



Staff Report

TO: Board of Harbor Commissioners

FROM: John Moren, Director of Operations

DATE: March 15, 2017

SUBJECT: Pillar Point Harbor West Trail Erosion Protection Project and Recent Mudslide

Recommendation/Motion:

Information only.

- Update on the Pillar Point Harbor (PPH) West Trail Erosion Protection Project.
- Update on the PPH West Trail bluff erosion and mudslide, which caused a partial closure of the West Trail for public safety.

Policy Implications:

Consistent with ongoing policy efforts to provide long term stability, functionality and safe public use of the West Trail while protecting natural resources.

Fiscal Implications/Budget Status:

On April 4, 2016 this Commission approved a contract with GHD for an amount not-to-exceed \$184,086.00 for design, engineering and environmental compliance assistance with the repair of the damaged trail areas, confirmation of drainage conditions inland of the West Trail culvert, and to prepare and submit a Coastal Development Permit (CDP) application packet to the California Coastal Commission (CCC), pursuant to the conditions of the Emergency Coastal Development Permit (ECDP) issued for the culvert repair. The not-to-exceed amount was not guaranteed and was based on actual services provided. As of this date \$120,931.89 has been invoiced for work completed. An additional design/engineering task proposal for GHD to provide a new ECDP and long term bluff stability alternatives have not yet been received. If approved by the Board, this will increase the scope and agreement dollar amount by a yet to be determined figure. Staff will come back to the Board for approval once a new proposal for design alternatives for bluff stabilization have been received.

Background:

Initially, in 2012 GHD developed a Draft Condition Survey Report which identified eroded areas along the West Trail coast.

In 2014 GHD was contracted to provide environmental services, prepare construction documents (plans, specifications, and estimate), and provide bidding and construction support services for the culvert and West Trail Project. While certain elements of this project were completed, the entire project was not finalized, as this Commission, in response to CCC actions, diverted efforts to an emergency repair of the West Trail at the drainage outlet culvert. This culvert under the West Trail was eroded to the point of rendering the trail unsafe for public use. The CCC provided the San Mateo County Harbor District (District) with an Emergency Coastal Development Permit (ECPD) for the Emergency West Trail Repairs on July 28, 2015. This was a temporary repair approval with the understanding that the District would act to develop a plan to design a long term method to protect the entire shoreline of the West Trail.

In March of 2016, after the emergency culvert repair was complete, GHD was asked to provide consulting services to prepare Erosion Protection Alternatives, a Sea Level Rise/Erosion Study, Landside Drainage Study, prepare and submit a CDP application and an Agency Scoping Memorandum.

The CDP application, with supporting documents, as required by the ECPD is in the process of being finalized. This includes an Alternatives Analysis considering structural and bioengineering (i.e., “soft”) solutions to diminish wave energy, impacts from varying tides, and heavy rain events. Alternatives considered consisted of, sheet pile wall, soil nail wall, retaining structures (e.g., stone rip rap, pre-cast concrete shoreline protection), planted areas, and/or a combination of soft and hard alternatives. After substantial community outreach and discussion, the Board approved moving forward with the soil nail, sculpted concrete and beach nourishment alternative for the shore side erosion protection.

On February 20th staff observed that several mudslides had occurred overnight at PPH due to the sustained rain and storms. PPH staff were able to clear most of the mudslides from pedestrian walkways with the assistance of the Oyster Point Marina staff and tractor. However, a mud/rock slide on the West Trail, approximately 600 yards west of the parking lot, could not safely be cleared. Staff erected signage on both ends of the trail blockage and at the parking lot trail entrance, closing a portion for public safety, as the bluff appeared to be possibly unstable.



On February 21st staff contacted Soil Engineers from GHD, who responded on February 23rd to conduct a professional evaluation. GHD's Geotechnical Experts prepared an evaluation report indicating that the bluff was potentially unstable and suggested this trail portion remain closed for public safety. Staff drove t-posts and installed temporary fencing and signs to deter the public from using this portion of the trail.



Staff contacted the CCC to alert them of the mudslide and that a portion of the trail had been closed for public safety. CCC reps discussed the issue and determined that an additional ECDP would be required and would be incorporated in the same CDP currently under review. GHD is currently preparing an agreement amendment proposal which will include alternatives for a long term repair and stabilization of the vertical bluff in this area.

Since the top of the bluff adjoins the USAF property fence line, staff contacted USAF to alert them that the bluff had been undermined. As part of the original CDP requirements, GHD is currently working on a topographical map clearly indicating property ownership demarcation lines. Staff also contacted the San Mateo County Office of Emergency Services and made the initial formal notification of this storm damage so eligibility could be considered for State and FEMA reimbursement funds for the bluff repair.

Summary/Recommendation:

District staff will return to the Board for consideration/approval once an agreement amendment proposal has been received from GHD to include design/engineering alternatives for a long term repair and stabilization of the vertical bluff area affected by the mud/rock slides. Based on analysis and studies provided by GHD, input from the California Coastal Commission, stakeholders and the San Mateo County Harbor District Board of Commissioners, a decision will later be made as to which alternative best meets the District's goal of providing the least environmental damaging feasible method to protect the hillside bluff and West Trail.

Attachments:

[GHD Slope Failure Evaluation Report](#)