



# SWAMPSCOTT PIER PROJECT

HARBOR & WATERFRONT ADVISORY COMMITTEE

February 3, 2022

# Status Updates

- What we heard at the last meeting:
  - Dredging of the harbor is most important to the Fishermen
  - Concerns about splitting up the beach by constructing pier to the west, maintaining connection between Fish House and Pier
- Big Storm Event on 1/17
- Round 1 Geotech Soil Sampling Occurred on 1/18
- Group Meeting with Regulators – 1/11/22 – EPA, MA DEP, MEPA, DMF, CZM
  - Primarily Related to Eelgrass Concerns



# January 17<sup>th</sup> Storm Event

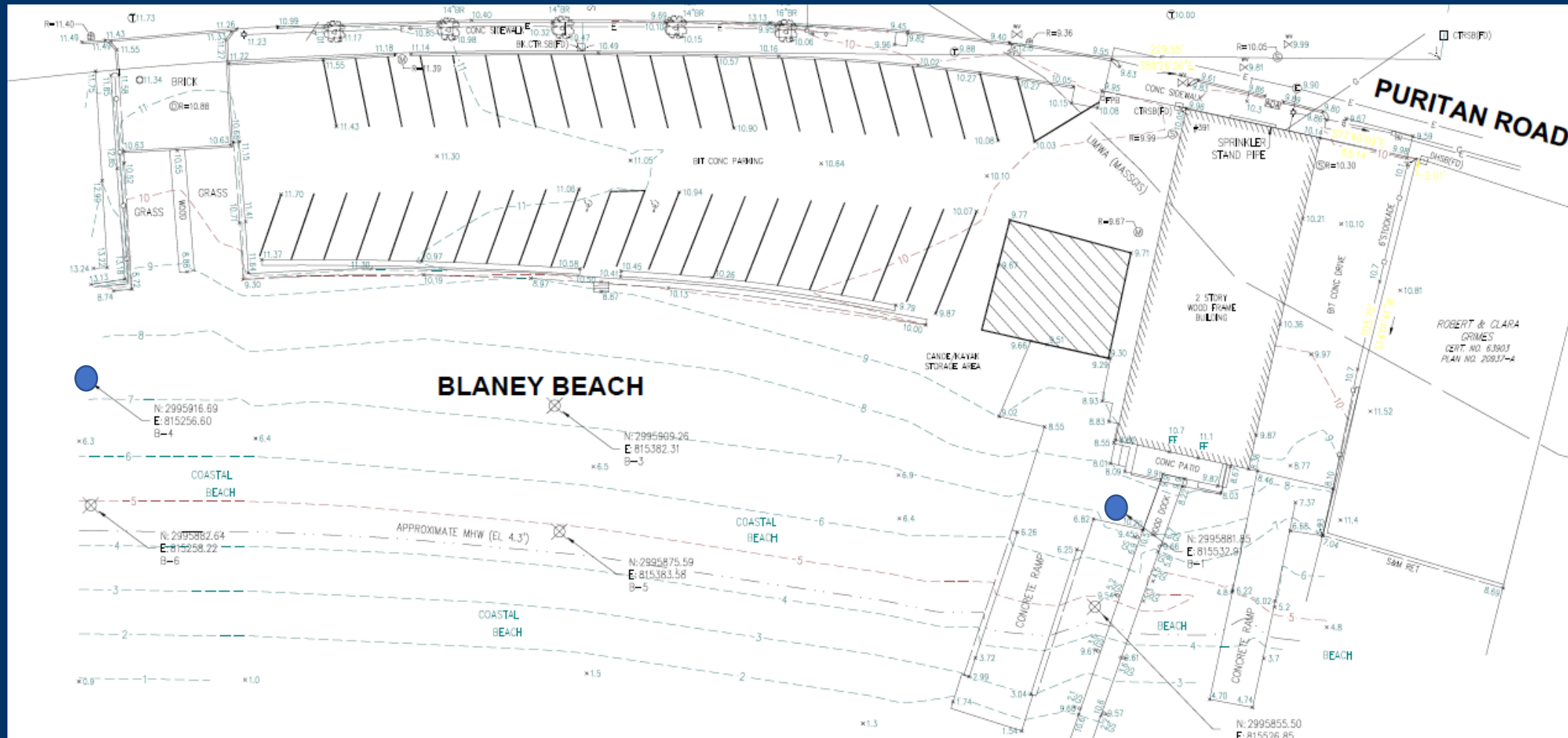




# January 17<sup>th</sup> Storm Event



# Round 1 Geotech Boring Program



# Boring Program

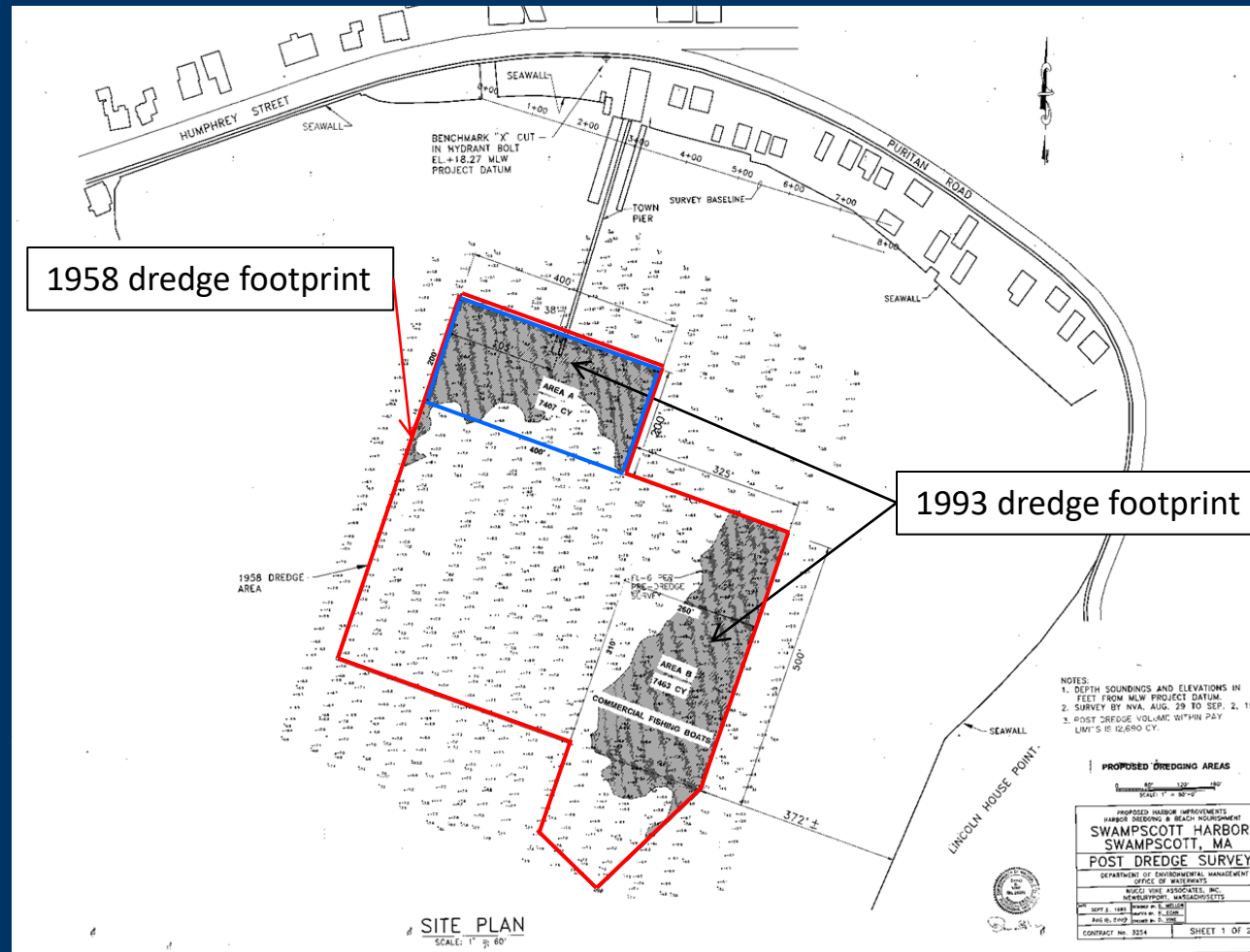


2 Boreholes- Similar profiles:

- 10-12 ft – Sand
- 15-17 ft – Med to stiff clay (one layer of soft clay)
- No refusal to 27 ft below grade – Bedrock not Encountered
- Typical Peri-glacial Subsurface Conditions



# HISTORIC HARBOR DREDGING

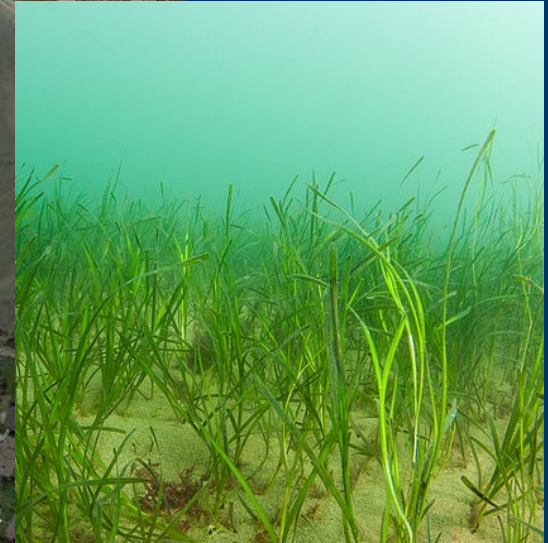
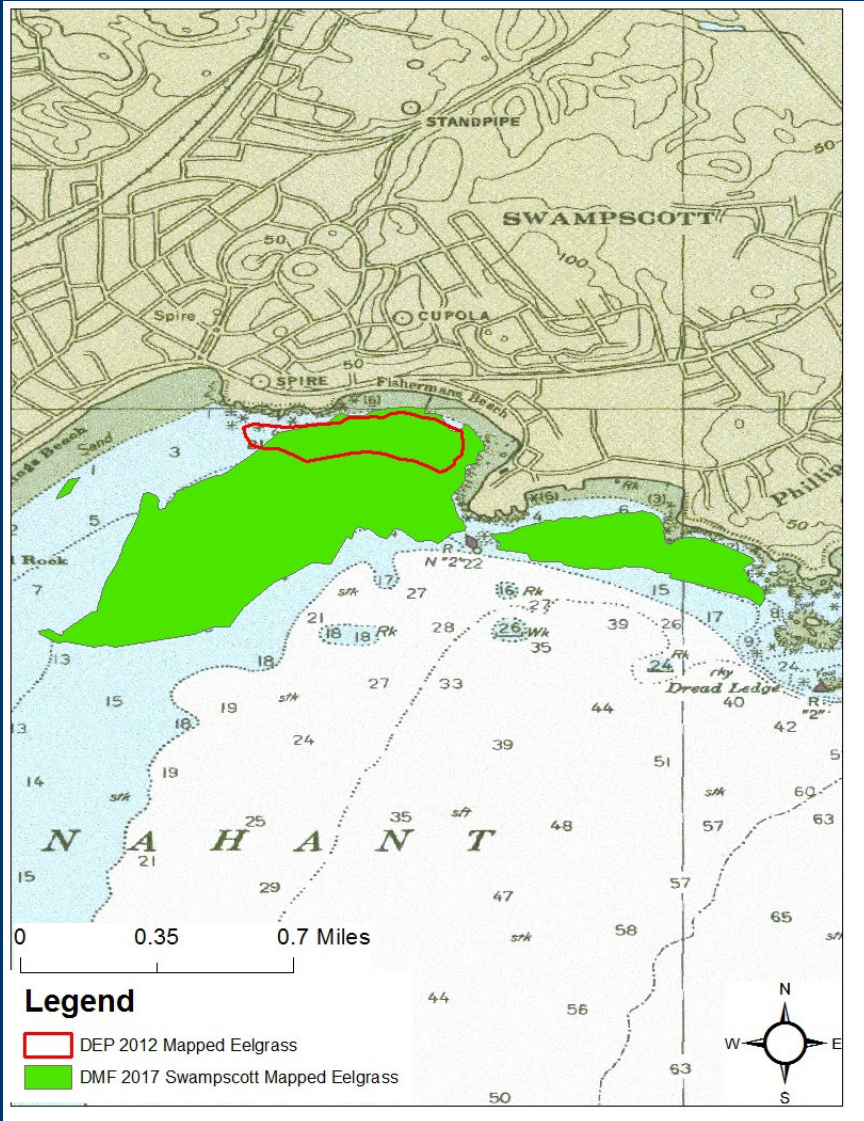


Dredging has occurred in the Harbor historically twice:

- 1958 – As outlined in red
- 1993 – As shaded in gray



# Eelgrass





# Eelgrass

- Eelgrass is protected under state and federal statutes as it:
  - Provides habitat and shelter to juvenile fish and invertebrates
  - Improves water quality by absorbing nutrients
  - Protects shorelines from erosion
- Regulators review projects through the objective of
  - Avoid and Minimize, Mitigation – regulators against (and costly)
- Eelgrass is impacted from dredging, vessel moorings and shading from direct sunlight.
- Raising structure and orienting north-south, minimizes shade
- Need updated surveys- at peak biomass- Summertime
  - Location, Density, and Health of Eelgrass



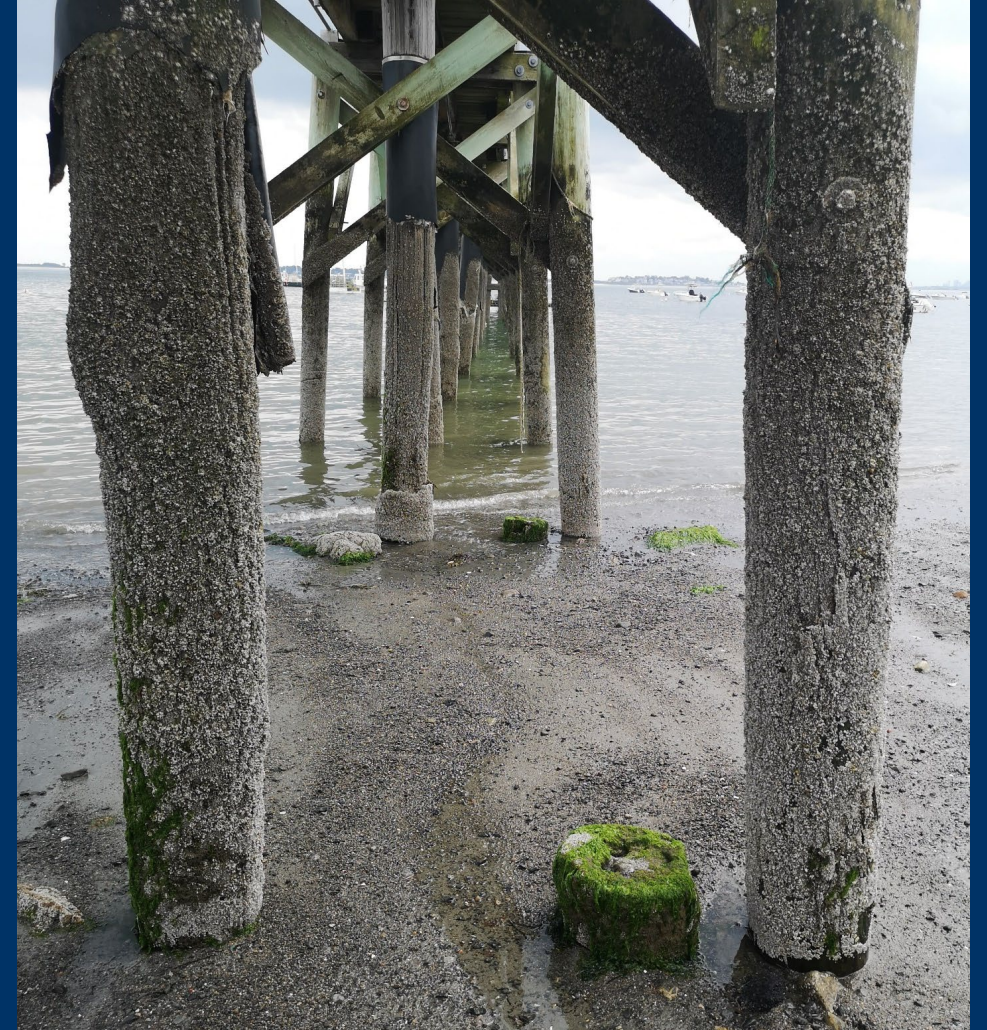
# Existing Structure

- Timber Structure – Completed in 1961 – 61 years old
  - Original Design Life would have been indicated in original design report- Unavailable
  - Typical Design Life for Timber Pile Supported Marine Structures – 50 yrs
    - Does not mean Structure is unsafe or structurally unsound after 50 yrs
    - Structure needs to be inspected, monitored and maintained
    - Balance of replacement cost versus continual maintenance costs
- Timber is a non-homogenous material, and can weather and age differently within the same structure
  - Need to look at Piles, Caps, Stringers, Braces, Deck, and mudline
  - Review over time, baseline inspection versus subsequent inspections



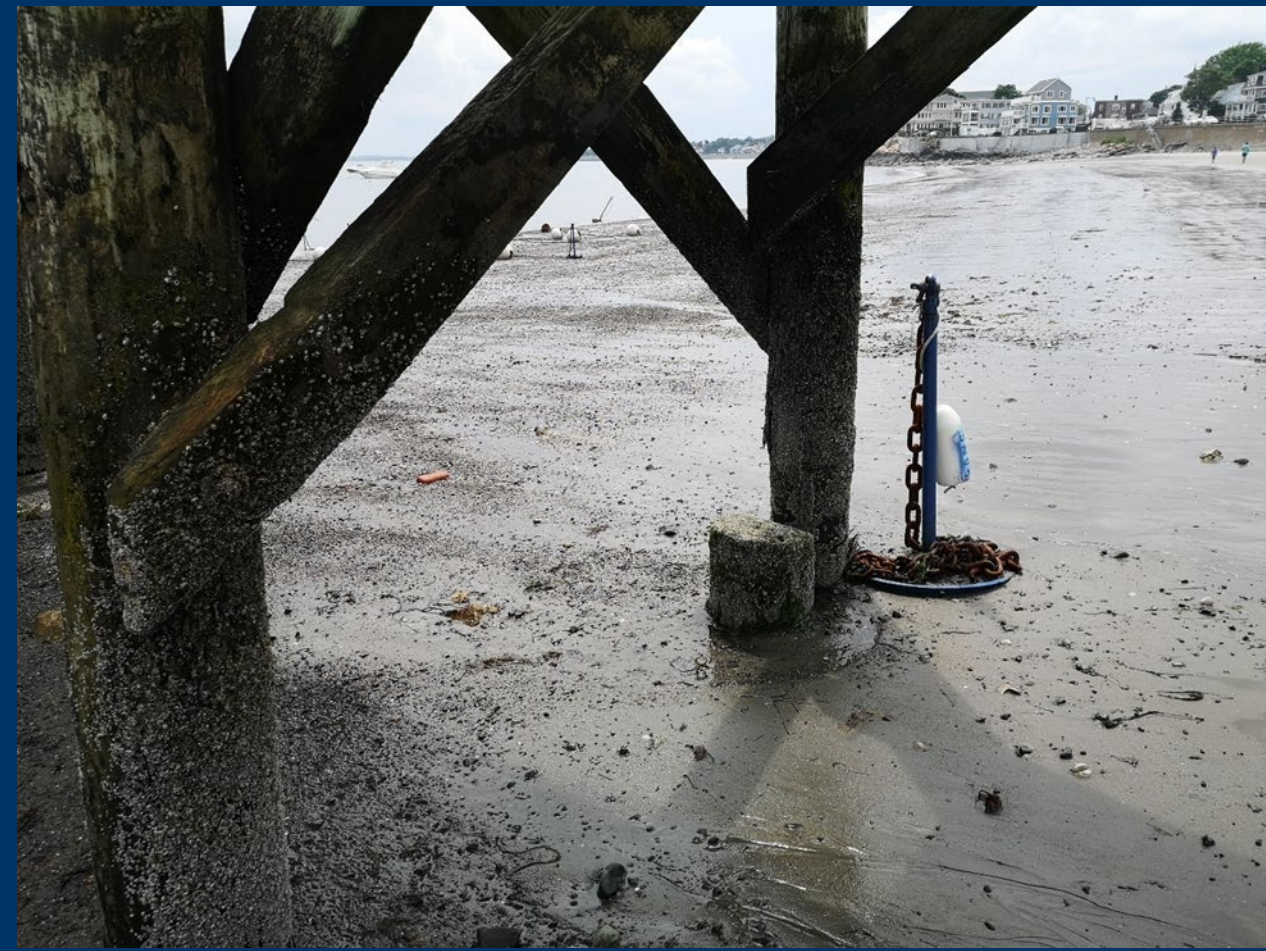
# Existing Structure

A complete structural assessment (consistent with the ASCE Waterfront Facilities Assessment Manual), has not been completed, However, we have performed above water and intertidal area documentation



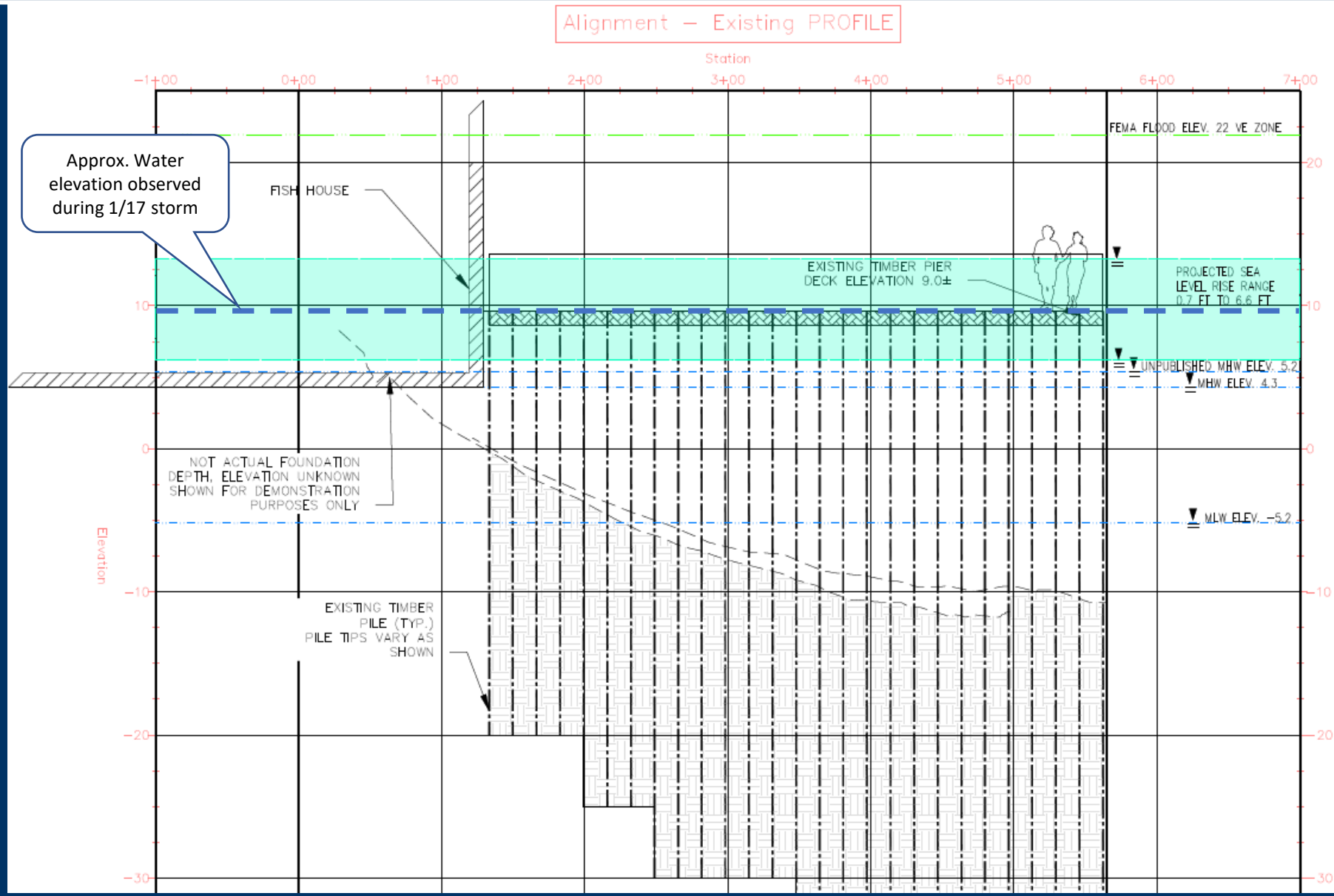


# Existing Structure





# Structure Height



# Next Steps

- Eelgrass Documentation Plan
  - With Buy-in from Regulators
  - Regulators will require study be conducted during Peak Biomass-Summer
- Bathymetric Survey
- Review Geotechnical Information for Structure
- Adjust Timeline

