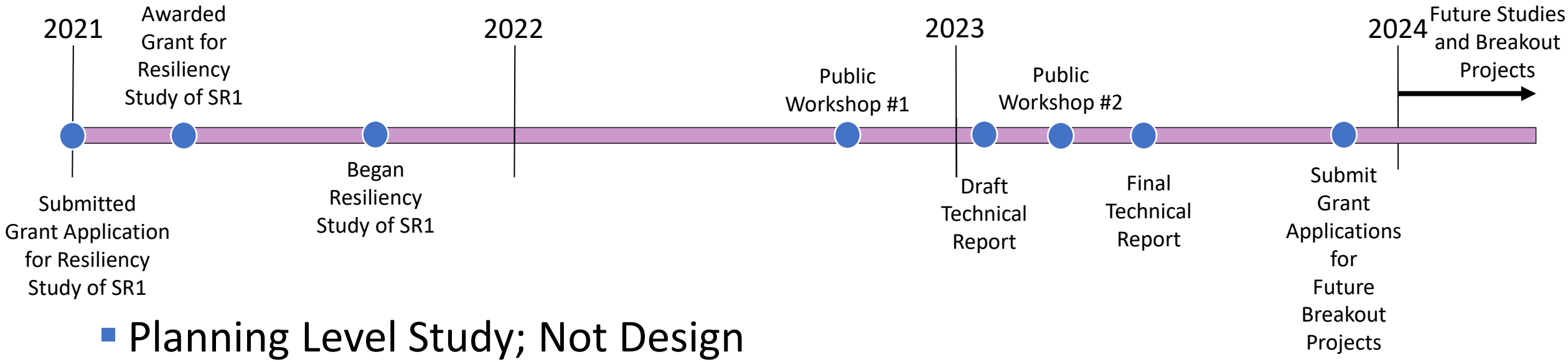
Meeting with Dewey Beach - Friday, January 13, 2023

Study Expectations

- SR1 Coastal Corridor Resiliency Study Timeline



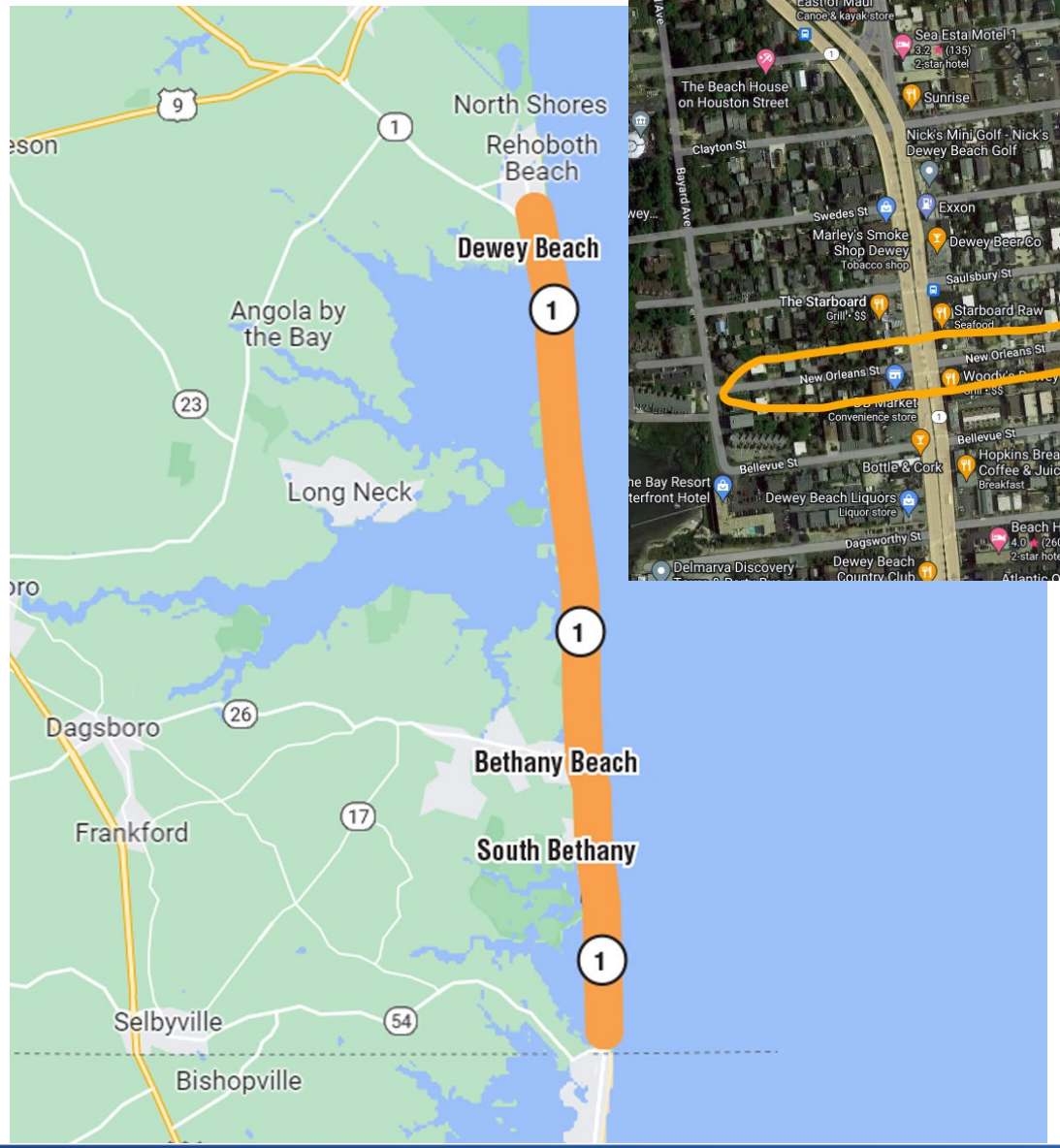
- Planning Level Study; Not Design
- Future Projects will be identified as part of the Study

Purpose and Need

- What is the purpose of the Study?
  - Establish existing and future conditions.
  - Identify a range of potential mitigation alternatives.
  - Establish criteria to evaluate the potential mitigation alternatives.
  - Evaluate the conceptual mitigation alternatives.
  - Work with public and stakeholders, determine preferred alternatives.

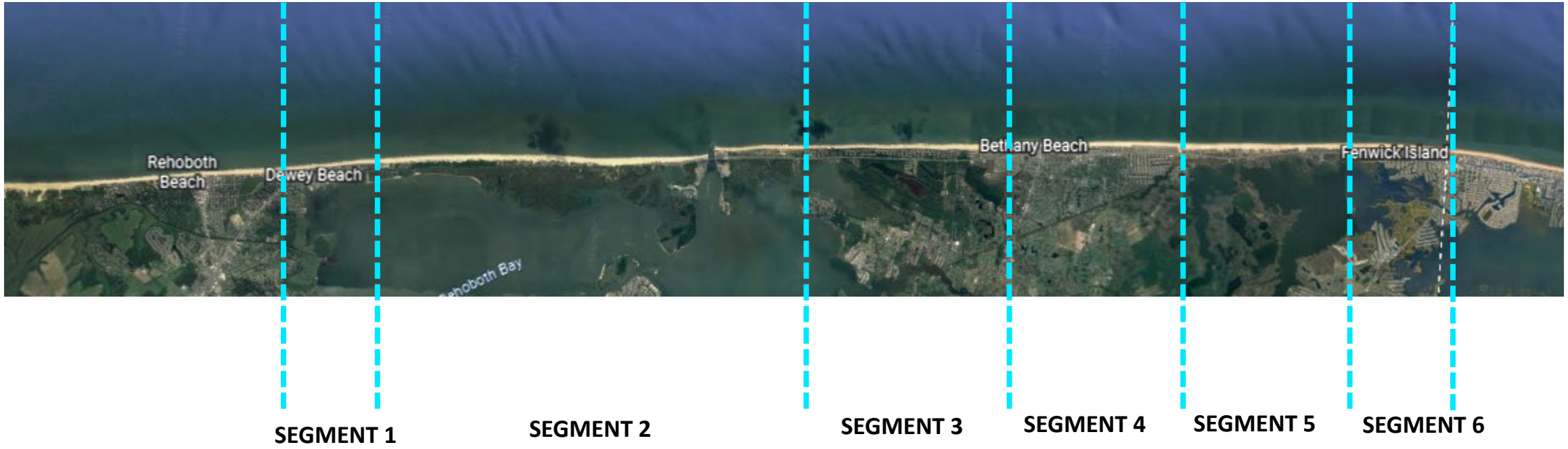
Study Area

- Sixteen (16) miles of State Route 1 (SR1) - Coastal Highway
- Northern Limits
  - Dewey Beach – New Orleans Street
- Southern Limits
  - Maryland State Line



SR1 COASTAL CORRIDOR RESILIENCY STUDY

Study Area – Proposed Segments



- Six (6) Segments – based on surrounding terrain conditions

Coastal Model – Local Model

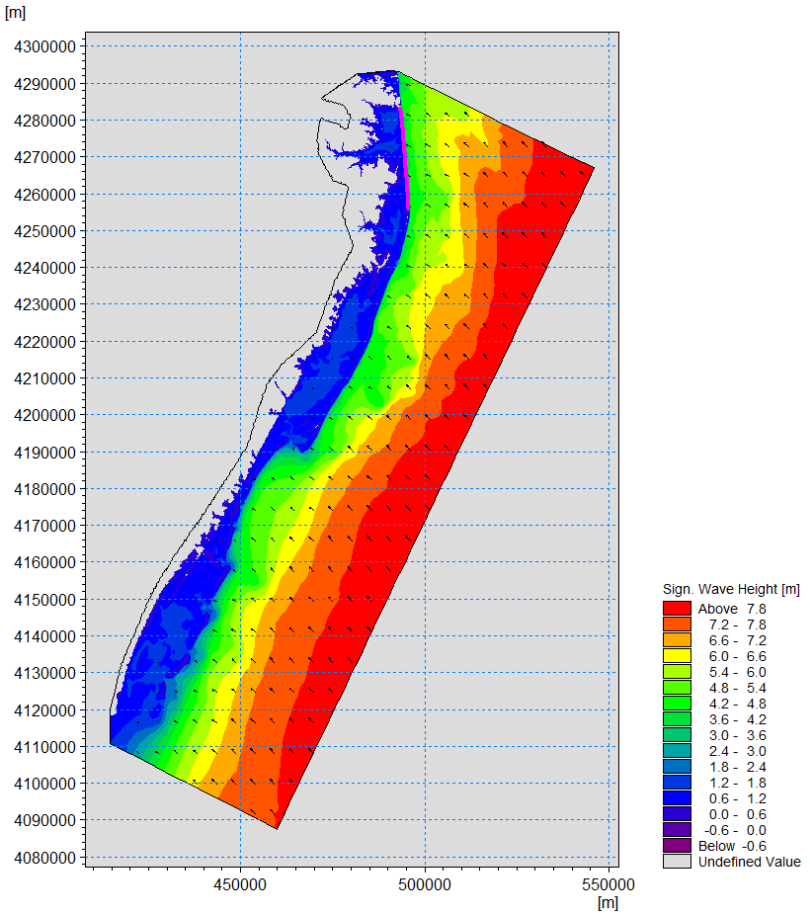
Local Model to simulate wave heights at study area sites under different scenarios

Input:

- Output from the regional model
- Water levels from FEMA Flood Insurance Study
- Extreme wave condition based on US Wave Information Study station (NOAA)
- Extreme wind condition based on local airport wind station
- Sea Level Rise incorporated

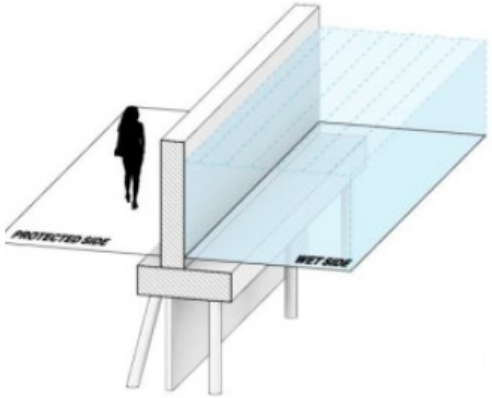
Outputs:

- Local wave conditions for different scenarios.
- Wave information for sediment transport simulation



Local Model

Examples of Primary Flood Mitigation/Protection



EXPOSED FLOODWALL

BURIED FLOODWALL / STRUCTURAL DUNE

MANTALOKING, NJ, MOTT MACDONALD

SHORT-TERM DEPLOYABLES

TRAP BAGS SARASOTA, FLORIDA

PERMANENT DEPLOYABLES

FLIP UP GATES BLOOMSBURG, PENNSYLVANIA

RAISED & REROUTED ROADWAYS

STATE ROUTE 54, SUSSEX COUNTY, DELAWARE

Examples of Secondary Flood Mitigation/Protection

LIVING SHORELINES

ORLEANS, MA

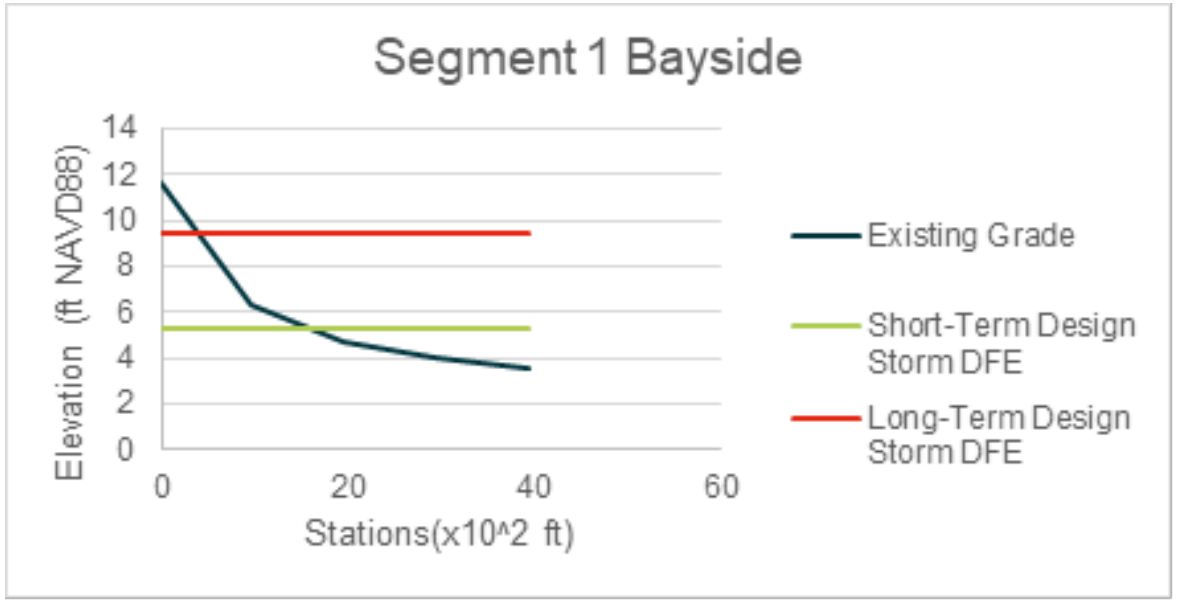
REVETMENTS

MAYPORT, GEORGIA

Evaluation Criteria

Criteria	Explanation
Level of Flood Protection	The water elevation that the countermeasure would protect up to.
Construction Cost	Estimated $ to build including right of way acquisition & utility relocation costs.
Operations & Maintenance Cost	Estimated annual $ to maintain the improved infrastructure over its lifecycle.
Physical Constraints	Estimated amount of time needed, right-of-way needed, and other physical constraints present.
Benefit-Cost Ratio	Compares future risk reduction benefits to its costs.
Environmental Effects	Benefits & impacts to the natural environment (carbon reduction, wildlife habitats, etc.
Community Effects	Benefits & impacts to the built environment (traffic volumes, travel times, etc.)
Aesthetics/Visual Effects	Visual effects (community impression, aesthetics, etc.)

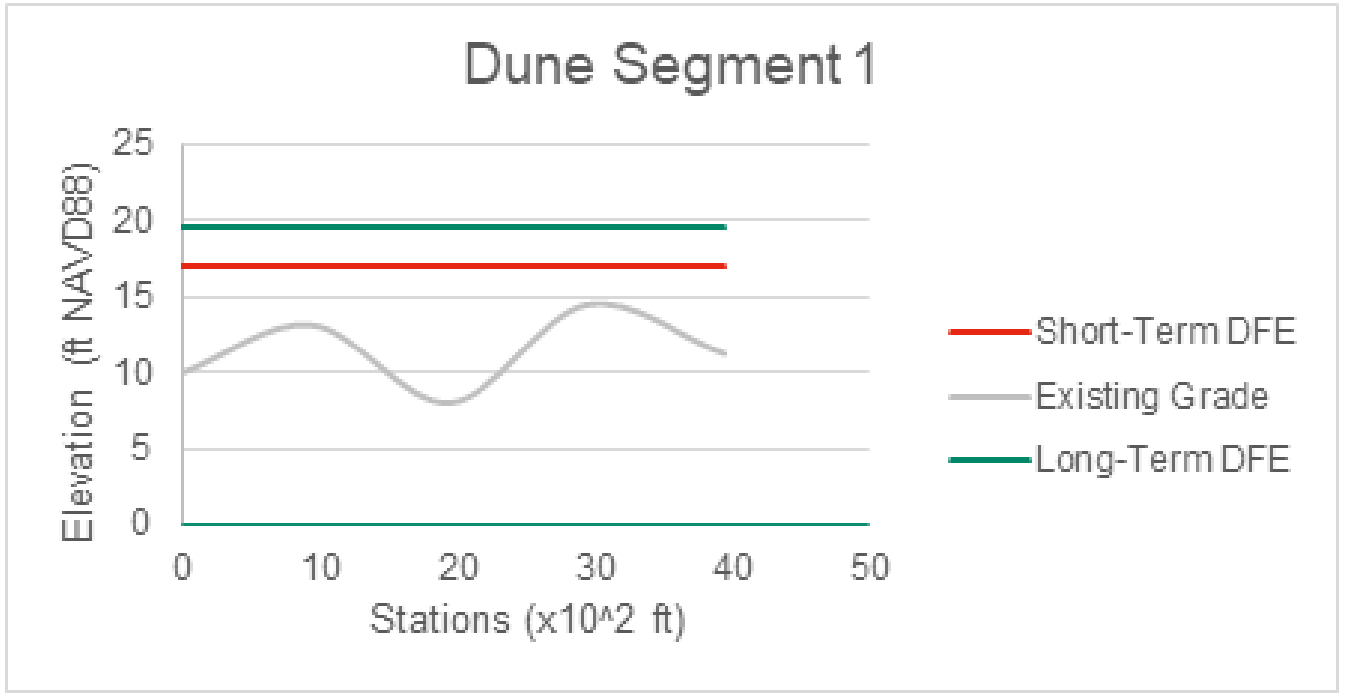
Town of Dewey Beach – Segment 1 - Bayside



Potential Flood Mitigation Measure:

- Raise SR1 and regrade any connected roads or driveways accordingly. This may be possible for part of this segment. However, further study and survey work are required to determine the bounds of feasibility.
- Construct an exposed floodwall next to the road with deployables at side street entrances and any required egress points. This may be possible for both the short-term and long-term DFE ranges. Due to the layout of side streets in this segment, a large amount of deployables would be required. Due to the urban environment and limited space in this segment, a buried floodwall is not recommended.
- Reroute SR1 into the Bay and around the town and regrade any required side streets. This is a very drastic option, but it would provide an alternate evacuation route and it would not impose as much construction in the Town of Dewey. The exact starting point of this option requires further study and analysis.

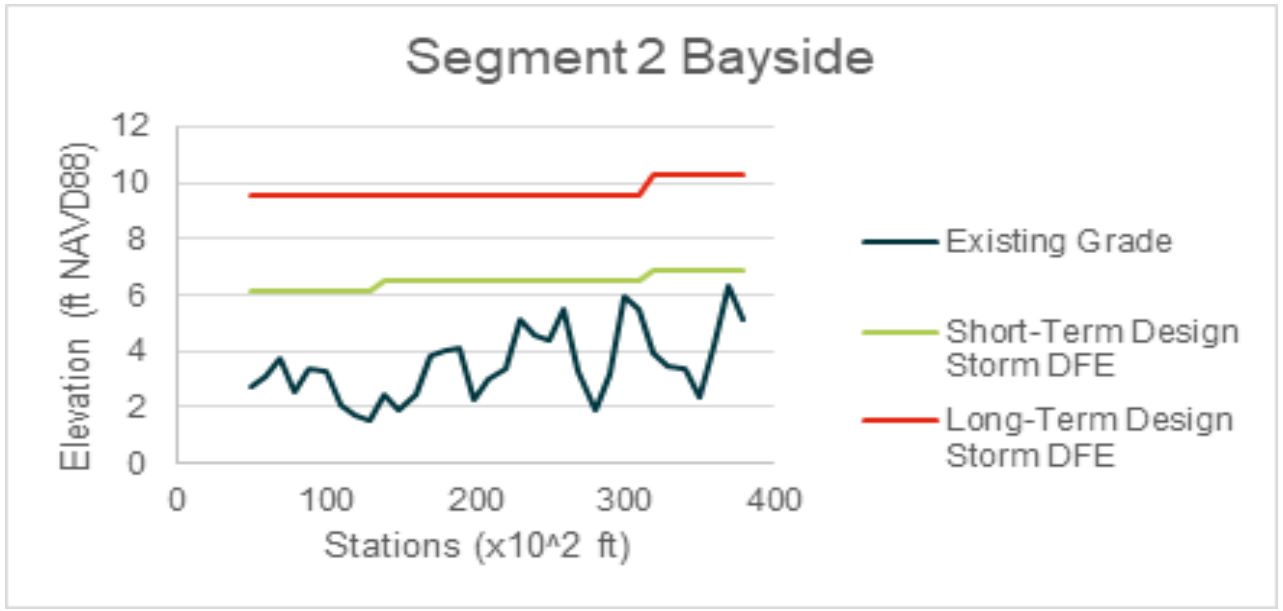
Town of Dewey Beach – Segment 1 - Oceanside



Potential Flood Mitigation Measure:

- Raise SR1 and regrade any side roads or driveways that intersect. This may be possible for part of this segment. However, further study and survey work are required to determine the bounds of feasibility.
- Construct an exposed floodwall next to the road with deployables at side street entrances and any required egress points.
- Construct a structural dune along the beach on the oceanside of SR1. This option may be possible for both the short-term and long-term DFE ranges and it would not impose as much construction directly in the Town of Dewey.

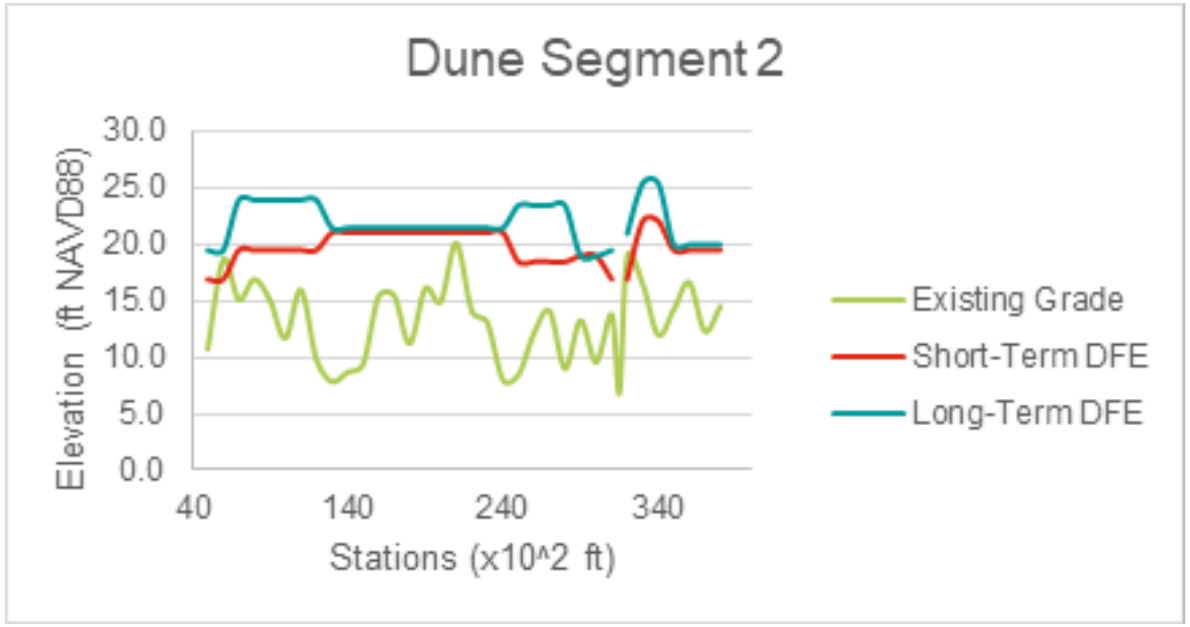
Bayberry Lane to Dune Road – Segment 2 - Bayside



Potential Flood Mitigation Measure:

- Construct an exposed or buried floodwall next to the road with deployables at side street entrances and any required egress points. This may be possible for both the short-term and long-term DFE ranges.
- Raise SR1 and regrade any connected roads or driveways accordingly. This may be possible for part of this segment. However, further study and survey work are required to determine the bounds of feasibility.
- Reroute SR1 into the Bay and around the town and regrade any required side streets. This is a very drastic option, but it would provide an alternate evacuation route. The exact ending point of this option requires further study and analysis.

Bayberry Lane to Dune Road – Segment 2 - Oceanside



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