

ROUX MEMORANDUM

TO: Hastings-on-Hudson Shoreline Committee

FROM: Amanda Ludlow and Kathryn Sommo, Roux Associates, Inc.

DATE: March 13, 2017

RE: Meeting with NYSDEC Region 3
Hastings-on-Hudson Conceptual Shoreline Plans

Meeting Attendees:

- Kevin Farrar NYSDEC Central Office Division of Environmental Remediation
(via teleconference)
- Dan Miller NYSDEC Region 3 Hudson River Estuary Program; Restoration
Biologist/Ecologist
- Corbin Gosier NYSDEC Region 3 Bureau of Habitat / Marine Resources, Fish and
Wildlife Technician
- Jessica LaClair NYSDEC Region 3 Division of Environmental Remediation,
Environmental Engineer
- Heather Gierloff NYSDEC Region 3 Bureau of Habitat / Marine Resources, Biologist
- Jacquelyn Nealon NYSDOH Bureau of Environmental Exposure Investigation, Public
Health Specialist
- Shannon Rooney Hastings-on-Hudson Shoreline Committee
- Meg Walker Hastings-on-Hudson Shoreline Committee, Village Trustee
- Daniel Lemons Hastings-on-Hudson, Village Trustee
- Amanda Ludlow Roux Associates, Inc., Principal Scientist
- Kathryn Sommo Roux Associates, Inc., Senior Biologist

Meeting

Meg Walker introduced the objectives of the meeting which included:

1. providing the NYSDEC with an understanding of the public desires for waterfront access and natural shoreline features;
2. gaining feedback from the NYSDEC on the conceptual design elements being presented (that were based on the public input and Hastings-on-Hudson Shoreline Committee input); and
3. gaining an understanding from the NYSDEC and where the BP project stands in the remedial design and the mitigation requirements the NYSDEC will be seeking from BP.

Heather Gierloff confirmed the limits of the “sloped shoreline area” as stated in the Consent Order includes the area from the mean low water line (-2’) to the finished grade at +11 feet above local mean sea level as will be determined in the Approved Remedial Design, estimated to be approximately 80 to 100 feet from the mean low water line and approximately 60 to 70 feet along the Northern and Southern boat slips.

Corbin Gosier indicated that over the next three months, the ARCO/BP sampling data is being reviewed by the NYSDEC. Once feedback is provided to ARCO/BP, they will have six months to submit a 50 percent Remedial Design.

Water infiltration into the fill material may need to be considered in the Remedial Design, because water needs to get in and out; the ROD did not include measures to preclude groundwater except from areas where PCBs will remain. The NYSDEC will not allow an unnecessary filling of the Hudson River; rather they would encourage design elements to pull back from the River.

Kevin Farrar – No direct contact will be allowed with the historical fill material; a 2-foot cap, buffer or equivalent would be needed along the shoreline. Such a buffer at the shoreline should be permeable, but prevent fines from flowing into river.

Amanda Ludlow presented the conceptual programming elements and potential shoreline treatment options within the “sloped shoreline area.” A summary of the “Conceptual Design Elements Hastings-on-Hudson Shoreline” presentation elements and response from the NYSDEC is provided below in the meeting notes. The presentation is provided as an attachment to the memo.

Northwest Corner Design Elements

- Ferry Terminal
- Floating Docks
- Waterfront Access Steps
- Esplanade
- Amphitheater
- Great Lawn / Gathering Area

Heather Gierloff – The ferry terminal and floating docks would not be considered under the remediation design; these structures would require separate Tidal Wetland Permits from the NYSDEC (based on Article 25, Section 661 requirements within adjacent areas 300’ from tidal wetland). The docking facility cannot exceed 40,000 square feet or a Docks and Mooring permit will be required. The permit application would need to demonstrate the need for these structures based upon examples of other ferry’s and public opinion. These permits could be obtained later by the Village of Hastings and/or a developer. The floating dock running parallel to the bulkhead would not be a feasible design element for that area for small boats due to the wake created by boats along the Hudson River, but could be built in a protected area, such as south of the Northwest Corner fill area.

The footprint of the waterfront access steps as shown would likely not be permitted; the footprint would need to be reduced to match only the bulkhead area that will be potentially included in the Remedial Design and the steps would also need to be set back so that filling within the Hudson River would not be required.

Jacquelyn Nealon – There will be recovery wells and a pump house potentially located around the perimeter of the Northwest Corner, where the hill and esplanade are shown. The Remedial Design will confirm the location of these remedial elements; however these areas may be restricted from public access and vehicle access into these areas may be required.

North Cove Design Elements

- Daylight Stream and Freshwater Wetland/Pond
- Bridge over Stream
- Step Access to Salt Marsh
- Salt Marsh Created behind bulkhead remnants and piers (piers act as a wave break)
- Varying Topography with Walking Trails
- Woody Plantings

Corbin Gosier – Mitigation requirements for the filling that will be needed in the Northwest corner of the property are not yet known and will be determined upon NYSDEC review of the Remedial Design. The ratio could be as high as 4:1 or 5:1. Mitigation requirement will likely be intertidal marsh (from -2' to +2') as this type of habitat is lacking along the Hudson River. The BP Operation, Maintenance and Monitoring (OMM) requirements for the shoreline restoration and the remedial elements will also be evaluated as part of the alternatives analysis within the Remedial Design and the final OMM requirements will be included in the Site Management Plan upon implementation of the selected remedy. Dredging will be required along 2,000 linear feet of shoreline at a distance of 60 to 80 feet from the shoreline to a depth of approximately 6 feet in areas where depths are 15 feet. Excavation depths will be dependent upon water depth and concentrations of PCBs present (refer to ROD for Operable Unit Number 02 (OU-2)). The dredging and backfilling within the river will require a 401 Water Quality Certificate which means there will have to be some level of detail for shoreline creation by BP. The piers that are currently present (supporting sheet pile bulkhead) will likely all be removed during remediation (refer to ROD for OU-2). Some of the excavated material may be able to be reused for filling in uplands to create the proposed varying topography. Where backfill is required, wave breaks could be designed into new sediment fill. (See example of this between Stillwater and Schuylerville on upper Hudson River.)

Heather Gierloff – Step access to salt marsh will be generally incompatible with tidal wetland regulations unless installation of bulkhead is necessary as part of the remedial design. The area where the steps are shown is also an area where the NYSDEC was initially thinking could be used to create habitat to fulfill the mitigation requirements associated with the filling in the northwest corner of the Site. In general, due to the strong wave action caused by boat wakes along the

Hudson River, salt marsh restoration that incorporates rip rap up to MHW is the most successful. Tidal wetland plantings in Haverstraw have to be repaired because they were not protected enough and do not have sufficiently shallow slopes. Any sills proposed to protect wetland plantings would need to be installed above the average mean high water line. However since this is a productive fish area the NYSDEC may not support filling the area with rock. Ice flows are generally not an issue along this stretch of the Hudson River. A deeper cap would be required to accommodate the proposed woody plantings, depending upon the Remedial Design, to ensure the plantings would not penetrate the remedial cap. Planting of woody species could be coordinated with remediation: areas with more excavation would provide room for roots.

South Cove Design Elements

- Salt Marsh Created behind bulkhead remnants and piers (piers act as a wave break)
- Bulkhead and Riprap to support Boathouse Structure and Kayak Dock
- Restrooms
- Bridge to provide Pedestrian and Fishing Access
- Woody Plantings

Refer to comments from North Cove Design Elements related to the salt marsh creation behind the bulkhead remnants and piers, and woody plantings.

Heather Gierloff – The proposed boathouse would require a Tidal Wetlands Permit, however, due to the anticipated wetland mitigation requirements that will likely rely on the south cove as an area for habitat creation and based upon the size and location of the proposed boathouse the reality is modifications to the proposed boathouse elements would be necessary in order to receive a permit. The wetland mitigation requirements will be determined upon NYSDEC review of the Remedial Design. The NYSDEC wants intertidal wetland habitat to replace the river bottom areas that will be filled as part of the Remedial Design and upland habitat creation will not be an acceptable wetland mitigation offset to compensate for the loss of river bottom habitat. A kayak launch would be ok but it would need to be smaller and be respectful to the mitigation that will likely be located in this area. All permanent structures will need to be set back 50 feet from the shoreline, including any proposed boat storage areas and restrooms. A separate permit for boat storage would be needed, but kayak launch could be part of remediation permit; it would not be included as part of the remediation. A floating dock would need to be less than 200 square feet to meet Tidal Wetland compatibility requirements and it would need to be located off the mudline during low tide.

Kevin Farrar – Perhaps the proposed stream daylighting and freshwater wetland/pond could be changed to an intertidal marsh that would help offset the mitigation requirements and may free up some of the shoreline/coves for public uses rather than strictly using the shoreline for habitat creation. There is also the potential that rather than backfilling some of the hot spot areas (especially those that are 9' deep), the excavation could be capped with claymax or a liner to create wetland habitat. These concepts would all have to be review and permitted through the

tidal wetlands program. These concepts need to be refined to determine feasibility, but could be presented to BP for potential mitigation options required further evaluation by their engineers.

Jessica LaClair – Any proposed development will not be allowed to penetrate the cap. The ROD states “pile-supported structures will not be permitted in any areas where PCB material is potentially present.” The cap location and remediation elements will all be determined during the Remedial Design. Therefore, future redevelopment of upland areas will be driven by what remediation is left in the place and the cap design.

Any site redevelopment plans would need to be discussed with the NYSDEC. A developer will need to follow the Site Management Plan and Excavation and Sediment Management Plan for the Site if they plan on penetrating the cap.

Off Site Design Elements

- Stormwater Management Features
- Fishing Pier
- Mooring Field
- Beach
- Restrooms
- Shoreline Choked and Vegetated Riprap

Refer to comments from Heather regarding setting back all permanent structures 50 feet from the shoreline. Shorelines that incorporate both riprap and plantings are the most successful along the Hudson River.

Jacquelyn Nealon – There have been trespassing issues with the entire site for years now. By creating public access you are also creating an attractive nuisance. Fish consumption is not allowed along the Hudson River. She would suggest posting a public advisory along the walkways and piers to discourage fish consumption and also to discourage the public from walking barefoot. There are public health concerns associated with direct contact with sediments impacted from sanitary sewer overflows, and in the lawn or park areas from goose droppings. The NYSDOH would not encourage the public to walk barefoot in these areas due to high bacterial concerns.

Next Steps:

1. Meet with ARCO/BP managers to share our plans/ideas and request frequent communication and regular updates regarding the shoreline as they proceed with Remedial Design.
2. DEC Fish and Wildlife and Estuary Program will give them mitigation requirements at 50% design.

Conceptual Design Elements Hastings-on-Hudson Shoreline

ROUX

offshoots
PRODUCTIVE LANDSCAPES



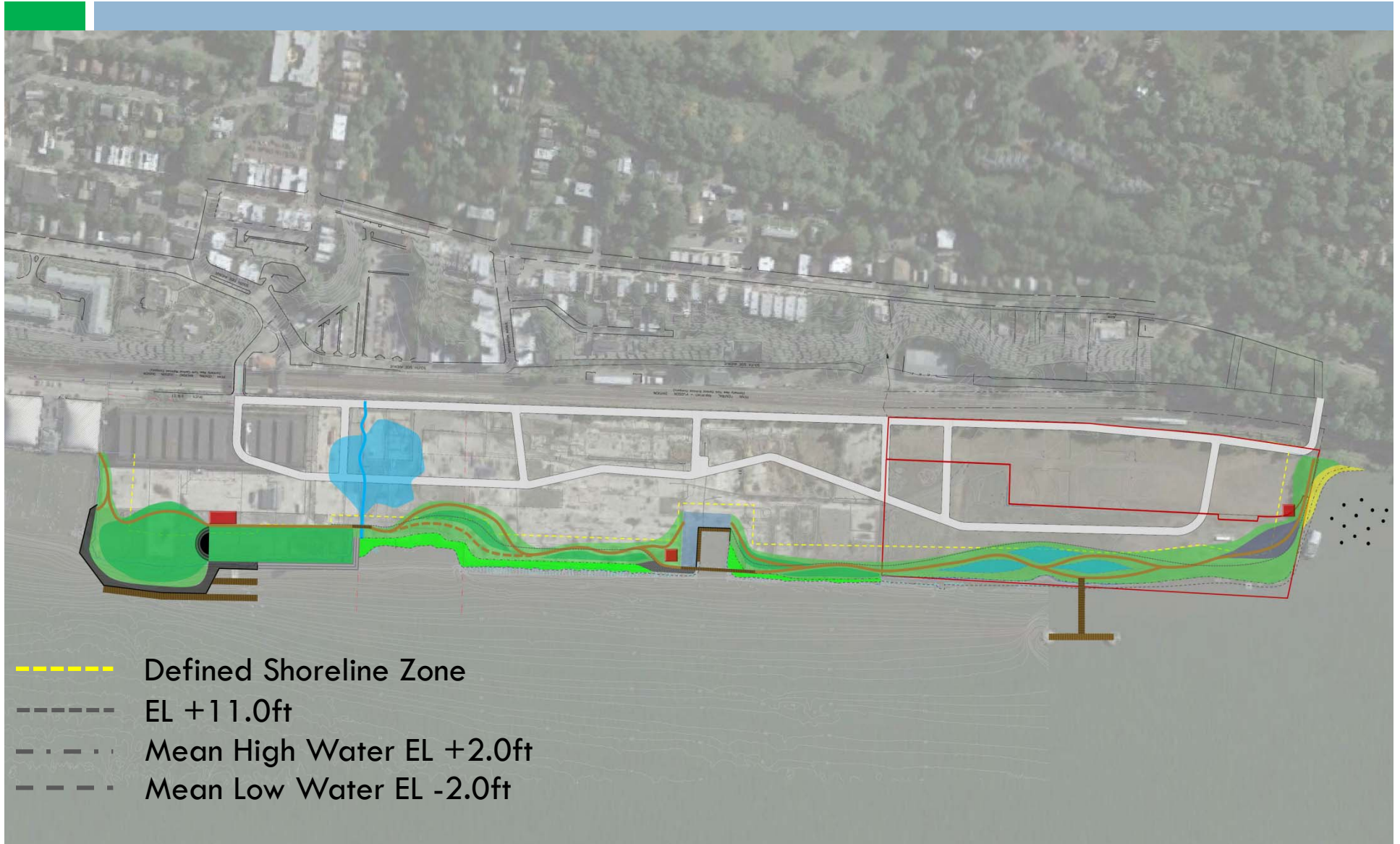
March 13, 2017

Proposed Approach

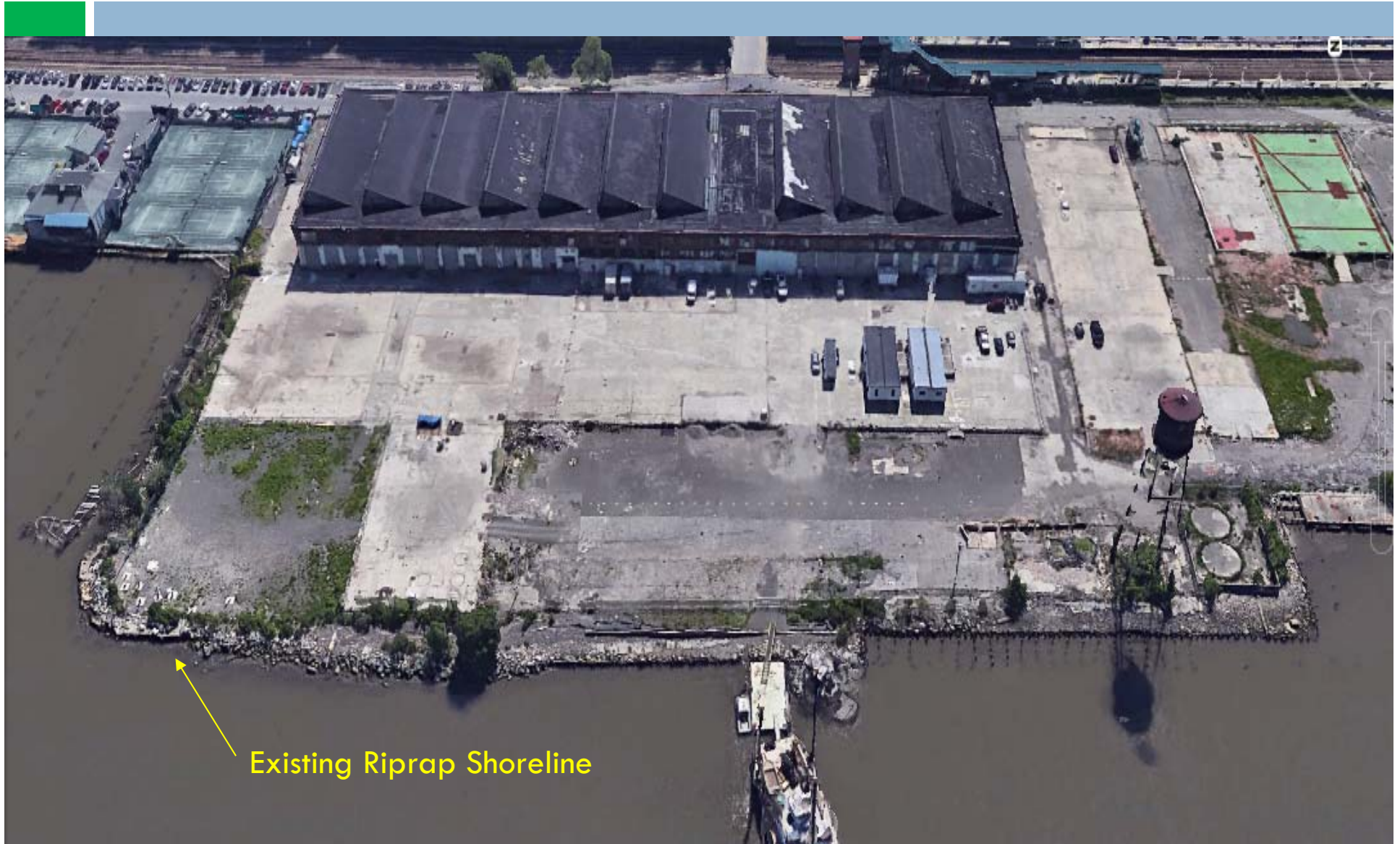
- ❑ Public access to waterfront
- ❑ Connectivity
- ❑ Responsive programming
- ❑ Flexible amenities
- ❑ Bioengineering solutions
- ❑ Habitat creation
- ❑ Remedial containment
- ❑ Long term performance & resiliency



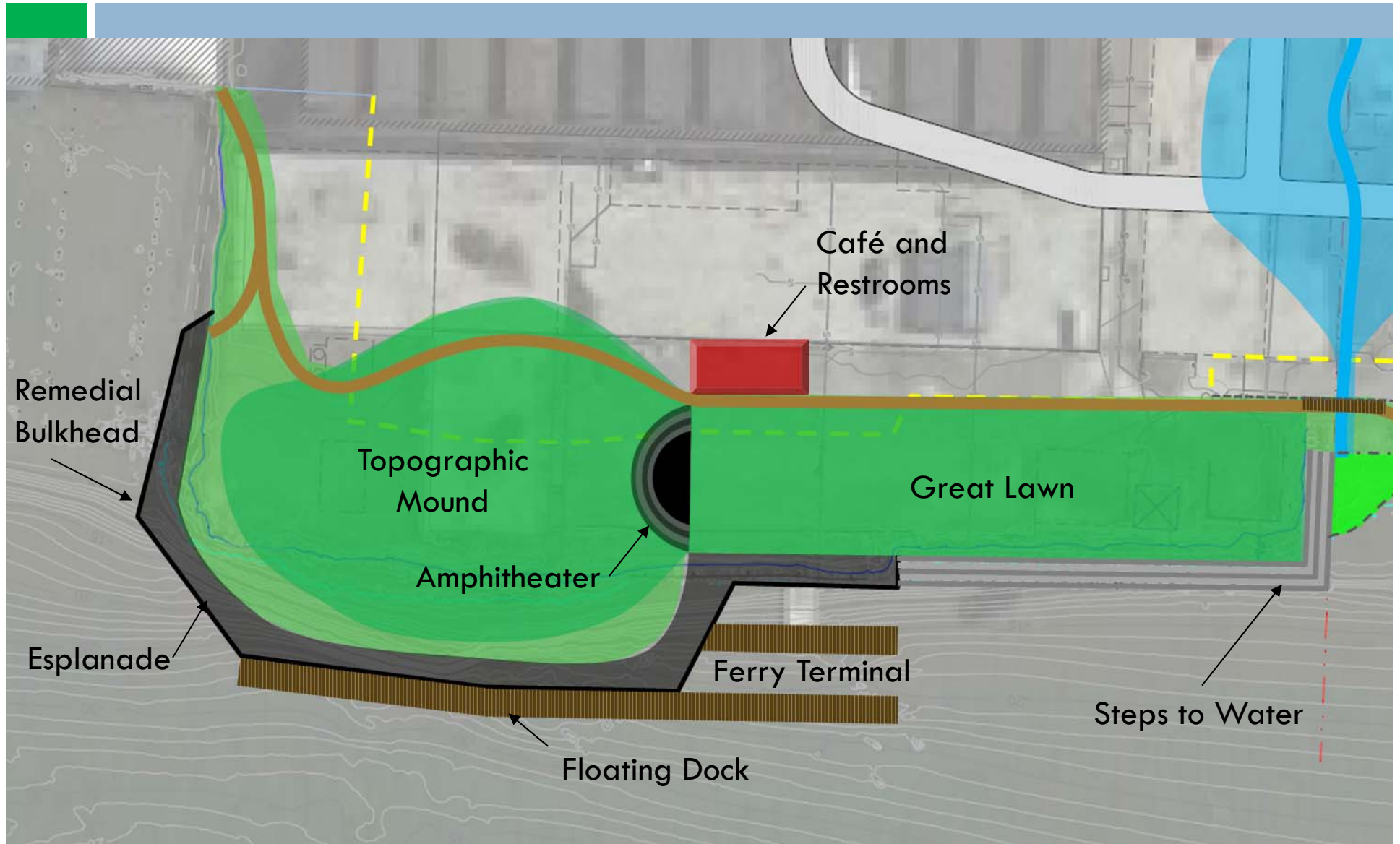
Conceptual Elements



Site North



Site North



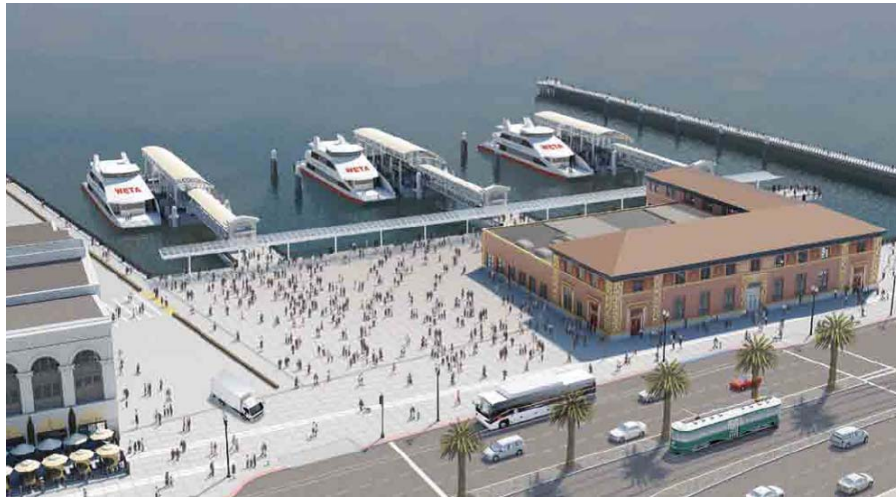
Site North

Great Lawn and Esplanade



Site North

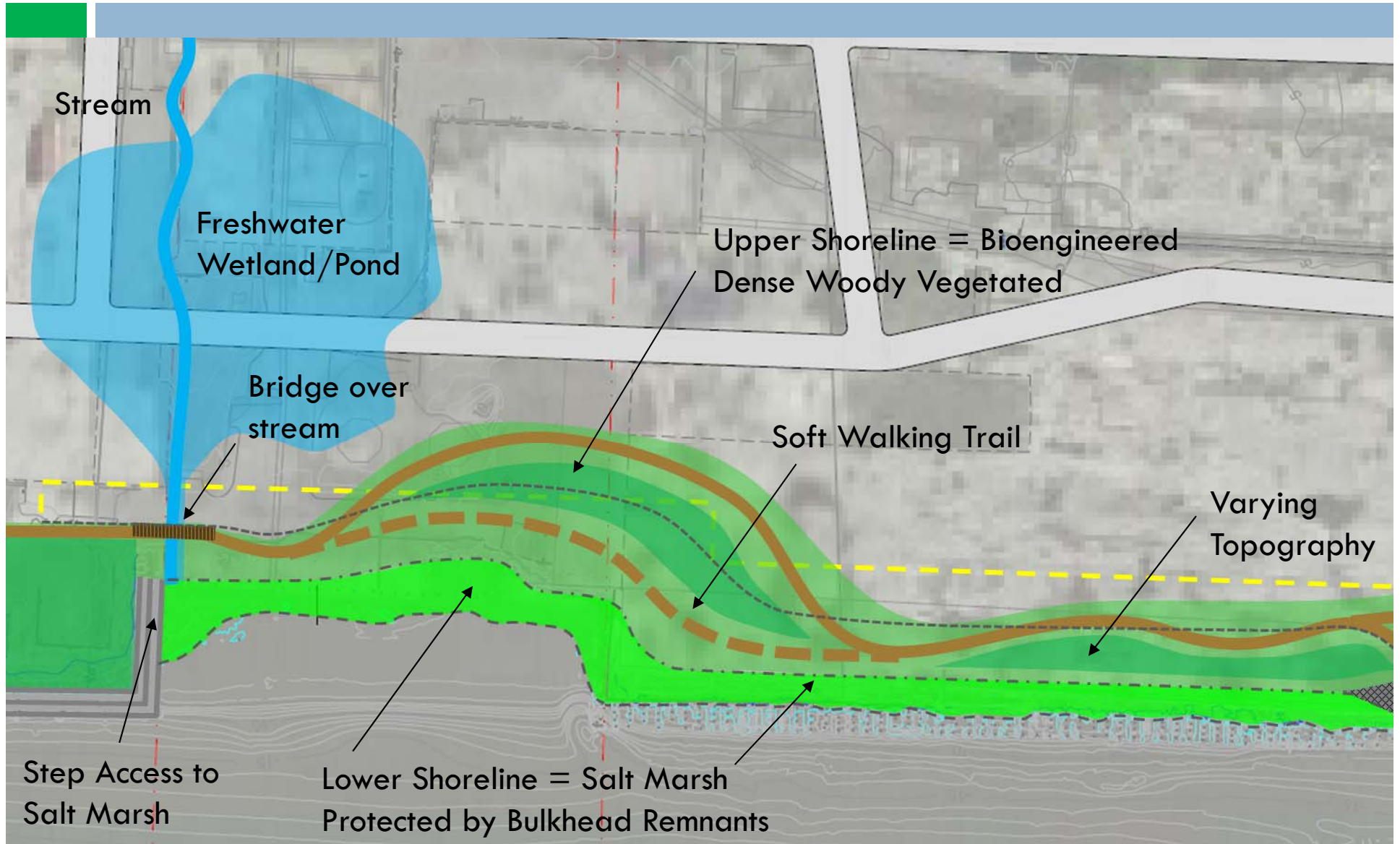
Water Access and Ferry Terminal



North Cove



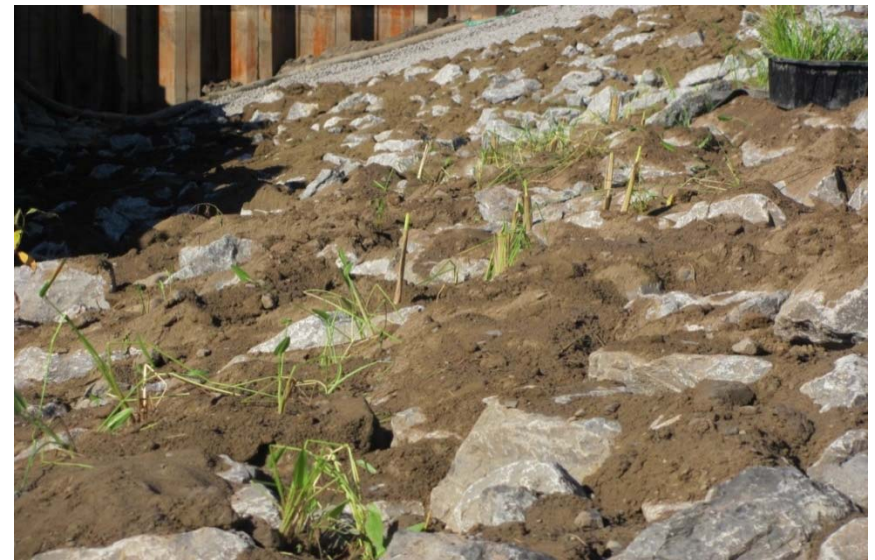
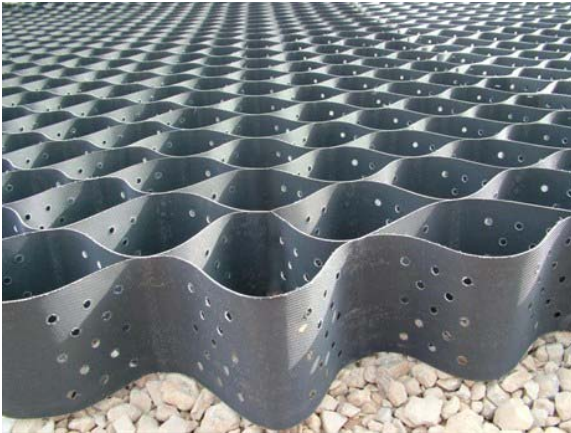
North Cove



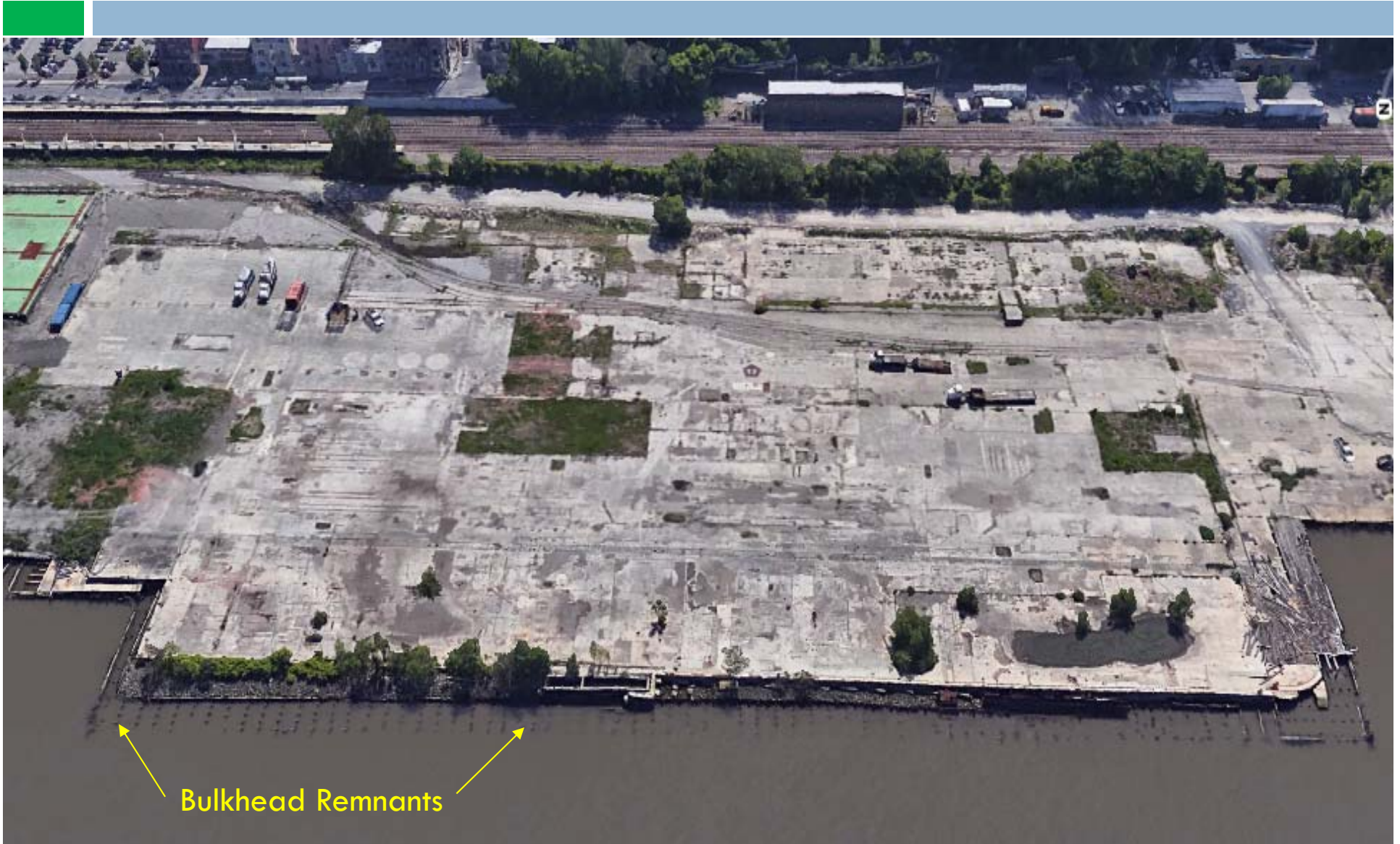
North Cove Habitat Creation



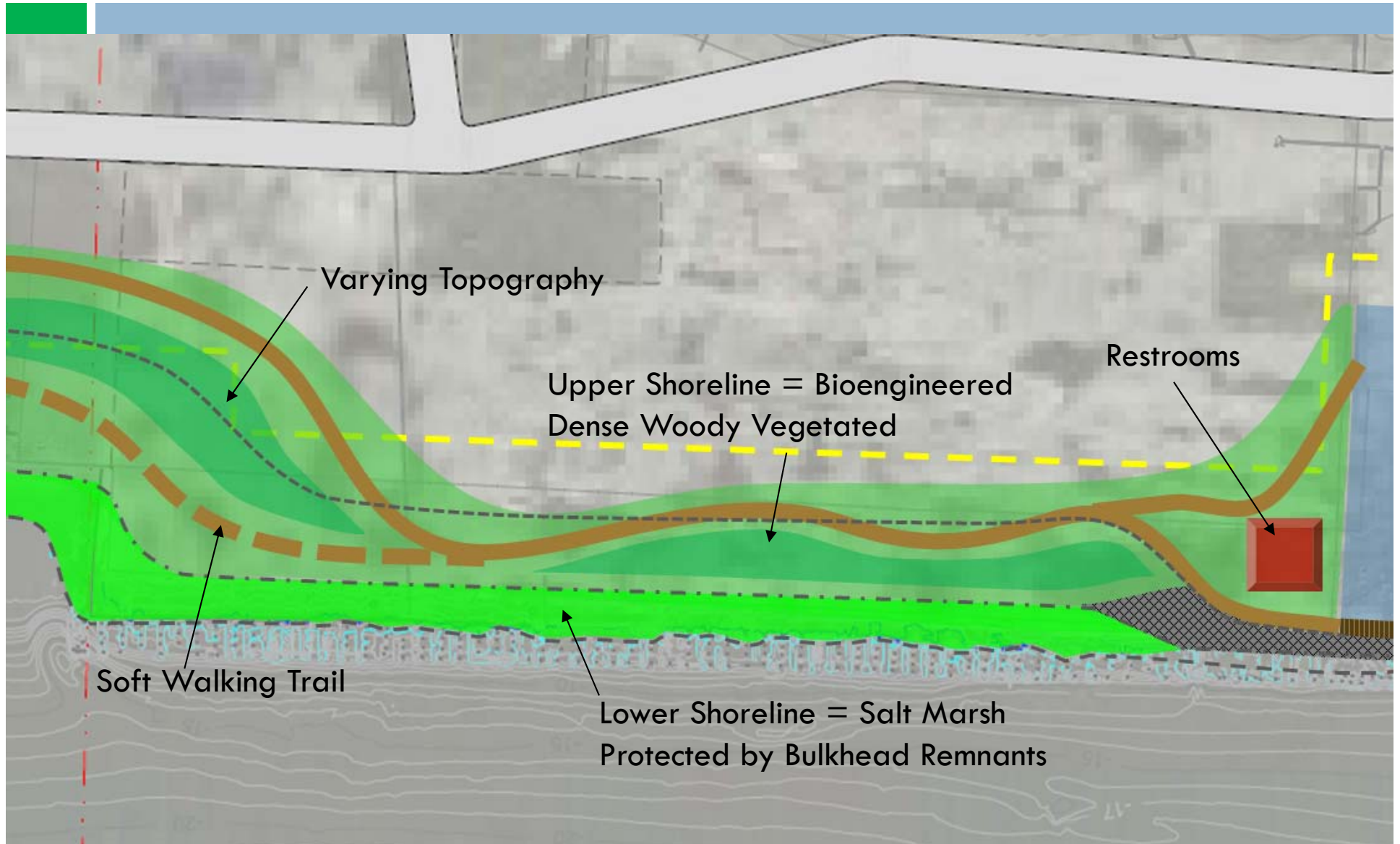
Shoreline Stabilization Elements



Former Bulkhead and South Cove



Former Bulkhead and South Cove



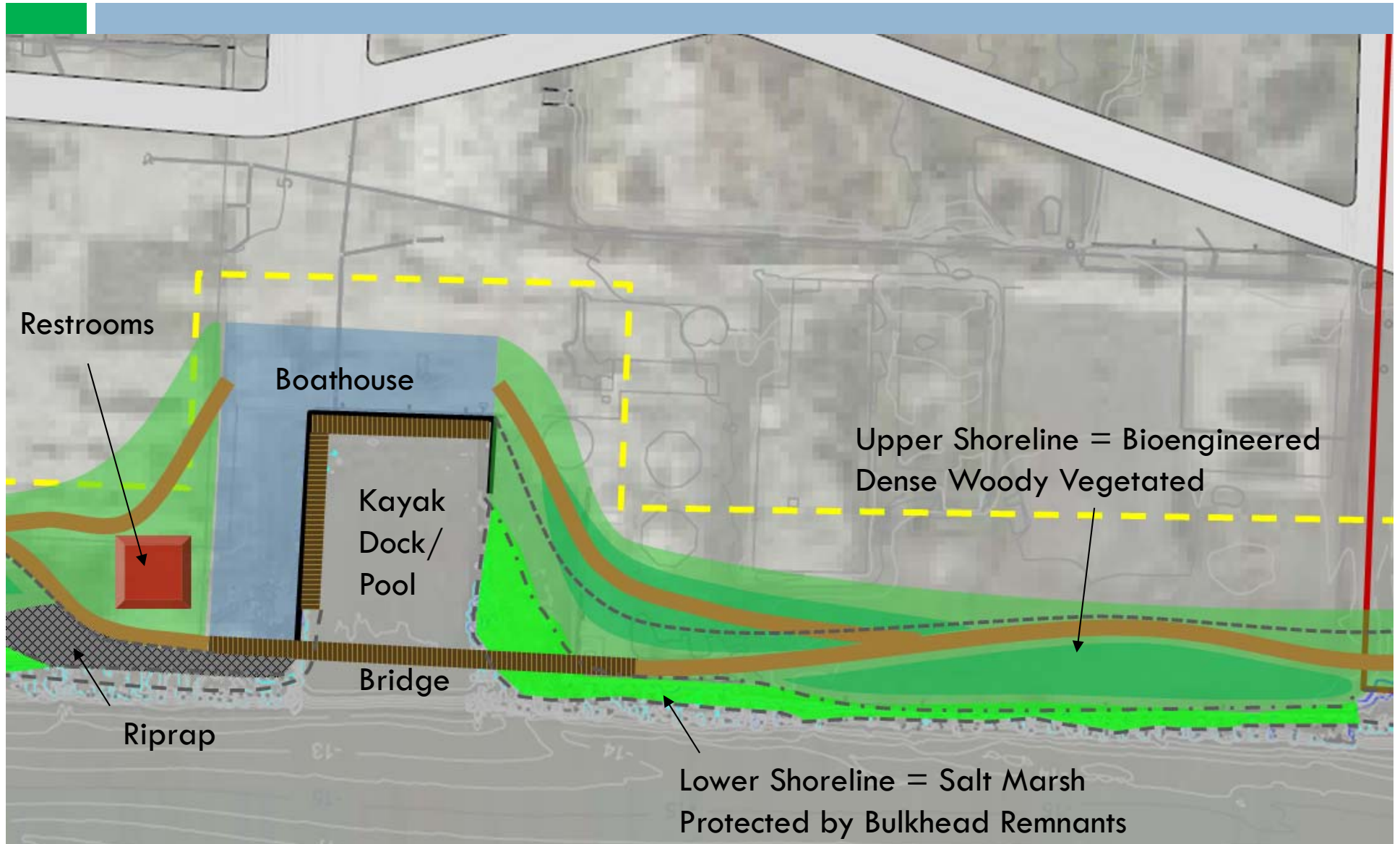
Former Bulkhead and South Cove



South Cove



South Cove



South Cove

Boathouse and Kayak Pool

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Long Dock Park, Beacon



Dallas Community Boathouse



South Cove

Habitat, Boardwalk, and Bridge

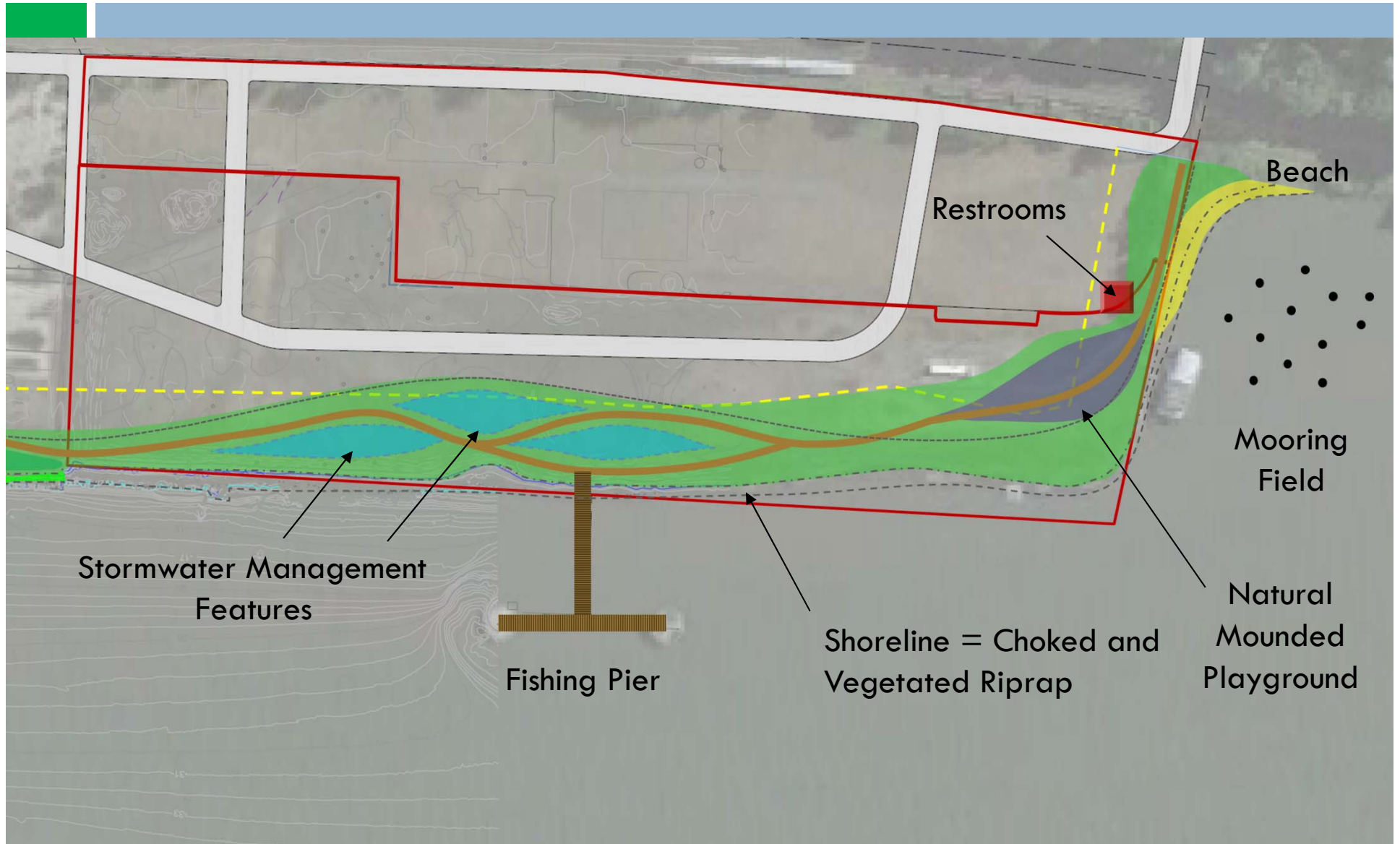
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Off Site

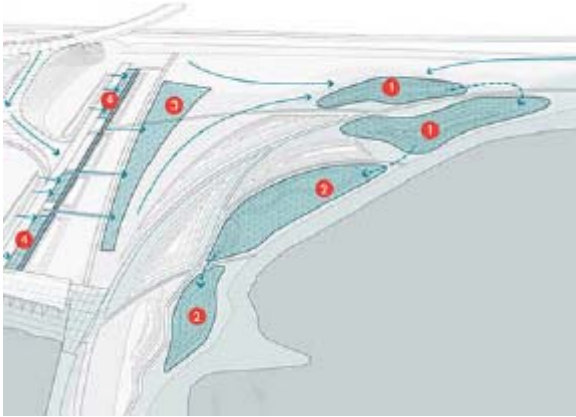


Off Site



Off Site

Stormwater and Flood Control



Off Site

Additional Features



Conceptual Elements

□ Shoreline:

- ▣ *range of types (from soft to hard)*
- ▣ *steepness of slope*
- ▣ *width of slope and elevation variations*
- ▣ *pond or day lighted stream*

□ Marine uses and locations:

- ▣ *ferry and excursion boats*
- ▣ *transient boaters*
- ▣ *kayak area with boathouse*
- ▣ *fishing pier*
- ▣ *floating dock*

□ Habitat:

- ▣ *mitigation requirement*
- ▣ *salt marsh*
- ▣ *trees*
- ▣ *grasses and other emergents*

□ Structures:

- ▣ *cafe*
- ▣ *restrooms*
- ▣ *boathouse*

□ Mounds and varied topography:

- ▣ *Northwest Corner and elsewhere*
Shape of fill at Northwest Corner



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Questions?

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