

Placing and Compacting 400,000 Cubic-Yards of Fill in the Thames River for the Redevelopment of the Connecticut State Pier Complex, New London, Connecticut

The State Pier complex in New London, Connecticut was redeveloped as a purpose-built facility for storing and loading heavy cargo, specifically offshore wind turbine components. The facility prior to redevelopment consisted of two adjacent piers with a deepwater berth between them, referred to as “Central Wharf”. The redesign intended to connect the two piers by filling Central Wharf and creating a solid-filled staging area. The infill of Central Wharf needed to be placed and compacted through 35 feet of water over a thin layer of soft organic silt present at the former mudline. The soft organic soils had to remain in place and could not be mobilized (mud wave) as the fill was placed. The project team developed an innovative, low-cost method to immobilize the organic silt prior to mass filling. The team then developed deep compaction strategies to meet the project specifications. The unique observational approach utilized provided a simple and low-cost solution to challenging site conditions.