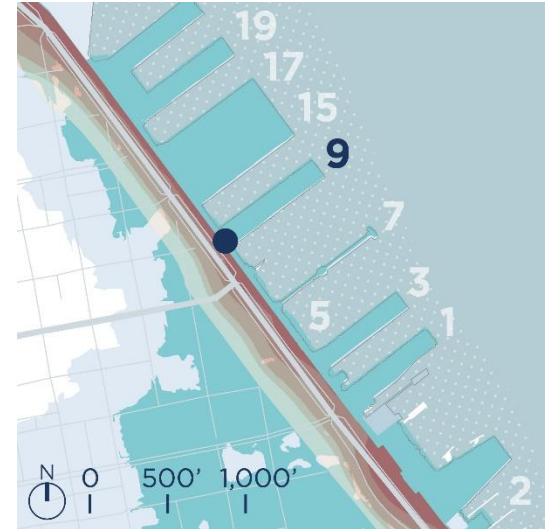


Pier 9 Bulkhead Wall and Wharf Substructure Earthquake Safety Retrofit Project



About the Project

Pier 9 is an historic finger pier that includes various business and maritime offices including the San Francisco Bar Pilots and the Water Emergency Transportation Authority (WETA) both of which berth numerous vessels at the Pier. The Port’s Multi-Hazard Risk Assessment (MHRA) determined this area to be at high earthquake risk from Seawall instability and lateral spreading that contributes to earthquake safety risks in the wharf zone. Additionally, the MHRA found high earthquake risk in the historic shed building which pre-dates seismic codes. The Pier 9 Bulkhead Wall and Wharf Substructure Earthquake Safety Retrofit Project is focused on more easily implementable solutions to improve safety by retrofitting the wharf substructure and utilities to better move with the Seawall (a separate project is focused on the shed). Because of thick Bay Muds, improvements to stabilize the Embarcadero Seawall in this area are challenging, very expensive, and better incorporated as part of a longer-term shoreline adaptation project that includes flood defenses and adaptability against future sea level rise.

Project Benefits	Project Details	Responds to Community Feedback
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Earthquake Safety <input checked="" type="checkbox"/> Disaster Response Improvement <input type="checkbox"/> Coastal Flood Defense <input type="checkbox"/> Public Space Enhancement <input checked="" type="checkbox"/> Historic Preservation <input type="checkbox"/> Bay Habitat 	<p>Status: Pre-Design</p> <p>Cost: \$5M to \$15M*</p> <p>Duration: 2 to 4 years*</p> <p>Complexity: Low</p> <p><i>*cost & duration are planning level estimates and include all costs</i></p>	<ul style="list-style-type: none"> ✓ Prioritizes life safety and emergency response. ✓ Protects and preserves historic and maritime resources. ✓ Preserves and enhances diversity of jobs. ✓ Enhances and sustains economic opportunities.