

Town of Marblehead's Municipal Shipyard Resiliency Improvements Project

Harbors & Waters Board
MEPA- EEA#16713

December 4, 2023



Project Area

Town Properties:

1. Parker's Boat Yard
2. Marblehead Municipal Light Department
3. Hammond Park
4. Commercial Street Pier
5. Marblehead Yacht Club
6. Cliff Street Boat Yard



Office of Coastal Zone Management Financial Assistance



Issues Affecting the Project Area

Waterfront structures are degraded and in need of investment



Deeper and more frequent flooding is occurring and predicted to increase



Public access along the waterfront is limited and disconnected





Project Goals and Proposed Improvements

Mitigate long-term risks from sea level rise, storm surge, and waves

- Raising seawalls, boatyards, and park to mitigate tidal and storm surge flooding
- Installing wave attenuating floats to mitigate wave overtopping risks.

Support existing water-dependent, industrial, and recreational uses

- Repaving boatyards, improving commercial vehicle access, increasing open space, and expanding dockage

Enhance public access to and across the waterfront

- Creating a continuous, safe, and accessible waterfront pathway connecting Parker's Boatyard through Hammond Park to Cliff Street

Resilient Design Standards



Resilient MA

Climate Change Clearinghouse for the Commonwealth

Massachusetts State Hazard Mitigation & Climate Adaptation Plan



Climate Resilience Design Standards & Guidelines

Recommended Design Standards for Seawalls



Sea Level Rise/Storm Surge

Target Planning Horizon: 2070



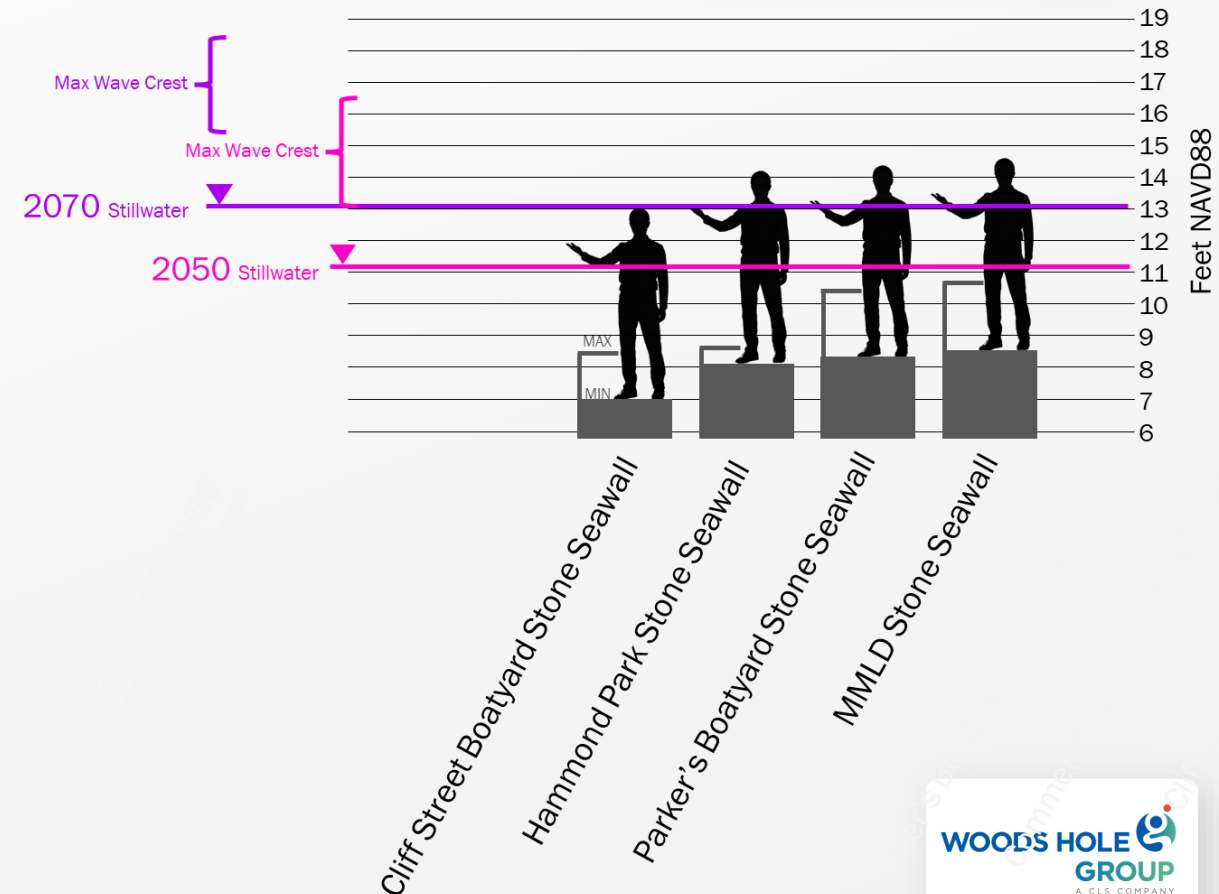
Intermediate Planning Horizon: 2050

Return Period: 50-yr (2%)



*Design to Intermediate horizon should include a plan for further adaptation to Target

50-Year Coastal Design Storm



MEPA Thresholds Triggered EENF

Expanded Environmental Notification Form

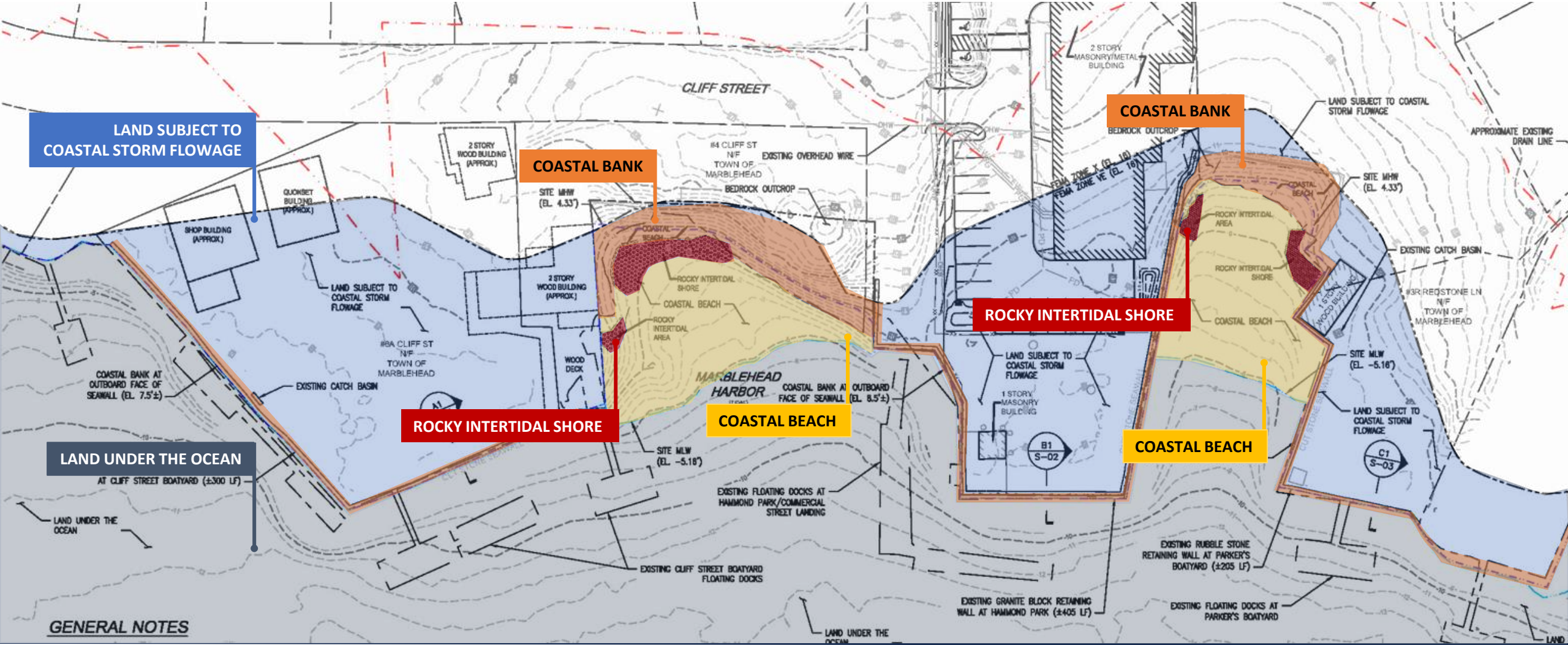
1. *301 CMR 11.0(3)(b)1.a*, alters a coastal bank (existing seawalls)
2. *301 CMR 11.03(3)(b)1.e* involves the expansion of an existing structure in a velocity zone
3. *301 CMR 11.01(3)(b)6* reconstructs existing solid fill structure of 1,000 or more square foot base area
4. *301 CMR 11.03 (10)(b)1*. demolishes structures included in the Inventory of Historic and Archaeological Assets of the Commonwealth
5. Using State financial assistance

Environmental Impact Report

Located within 1 mile radius of Environmental Justice community



Resource Areas



Existing Conditions

Municipal Shipyard Resiliency Improvements

Element #1: Seawalls - Provide major coastal resiliency benefits.

Element #2: Upland Areas of Boatyards and Hammond Park

Fill is required for flood control and to support the resilience of the raised seawalls to wave overtopping hazards.

Element #3: Floating Wave Attenuating Docks

Eight docks with pile anchors have the least permanent impacts to land under the ocean. In combination with Element #1, these improvements provide major coastal resiliency benefits.

Element #4: Buildings and Associated Infrastructure

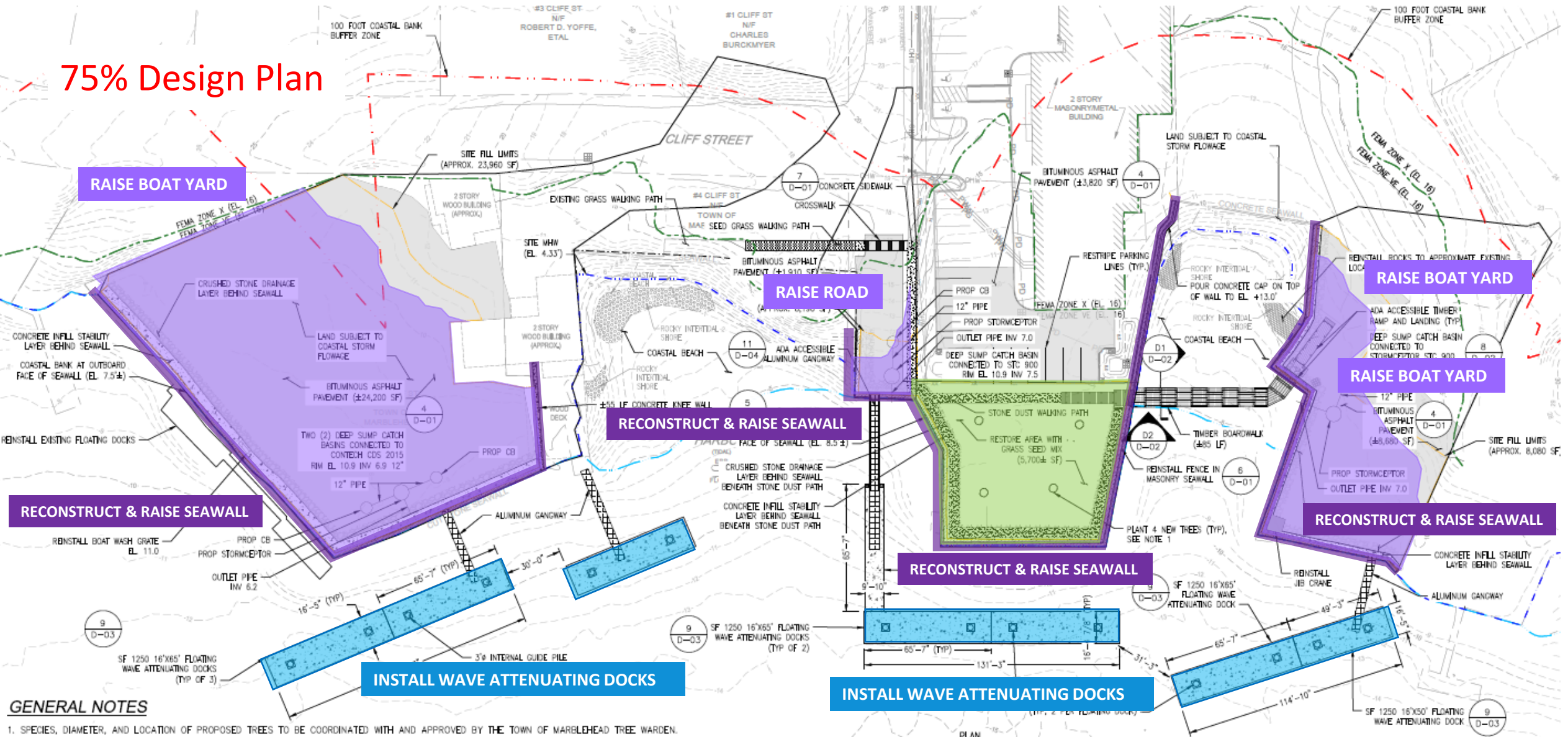
Removal of existing buildings is proposed, reducing the area of vulnerable structures located in land subject to coastal storm flowage. Impacts to the jib crane, which will be reinstalled in land subject to coastal storm flowage, will be minimized by elevating it on a concrete pad.

Element #5: Public Access Infrastructure

Selected alternatives provide major benefits for public safety, ADA, waterfront access and connectivity, and continued water-dependent and industrial uses.

Mitigate long-term risks from sea level rise, storm surge, and waves

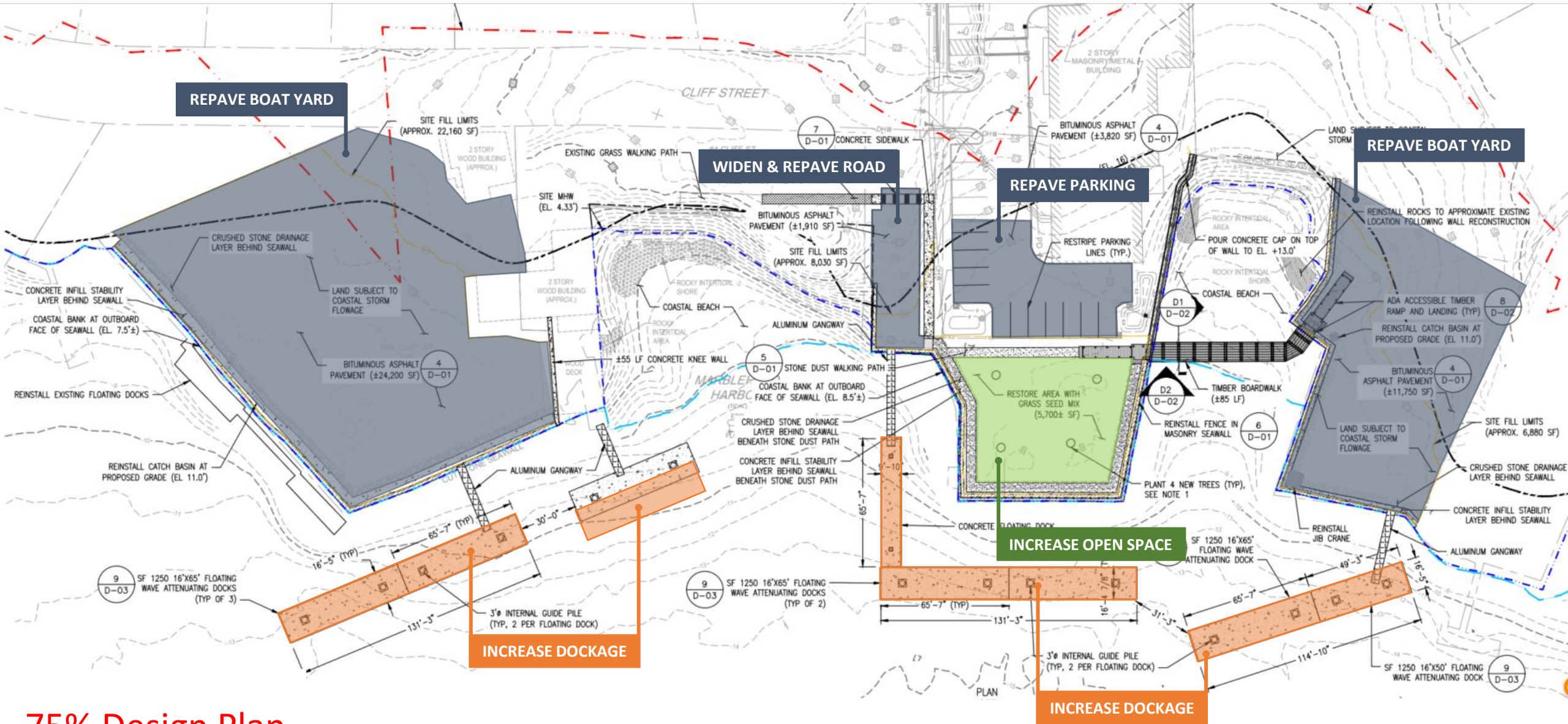
75% Design Plan



GENERAL NOTES

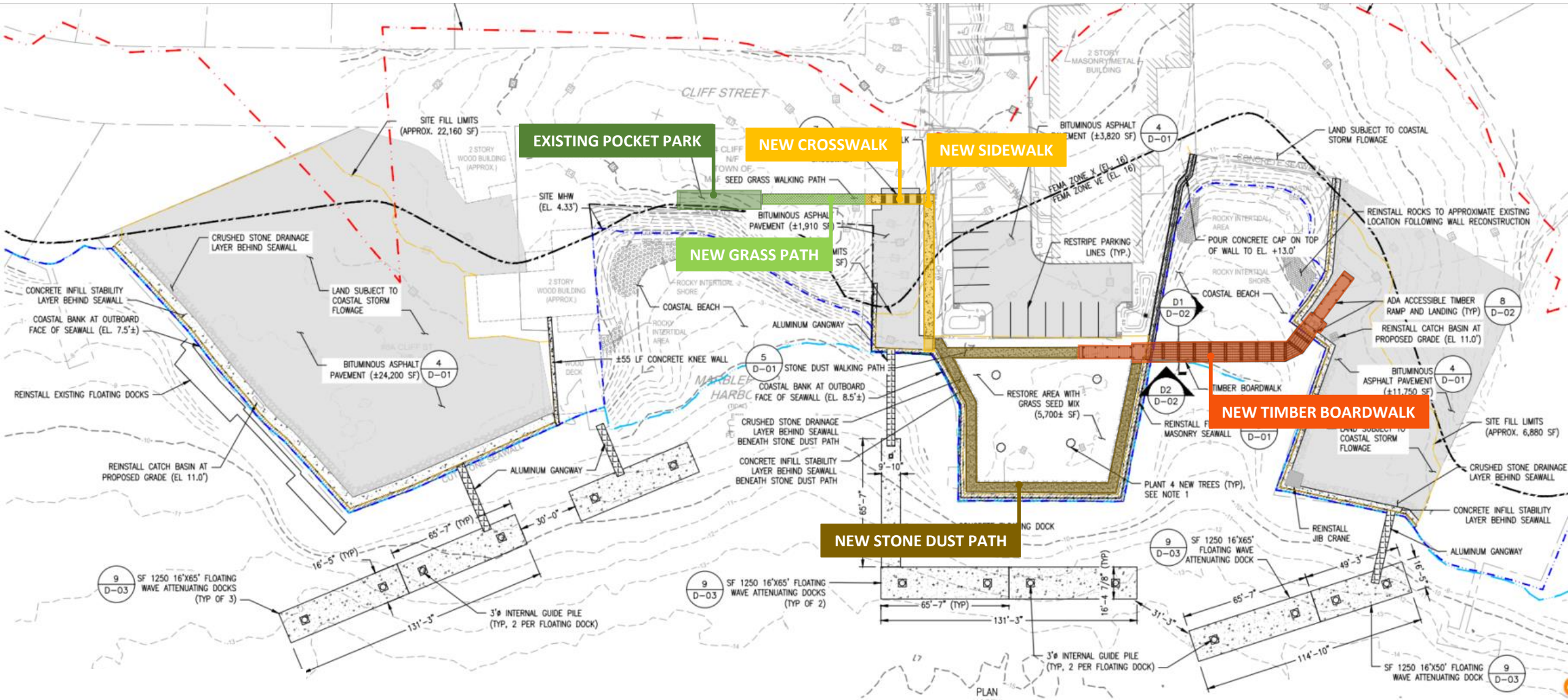
1. SPECIES, DIAMETER, AND LOCATION OF PROPOSED TREES TO BE COORDINATED WITH AND APPROVED BY THE TOWN OF MARBLEHEAD TREE WARDEN.

Support existing water-dependent, industrial, and recreational uses



75% Design Plan

Enhance public access to and across the waterfront



75% Design Plan

Permanent impacts to historic structures



QUONSET HUT (MAR.1637)
STORAGE SHED (MAR.1636)



SHIPYARD SHED (MAR.1677)



STONE DOCK (MAR.933) (MAR.934)
SHIPYARD WHARF (MAR.937)
DEEPWATER DOCK (MAR.938)



PUMP HOUSE (MAR.1663)

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Permitting Process – Expect to go into 2024-2025

#1: MEPA – SEIR Single Environmental Notification Form

#2: Conservation Commission NOI Upland Areas of Boatyards and Hammond Park

Fill is required for flood control and to support the resilience of the raised seawalls to wave overtopping hazards. proposed fill will, uniquely, be in a self-contained floodplain.

Addition of fill is expected to have no negative redirection of wave energy or flow to other properties.

Fill will not be used to enable new development of high risk and non-water dependent buildings and uses.

#3: Chapter 91 Protects the Public's Interest in Waterways of the Commonwealth

Encourages water-dependent uses and public access along and to the water.

Ch91 authorization is required for structures in tidelands and certain rivers and streams which include piers, wharves, floats, retaining walls, revetments, pilings, bridges, dams and waterfront buildings (if on filled lands or over water).

#4: Army Corps of Engineers General Permit

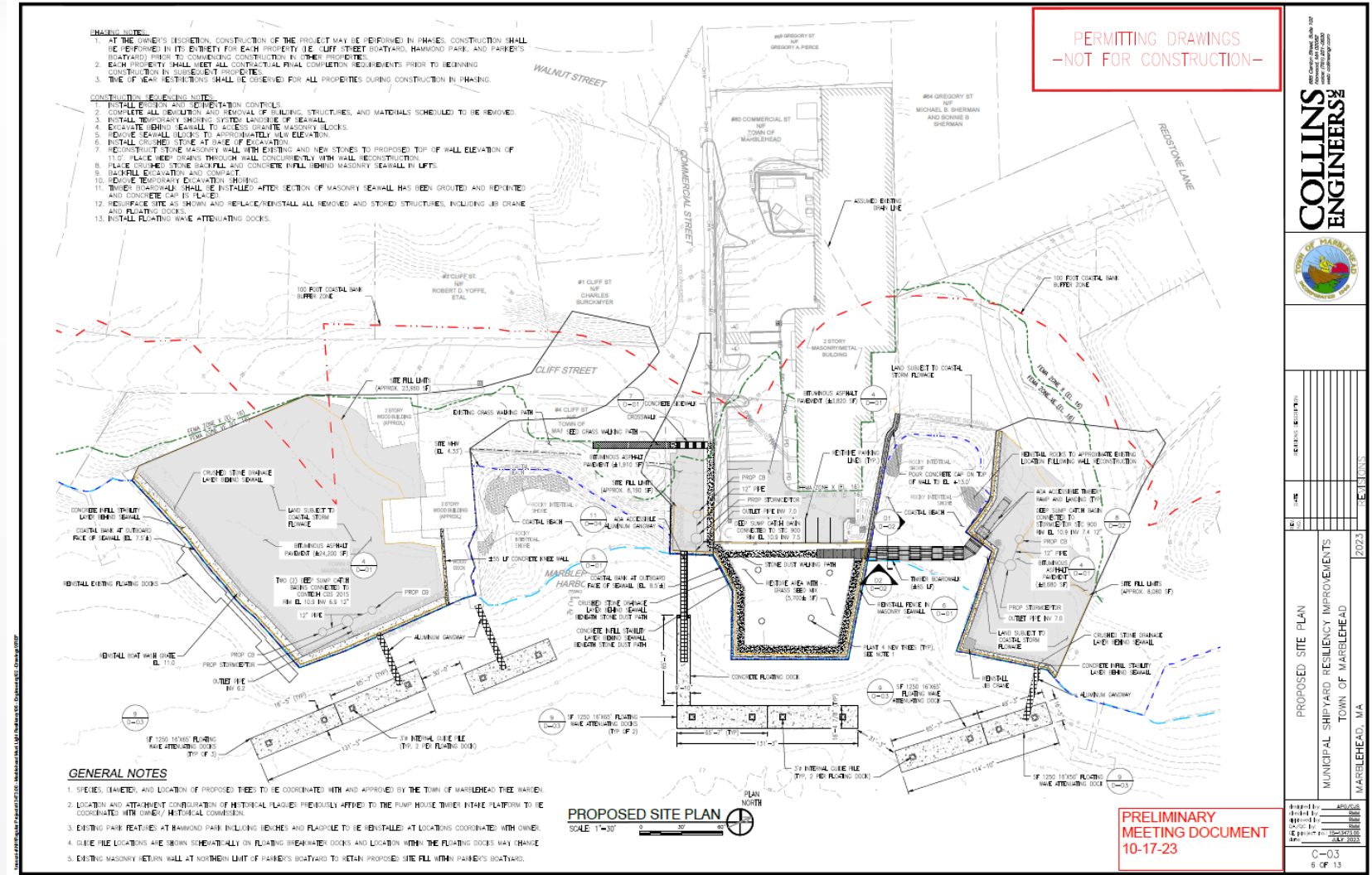
Funding Proposed Plan - 75% Design & Cost Estimates

› Cliff Street Boatyard
\$4.6M

› Hammond/MMLD/Commercial
\$4.1M including boardwalk

› Parker's Boatyard
\$4.8M

› TOTAL
\$13.5M



Project Impacts During Construction

- *When will construction take place?*
 - Dependent on funding
 - Construction could last between 12-16 months
 - Advantage of doing projects concurrently could possibly reduce time by a month or two and limits mobilization costs with barges working between sites.
 - Cliff Street Boatyard first priority since in the worse condition/lowest
 - Hammond/MMLD/Commercial Street
 - Parker's Boatyard
 - Docks and Boardwalk constructed after seawalls completed
- *Chapter 91 licensing standards about temporarily displacing existing water-dependent uses during construction.*
 - Goal is to maintain access and limit the disruption
 - Schedule construction activities not to impact the use of existing gangways and floating docks
 - Time of year restrictions for in water work (pile driving) - limited between November and February
 - Work to occur, to the maximum extent practicable, during off-season shutdown periods
 - Need to work with operators/operations/users to minimize impacts

Thank you

Questions & Discussion



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