

County Rapidly Replaces Bridge After a Devastating Flood, And Saves Millions



144th Ave. Bridge

Colorado, USA

A devastating flood destroyed a crucial bridge in Adams County, Colorado, disrupting the daily commute of nearly 1,000 vehicles. The shortest detour was several miles on a narrow dirt road, which was not ideal for residents and couldn't accommodate agricultural equipment or freight trucks. The county needed an urgent solution and reached out to experienced bridge construction contractors and planned to use the Construction Manager/General Contractor (CM/GC) project delivery method.

CHALLENGE

Replacing the bridge posed significant challenges and required the need to design and build a resilient bridge for future floods. Two contractors submitted multiple options, including installing a temporary structure in summer 2024, followed by a permanent solution in 2025, but initial estimates suggested a costly (\$5 million) and time-consuming process.

INQUIK® SOLUTION

The county ultimately chose the CMC Bridge solution because InQuik Bridges are pre-engineered and prefabricated, ensuring efficient and easy installation for the contractor. More importantly, this solution provided a cast-in-place integral structure that is both permanent and has proven disaster resilience. The project was delivered in less than 6 months because of the innovative InQuik construction process, shaving a year off the original timeline, and was completed for \$2 million, saving the county \$3 million. The CM/GC delivery process was a collaborative effort between the county, consulting engineers, local contractors, C-DOT and CMC.

InQuik®
accelerated construction

OVERVIEW

Dimensions

61' L x 40' W

Client

Zak Dirt Construction

Type

Rural Arterial Road

Original Structure

Steel Beam Bridge

KEY POINTS

Disaster Recovery

Critical Rural Road

6-month project

Substantial Cost Savings

Integral Bridge



Abutment Installation

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- ◇ A devastating flood destroyed a crucial bridge, calling for rapid and disaster resilient replacement



- ◇ After the consulting engineer completed the Geotech and Hydraulic investigations, it was decided to drive the steel piles for the foundation and expand the clear-span of the structure
- ◇ Prefabricated InQuik abutments and wingwalls can be lifted onto the foundation and filled with ready-mix concrete on the same day
- ◇ The new structure was designed with a larger clear-span and InQuik's innovative integral bridge to ensure future floods were not a concern



- ◇ InQuik superstructure deck panels incorporate reinforcing steel and formwork only, without concrete, so they're lightweight for easy installation
- ◇ This modular bridge required only 7 picks for installation: 2 abutments and 5 superstructure deck panels
- ◇ The contractor completed the project with only 300 man-hours as opposed to 3000 man-hours for a similar project using traditional construction processes



- ◇ The image highlights the interest in this project, as engineers and counties from across Colorado, came for the open day during construction
- ◇ While a temporary bypass road was constructed next to the bridge project, the total project cost was only \$2 million, as opposed to the original estimate of \$5 million

