

# MILWAUKEE SOUTH FIRST STREET BRIDGE REHAB

Milwaukee, Wisconsin

## OVERVIEW

In 2014, Fibrwrap Construction and a crew of certified divers completed the pile protection of the South 1st Street Bridge over Kinnickinnic River in Milwaukee, Wisconsin. The bridge sits adjacent to a community park in a heavily trafficked region of suburban Milwaukee and is maintained by the City of Milwaukee Department of Public Works.

The roadway bridge consists of a steel superstructure resting atop three concrete pile caps supported by steel encased concrete piles. Due to prolonged exposure to the harsh Wisconsin riverfront environment, the steel casings of the bridge piles had begun to show signs of moderate corrosion. The Milwaukee Department of Public Works ultimately decided to employ the Tyfo® SEH 51A glass fiber reinforced polymer (FRP) system for corrosion abatement and protection from damage generated by other environmental factors.

In order to provide protection from specified environmental exposure for the desired extended service life, two layers of the Tyfo® SEH 51A system were applied to 64 bridge piles in a full coverage wrap scheme. Because the bridge piles in question are partially submerged in the Kinnickinnic River; the Tyfo® SW-1S water resistant epoxy was used in the saturation and application of the Tyfo® SEH 51A fabric. The South 1st Street Bridge did not require any lane closures during the pile wrapping (though a deck replacement did), and immediately reflected a service life extension upon completion of the rehabilitation.



Bridge piles prior to rehabilitation



Tyfo SEH 51A System applied



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