

Pier III Bracing

Project Summary

July 11, 2007

Background

Pier 3, Kodiak's Cargo dock and terminal, was originally constructed in the early 1970s. The pier has undergone several additions and changes to its original configuration to enhance its function as a container terminal for 700 foot long ships. The current configuration consists of 4.46 acres of paved yard; a 490 foot long by 64 foot wide container terminal dock, and a 30-ton container crane.

After a 2004 steel pile inspection, a professional engineering firm (Reid Middleton) recommended that a load rating assessment be performed for the old section that supports the traveling container crane. Deterioration of the steel piling under the pier has resulted in lowering of the pier's load rating. The capacity of the pier is just slightly greater than the demand, i.e. the safety factor is very close to 1. Further deterioration of the piles would decrease the safety factor to less than one. This would lead to structural failure under current design loads.

Ried Middleton designed pile bracing that would increase the load carrying capacity of the pier and extend its useful life three to ten years. The bracing consists of steel plates bolted onto the flanges of selected piles and a series of tensioned rods between the piles.



Photo 1 – Pier 3 with container offloading operations underway.

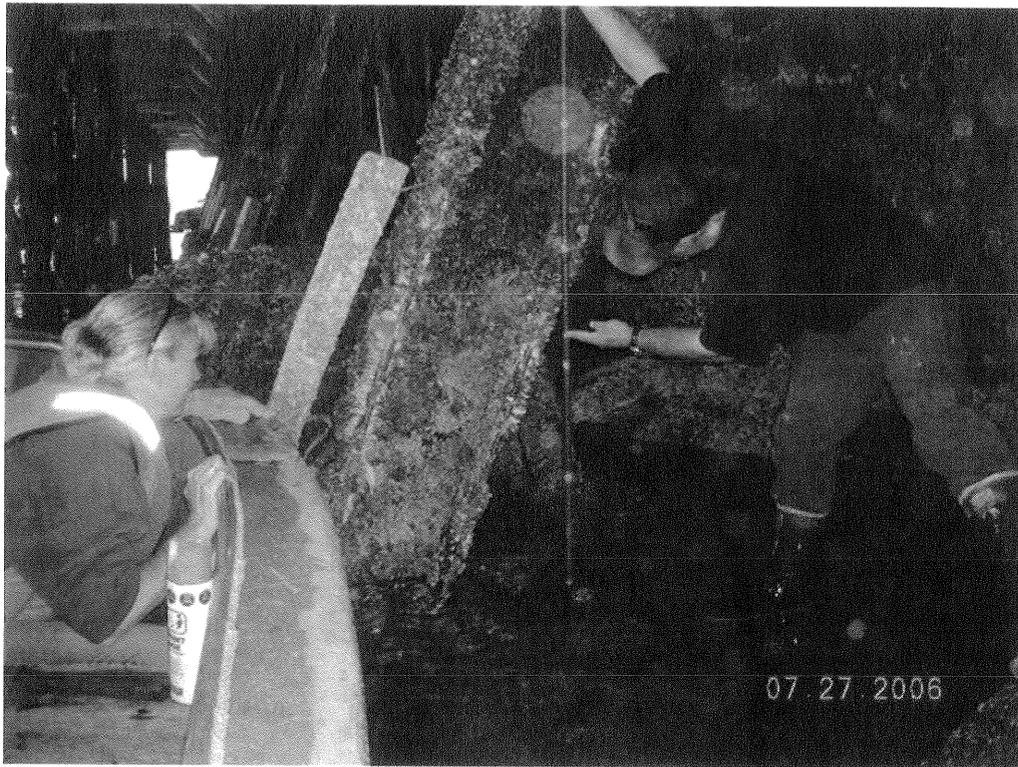


Photo 2 - Measuring Piles for Bracing Plates

Construction Bids

Bids for the Pier III Bracing project were opened by the Kodiak City Manager on June 20, 2006. Two bids were received as tabulated below.

Red Hook Construction:	\$715,000
Lash Corporation	\$721,000
Engineer's Estimate	\$1,023,000

The bids were significantly below the engineer's estimate. Much of the work could be performed at low tide. The two local bidders planned to work with the tides and utilize their crews on other projects when the work area was submerged. The engineer's estimate was based on a contractor that would have to work on the project continuously, regardless of the tide level, to effectively utilize their crew. Using divers to perform much of the work, or having the crew on standby waiting for low tide, would have been more expensive.

Construction

Notice to proceed was issued to Red Hook Construction on July 19, 2006.

Materials were fabricated and delivered and field work began on September 8, 2006. The work performed in accordance with the plans and specifications and was completed on October 9, 2006.

The work was inspected by City staff and the City's contract inspector from DOWL Engineers/Alaska Testlab.

No change orders were requested by the contractor. The Alaska Department of Labor and Workforce Development, Labor Standards and Safety Division, Wage and Hour Administration approved the Notice of Completion of Public Works on November 29, 2006. Red Hook Construction applied for final payment on December 18th and the City issued the final payment check on December 22, 2006. The total payments to Red Hook Construction equaled the bid price of \$715,000.

Report Prepared by
City of Kodiak

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