

Cut-Off & Containment



► Pete's Blu Harbor | Redwood City, CA | October 2015

Project Partners:

Contractor: B&B Hughes Construction

Engineer: Engeo, Inc.

Owner: The Pauls Corporation

Max Depth:

20 ft 6 m

Length:

15 ft 4.6 m

Products:

ShoreGuard® SG-625

PileClaw™



Background

Blu Harbor is a luxury apartment development in Redwood City, California, located on a peninsula on San Francisco Bay. The site was once a marina with an old tide "wall" made of asphalt, wood pilings, concrete rubble, laced tires and gravel. The plans required the removal of old debris and raising the entire peninsula a few feet. A new, mostly buried, 40-50 ft Deep Soil Mixing (DSM) wall would cut-off bay water, stabilize the soft soils, and supply scour protection during storms.

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Why CMI

The DSM wall located 10-15 ft from the water's edge would be in a corrosive saltwater environment. Engeo, Inc. needed a solution for protecting the top 15 ft of the soil-cement wall from saltwater decay. Due to this, Engeo rejected steel sheet piling. Instead, they specified CMI's highly corrosion resistant ShoreGuard® vinyl sheet piling. The vinyl sheets, in 15-20 ft lengths, were driven down 12-15 ft on the bay side of the DSM wall, leaving the top 3-5 ft exposed.



Performance

The contractor was thrilled to finish ahead of schedule. The developer, The Pauls Corporation, was extremely happy to see the designers' gently curving walls take form. Eventually, a promenade 12 ft wide will cap the wall, covering all but 2 ft of the sheets.



Installation

A DSM machine created the soil-cement wall and had cured before B&B Hughes Construction came to install the sheet piling. Unfortunately, the Blu Harbor Community high pressure of the DSM process caused the soil-cement mixture to fill various voids in the soft soil. This hardened "over pour" created root-shaped obstacles where the vinyl sheet piling needed to be driven. B&B Hughes, an experienced ShoreGuard® piling installer, expected potential buried obstacles.