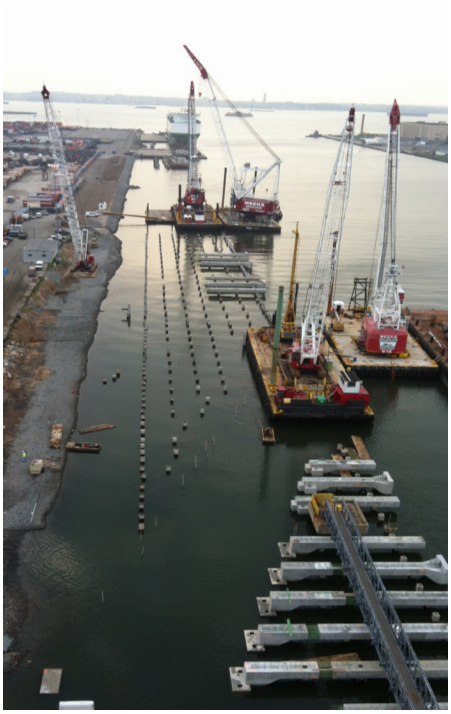
Jersey City, NJ

Container Wharf Expansion



Owner/Client: Global Terminals, LLC

Engineer: CH2M Hill - Halcrow

Year Complete: 2013

Scope of Work: Design/Build

Project Cost: $56.5 Million

This design-build project involves construction of a 90,000 sf, 24" square precast pile supported container wharf pier structure adjacent to an existing, active cargo facility. The superstructure consists of precast and structural steel pile caps and girders, precast deck planks, and a cast-in-place pier deck. Deck finishing consists of concrete pavement, rail installation, and installation of vessel fender and mooring hardware. The project also includes upgrades to upland facilities including roadways, electrical, and mechanical systems. An existing, 12' diameter sewer outfall tunnel runs below the harbor bottom under the footprint of the wharf extension. Due to concerns about the existing condition of the tunnel, vibrations produced during pile driving were limited to 0.5 in/sec and below. To address this concern, Weeks developed an innovative vibration-monitoring program to ensure pile driving near the outfall tunnel did not exceed these limits. Tri-axial geophones were grouted into 4" diameter drilled boreholes at the tunnel springline elevation. Other design considerations in the area of the tunnel included a 500 ton, 190' long steel truss element to span the tunnel right of way. This innovative solution allowed the owner to build a contiguous extension to their facility, rather than avoid work near the tunnel completely.