



**NEW MILLENNIUM**  
BUILDING SYSTEMS  
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## APPLICATION NOTES

April 4, 2017

# Tallest bridge in Minnesota under construction

The TH53 Highway Relocation Project in Virginia, Minnesota, is critical to the local economy of this once-thriving mining town. By raising the bridge hundreds of feet up from the ground, the area will once again be open to mining the estimated billion dollars of iron buried there. New Millennium's on-site project manager is helping to keep this enormous project ahead of schedule<sup>1</sup> and its costs contained.



*A girder being lifted onto the TH53 Bridge. Bridge-Dek® stay-in-place forms from New Millennium attach to the bridge girders once they are placed onto the larger structure.*



*Bridge photos courtesy of the Minnesota Department of Transportation.*

In 1960, the Minnesota Department of Transportation (MnDOT) agreed with local mining interests that it would move a roadway it had built if it interfered with mining in the future. A new bridge is now being constructed over the Rouchleau Pit, which has an estimated billion dollars of iron ore just waiting to be mined.

According to MnDOT, "Moving the highway to a new location will allow United Taconite access to large quantities

of iron ore deposits that will help provide for the continued operation of the company which is critical not only to the economic vitality of the region, but to the entire state of Minnesota."<sup>2</sup>

When completed, the bridge will be the tallest of its kind in Minnesota. The piers go 40 feet into the bedrock, rise through 100 feet of water, and then extend up another 200 feet into the air.

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## Working together to solve on-site issues

During construction, it was discovered on-site that additional customization of the beam straps — the attachment points to the bridge girders — was required. Due to the size of the project, standard install procedures did not work. So, New Millennium's project manager was brought on-site to work together with the engineers to craft a solution.

"This is the sort of personal attention that's so central to the way we do business," says Robert Calhoun, New Millennium project manager. "We don't wash our hands of a project once the decking is delivered. We contribute to early design phase efforts and follow through until the erection is completed."

As part of the solution, New Millennium provided the on-site crew with detailed drawings to help elucidate the solution and ensure that the work was done right.

## Detailed drawings can improve safety

Detailed shop drawings, complete with instructions, can be critical on a jobsite. "The crew on a bridge project — especially one that's so high as this one — are picking up and moving heavy steel around. So detailed drawings can really help to lessen safety issues since you are more likely to be doing things right the first time," says Sev Mullen, Bridge-Dek® District Sales Manager for New Millennium.



As the bridge nears completion, the Minnesota Department of Transportation project webcam shows progress being made. Here, the stay-in-place forms have been laid in anticipation of the November 2017 completion date.



<sup>1</sup> <http://www.bemidjipioneer.com/news/region/4200757-work-moves-one-tallest-bridges-minnesota>  
<sup>2</sup> <http://www.dot.state.mn.us/d1/projects/hwy53relocation/index.html>



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