



Staff Report

TO: Board of Harbor Commissioners

FROM: John Moren, Director of Operations
THRU: James B. Pruet, General Manager

DATE: November 18, 2020

SUBJECT: Pillar Point Harbor West Trail Living Shoreline Protection Project – Project Status Update and Proposal

Requested Action/Issue:

Receive a presentation from consultants on the Pillar Point Harbor West Trail Shoreline Protection Project (Project). Consider a proposal for engineering and permitting services for the Project. Approve increase in Capital Expenditure Appropriations of \$114,904 to be funded by available working capital. These costs (not to exceed) include the following:

- \$24,976 to Go Native for Native Plant Germination for Dune and Biofiltration Basin
- \$4,290 to MTS for Eelgrass survey
- \$47,798 to GHD for Pre-construction engineering, permitting and project management.
- \$24,976 to ESA for Pre-construction engineering support & CEQA finalization
- \$10,500 to Bradley Damitz for permitting coordination and project planning assistance
- \$3,920 to Dr. Peter Baye for Habitat Restoration and Monitoring Plan development & Native Plant Germination oversight.

Recommended Motion:

Motion: Approve an increase in Capital Expenditure Appropriations of an amount not to exceed \$114,904 to cover anticipated additional soft costs for the GHD Team to continue efforts on the West Trail Living Shoreline Protection Project.

Policy Implications:

Consistent with the District's ongoing efforts to provide long term stability, functionality and safe public use of the West Trail while protecting natural resources and guaranteeing access for emergency vehicles.

Background:

Following the construction of the Pillar Point Harbor (PPH) outer breakwaters 1959-1961, the shoreline dynamics in and adjacent to the harbor have been altered, resulting in loss of beach habitat fronting portions of the West Trail, and ultimately leading to severe erosion of the trail. This Project focuses on repairing and providing for protection of an approximately 300 ft length of trail and shoreline shown in Figure 1 and restoring the historic beach that previously existed in this area. This particular portion of the trail (highlighted in red) has been subject to erosion and emergency repairs since 1994. The most recent repairs occurred in January 2016 at the corrugated metal pipe (CMP) outfall. Under emergency permits, SMCHD replaced the previous drainage basin at the toe of the hillside along the western edge of the trail and associated dual drainage pipes with a larger 36-inch diameter reinforced concrete pipe. Based on the conditions of the Emergency Coastal Development Permit issued by the California Coastal Commission authorizing the culvert repair, this repair is temporary until a long-term solution could be implemented. The West Trail Living Shoreline Project represents this required long-term solution.

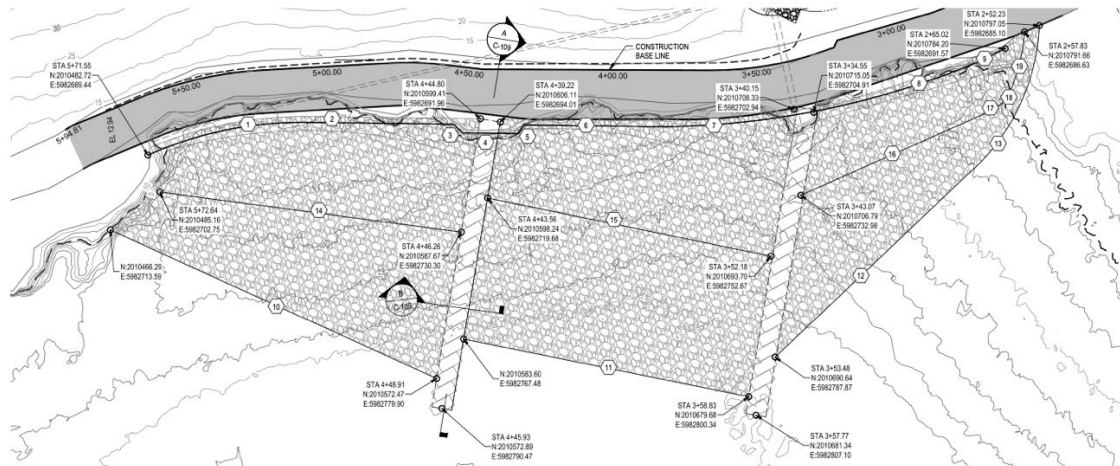


Figure 1: West Trail Living Shoreline Location

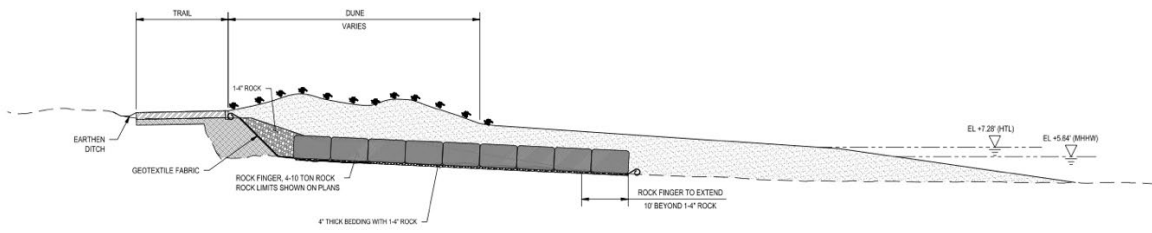
The Project entails the construction of a living shoreline to protect and restore the severely eroded segment of the West Trail shoreline and also addresses drainage issues in the vicinity of the Project. The overall Project purpose is to provide multiple ecological and community benefits by implementing a nature-based shoreline solution that increases the resilience of the West Trail to coastal erosion, extreme storms, and sea level rise. Specifically, the Project will meet the following objectives:

- Stabilize the trail to maintain public access for at least 25 years with minimal maintenance.
- Upgrade the function of the existing stormwater system so it functions adequately for a 50-year design event with minimal maintenance.

- Incorporate natural design features and/ or living shoreline techniques to the maximum extent possible, while minimizing the use of hard armoring.
- Enhance surrounding ecological systems in the long-term by planting native vegetation.
- Align with the natural aesthetics of the landscape.
It involves a nourished beach with an elevated dune adjacent to the trail. Buried beneath the surface of the shoreline and dune would be a cobble berm (otherwise known as a dynamic revetment) and two rock fingers extending perpendicular from the trail (See *Figure 2*). The proposed project also includes storm water improvements needed to address the aesthetics, function and maintenance needs of the existing storm drain system.



1 ROCK PLAN
C-201 1" = 20'



A TYPICAL ROCK FINGER ELEVATION
C-109 1" = 20'

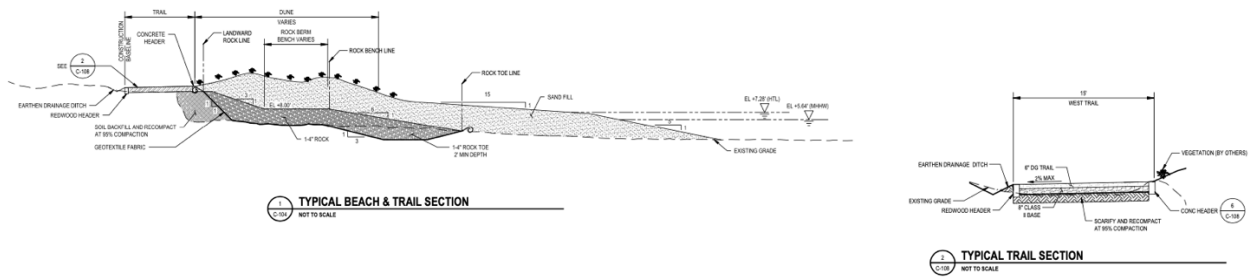


Figure 2: Proposed Living Shoreline Design



Figure 3. Existing Condition and Visualization of Post-Construction Condition

Ecological restoration of native beach and foredune vegetation is another key element of the Project. A specific palette of native plants and grasses has been selected for the site and will be propagated and planted on the constructed beach and foredunes. Additional native plants have been selected for planting in the biofiltration basin (drainage ditch) and in the hillside above the trail. The overall ecological goal is to re-establish a resilient, dynamic native beach and foredune plant community typical of the San Mateo – Santa Cruz coast, modified for the relatively low-energy wind and wave environment of the east-facing embayed pocket beach. The plants have been

specifically selected to provide stabilization and resilience of the shoreline and to enhance biological diversity.

The GHD-led Team, which includes partners ESA, Brad Damitz and others, have reached the 100% engineering design stage of this Project and are nearing completion of the environmental review and permit acquisition process. District staff intends to put the Project out to bid for construction as soon as permits have been issued, or prior to that should we have indication from the agencies that changes to the proposed design will not be significant or required at all for the permitted design. The Project Team submitted permit applications and required studies and documentation to the California Coastal Commission, Regional Water Quality Control Board and U.S. Army Corps of Engineers in July of this year. However, agency review and processing of these permits have been slower than anticipated, due to COVID work from home orders and staff shortages. These conditions resulted in delays in securing Project permits, which are now anticipated to be issued by early 2021. The Project, which involves habitat restoration and other elements that will provide ecological benefits, is viewed favorably by the permitting agencies, therefore we are confident that it will be approved.

Due to the COVID-related delays, unanticipated analyses in the form of additional reports and surveys being required by regulatory agencies, and the need to initiate seed collection and propagation of native plants, the GHD Team is requesting additional budget to complete items that they have identified as being needed to progress the Project through pre-construction (i.e., through the bidding process and selection of a contractor). GHD's proposed scope of work, fee, and schedule are presented in the attached proposal.

Recommended Motion:

Staff recommends the Board approve an increase in Capital Expenditure Appropriations of an amount not to exceed \$114,904 to cover anticipated additional soft costs for the GHD Team to continue efforts on the West Trail Shoreline Protection Project.

Attachments:

1. [West Trail Living Shoreline Project Update Presentation](#)
2. [GHD Proposal for Pre-Construction Services to support the West Trail Living Shoreline Protection Project.](#)