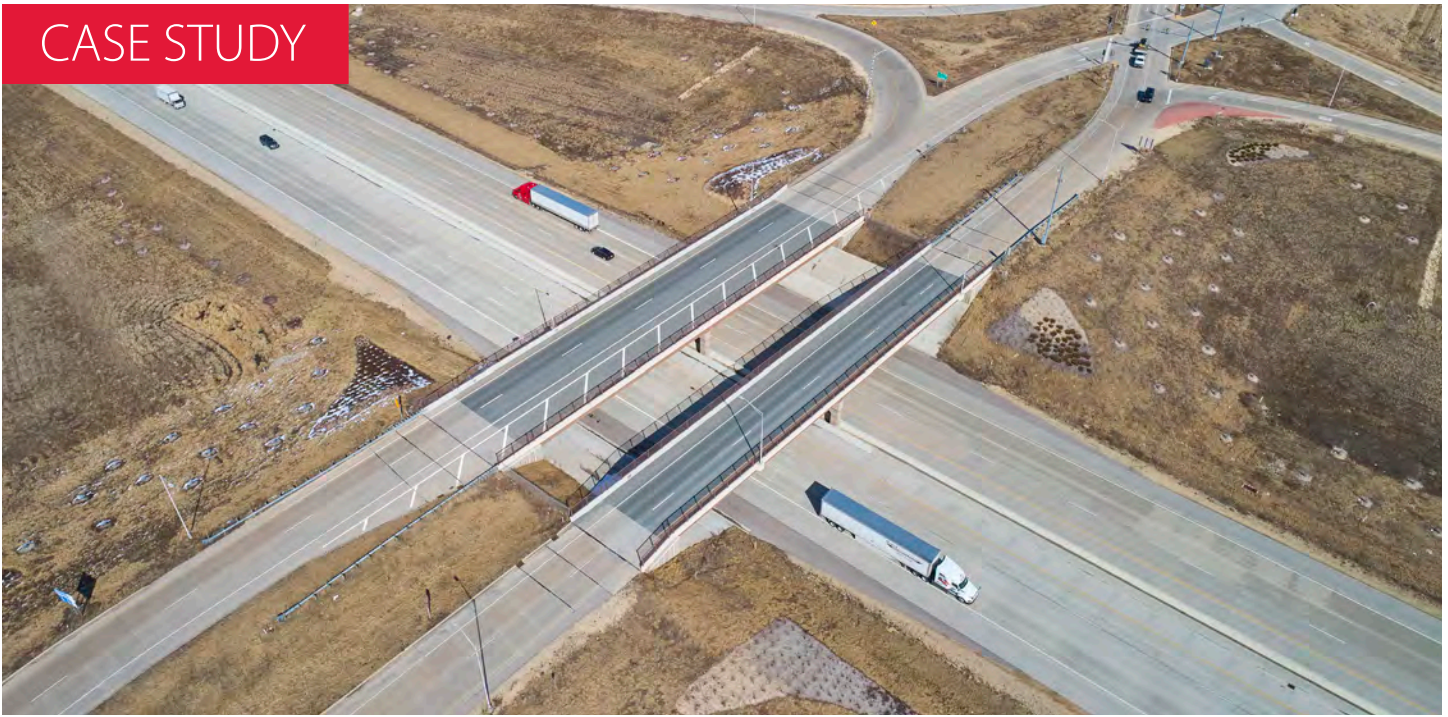


## CASE STUDY



### PROJECT DETAILS

**Project Name:**

Diverging Diamond Interchange

**Location:**

Janesville, WI

**Products Used:**

Bridge Girders

**Contractor:**

Zenith Tech, Inc.

**Product Manufacturer:**

County Materials Corporation

## Prestressed Girders Manufactured by County Materials Accelerate Construction of State-of-the-Art Interchange

**Solutions:** Prestressed bridge girders decrease overall project costs and minimize road closure time during bridge installation

As part of the reconstruction and expansion of I-39/90 between Beloit and Madison, WI, County Materials manufactured and delivered prestressed concrete girders to construct the state's first Diverging Diamond Interchange (DDI), a state-of-the-art system that improves traffic flow and safety.

The Wisconsin Department of Transportation constructed the DDI to replace the existing WIS 11 Avalon Road interchange near Janesville, WI. Surrounded by farming operations, the interchange sees a large volume of traffic from oversize and overweight vehicles.

Designed to enhance safety by eliminating left turns in front of oncoming traffic, a DDI offers a more efficient traffic pattern for areas with high volumes of left turns. A DDI allows for free flow left turns by shifting traffic to the opposite side of the road on both ends. The long sweeping curves of the turns also make them easy for oversize trucks to navigate.

*Continued on page 2.*







For highway infrastructure projects where limiting road closure time is a priority, prestressed girders offer many benefits over girders that are cast onsite. Prestressed girders arrive ready to install, accelerating the construction schedule. They also require less equipment to install, decreasing overall project costs.

Manufactured in a controlled environment, prestressed girders offer unmatched structural strength. The girders' inherent durability and proven resistance to inclement weather and heavy wear over a service life of up to 100 years makes them a cost-effective solution for highway infrastructure.

County Materials supplied the project contractor, Zenith Tech, with 30 massive 45W prestressed girders measuring 115 feet each. The interchange was built in two phases, one for each direction of traffic. To maximize efficiency, County Materials delivered the girders before the start of each phase.



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