

# VENOCO CARPINTERIA PIER REPAIR AND RETROFIT OF CORRODED BEAMS

Location: Carpinteria, CA

## OVERVIEW

The Venoco Inc. service pier in Carpinteria California showed severe signs of deterioration on the reinforced concrete beams running parallel to the structures primary axis. Steel corrosion produced large spalled concrete areas and this alerted the client to retain FCI to perform a design-build structural repair.

A suspended platform was constructed to provide working space for the crew, and at the same time, protect the beams from the ocean surge. A process of discovery was initiated to remove unsound concrete. After treatment with Tyfo® CIS, a corrosive inhibitor system, the exposed steel and surrounding concrete was sandblasted. Polymer-modified concrete was then applied to reform members to their original shape by forming and pouring. After the client and FCI quantified the steel section loss, the Tyfo® SCH uni-directional carbon Systems was designed and installed to supplement the transverse steel lost due to corrosion. The composite system also served as a superb coating which prevents contaminants from reaching the reinforced concrete section, thereby preventing corrosion. The Tyfo® Systems restored the structural capacity back to original strength and was completed in an environmentally-sensitive area where seals and sea lions make their natural habitat.

