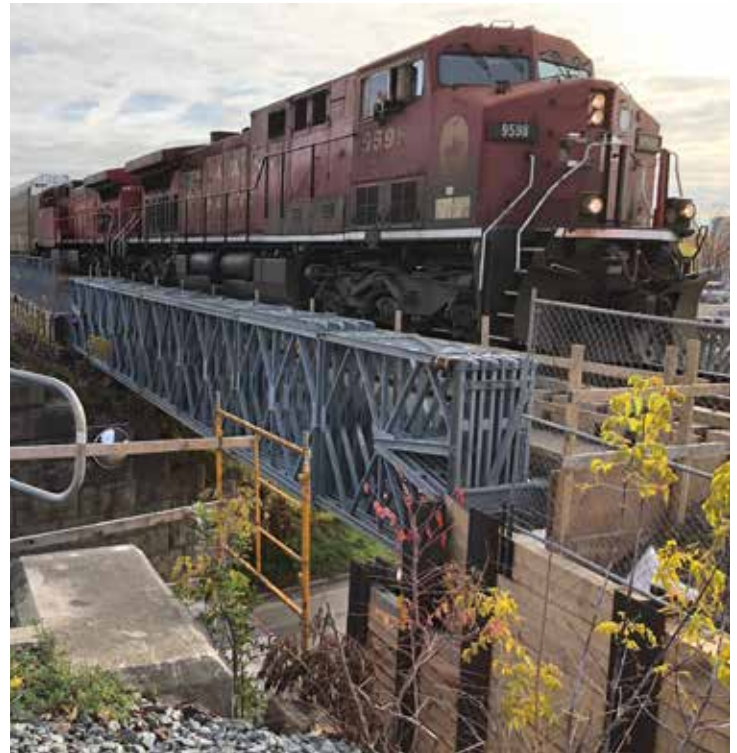


## Temporary Acrow Bridge Keeps Canadian Pacific Railway Traffic Moving During Major Road Construction

Rented detour structure keeps road-widening project on track in the City of London, Ontario



Within the busy Western University district, a bridge dating from 1931 carried Canadian Pacific Railway traffic over two lanes of vehicular traffic. The roadway has heavy congestion, particularly at peak times, so it was determined it should be widened to four lanes.

To accomplish that, it was first necessary to replace the existing rail bridge to accommodate the wider road below. An Acrow bridge was rented as a detour to carry the rail traffic alongside the existing structure while the permanent bridge is constructed.

The modular steel bridge from Acrow is 21.0 meters (70 feet) long by 5.5 meters (18 feet) wide. It has rails over a timber deck and a Cooper E80 load rating. The assembly and installation of the main components of the Acrow bridge took 5 days excluding the ties and rails. Due to site area access issues, the bridge was assembled nearby and then lifted into place using two cranes.

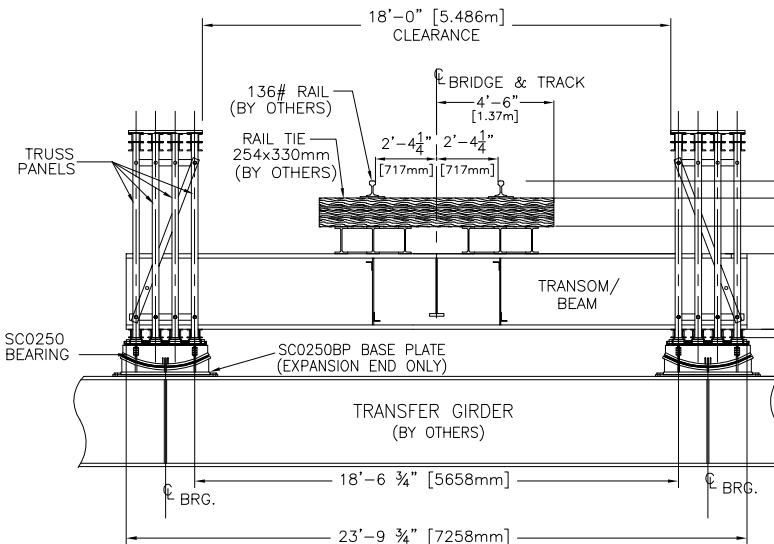
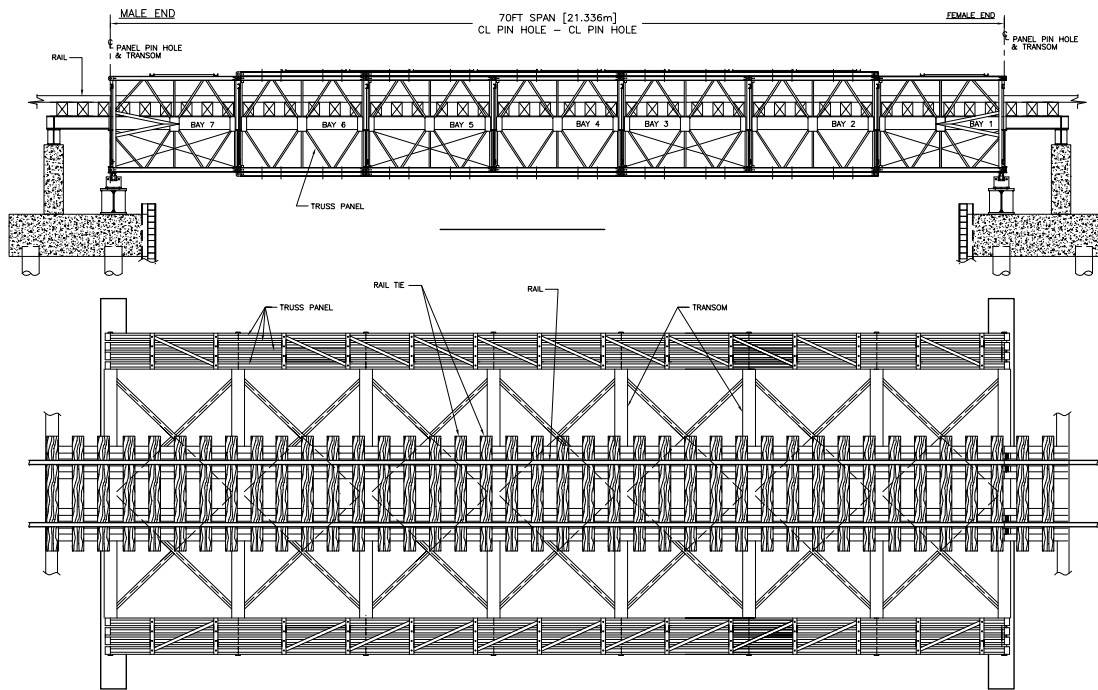
In an interesting twist, for his final year's engineering assignment at Western University (then known as the University of Western Ontario), Gordon Scott, P.Eng., Senior Project Manager for Acrow, was part of a student team that designed a replacement bridge for the old CPR bridge. As Gordon had spent his summers working as a student with Acrow, he had acquired the knowledge to contribute the detour bridge aspect of the design. Gordon more recently

worked with the design engineers on the actual project to develop the final detour bridge design.

The Acrow structure was opened to rail traffic on November 7 and it is anticipated that it will be in place until May 2018, when the permanent bridge replacement is put into operation. The contractor for the project is McLean Taylor Construction, and design engineering services were provided by the consulting firm AECOM.

"Acrow's ability to provide an assembly-ready rental bridge proved the ideal solution for this project," said Jack Bishara, P.Eng., Project Engineer with Acrow. "A rental structure not only allows for a fixed dollar amount to be allocated to the detour bridge, it can also help ensure a critical project like this CPR bridge stays on or ahead of schedule, important for both contractors and government entities alike."

Added Bill Killeen, CEO of Acrow Bridge, "Our prefabricated modular steel bridges are an ideal choice for cost-effective and rapid temporary or permanent bridging applications. We use only the highest quality steel from mills that hold certification from the International Organization of Standardization (ISO), and our bridges have been full-scale tested for load-carrying capability by multiple organizations."



CROSS SECTION @ ABUTMENTS

SCALE: 1"=5'

## Specifications

### Bridge length:

21.0 meters (70 feet)

### Bridge width:

5.5 meters (18 feet)

### Live load:

Cooper E-80

### Deck Surface:

Rails on timber ties

### Bridge finish:

- All major components galvanized to AASHTO M111 – ASTM A 123
- All bolts are hot dipped galvanized
- All pins are electro galvanized

### Bridge erection:

Two-crane lift-in

### Bridge design:

- (A) Panel chords, diagonals, verticals, panel reinforcing chords, rakers to AASHTO M223 GD 65
- (B) Raker brace, transom, top chord brace, swaybrace, transom brace, diagonal chord brace to AASHTO GD 50
- (C) Panel pins to ASTM A 193 GD b7
- (D) Bolts to AASHTO M164M – A325

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