue, Providence, Rhode Island on the shore of Providence Harbor near the mouth of the Thurbers Avenue Creek. The property has historically been used for industrial purposes, but has remained largely undeveloped for many years. The inactivity of the property is evident as the site is comprised of derelict bulkheads, a derelict timber pier, and riprap stabilization along the shoreline.

The proposed project involves the installation of a steel sheetpile bulkhead with a concrete deadman anchor and steel tie-rod system, removal of various shoreline structures, improvement dredging to create deep-water access and berthing, and installation of dolphin pile clusters. All components of the bulkhead will be located landward of the mean high water line. The proposed bulkhead, in conjunction with the structure removal and dredging, will allow commercial vessels to temporarily berth in a perpendicular fashion directly along the property's new deepwater shoreline. The dolphin pile clusters will allow the applicant to temporarily tie up derelict vessels which will be salvaged for scrap metal. The redeveloped waterfront will serve to facilitate acceptance of scrap metal from the dismantling of derelict vessels marked for salvage. The scrap metal produced from this operation will be transported off-site to an appropriate upland recycling facility. As such, the application intends to return the property to its historical use as an operational industrial facility.

Local Ordinances, Codes, Standards, and Requirements

The proposed activities will conform to all applicable local ordinances. The following is a summary of local regulatory consultations and associated site/operation details.

The City of Providence Tax Assessor has provided us with the "Summary Record Cards" as proof that ACR Realty, LLC is the owner of the property (see Project Correspondences).

A formal correspondence (see Project Correspondences) has been obtained from Mr. Kerry Anderson, Building Official, City of Providence, Department of Inspections and Standards, outlining his comments on the project. In addition, the City of Providence, Department of Inspections and Standards, completed and returned the CRMC Building Code & Zoning Ordinance review form (see Project Correspondences). This completed form confirms that the project conforms with all elements of the zoning ordinance.

The proposed activities will not involve any new parking areas - facility employees will utilize existing parking areas. The proposed activities will not involve any new sanitary systems – facility employees will use temporary portable toilets until the restrooms in the "Existing Wood Frame Building" can be repaired.

Boundaries of Coastal Waters and Land Area

The proposed project site is a vacant lot located at 434 & 444 Allens Avenue, Providence. The northerly abutting property consists of a property owned by the City of East Providence which serves as an upland lot for the waterline crossing Providence Harbor. The direct southerly abutting property is a small paper lot known as Thurbers Avenue which is owned by the City of Providence. The next southerly developed property consists of an oil terminal owned by Motiva Enterprises, LLC. A recent site review by Coastline Consulting & Development, LLC shows that the project site consists of a large undeveloped parcel of land with derelict buildings and railroad tracks. Along the water there is a derelict bulkhead, a derelict timber pier, and riprap stabilization. The derelict structures have not been maintained for many years, are no longer serviceable, and will be removed as a component of this project. The riprap stabilization is described in greater detail below:

> ***Riprap Stabilization*** - Riprap stabilization contours the complete length of the property shoreline from the northerly abutting property to Thurbers Avenue Creek. The riprap measures 380' in linear length, is approximately 10' – 20' wide, 1' – 3' deep, and contains approximately 400 cubic yards of stone and broken concrete slabs.

Erosion and Deposition Analysis

The purpose of the proposed project is to provide a necessary berthing face with adjacent deep-water access and berthing directly along the property's shoreline. Shoreline erosion and deposition is not anticipated as no solid fill structures are proposed. Minimal natural siltation is anticipated once dredging is complete.

Plant & Animal life Analysis

Coastline Consulting & Development, LLC evaluated potential impacts to the abundance and diversity of plant and animal life. An assessment of each is provided below.

> *Plant life*
>
> The project has been specifically located in an area so as not to affect the tidal wetlands on the project site. The bulkhead is located over an area that has historically been used for shoreline stabilization as found evident by the derelict structures and riprap & stone rubble. Also, there is no SAV within the dredge footprint. Therefore, no impacts are anticipated to plant life.
>
> *Animal life*
>
> No impacts are anticipated to animal life as the proposed project has been properly designed according to specific site characteristics. The bulkhead has been located landward of the MHW line and outside of coastal resources. Furthermore, bulkheads are common structures along this stretch of Providence Harbor including a bulkhead immediately to the south. Dredging is being proposed within a window which has been determined to minimize impacts to animal life. Therefore, no impacts are anticipated to animal life.

Public Access Evaluation

With regard to public use of the public trust lands and waters waterward of the MHW line, little to no adverse impacts are anticipated as the proposed project is located in an area defined as Type VI waters. These waters are defined by the Rhode Island CRMC as Industrial Waterfront and the intended use of these waters are for servicing water dependent facilities. As previously discussed, this project intends to return this site to historical use as an operational industrial facility. As a result, there will be no new adverse impacts to the public trust.

Water Circulation Analysis

The project will not involve any activity within the waterway that would cause adverse impacts to circulation or flushing. Following completion of the dredging activities, the wave energy breaking along the bulkhead face will largely disperse before reaching the mud line, and therefore will not likely re-suspend small particulates. As such, turbidity will not be significantly impacted. The hydrography in the area does not indicate that significant sedimentation is occurring at the site, and as such no significant impacts are anticipated to sedimentation. Finally, the three proposed dolphin piles will be spaced 50 feet apart, thus eliminating any localized adverse impacts to water circulation.

Water Quality Analysis

The proposed project will include the installation of an infiltration trench to manage stormwater runoff from the site. The trench has been designed as per the Stormwater Design and Installation Standards Manual. As such, no adverse impacts are anticipated from the proposed project.

Historic and Archaeological Significance

Coastline Consulting & Development, LLC conducted a phone interview on November 5, 2009 with Jason Martin of the City of Providence, Historic District Commission. Mr. Martin stated that this project site is not located in an area of historic and archaeological significance.

Water Dependent Uses

During the initial planning stages, Coastline Consulting & Development, LLC carefully evaluated the potential impacts to water dependent uses. In order to avoid potential impacts, it was important to evaluate specific site characteristics so that appropriate design measures could be implemented. Based upon our review, it is our opinion that there will be no adverse impacts to local navigation due to the following factors:

1. The applicant's property is located along a stretch of Providence Harbor where large vessels and barges transit regularly. The infrequent vessel traffic that will result from the dismantling of derelict vessels will create no new navigation impacts.

2. The bulkhead has been designed to allow large vessels to berth directly up to and alongside the property's shoreline. The bulkhead is located away from the federal navigation channel and is centrally located along the property. Therefore, when the vessels are berthed up to the bulkhead, there will be no obstructions to navigation within the channel.

3. The proposed dredging will allow vessels to access the bulkhead directly through their riparian areas and will therefore not impact neighboring facilities.

Scenic Impact Evaluation

During the preliminary planning stages of this project, Coastline Consulting & Development, LLC carefully evaluated the potential scenic impacts to the surrounding area. Based upon our review, the project site is located in an industrialized portion of Providence Harbor. The water dependent facilities serve to support the large vessels that transit this area, and this project is consistent with all neighboring activities. It is therefore evident that this project will not impose any new adverse scenic impacts.

ADDITIONAL CATEGORY B REQUIREMENTS

Section 300.2 Filling, Removing, or Grading of Shoreline Features

Coastline Consulting & Development, LLC reviewed and evaluated Section 300.2 to determine the applicable requirements as it pertains to the proposed project. In addition, it was also necessary to determine the appropriate steps to meet the requirements of the property's Environmental Land Use Restriction (ELUR). In accordance with the ELUR, a formal request for soil disturbance has been made to the RI DEM (see attached). This request to the DEM includes a project specific Soil Management Plan. In an e-mail correspondence from Mr. Dan Goulet on November 24, 2009, Mr. Goulet stated that CRMC would accept the DEM Plan in place of a separate Erosion & Sedimentation Control Plan.

Section 300.3 Residential, Commercial, Industrial, and Recreational Structures

Coastline Consulting & Development, LLC reviewed and evaluated Section 300.3 to determine the applicable requirements as it pertains to the proposed project. The results of our evaluation are outlined in the following sections.

Public Access Plan – The applicant is requesting a variance to remove the requirement of a Public Access Plan for the site. An analysis of the six criteria outlined under Section 120 - Variances follows below.

1. *Conformance to Applicable Goals and Policies*
   The two applicable Standards for ***Part Two*** are 200.6 - Type 6 Industrial Waterfronts and Commercial Navigation Channels and 210.6 - Manmade Shorelines.

   Standard 200.6 states the following: "Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels; (b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities."

   Since the purpose of the project is to create a berthing area for a commercial operation, this project conforms to the goals and policies of Standard 200.6.

   Standard 210.6 states the following: "The Council's goals are: (a) to encourage the maintenance of structures that effectively mitigate erosion and/or sustain landforms adjacent to the water; and (b) prevent the accumulation of debris along the shore where such structures are ineffective or no longer in active use."

   The proposed bulkhead will mitigate erosion along the waterfront. The bulkhead will also mitigate the current problem of debris accumulating along the dilapidated shore structures. As such, this project conforms to the goals of Section 210.6.

The project will also conform to the applicable Standards listed under ***Part Three***, as outlined in the following sections (300.4 – 300.18).

2. *Environmental Impacts & Use Conflicts*
   The proposed project will conform to all applicable environmental guidelines, and therefore is not anticipated to cause any significant adverse environmental impacts. The project location is currently an undeveloped lot with a dilapidated riprap shoreline. The current conditions of the waterfront area are such that passage below the mean high water line is unsafe. As such, the project is not anticipated to have any significant adverse impacts to use.

3. *Site Conditions*
   The purpose of the project is to facilitate the berthing of derelict vessels for decommissioning and dismantling. The dismantling and scrap material transfer process would pose potential hazards to pedestrians attempting to traverse the bulkhead. As such, conditions at the site would prevent the applicable Standard from being met.

4. *Minimum Variance*
   The only portion of the Standard for which a variance is being sought is the need for public access. All other aspects of the Standard are being adhered to and will be met.

5. *Prior Action of the Applicant or Predecessors in Title*
   The requested variance is not due to any prior action of the applicant or the applicant's predecessors in title.

6. *Undue Hardship*
   The purpose of the project is to facilitate the dismantling of derelict vessels. The scrap material transfer process would pose potential hazards to pedestrians attempting to traverse the bulkhead. As such, conditions at the site would prevent the applicable Standard from being met.

Conformance with Local Zoning Ordinance - The City of Providence, Department of Inspections and Standards, completed and returned the CRMC Building Code & Zoning Ordinance review form (see attached) confirming that the plans conform with all elements of the zoning ordinance.

Conformance with the Rhode Island State Building Code - A formal correspondence (see attached) has been obtained from Mr. Kerry Anderson, Building Official, City of Providence, Department of Inspections and Standards, stating his review comments on the bulkhead portion of the project. In addition, the City of Providence, Department of Inspections and Standards, completed and returned the CRMC Building Code & Zoning Ordinance review form (see attached).

Conformance with State Safety/Fire Codes and Environmental Requirements – The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components will be located landward of the mean high water line. In conjunction with the dredging, the proposed structure will serve to facilitate the dismantling of derelict vessels. The results of an evaluation of applicable codes is outlined in the following sections.

Safety Codes
There are no habitable or other traditional enclosed structures proposed as part of this application. The applicant will install all safety items (i.e.: fence along bulkhead, gates, warning signs, etc.) as required by applicable codes.

Fire Codes
There are no habitable structures, enclosed structures, electrical components, or flammable materials included as part of this application. As such, the project should be in conformance with applicable fire codes.

Environmental Requirements
With regard to the site's Brownfield history, the property has a Certificate of Completion from the US EPA, a Letter of Compliance from the RI DEM, and an Environmental Land Use Restriction document on file with the City land records. A formal correspondence and Soil Management Plan (see attached) has been submitted to Ms. Margaret Bradley, Project Manager, Rhode Island Department of Environmental Management, requesting disturbance of site soils.

In addition, the aforementioned formal correspondence received from Mr. Kerry Anderson, Building Official, City of Providence Department of Inspections and Standards, includes a checklist of "Minimum Requirements to Apply for Commercial and Mixed Use" which lists the project specific submittal requirements.

Section 300.4 Recreational Boating Facilities

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the three tie-off piles, will be located landward of the mean high water line. The proposed bulkhead and tie-off piles, in conjunction with the dredging, will allow derelict vessels to temporarily berth in a perpendicular fashion directly along the property's shoreline. The redeveloped waterfront will serve to facilitate the dismantling of derelict vessels. The scrap metal produced from dismantling will then be transferred to the upland and transported off-site to an appropriate upland recycling facility. As such, the proposed project does not involve structures or activities that are part of a recreational boating facility.

Section 300.5 Mooring and Anchoring of Houseboats & Floating Businesses

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the three tie-off piles, will be located landward of the mean high water line. The proposed bulkhead and tie-off piles, in conjunction with the dredging, will allow derelict vessels to temporarily berth in a perpendicular fashion directly along the property's shoreline. The redeveloped waterfront will serve to facilitate the dismantling of derelict vessels. The scrap metal produced from dismantling will then be transferred to the upland and transported off-site to an appropriate upland recycling facility. As such, the proposed project does not involve structures or activities that are part of the mooring/anchoring of houseboats and floating businesses.

Section 300.6 Treatment of Sewage and Stormwater

The proposed activities do not meet the definition of Large Projects as outlined in Section 300.6.A.7. The proposed activities have therefore been designed in accordance with stormwater management requirements for Small Projects as defined in Section 300.6.A.8. The project's Stormwater Management Plan is attached in the back section of this application report.

Section 300.7 Construction of Shoreline Protection Facilities

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components are proposed to be located landward of the mean high water line. As the existing shoreline is currently well stabilized with a proper slope and riprap, the purpose of the proposed bulkhead is not to control erosion. As stated earlier, the purpose of the project is to retain upland material in order to create a deepwater berthing location directly along the property's shoreline.

An analysis of the applicable Standards as outlined under Section 300.7.F follows below.

1. All applicable standards for earthwork have been outlined in the attached Soil Management Plan. The base of the proposed bulkhead has been located immediately landward of mean high water line and away from coastal wetlands.

2. As there are no adjacent structures, the ends of the proposed bulkhead have been shown to gradually return to the slope of the upland. These proposed bulkhead returns will minimize opportunities for erosion around the back of the primary bulkhead face.

3. The proposed sheetpiles will be vibrated into place, through consolidated sediments, to an approximate base depth of -50.5' MLW.

4. To promote good drainage behind seawalls and bulkheads, to minimize the flow of sediment into the adjacent waterway, and to avoid loss of backfill, all proposed backfill material will contain less than 10% silt. In addition, a filtering layer of 1 ¼" crushed stone and geotextile fabric will be installed directly landward of the bulkhead. Finally, to maximize post

construction drainage, weep holes will be installed along the waterward face of the bulkhead.

5. The area landward of the bulkhead will be level for a distance equivalent to the height of the structure (approximately 15').

6. No revetments are proposed as part of this application.

7. No revetments are proposed as part of this application.

8. The proposed bulkhead has been designed and stamped by a registered professional engineer (see Application Drawings).

9. No concrete is proposed as part of the primary bulkhead construction.

10. The proposed bulkhead has been intentionally located landward of the mean high water line. The method of the installation is by vibratory hammer. All associated excavation activities will be temporary, minimized to the greatest extent possible, and conducted in stages. As a result, it is evident that the construction activities will minimize disturbance of shoreline sediments thereby avoiding adverse impact to water quality.

In addition to the bulkhead portion of the project, a small area of riprap will be consolidated. An analysis of the Maintenance and Repair as outlined under Section 300.7.G follows below.

1. The riprap consolidation will not result in the seaward expansion of structural shoreline protection facilities.

2. The riprap consolidation has been minimized to the greatest extent possible. No new stone material is proposed for this activity.

3. The riprap consolidation has been minimized to the greatest extent possible so as to minimize adverse impacts to water quality.

4. All applicable standards for Section 300.2 shall be met, as noted above.

5. The proposed project has been designed and stamped by a registered professional engineer (see Application Drawings).

Section 300.8 Energy-Related Activities and Structures

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the three tie-off piles, will be located landward of the mean high water line. The proposed bulkhead and tie-off piles, in conjunction with the dredging, will allow derelict vessels to temporarily berth in a perpendicular fashion directly along the property's shoreline. The redeveloped waterfront will serve to

facilitate the dismantling of derelict vessels. The scrap metal produced from dismantling will then be transferred to the upland and transported off-site to an appropriate upland recycling facility. As such, the proposed project does not involve an energy-related activity and/or structure.

Section 300.9 Dredging and Dredged Materials Disposal

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. The dredging portion of the project has been specifically designed to conform to the Standards as outlined in Section 300.9, as outlined below:

1. ***For Dredging***:

   a. The proposed dredging plan has been designed with inadvertent side slopes to maximize tidal flushing.

   b. Bottom slopes at the edges of dredged areas will have a slope of 33 percent.

   c. The project has been designed to avoid impacts to the proposed bulkhead. There are no other adjacent shoreline protection structures in the vicinity of the proposed dredge footprint.

   d. No shellfish dredged from the project will be used for human consumption or bait.

   e. The proposed project will not occur at a marina facility and therefore this section does not apply.

2. ***For Dredged Materials Disposal in Open Water***

   a. It is anticipated that the dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River. Therefore, the material will not be disposed of in an area determined by the CRMC to be prime fishing grounds.

   b. The dredge will come to a stop at the specific CAD cell disposal coordinates identified by the regulatory agencies. Material will be point dumped at this location.

   c. It is anticipated that the dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River. As such, the hydrographic conditions at the site will be such that the disposed dredged materials will remain within the disposal area and re-suspension of bottom sediments will be minimal.

   d. If a regulatory review of lab data determines that the material is contaminated, a Cap Plan will be prepared at that time.

e. It is anticipated that the dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River. As such, monitoring of the disposal site is not required.

3. It is anticipated that the dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River, and will not involve the creation of wetlands, aquatic habitat, or islands. As such, this section does not apply to this project.

4. It is anticipated that the dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River, and will not include any upland disposal. As such, this section does not apply to this project.

5. It is anticipated that the dredge spoils will be disposed of at the Confined Aquatic Disposal (CAD) cells located in the upper reaches of the Providence River and will not involve beach nourishment. As such, this section does not apply to this project.

Section 300.10 Filling in Tidal Waters

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components will be located landward of the mean high water line. Therefore, the proposed project does not involve the filling in of tidal waters.

Section 300.11 Aquaculture

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the three tie-off piles, will be located landward of the mean high water line. The proposed bulkhead and tie-off piles, in conjunction with the dredging, will allow derelict vessels to temporarily berth in a perpendicular fashion directly along the property's shoreline. The redeveloped waterfront will serve to facilitate the dismantling of derelict vessels. The scrap metal produced from dismantling will then be transferred to the upland and transported off-site to an appropriate upland recycling facility. As such, the proposed project does not involve structures or activities that are part of a marine aquaculture operation.

Section 300.12 Coastal Wetland Mitigation

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the tie-off piles, will be located landward of the mean high water line. Coastline Consulting & Development, LLC conducted a site evaluation in order to determine the presence of tidal wetland vegetation in the proximity of the proposed project. According to this review, the shoreline at the project site is stabilized with riprap stabilization and therefore has no tidal vegetation in the immediate project footprint.

However, tidal vegetation is located in close proximity to the project area. The banks of Thurbers Avenue Creek are lined with the vegetative species *Spartina alterniflora* and there are isolated patches of these wetlands along the southerly portion of the property. During the initial planning stages, Coastline Consulting & Development, LLC carefully evaluated the potential impacts to these tidal wetlands. Based upon our review, it is our opinion that there will be no adverse impact on coastal wetlands due to the following site characteristics and design measures:

1. The tidal wetlands in the area were located and are identified on the attached Existing Conditions Drawing.

2. The bulkhead and dredging has been specifically designed in an area absent of coastal wetlands.

3. The construction activities will not adversely impact the coastal wetlands as all staging and construction areas are located landward of the mean high water line and therefore outside the growing range of coastal plant species.

Section 300.13 Public Roadways, Bridges, Parking Lots, Railroad Lines & Airports

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the three tie-off piles, will be located landward of the mean high water line. The proposed bulkhead and tie-off piles, in conjunction with the dredging, will allow derelict vessels to temporarily berth in a perpendicular fashion directly along the property's shoreline. The redeveloped waterfront will serve to facilitate the dismantling of derelict vessels. The scrap metal produced from dismantling will then be transferred to the upland and transported off-site to an appropriate upland recycling facility. As such, the proposed project does not involve the construction of any new roadways, highways, bridges, parking lots, railroads lines, and airports.

Section 300.14 Maintenance of Structures

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. The majority of existing waterside structures are derelict and are proposed for removal. As noted above in Section 300.7, a small area of riprap is being retained and reconsolidated – no new stone material is proposed.

Section 300.15 Municipal Harbor Regulations

The applicant of the proposed project is a private organization. As such, the proposed project does not involve the exercising of rules, regulations, programs or management functions by a municipality.

Section 300.16 Boat Lift and Float Lift Systems

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. As such, the proposed project does not involve the installation of a boat/float lift system.

Section 300.17 Wetland Walkover Structures

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing. All structural components, save the tie-off piles, will be located landward of the mean high water line. An assessment of the project site revealed that there are no coastal wetlands along the immediate area of the proposed activities. As such, the proposed project does not involve the installation of a wetland walkover structure

Section 300.18 SAV & Aquatic Habitats of Particular Concern

The activity along the waterfront consists of the installation of a commercial/industrial shoreline protection structure and improvement dredging to create deep-water access and berthing in Type 6 waters. All structural components, save the tie-off piles, will be located landward of the mean high water line. An August 2009 site assessment and waterside survey of the project site revealed that there are apparently no communities of SAV in the surrounding waters. As such, the proposed project will completely avoid adverse impacts to SAV.