

FORT MASON MUNICIPAL PIER STRENGTHENING

San Francisco, California

OVERVIEW

A United States Army post for more than 100 years, Fort Mason is now a National Historic Landmark and part of the Golden Gate National Recreation area in San Francisco. The marine environment had corroded the concrete pier serving the area, with the rebar on the underside of the deck suffering from corrosion. Approximately 250 4-foot diameter cassions were found to be in need of additional confinement and shear strength to resist anticipated seismic loads.

Fibrwrap Construction installed a prefabricated FRP jacket with a 2-inch angular gap around the cassions. Additional layers of wet lay-up FRP saturated in a water-curing epoxy, Tyfo® SW-1, were applied over the prefabricated jackets and then submerged in 4-foot tall sections until the cassions' entire 30-foot height was encapsulated by the jacket. The jackets were sealed at the bottom and the 2-inch angular gap was filled with non-shrink grout to provide contact between the FRP jacket and the new cassion cross section.

In addition to strengthening the cassions, Fibrwrap Construction performed repairs to the pier deck, all while keeping the pier open for business and creating minimal impact on the surrounding marine environment.



Cassions with FRP jacket