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The State of New Jersey's Shore Protection Program



State of New Jersey
Phillip Murphy, Governor
Sheila Y. Oliver, Lieutenant Governor

Department of Environmental Protection
Catherine R. McCabe, Commissioner

Engineering & Construction
David Rosenblatt, Asst. Commissioner

Division of Coastal Engineering
Bill Dixon, Director



Division of Coastal Engineering Purpose....



To administer beach nourishment, shore protection and storm damage reduction projects throughout the State and to work with the US Army Corps of Engineers as a non-federal sponsor within the State to:

- ...Provide for protection of life and property along the Atlantic, Delaware Bay and Raritan and Sandy Hook Bay coastlines
- ...Preserve our State's vital coastal resources



Shore Protection Fund is Dedicated...



“To protect existing development and infrastructure from storm surges, sea-level rise, and shoreline migration, through dune creation and maintenance, beach nourishment projects and construction and repair of shore protection structures.”

**\$25 million dedicated annually
Realty Transfer Tax (N.J.S.A. C. 13:19-16.1)**



How the money is divided...



Federal Projects – NJDEP - local sponsor in these projects

- Studies
- Hurricane and Storm Damage Reduction/Shore Protection
- Environmental Restoration

State Projects – Municipalities – local sponsor in these projects

- Hurricane and Storm Damage Reduction/Shore Protection

Professional and Technical Services

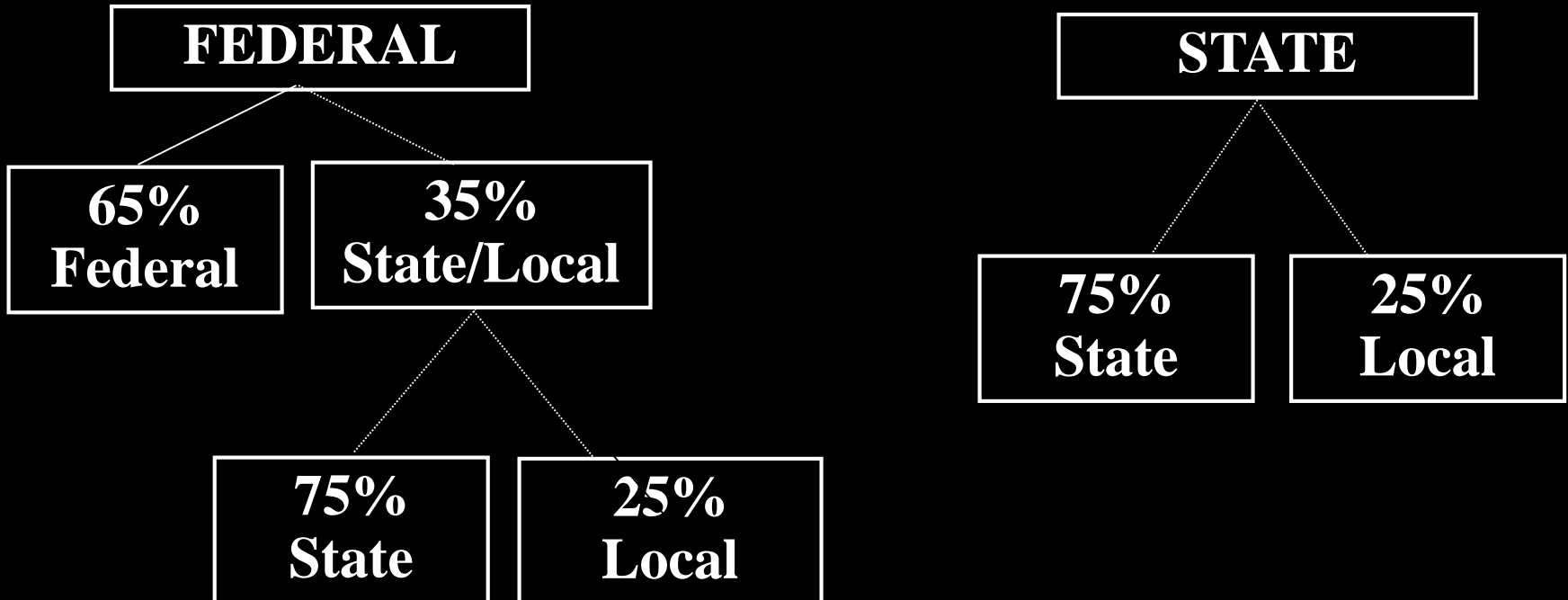
- Steven's Institute of Technology
- Richard Stockton College of NJ
- NJ Division of Fish and Wildlife
- NJ Geological Survey



Typical Cost Share Breakdown...



Shore Protection Projects





Raritan and Sandy Hook Bay Hurricane and Storm Damage Reduction Project - Port Monmouth



- USACE Authorized Project through the WRDA 2000, and PL113-2, Hurricane Sandy Emergency Supplemental Bill which provided for **100% Federal Funding** for this project.
- A beach and dune as well as several different types of flood control structures will be constructed to protect the municipality of Port Monmouth from the damages caused by flooding due to coastal storms.
- Several similar flood control projects are being designed by the Corps for construction throughout the Hurricane Sandy impacted Raritan and Sandy Hook Bay area.



What We Need From the County/Municipality...



- To execute a State-Aid Agreement
- To Obtain all Real Estate necessary for construction of the project
- To Provide upfront costs to obtain Real Estate interests which are fully reimbursable (Initial construction of this project is 100% Federally funded)

New Jersey Department of Environmental Protection

Shore Protection Program



www.nj.gov/dep/shoreprotection

RARITAN BAY AND SANDY HOOK BAY, PORT MONMOUTH, NJ HURRICANE AND STORM DAMAGE REDUCTION PROJECT

Middletown, NJ

USACE - New York District
November 2018



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RARITAN BAY AND SANDY HOOK BAY, PORT MONMOUTH, NJ HURRICANE AND STORM DAMAGE REDUCTION PROJECT

OVERVIEW

- Authority
- Estimated Cost, Non-Federal Sponsor and Cost Share
- Project Overview
- Phases and Features
- Walk thru Project Features
- Schedule
- Questions



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AUTHORITY

- The project is authorized for construction under Section 101 of the Water Resources Development Act of 2000. The authorization provides for hurricane and storm damage reduction, in the Raritan Bay and Sandy Hook Bay, Port Monmouth, New Jersey.
- Public Law 113-2, the Disaster Relief Appropriation Act of 2013, Chapter 4



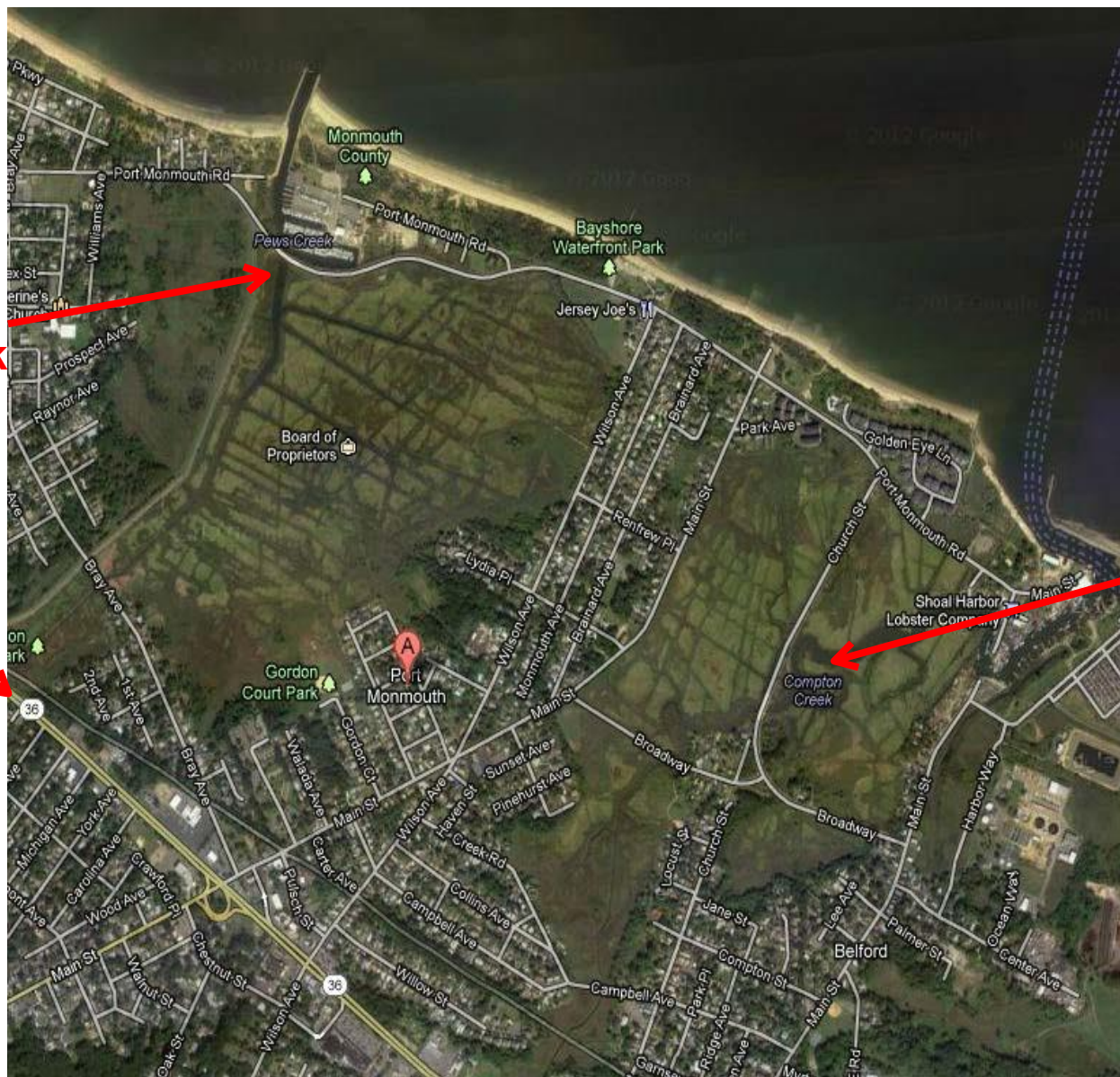
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Project Cost & Cost Share

- Project Current Working Estimate
 - \$115M
- Non-Federal Sponsor:
 - Executed PPA with NJDEP on 31 January 2014
- Cost Share
 - Initial Construction: 100% Federal
 - Renourishments: 50% Federal, 50% NonFed
 - Operation & Maintenance: 100% NonFed



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Pews
Creek

Route 36

Compton
Creek



PORT MONMOUTH, NJ OVERVIEW



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PHASES AND FEATURES



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- **Phase I (Completed)**
 - Dune
 - Groin
 - Pier Extension
- **Phase II (Under construction and design)**
 - Tide Gate
 - Pump Stations
 - Levees
 - Floodwalls
 - Road Closure Structures
 - Interior Drainage Structures
 - Mitigation



ENVIRONMENTAL REQUIREMENTS



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■ Phase I

- Endangered Species Act consultation ongoing (sturgeon, whales, sea turtles)
- NEPA complete (ROD 2008; FONSI 2009)
- Water Quality/Federal Consistency rec'd (May 2013)
- Benthic, T&E species, and dune planting monitoring

■ Phase II

- Supplemental NEPA: update EIS & design changes
- Update Wetland Delineation/Geotechnical Boring Permit
- Pre-Application Meeting for other permits needed
- Wetland Mitigation Required: purchase of credits and possible conversion of Phragmites to Spartina dominated plants
- Wetland mitigation and tidal exchange monitoring



DESIGN TO CONSTRUCTION



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- Design Documentation Report (DDR)
- Value Engineering (VE)
 - Groin was added during the VE of Phase I
 - Some levee areas changed to floodwall
- Engineering Design Report(EDR)
- Coordinate with the Non-Federal sponsor
 - Regular meetings are held
- District Quality Control
- Agency Technical Review
- Independent External Peer Review
- BCOES



PORT MONMOUTH, NJ PHASE I



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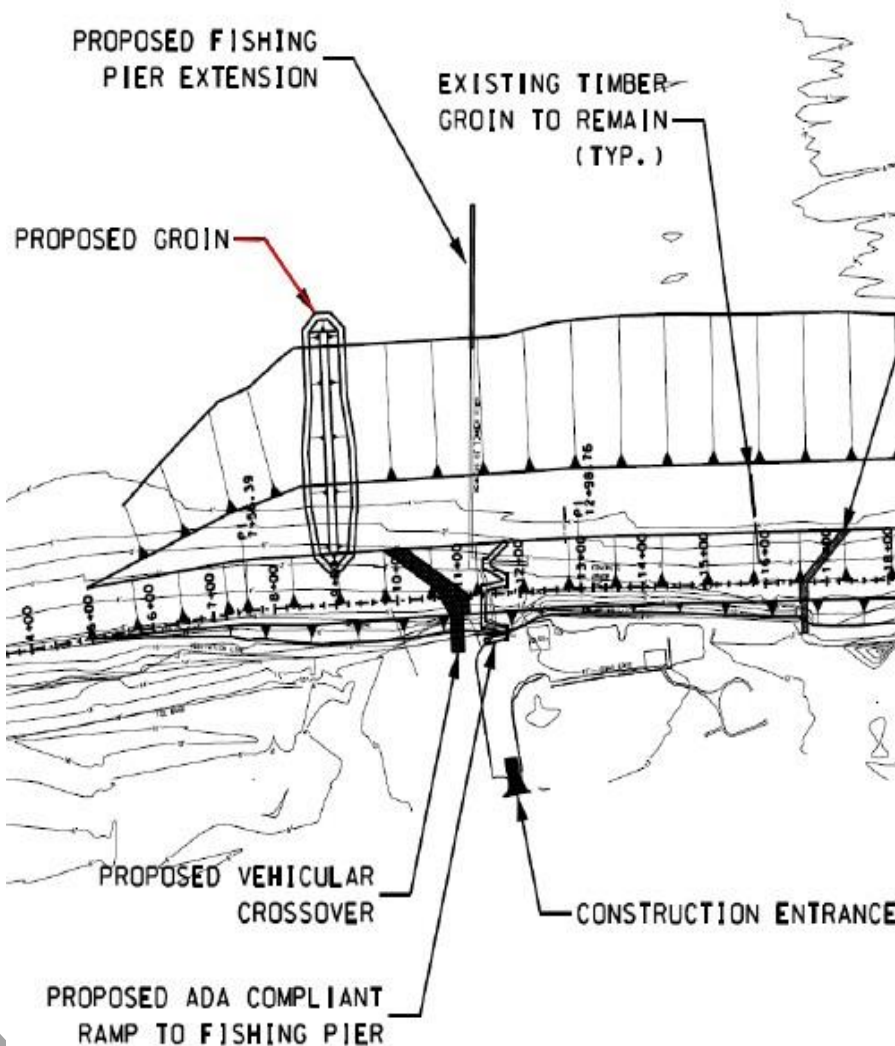




GROIN



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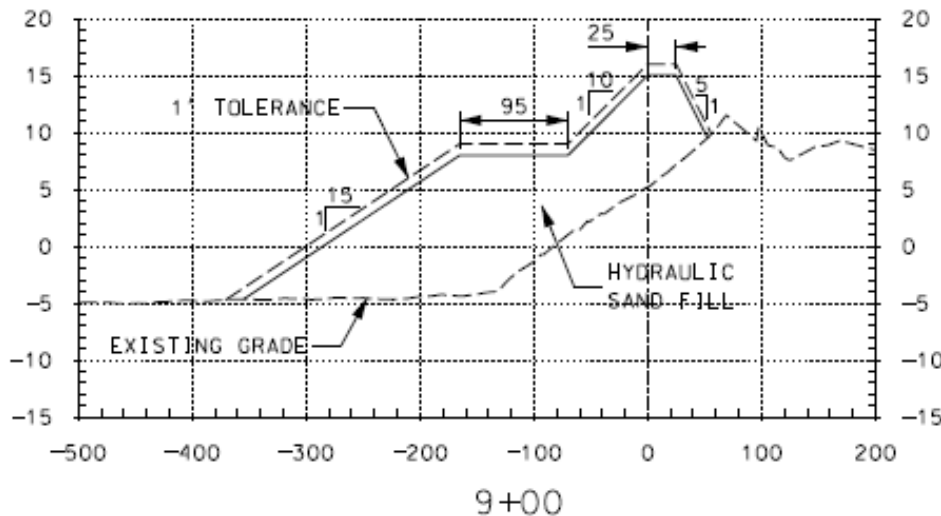
**Port Monmouth
Locations:
Length= 305 LF
Crest Width= 13 ft**



BEACHFILL

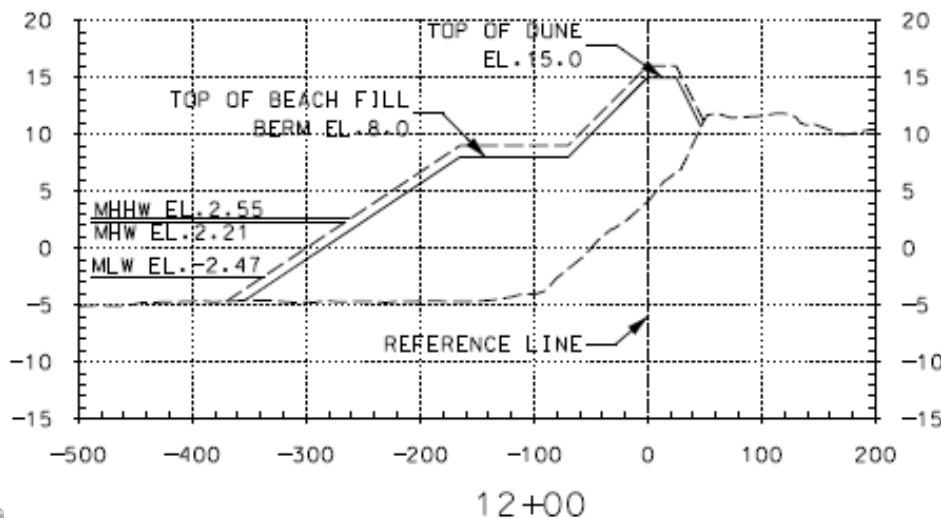


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Port Monmouth Beachfill:

-Dune Elevation 15' NAVD
(16' NGVD)





PIER EXTENSION

- Extend Pier by 195LF
- New ADA Ramp





PORT MONMOUTH, NJ PUMP STATION LOCATIONS



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PUMP STATION



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Port Monmouth Locations:

Pump Station at Pews Creek - 120 cfs

Pump Station at Compton Creek – 60 cfs





PORT MONMOUTH, NJ TIDE GATE



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TIDE GATE



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Port Monmouth Locations:

Pews Creek- approx 40'w x 21'h

**Through Value Engineering
the following types of gates
were considered:**

Stoplogs

Obermeyer Gate

Tainter Gate

Sector Gate

Roller Gate

Lift Gate

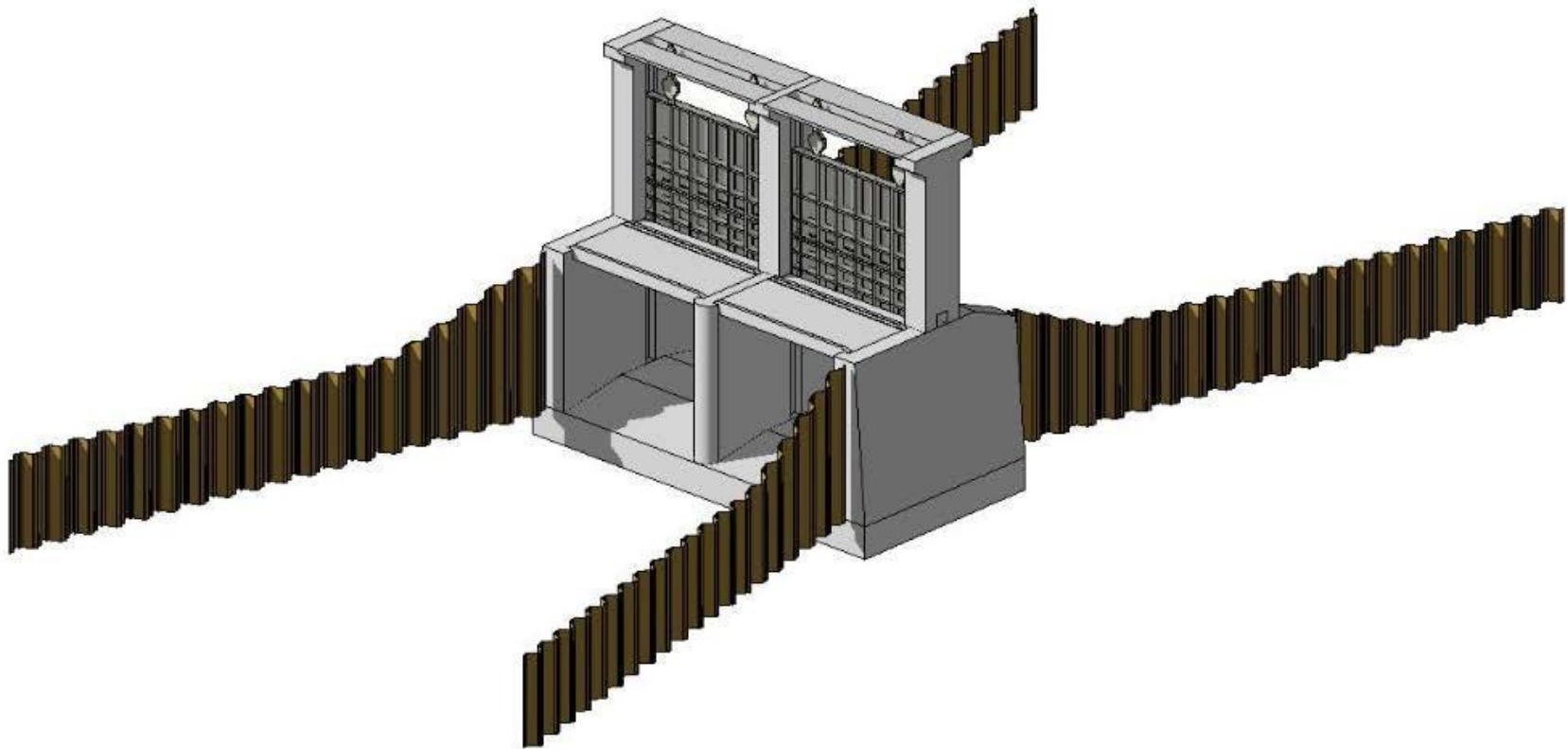
Swing gate



LIFT GATE



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LIFT GATE AND PUMP STATION



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PORT MONMOUTH, NJ LEVEE



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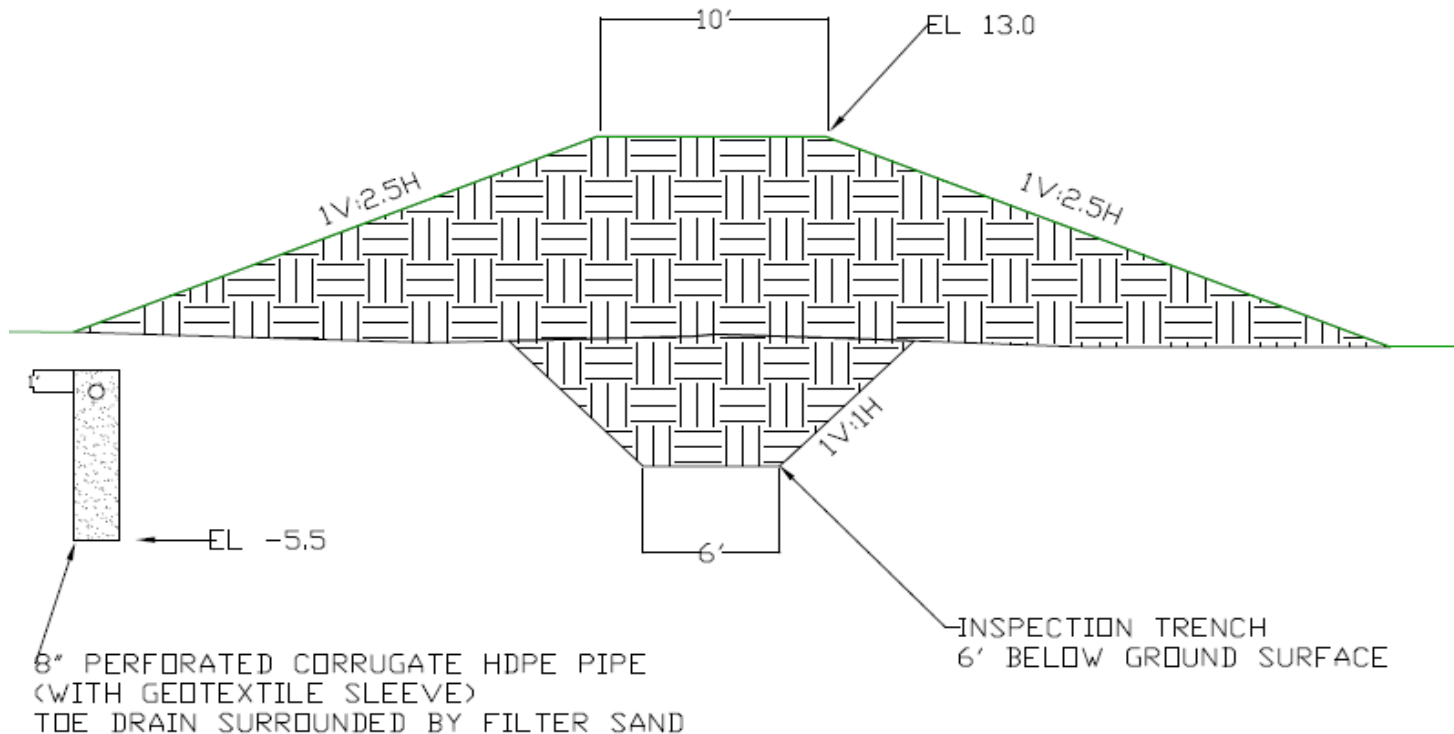


LEVEE



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- **Port Monmouth Levee:**
- Various locations
- Elevation 14' NGVD or 13' NAVD
- Required vegetation free 15' from base or edge of swale





LEVEE



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- **Port Monmouth Levee:**
- Various locations
- Elevation 14' NGVD or 13' NAVD





PORT MONMOUTH, NJ FLOODWALL

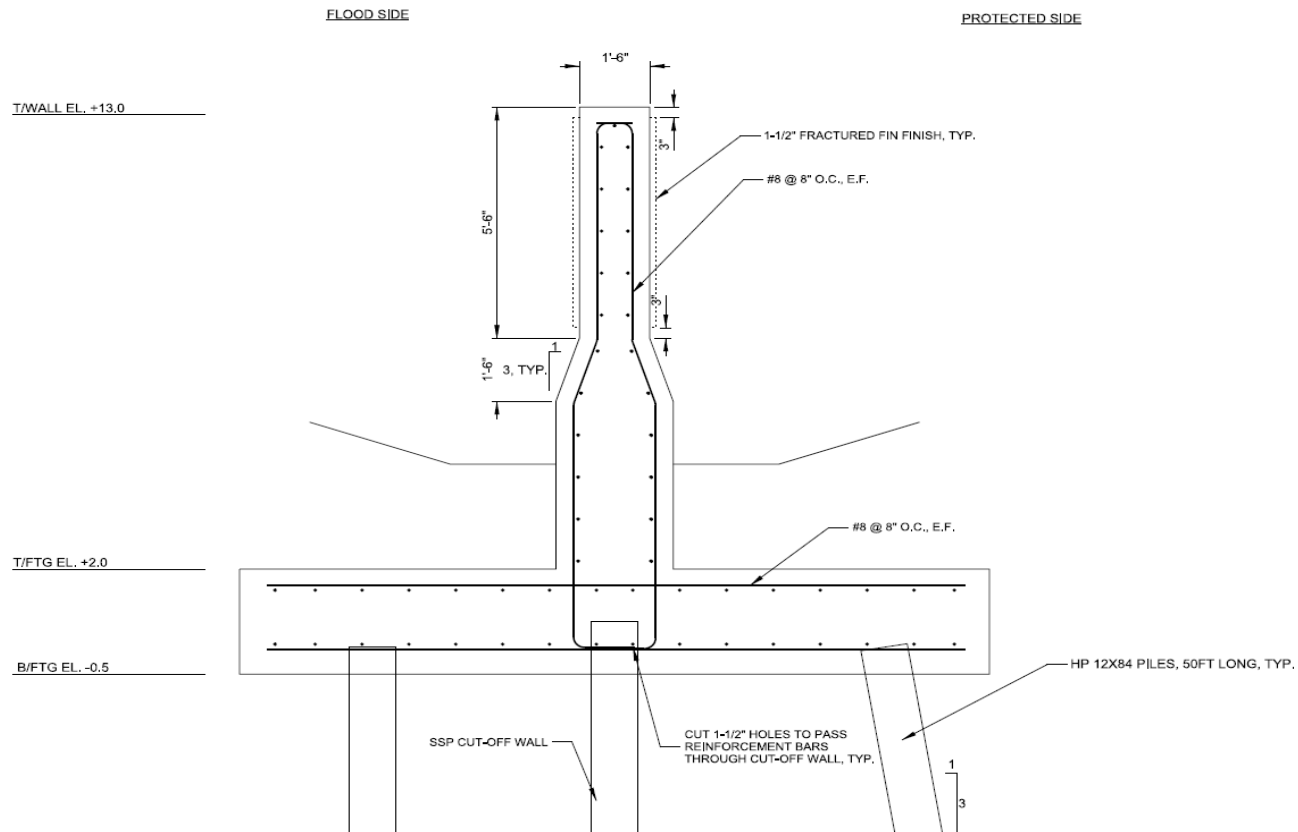


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- Various locations
- Elevation +13' NAVD 88
- Required vegetation free 15' from edge of swale





FLOODWALL



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FLOODWALL-TYPICAL FINISH



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PORT MONMOUTH, NJ ROAD CLOSURE STRUCTURES



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ROAD CLOSURE GATE



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Port Monmouth Locations:

Port Monmouth Road- 40'w x 4'h

Broadway – 40'w x 8'h

Campbell Avenue – 40'w x 8.5'h





PORT MONMOUTH, NJ INTERIOR DRAINAGE FEATURES



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INTERIOR DRAINAGE



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Port Monmouth Locations:

Pump Station at Pews Creek

Pump Station at Compton Creek

Interior Drainage structures through the levee/floodwall

- Drainage structures with flap valve and sluice gate
- Storm water diversion culvert and swale







SCHEDULE



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- Current completion date is Dec. 2022
- Need to obtain necessary Real Estate
- Need to obtain Phase II permits
- Contracts 1, 4 and 5



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QUESTIONS?



PORT MONMOUTH, NJ



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