

## CASE STUDY

# Eau Claire County Bridge



## Overview

The bridge is located on a rural County Highway V road over Bears Grass Creek in Eau Claire County, Wisconsin. Construction took place during a wet and rainy midwest summer that could have presented challenges if constructed with more traditional methods.

- **Dimensions:** 30' length x 27' width
- **Client:** Eau Claire County
- **Type:** 2-lane road
- **Original Structure:** 13' culvert & steel-plate arch

## About

In 2023, Eau Claire made a pioneering leap in bridge construction with the United States' first ever InQuik bridge system. Needing to replace a structurally deficient culvert on Highway V over Bears Grass Creek, the county project improved road safety by replacing the deficient bridge with a new cast-in-place one that has a 75+ year design life. Despite facing a few weather challenges and a tight construction deadline, the final result was a durable bridge made quicker and cheaper than originally anticipated.



accelerated construction

InQuik®

## How We Helped

Having never built their own bridge before, the self-supporting and simple InQuik system enabled Eau Claire to perform the project themselves and keep funds within the local community, while also saving substantially compared to the engineers' initial estimate. Additionally, while we often see three-to-four-month timelines for fully formed and cast-in-place bridges, the Eau Claire project was completed in just four weeks.

## Results

- Replaced a structurally deficient culvert with a durable bridge that requires minimal maintenance, plus proven disaster resilience and a +75 year design life.
- Positive community impact due to reduced construction time and utilization of local labor; efficient, prefabricated parts “placed and poured” by the county in only 4 weeks.
- The county saved a significant amount of their budget in comparison to the initial estimate made by the engineer.

## Key Points

- **Lightweight:** Parts were carried by an F-truck and installed with the county’s excavator, leading to savings on labor and enabling local county crews to perform bridge work.
- **Self-supporting system:** No bracing or de-watering was required, minimizing the disturbance of sensitive waterways and reducing construction time.
- **Quality control assured:** Minimal maintenance, disaster resilience, and a 75+ year design life.
- **Efficient:** If using more traditional methods, issues may have arose due to weather and time constraints.

## Challenges

Some intense summer storms raised the waterway and could have caused issues with conventional formwork for the abutments; but because they were pre-fabricated, there were no issues with de-watering.

The tight construction deadline due to fish spawning season presented a challenge for more traditional methods, but the efficiency of prefabricated parts allowed for rapid construction.

