PROJECT PROFILE

Four Historic Ferry Slips

Mechanical and Electrical Equipment Replacement | New York, NY

OWNER

The Trust for Governors Island

CLIENT

Ocean and Coastal Consultants, Inc.

BACKGROUND

The Battery Maritime Building, located at the tip of Manhattan Island in New York City, is used as the ferry terminal for service to Governors Island's Soissons Landing. The Beaux-Arts Battery Maritime Building was built from 1906 to 1909 as the Municipal Ferry Pier and listed on the National Register of Historic Places in 1976.

The Governors Island ferry slips provide access from the island to Manhattan and Brooklyn. The ferry landing was renamed Soissons Landing in commemoration of the American regiment posted there after their participation in WWI's Battle of Soissons in 1918.

WJE provided mechanical and electrical engineering services for the replacement of all mechanical and electrical equipment for four historic ferry slips. Two slips are located at the Battery Maritime Building in Manhattan, New York, and another two slips are located at Soissons Dock on Governors Island. Services included an in-depth scoping inspection; development of a Bridge Design Report; preparation of plans, specifications, and cost estimates for the design of all machinery; and construction services.

SOLUTION

WJE's scoping inspection identified significant degradation of the original equipment, resulting in an overall loss of integrity and operational reliability. This led to the design of a complete replacement of all mechanical machinery and emergency replacement of the sheave trunnions for one ferry slip.

The original machinery consisted of a unique arrangement of wire ropes, sheaves, counterweights, and winches, which served to raise and lower the slip to allow for the berthing of vessels. Mooring devices capable of accommodating tidal change, wave action, and the loading and unloading of cargo were provided to secure the slip to the vessel. The existing worn components were modernized to provide for reduced friction, greater reliability, and longer service life without altering their historic appearance.

The electrical systems associated with the ferry slips were upgraded, including a new motor control center, operators control station, and the associated ferry slip operating logic. The work included the integration of this control system into the existing operating system and the specifying of a motor control center with protective relaying local control and control station interface. The design also included replacing the existing wound-rotor motors and control panel with squirrel cage induction motors with VFD control.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS