



PROJECT CONCEPTUAL SUMMARY:

Borough Workshop Meeting dated July 18, 2024 at 6:00 pm

**Re: Bayfront Wave Energy Dissipation Structure Project
Borough of Seaside Park, Ocean County
RVE Job No.: 1528-U-085**

1. Proposed Seawall – Option 1:

- Proposed Seawall design to include:
 - Composite seawall spanning from 14th Avenue to I Street in the Borough of Seaside Park.
 - The seawall will be placed in the Ocean County right-of-way on North and South Bayview Avenue. The seawall will be a cantilevered type retaining wall to avoid digging up Bayview Avenue to install an anchored tie-back system. The location of the seawall will need to be verified based on existing utility conflicts.
 - The proposed seawall will maintain an elevation of 5.0' NAD-1983. Grading of the land to accommodate a seawall elevation of 5' needs to be reviewed in detail with the Borough for the following locations:
 - 14th Avenue Pier and Boat Ramp
 - 5th Avenue Pier and Playground
 - Seaside Park Yacht Club
 - Seaside Park Marina
 - The seawall along North and South Bayview Avenue will be faced in rip rap as shown on the attached plan to provide additional breakwater.
 - Rip Rap sizing will need to be confirmed during the Final Design Phase. Placement of rip-rap along the seawall in all areas will need to avoid SAV disturbance. It is estimated that the rip-rap width will be approximately 6' wide which will serve to dissipate any wave energy before the waves reach the seawall. This will extend the life of the seawall and reduce the amount of saltwater spray that makes it past the seawall.
 - In areas where the proposed rip rap will be placed in the water, spartina patens dune plantings are proposed along with the rip rap to establish a living shoreline to alleviate SAV mitigation requirements.
 - Public access points will be located at every other street end; locations of the access ways will need to be confirmed with the Borough.
 - A conceptual cross section has been provided for the public access ways. In areas where there is a beach waterward of the seawall, the

public access point will have a ramp down to the beach to allow residents access. Where there is not an established vegetated beach area, the public access ways will have steps directly into the water.

- The public access ramps will be wide enough to accommodate small hand drawn trailers for boats and kayaks.
- ADA public access will be proposed at the 5th Avenue Pier and Park Area. Additional evaluation of ADA public access points will need to be reviewed with the Borough.

2. Proposed Seawall – Option 2:

- Proposed Seawall design to include:
 - Composite seawall spanning from 14th Avenue to I Street in the Borough of Seaside Park.
 - The seawall will be placed in the vegetated dune area, waterward of the edge of pavement on North and South Bayview Avenue. In the areas that have an existing bulkhead, the seawall will replace the bulkhead in-kind with a higher elevation. The seawall will be a cantilevered type retaining wall to avoid digging up Bayview Avenue to install an anchored tie-back system.
 - The proposed location of this seawall presents many permitting obstacles since over 2,000 linear feet of the proposed seawall will be placed in coastal wetlands, which are highly regulated by the NJDEP.
 - The proposed seawall will maintain an elevation of 5.0' NAD-1983. Grading of the land to accommodate a seawall elevation of 5' needs to be reviewed in detail with the Borough for the following locations:
 - 14th Avenue Pier and Boat Ramp
 - 5th Avenue Pier and Playground
 - Seaside Park Yacht Club
 - Seaside Park Marina
 - The seawall along North and South Bayview Avenue will be faced in rip rap as shown on the attached plan to provide additional breakwater.
 - In areas where the bulkhead is being replaced by the seawall in-kind, the rip rap breakwater will be less effective due to the presence of SAV waterward of the seawall. *Spartina patens* dune plantings are proposed along with the rip rap to establish a living shoreline to alleviate SAV mitigation requirements
 - Rip Rap sizing will need to be confirmed during the Final Design Phase. Placement of rip-rap along the seawall in all areas will need to avoid SAV disturbance. It is estimated that the rip-rap width will be approximately 6' wide which will serve to dissipate any wave energy before the waves reach the seawall.

- Considerations for alternative breakwater solutions to be discussed with the Borough in areas where breakwater is encroaching into the waterway.
- Public access points will be located at every other street end; locations of the access ways will need to be confirmed with the Borough.
- A conceptual cross section has been provided for the public access ways. In areas where there is a beach waterward of the seawall, the public access point will have a ramp down to the beach to allow residents access. Where there is not an established vegetated beach area, the public access ways will have steps directly into the water.
- The public access ramps will be wide enough to accommodate small hand drawn trailers for boats and kayaks.
- ADA public access will be proposed at the 5th Avenue Pier and Park Area. Additional evaluation of ADA public access points will need to be reviewed with the Borough.

3. Stormwater Conveyance Improvements

- Proposed Stormwater Conveyance Improvements to include:
 - All stormwater catch basins located in Bayview Avenue will be replaced with type “E” inlets and redirected to the (3) stormwater pump stations owned by the NJDOT. Ductile iron stormwater pipe material is being proposed within the conceptual plan, sizing of the pipe will be completed during the Final Design Phase.
 - The proposed seawall will be placed waterward of all NJDOT pump stations to protect the stormwater system from being inundated with flood water during high tide events and to provide for ease of maintenance of the pump station.
 - All stormwater outfall pipes will be removed as part of this project except for the outfall pipes that are utilized by the NJDOT pump stations.
 - As required by the NJDOT, the stormwater will be treated in an underground manufactured treatment device prior to entering the NJDOT pump stations.
 - The Conceptual Plan currently identifies a seawall elevation of 5.0’ NAD-1983.

4. Proposed Tie in Locations

- Seaside Park Yacht Club
 - Yacht Club Parking lot to be elevated to 5.0’ NAD-1983 to account for the proposed seawall.
- 5th Avenue Bay Pier

- A portion of the existing pier is to be elevated to 5.0' NAD-1983. A handicap ramp and platform will be installation in the Right-of-Way to allow access to the pier and the park
- 14th Avenue Pier and Boat Ramp
 - The 14th Avenue Pier parking lot will be raised to an elevation of 5.0' NAD-1983. The boat ramp will be regraded to allow boat owners to continue to use the ramp at its new elevation.
 - The proposed seawall will tie into the existing bulkhead at the 14th Avenue Pier as it is at an elevation of 5.0' NAD-1983
- Seaside Park Marina
 - The termination of the seawall will be at the Seaside Park Marina, the grading of the area will require further review and coordination with the Borough.

5. Regulatory Agency Requirements

- **Required Permits, Pre-Application meetings shall be coordinated with all of the following agencies:**
 - New Jersey Department of Environmental Protection CAFRA/Waterfront Development Permit – Construction of seawall, modifications to outfalls, proposed rip-rap breakwater, public access points
 - United States Army Corps of Engineers Nationwide permit
 - New Jersey Department of Transportation Permit – Drainage Permit required to allow the connection of the drainage system to the NJDOT Pump Stations
 - Ocean County Road Opening Permit – Meeting to be held with Ocean County
 - Ocean County Soils Conservation District Permit – over 5,000 square feet of disturbance is proposed therefore proposal is required.
- **Required State & County Level Approvals:**
 - Ocean County approval of seawall location in Right-of-way
 - New Jersey Department of Transportation approval of the use of state-owned stormwater pump stations

6. Design Flood Elevations (Source: New Jersey Flood Mapper):

- Annual Flood 2.31 ft (1.6 ft above MHHW)
- 2-Year Flood 3.11 ft (2.4 ft above MHHW)
- 10-Year Flood 4.01 ft (3.3 ft above MHHW)
- 100-Year Flood 5.51 (4.8 ft above MHHW)

Attachments:

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Project Scope Summary
HMGP Wave Dissipation Structure Bayfront
1528-U-085

- Bayfront Wave Energy Dissipation & Flood Mitigation Overall plan and Cross Section Details