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Inspectors/Managers

Bridge Condition
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New Jersey
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Barnegat Light Pier Inspections and Evaluations

Contract Nos. HSCG27-14-F-PCVC65, HSCG27-15-F-PCV045

Barnegat, New Jersey

PROJECT TYPE

Condition Inspection and Evaluation

PROJECT OWNER/CLIENT

United States Coast Guard

CONTRACT AMOUNT

\$20,000 fee

START & END DATES

9/2014, 12/2014

ROLE

Prime, Engineering, Inspection

REFERENCES

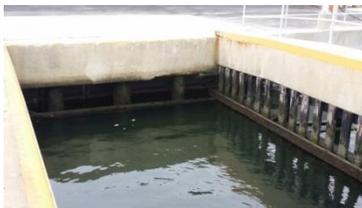
Sean Griffin, (609) 494-2661

PROJECT DESCRIPTION

Under contract with the United States Coast Guard (USCG), the SJH team inspected, performed a structural analysis, and produced a report with the findings of the evaluation and recommendations for repair of the haul out finger piers to support a boat lift at Station Barnegat Light. After the recommended repairs were complete, SJH was awarded a subsequent contract to inspect, evaluate and certify the repairs.

The pier was constructed originally in 1972. The boat lift features a Marine Travel Lift with a hoist capacity of 35 tons. Some cracks in the concrete pier were observed. The haul-out finger piers are 42 ft. long x 5 ft. wide each and are supported by 2 ft. diameter timber piles spaced at 0 ft. At every support location, the finger piers are supported by two piles, one vertical and the other battered. A timber fender system is installed on the inside of the finger piers. The clear distance between the finger piers is 17 ft. 10 in. The pier structure consists of 30 in. wide x 41 in. deep reinforced concrete beams. The 5 ft. wide concrete sidewalk is 10 in. thick. The finger piers abut another pier platform that is 20 ft. long, resulting in a total length of the pier of 62 ft.

SJH performed an in depth, hands on inspection of the pier, along with an underwater inspection of the piles by an underwater/ diver subcontractor. Based on the inspection and available as built drawings, we performed an analysis of the concrete structure to estimate the load carrying capacity of the pier. The analysis was performed as per the AASHTO LRFD design method. Dead, live and travel lift loads were considered in the analysis. Our findings and the recommendations for repairs were included in the final report. Both projects were completed on budget and within schedule, each under an aggressive ten day turnaround time.



SJH Engineering, P.C.