

# Temporary Acrow Bridges Provide Uninterrupted Access During Bridge Replacement Project in Québec

Structures in the Îles Laval lessen construction impact on a busy commuter route



When two bridges in the Îles Laval district in Québec needed replacement, it was quickly determined that interim detour structures would be needed. The first bridge connects the city of Laval with Île Bigras, and the second links Île Bigras with nearby Île Verte. Each of the two locations carries daily commuters to Montréal from the rail station on Île Bigras.

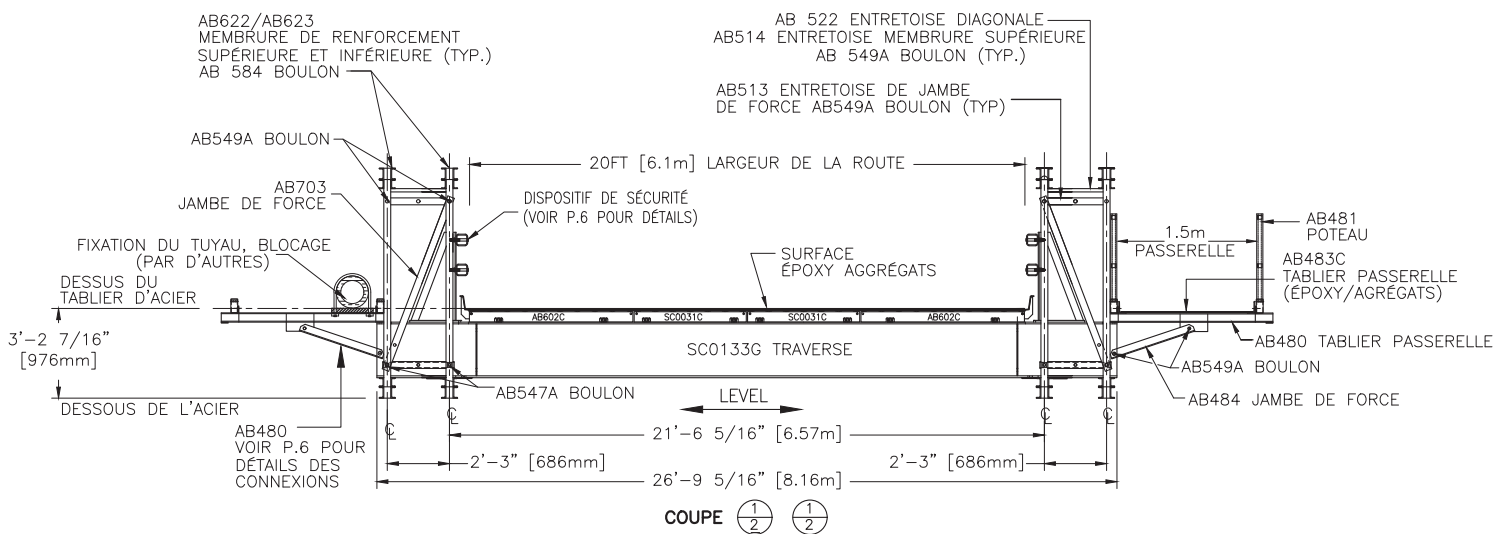
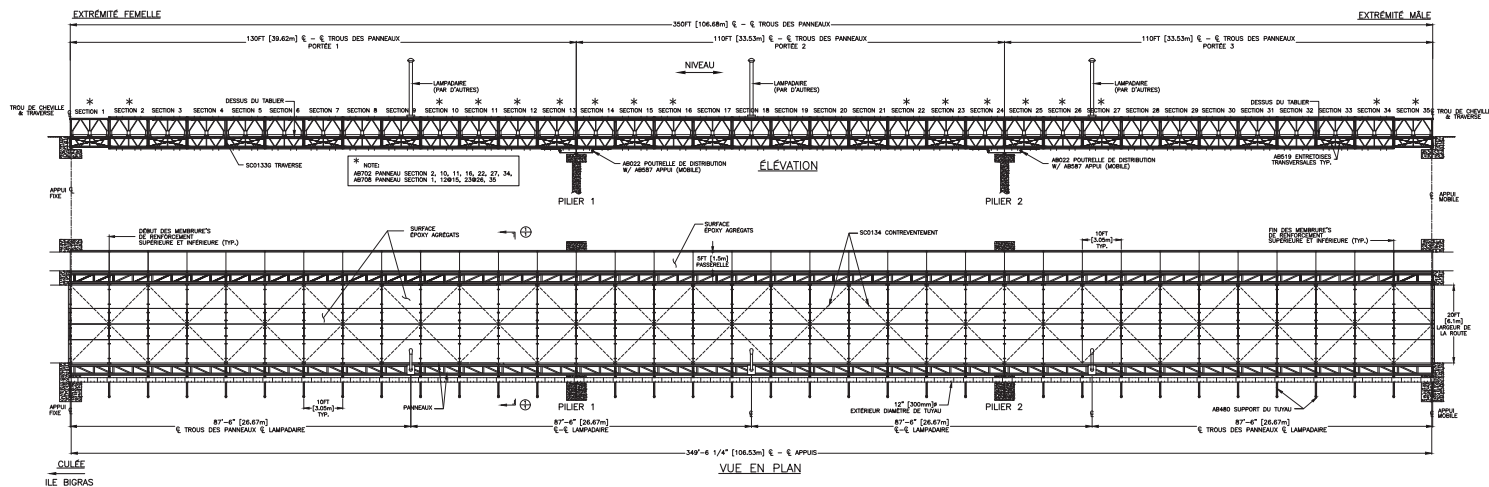
The temporary two-lane bridge from Acrow linking Laval to Île Bigras consists of three spans totaling 106.7 meters (350 feet) in length with a width of 6 meters (20 feet). The single-lane structure from Île Bigras to Île Verte contains two spans for an overall length of 76.2 meters (250 feet) and a width of 4.3 meters (14 feet). Both bridges have additional pedestrian walkways 1.5 meters (4.9 feet) wide.

The construction zones for each bridge offered very limited space, particularly in the case of the bridge to Île Verte. Due to the challenges of the site, it was necessary to launch the bridge from Île Verte, misaligned with the pier, and later rotate the structure into place with a crane.

The first of the rented Acrow components arrived on site in early October 2017. The temporary bridge from Laval to Île Bigras was completed in late November and is expected to be in place for approximately 18 months until the completion of the permanent bridge. The temporary Île Verte structure was completed December 18 and will be used during the duration of the project, expected to be 12 months.

“Acrow’s temporary structures were the perfect solution for this project,” said Benoit Forget, Acrow’s regional director for Québec/New Brunswick. “While this was a technically difficult job owing to the tight work zones, it was ultimately very rewarding to be a part of this bridge replacement project.”

The project contractor is Eurovia Québec, and the abutments and piers for the temporary bridges were made by design engineer LDA Services Conseils. The assembly and installation of the bridges was executed by ETPO-GÉODEX.



## Specifications

### Bridge length:

- Ile Bigras: 350' – DSR2H
- Ile Verte: 250' – DSR2

### Bridge width:

- Ile Bigras: TL20 (2 lanes 20' wide)
- Ile Verte: EW (1 lane (14' wide)

### Live load:

CL-625 for both bridge

### Deck surface:

Epoxy Coated

### 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:

The bridge structure was installed using a full cantilevered launching method provided by Acrow.

### Bridge design:

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

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