

# County Project Manages Full Bridge Replacement In Less than a Month From Demo to Completion



## CTH-N Bridge

Wisconsin, USA

A biennial bridge inspection identified issues with a county highway bridge, including scour and structural, so the county had to face a load posting, or expedite the replacement of their bridge because it's on a critical freight route.

### CHALLENGE

The project faced many significant challenges, particularly regarding funding and timing. State and federal funding programs would have necessitated an unacceptable delay, leaving the county with no choice but to self-fund. While a detour would only be 4 miles, the construction process needed to be quick to reduce impact on transport and commerce associated with the critical freight and agriculture highway.

### INQUIK® SOLUTION

The county selected the InQuik Bridge solution because it empowered them with more control over decision-making and project delivery, as well as an expedited construction process. They could leverage their internal resources and equipment while hiring local contractors for specialty construction services. This hybrid and collaborative delivery approach enabled rapid construction, completing the project within 10 months of inspection which also led to cost savings compared to common project delivery processes and timelines. The road closure was limited to just three weeks, minimizing disruption to freight and local traffic. The successful outcome resulted from effective partnership between the county, state DOT, consulting engineers, local contractors and the CMC Bridge Systems team.



#### OVERVIEW

Dimensions

**40'L (37' clear-span) x 35' W**

Client

**Marathon County**

Type

**2-lane County Highway**

Original Structure

**Steel beam with concrete deck built in 1945**

#### KEY POINTS

**Hybrid Project Delivery**

**Critical Freight Route**

**Integral Bridge**

**Concrete Barrier**

**6 Picks/Heaviest: 5 Tons**



Ready-mix concrete placed in abutment.



- ◇ The previous structure was built in 1945 and issues were identified in the biennial inspection, that required urgent attention.



**Week 1:**

- ◇ Existing structure was demolished, and roadway excavated to increase clear-span, avoiding any disturbance to rip rap and waterway
- ◇ Steel H-piles were driven for new foundation
- ◇ InQuik abutments lifted onto foundation and filled with ready-mix concrete



**Week 2:**

- ◇ InQuik superstructure deck panels lifted onto abutments and spliced together
- ◇ Rebar tied into structure for concrete barrier
- ◇ Concrete placed in superstructure & roadway barrier



**Week 3:**

- ◇ Roadway backfilled and asphalt laid
- ◇ Rail connected to concrete barrier & signage installed
- ◇ New structure: AASHTO compliant cast-in-place integral bridge with 75+ year design-life

