



## McNear's Beach Pier Repair and Seismic Upgrade Marin County, California

During a storm, a 100 ft by 400 ft barge broke its mooring and collided with the pier at McNear's Beach Park, damaging about half of the pier structure.

The original pier structure consisted of a precast concrete superstructure supported by slightly battered 18 inch octagonal precast, prestressed piles.

Liftech designed a replacement pier structure with details to provide significantly better seismic performance. These details included pile-to-pile cap connections designed using a fiber reinforced bearing pad, isolating the sides of the embedded pile, and unbonding the dowels for 24 inches of length. This flexible connection results in considerable elastic rotation.

Testing by the University of Washington has shown that similar connections perform significantly better during seismic loading than a classical pile connection.

Client:  
Manson/Dutra JV  
Richmond, California