



Acrow's Clear Span Rail Bridge Permits Innovative Structure Replacement

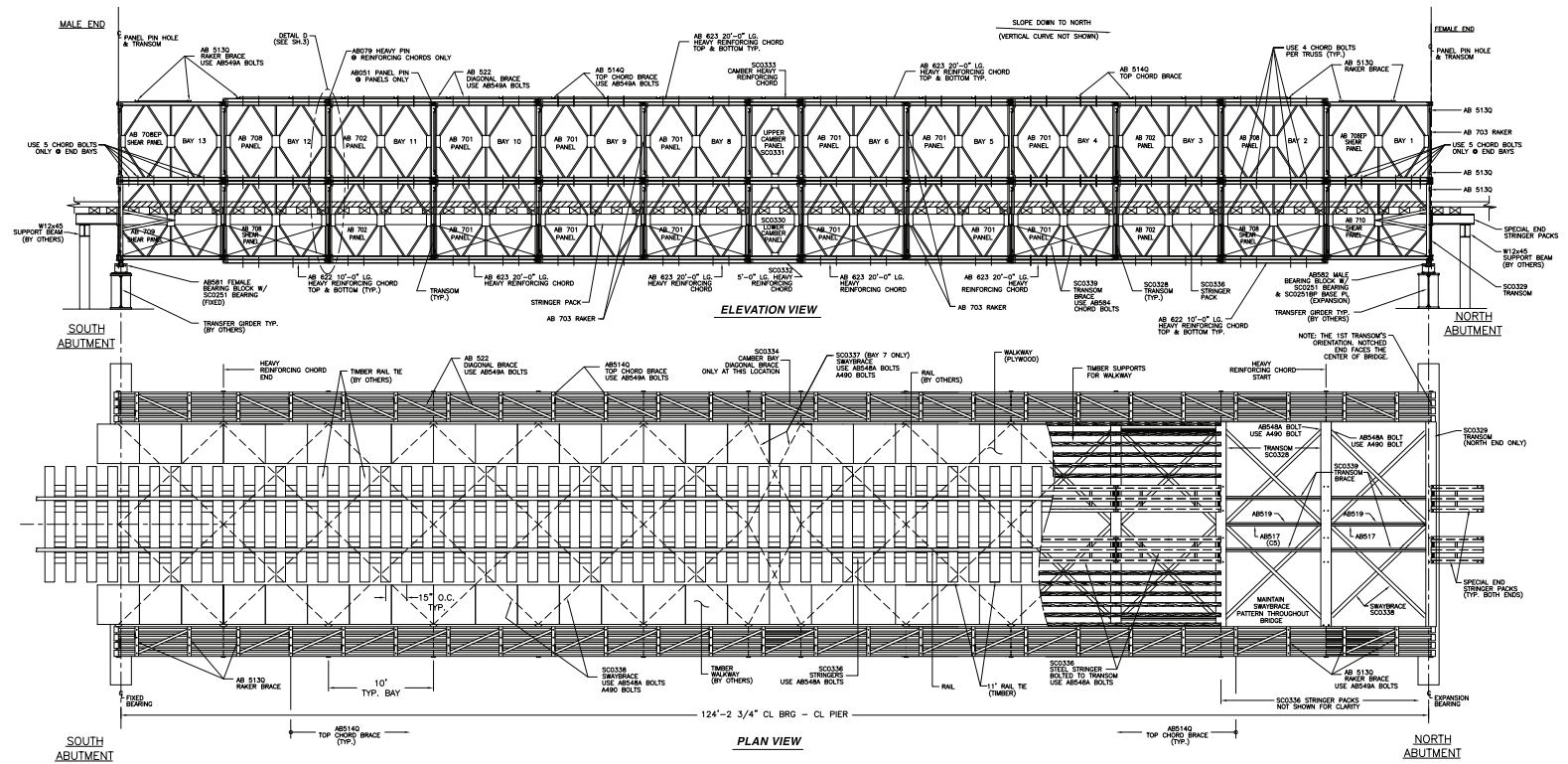
Detour structure provides uninhibited travel for rail traffic in Columbus, Ohio

The railroad bridge over Alkire Road was a simple stone tunnel that served users well for more than 100 years. However, changes in horizontal and vertical clearance requirements and roadway capacity necessitated a replacement of the bridge to provide a safer environment for motorists.

While Acrow bridges are common to vehicular applications, they are also used to carry extremely heavy rail traffic. The Acrow bridge used on this project was a 125-foot-long (38.1m) clear span, with a live load of Cooper E80. As with all complex projects, there were many challenges faced such as railroad outing restrictions and right of way traffic limitations.

The use of an Acrow panel bridge minimized several critical project issues including the potentially costly car rerouting expenses the rail line could have imposed on the contractor. Additionally, with a narrow six day time frame for construction and installation of the detour span, only a modular system like Acrow's could be considered. The speed of the install was amplified during the removal — the entire Acrow structure was “picked” and disassembled offline, streamlining the swap of the rail traffic to the permanent structure.

The project won an award from the Central Ohio Section of the American Society of Highway Engineers and continues to be recognized in the greater Ohio area for its on-time completion and innovation.



Specifications

Bridge length:

Acrow supplied a single span of 125' (38.1m).

Roadway width:

The Acrow bridge was 18' (5.5m) between the trusses to support a single track and a worker access walkway.

Deck surface:

Rails on timber ties

Bridge erection method:

Segmental lift in

Design load:

Cooper E80 train loading per AREMA

Standard Acrow bridge finish:

- All major components galvanized to AASHTO M111-ASTM A123
- All bolts are hot-dip galvanized
- All pins are electrogalvanized

Standard Acrow bridge specification:

- Panel chords, diagonals, verticals, reinforcing chords, rakers to AASHTO M223 GD 65
- Raker braces, transoms, top chord braces, swaybraces, transom braces, diagonal chord braces, decking to AASHTO M223 GD 50
- Panel pins to ASTM A 193 GD B7
- Bolts to AASHTO M164M - A325