

CASE STUDY



PROJECT DETAILS

Project Name:

I-44 & Hwy 141
Interchange

Location:

Valley Park, MO

Project Owner:

Missouri Department of
Transportation

General Contractor:

Pace Construction
Company

Product Manufacturer:

County Materials
Corporation

Date:

2018

Key Products:

Prestressed Bridge
Girders and Prestressed
Deck Panels

County Materials' Prestressed Bridge Girders Utilized in Flyover Construction

Solutions: Prestressed bridge girders improve Missouri State Highway interchange efficiency

The I-44 and Missouri State Highway 141 interchange is highly traveled by motorists daily. As traffic demands increased, frequent congestion and traffic accidents occurred. Missouri Department of Transportation sought a solution to improve traffic flow. A flyover ramp was constructed, allowing travelers on Highway 141 to easily merge with I-44 traffic.

County Materials' Prestressed Bridge Girders and Concrete Deck Panels proved ideal for the ramp construction. Prestressed girders support heavy loads over long spans and offer extended service life. High-performance prestressed concrete is inherently durable and can withstand the elements with minimal maintenance.

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Prestressed bridge girders are manufactured to specification and delivered ready to install. The flyover ramp was the project's most challenging aspect. Tightly curving above Highway 141 and I-44, it required a complex system of different girders. Bridge girders typically have the same design and lengths within a bridge, however, this project required sloped girders of various depths and lengths. Custom inserts, including lifting loops, drains, and exposed rebar were used to provide construction crews an efficient installation.

County Materials manufactured and delivered more than 40 bridge girders and over 24,000 SF of prestressed deck panels. MoDOT's construction schedule was met and a safer interchange was built for vehicles.



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