
An aerial photograph of a coastal area. In the foreground, there are dark blue ocean waves with white foam. A sandy beach runs horizontally across the middle of the image. To the left of the beach, there is a rocky area. In the background, a paved road runs horizontally, with a dark-colored car driving on it. The area above the road is covered with green and brown vegetation. A semi-transparent white box with black text is overlaid on the beach area.

**Surfer's Beach Shoreline Protection
and Coastal Recreation
Enhancement Project**

An aerial photograph of a coastal area. At the top, a road with a car is visible. Below the road is a sandy beach with some vegetation. In the foreground, waves are breaking on the shore. The text is overlaid on a semi-transparent grey box.

Project Partners

- **County of San Mateo**
- **California Department of Transportation**
- **City of Half Moon Bay**

Consultant

- **WRECO**

Grant Funder

- **National Fish and Wildlife Foundation**

An aerial photograph of a coastal area. In the foreground, dark blue ocean waves with white foam are crashing onto a sandy beach. The beach is light-colored and appears to be eroding in some areas. In the background, a paved road runs horizontally across the frame. A dark-colored car is visible on the road. The overall scene illustrates the coastal erosion mentioned in the text.

Objective

- **The Surfer's Beach project's objectives are to:**
 - **Protect Highway 1 from coastal erosion**
 - **Construct a staircase**
 - **Formalize the "400 Feet of Danger"**

A photograph of a coastal landscape. In the foreground, there are blue ocean waves with white foam. A sandy beach runs across the middle ground. In the background, a paved road with a dark car is visible, and further back, there is a line of green and brown vegetation. The text is overlaid on a semi-transparent grey box in the center of the image.


Priorities

- **Interim project until a feasible long term solution can be established**
- **Enhance Coastal access and recreation**
- **Design to state standards**
- **Easily removable**
- **Minimal amount of beach take possible**
- **Avoid or minimize adverse impact to wetlands**

A coastal landscape featuring a paved road in the upper third, a sandy beach in the middle, and ocean waves with white foam in the foreground. The background shows some greenery and a dark car on the road. The entire scene is overlaid with a semi-transparent grey rectangle containing text.

Process

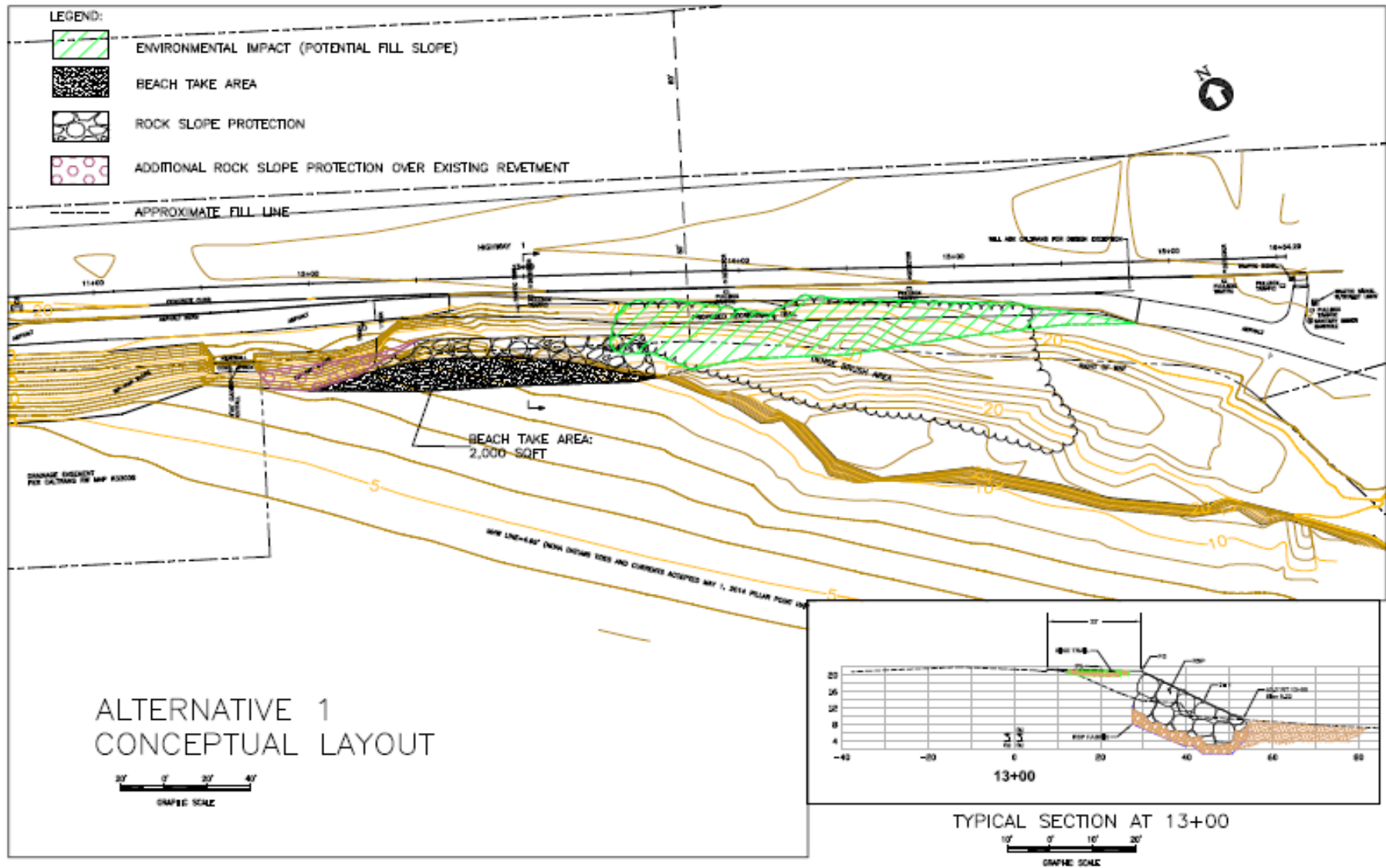
- **Environmental Studies for NEPA and CEQA**
 - Biological Assessment
 - Location Hydraulic Study
 - Water Quality Report
 - Hazardous Waste Assessment
 - Geotechnical/Paleo Study
 - Cultural Resources
 - Sand Supply Study
 - Wave Run-up Analysis
 - Sea Level Rise




Process Cont.

- **Permitting**
 - U.S. Army Corps of Engineers (404 Permit)
 - U.S. Fish and Wildlife Service
 - National Marine Fisheries Service
 - San Francisco Regional Water Quality Control Board (401)
 - California Coastal Commission
 - California Department of Transportation

Conceptual Alternative 1

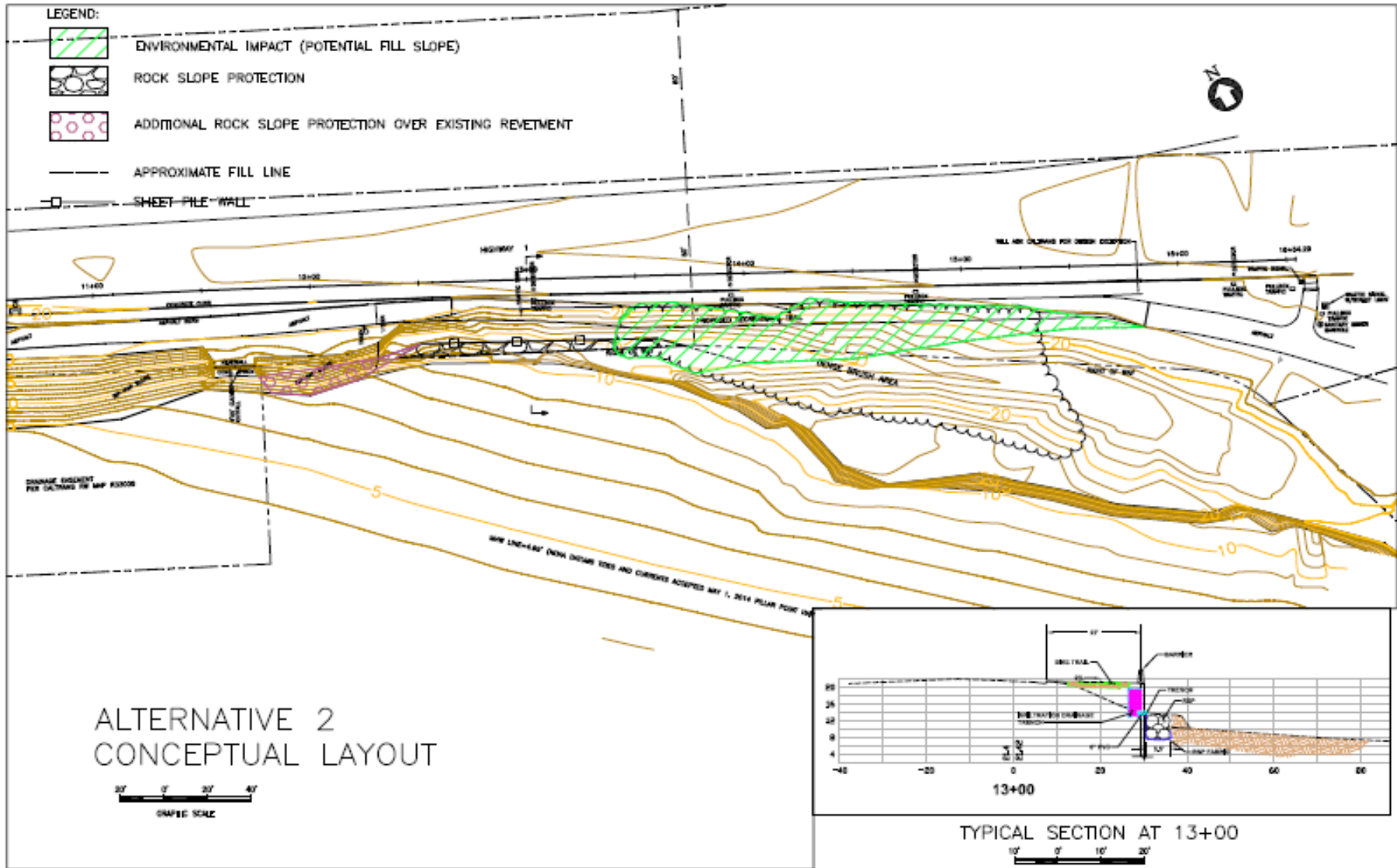


The background image shows a coastal scene. At the top, a paved road with a dark car is visible. Below the road is a sandy beach area with some sparse vegetation. In the foreground, there are white-capped waves breaking on a sandy shore. The entire scene is overlaid with a semi-transparent grey box containing text.

Conceptual Alternative 1 Cont.

- **Rock Slope Protection (RSP)**
 - Retaining wall constructed of riprap to protect roadway and embankment
 - Approximately 2,000 Square Feet of beach take
 - Minimal impact on wetlands
- **Coastal Trail Segment**
 - 22 feet wide
 - 400 feet long
- **Staircase to be incorporated in future designs**

Conceptual Alternative 2



An aerial photograph of a coastal area. In the foreground, there are blue ocean waves with white foam. Behind the waves is a sandy beach. Further back, there is a paved road with a dark car driving on it. The background shows some green vegetation and a hillside.

Conceptual Alternative 2 Cont.

- **Sheet Pile Retaining Wall/RSP Toe Protection**
 - Sheet Pile Wall to protect Highway 1
 - RSP located at toe of retaining wall
 - Little to no beach take
- **Coastal Trail Segment**
 - 22 feet wide
 - 400 feet long
- **Staircase to be incorporated in future designs**



Questions?