

**CASE STUDY**

# Kosciuszko Bridge

Brooklyn, New York

## HISTORY

The Kosciuszko Bridge has a long and storied history. The first bridge on the site, built in 1803, connected Meeker Street in Brooklyn to Review Avenue and Laurel Hill Blvd. in Queens. Several replacement bridges have come and gone, with the most recent being a cable-stayed bridge that replaced the deteriorating truss bridge built in 1939.

## PROBLEM

Traffic on and around the Kosciuszko Bridge in Brooklyn has been a problem for years. The 1939 bridge was built to serve up to 10,000 cars a day. However, when it became part of the Interstate Highway System in 1965, traffic flowing across the bridge was up to 18 times that number.

In 2009, the New York State Department of Transportation decided to replace the aging structure with a new bridge. Two structures would be built. The first, a new 5-lane eastbound span constructed parallel to the old structure. In April 2017, the eastbound structure opened with 2-way traffic, allowing the older bridge to be demolished and construction to begin on the second structure, a new westbound span.

## SOLUTION

Granite Construction Company was the contractor on the second bridge span, and partnered with Nucor Skyline, who manufactures Electronic Resistance Welded (ERW) pipe piles. ERW pipe is manufactured by cold forming a flat steel strip into a rounded tube and passing it through a series of forming rollers to obtain a longitudinal seam. The two



edges are then simultaneously heated with a high frequency current and squeezed together to produce a bond. The longitudinal ERW seam does not require filler metal while impurities in the heat affected zone are extruded during the welding process.

The ERW pipe piles used for the pier footings were all produced by Nucor Skyline's new ERW mill. The piles were shipped by rail to our Morrisville plant, where conical points were installed, and the piles were spliced to lengths up to 100'. Nucor Skyline delivered the product to the jobsite in a heavily congested area of Brooklyn ready for installation.

## PROJECT PARTNERS

### Owner

New York State Department of Transportation – Albany, NY

### General Contractor

Granite Construction Company – Watsonville, CA

## PRODUCTS

Pipe Piles: 18" x .625" ERW pipe piles – 2,000 tons

## PROJECT TIME FRAME

February 2018 to June 2018