

BNSF Bridge 3.8 Over Missouri River

To meet the increased coal, grain and intermodal shipping demands at this critical link in the BNSF network, BNSF Railway planned a \$46 million capacity improvement that included 2.3 miles of additional track and a new 11-span, 1,682-foot-long bridge over the Missouri River.

PROJECT RESULTS

Kleinfelder's experience and expertise led to cost-effective design alternatives, resulting in an overall construction cost savings. Kleinfelder's constructible solutions and strong working relationships with the design and construction team have enabled seamless construction on this project, as well as other heavy rail projects throughout the Midwest.



TRICKY TERRAIN

The traverse and profile of the new track required construction of 52-foot-tall embankments within the eastern Missouri River floodplain and a 100-foot cut within loess bluffs at the western approach—all while maintaining railway traffic. Kleinfelder's technical team used the observational method, along with detailed analyses, to develop a maintainable west approach slope configuration for the 100-foot cut that could be constructed with railway right-of-way. The final west approach cut configuration includes nearly 85,000 square feet of soil nail wall in combination with near vertical benched loess slopes.

GLOBAL NETWORK, LOCAL EXPERTISE

Kleinfelder's locally based, qualified staff were able to identify key technical issues, characterize the geologic concerns, and provide detailed geotechnical engineering, which identified potential cost-savings during the design phase. Based on our outstanding performance with the project's complex geology, as well as our local presence, Kleinfelder was awarded a portion of the construction phase oversight, which included observation and documentation of earthwork, foundation installation, bridge construction, soil nail wall construction, removal of landfill debris, and construction of track substructure.

Location:

Plattsmouth, Nebraska

Owner:

Burlington Northern
Santa Fe (BNSF) Railway

