

CASE STUDY



PROJECT DETAILS

Project Name:

Main Street Bridge

Location:

Rice Lake, WI

Project Owner:

WisDOT

Project Contractor:

Lunda Construction

Product Manufacturer:

County Materials
Corporation

Date:

2018-2019

Key Products:

Prestressed Concrete
Bridge Girders

County Materials Keeps Bridge Project on Track Through Winter Weather

Solutions: Climate-controlled manufacturing facility promotes year-round construction; extended service life of concrete

After serving the community of Rice Lake for nearly 100 years, engineers determined Main Street Bridge was nearing the end of its service life and recommended partial replacement of the bridge to mitigate safety risks and accommodate community growth. The original structure was built in 1919, using a concrete arch system. The system was later expanded with the addition of prestressed concrete girders. While the original arch system warranted replacement, the 69-year-old girders remained in serviceable condition.

Taking notice of the existing prestressed girders' performance, six additional girders were specified to replace the arch system. Prestressed concrete was favored by project leaders for its proven service life and enhanced structural capabilities. County Materials planned to manufacture the girders at its outdoor production facility in Roberts, WI; however, when inclement winter weather moved into the area and halted outdoor operations, the company quickly sought a new solution to keep the project on schedule. County Materials responded by moving girder production to its climate-controlled facility in Janesville, WI. Without sacrificing valuable time, all six prestressed concrete bridge girders were manufactured, each measuring 134-feet-long and weighing 135,000 pounds.

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With the girders manufactured across the state, mid-winter deliveries were carefully coordinated to maintain the construction schedule, while taking safety and road conditions into consideration. Within two months, the girders were manufactured, delivered, and installed.

County Materials' responsiveness coupled with its enhanced manufacturing capabilities were essential to the project's timely completion. With its updated components, Main Street Bridge is expected to serve a prolonged service life that is comparable to that of the original structure. Concrete bridge systems have proven to be a reliable solution for the Rice Lake community for over 100 years and will continue to prove resilient into the future.



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