



# Pillar Point Harbor West Trail Living Shoreline Project

## 1. Background

The Project entails the construction of a living shoreline to protect and restore the severely eroded segment of Pillar Point Harbor's (PPH) West Trail. It 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. The living shoreline is needed to protect the trail from chronic erosion and ensure access to PPH's West shore and Mavericks Beach. 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 attached construction plans). The project is located along the west trail at Pillar Point Harbor (approximate location coordinates: 37°29'58.69"N; 122°29'45.09"W). The proposed project also includes storm water improvements needed to address the aesthetics, function and maintenance needs of the existing storm drain system.

The current construction plans (not for construction) are attached for information.

## 2. Brief history of the site:

Following the construction of the PPH outer breakwaters 1959-1961, the shoreline dynamics have been altered. This Project focuses on an approximately 300 ft length of trail and shoreline. This particular portion of the trail 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. 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 understood to be temporary.

## 3. Description of the surrounding area:

The West Trail is a north-south oriented trail located along the western edge of Pillar Point Harbor. It provides a pedestrian pathway from the West Point Avenue access and parking area to the Pillar Point outer harbor and Maverick's Beach. It is a popular public access area that is used on a daily basis by pedestrians, dog owners, surfers and other recreationists.

## 4. Living Shoreline Project details:

The Project will entail import of up to:

- 8,000 CY of sand to create beach and dune
- 4,000 CY of 1-4" diameter rock
- 280 tons of 4 -10 ton stones

The Project will beneficially reuse sand from local sources to construct the beach and dune. Specifically, 1,600 CY from the Boat Launch Ramp dredging project is proposed to be used, with the remaining 7,000 CY sourced from a 1.67 acre site within the harbor near the project.

## 5. Overview of Proposed Drainage Improvements:

The proposed project also includes storm water improvements needed to address the aesthetics, function and maintenance needs of the existing storm drain system. The proposed solution encompasses:

- Removing and replacing a damaged concrete ditch on the bluff.
- Removing the existing corrugated metal pipe (CMP) pipe and replacing with a concrete channel, check dam (for steep slopes) and concrete energy dissipator.
- Creation of a bioretention basin with native plants that will feed captured stormwater north towards the Pillar Point Marsh.
- Improving one existing overflow discharge pipe from the new basin to feed water to upland portions of Pillar Point Marsh.
- Removing existing 36-inch reinforced concrete pipe outfall which currently discharges directly into the harbor.

## 6. Available Project Reference Reports

The following reference documents and reports are available for the project:

- Project Construction Plans
- Wetland/Waters of U.S. and State Delineation Report
- Biological Assessment Report
- Draft CEQA Initial Study/MND
- Sampling and Analysis Plan Results Report
- Technical Memo: Analysis of Proposed Stormwater Improvements
- Technical Memo: Avian Rookery Survey Results
- Technical Memo: Geomorphic Assessment and Conceptual Design of Beach and Dunes

## 7. Construction Bid

Following selection of prequalified bidders for the Project the District will invite those Bidders who are successfully prequalified to bid on the Project, at that time Bidders will be provided a full set of plans, specifications, and other contract documents. A 4-week bid period is anticipated.