



Project Spotlight

Fore River Bridge: Bridge Approach - Boston, MA



Owner: City of Boston

Installer: Joseph Morelli & Company

General Contractor: Joseph Morelli & Company

Background Information

Carrying 32,000 vehicles on Route 3A between Quincy, and Weymouth, Massachusetts, the Fore River Bridge has been an integral part of Boston's roadway system since 1902. Since that time, the moving bridge has been replaced three times - most recently in 2018. The new permanent vertical-lift bridge cost approximately \$224 million to build and is projected to service Boston commuters for the next 75 years.



In September, 2019 an 80-foot section of the former Fore River Bridge was salvaged and repurposed in Perches, Haiti in order to serve an area whose residents had been isolated by the lack of a crossing over the Riviere Cochon Gras. The absence of a bridge had made it difficult for tourists to gain access to the area, and for residents to reach other parts of the island without risk.

Prior to the installation of the Fore River Bridge's former section, many residents were put in great danger by attempting to cross the river, whose flow was unpredictable and often deadly. The new structure in Haiti is currently in place and has been well received by the area's residents.

Project Details



The new four-lane bridge not only provides long-term safety and improved traffic flow, it also accommodates bicycles and pedestrians, including five-foot bicycle lanes and expansive, ADA-compliant sidewalks in both directions. In addition, the new structure provides a greater vertical clearance of 60 feet in the closed position, allowing virtually any sailboat in the Fore River basin to pass beneath the bridge without requiring it to open, thereby greatly reducing delays to vehicle traffic.

One of the most important factors for the Massachusetts DOT in choosing which type of bridge to construct was the ability to use accelerated construction techniques, ensuring that the impact on local commuters was as minimal as possible. In light of this, when contractor Joseph Miorelli & Company, Inc. needed a cellular lightweight concrete for use in the bridge construction, they chose Aerix Industries AQUAERiX™ permeable low-density cellular concrete (PLDCC). As a pumpable, self-leveling cellular concrete that provides enhanced compressive strength, AQUAERiX was the ideal choice for this project.

Aerix Added Value

The use of Aerix Industries AQUAERiX product not only provided the necessary strength and support for this new bridge, it also provided a quick-and-easy application. Used at the bridge approach structures over a total area of 6,000 cubic yards, AQUAERiX was pumped at a rate of 40-50 yards per hour with the use of a roto-stator screw pump and a two-inch hose. Aerix's AQUAERiX product provided the extreme strength needed to support this expansive bridge while also offering the swift installation required to restore peace and order to Boston's automotive and marine traffic.

