



Acrow Bascule Bridge Maintains Vehicle and Vessel Traffic During Construction in Vermont

\$60M project will replace historic twin leaf drawbridge on Lake Champlain

The drawbridge linking the Lake Champlain towns of North Hero and Grand Isle, Vermont was built in 1953. Over the last several decades, the increasing number of costly emergency repairs led to the decision that a full replacement of the structure was the only viable option.

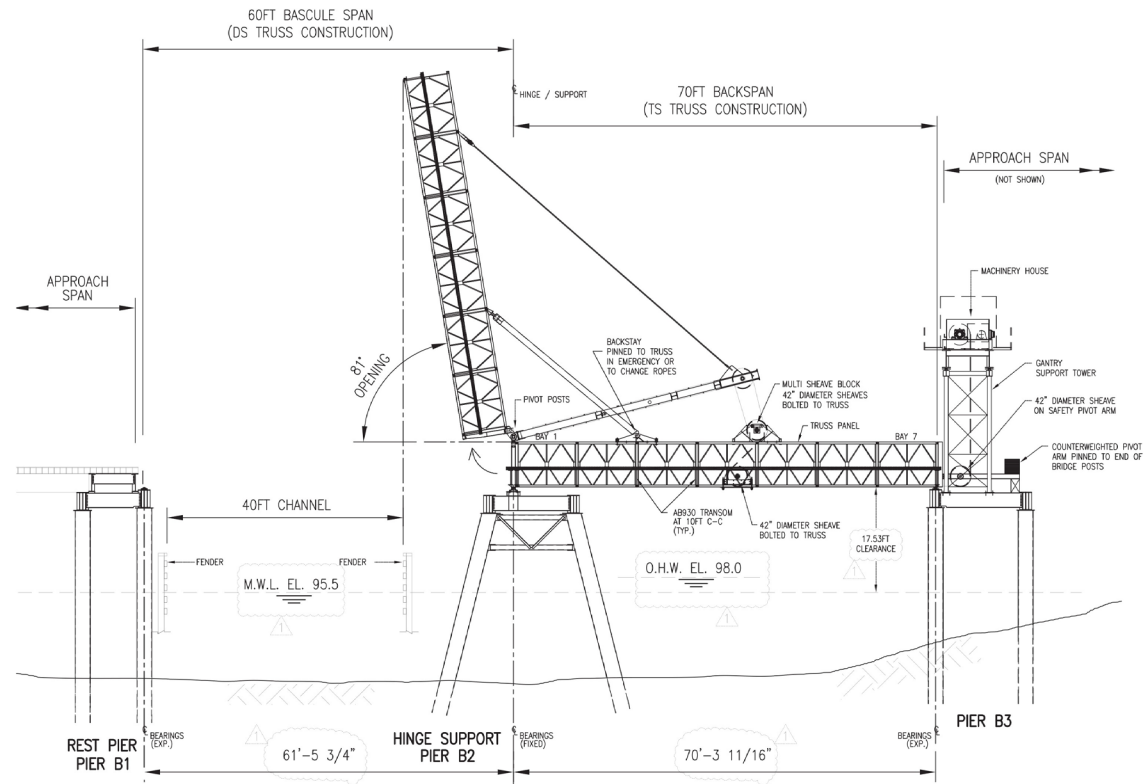
Carrying U.S. Route 2, the drawbridge is the only highway between the islands and a critical link south to the Vermont mainland. It carries 3,000 vehicles daily during the off-season and twice that during the summer and fall. Without a span in place during construction, a 60-mile detour would result.

In addition, the drawbridge allows vessel traffic to pass through the channel between Grand Isle and North Hero. As required by the U.S. Coast Guard, it must be opened on a regular schedule between May 15 and October 15 each year. With a large fine levied for each missed opening, the Vermont Agency of Transportation

(VTrans) deemed a provisional bascule bridge critical to the success of the multi-year project.

Contractors broke ground on the project in July 2018 and worked on the detour bridge throughout the winter ensuring a fully functional structure for the first required opening of the season on May 15, 2019. When the new structure opened, the old bridge was raised for the last time and will be dismantled in the open position so vessel traffic will not be impacted.

The Acrow bridge is 30' wide to accommodate two lanes of traffic. The movable bascule span is 60' long and the back span is 70' long for an overall length of 130'. The back span also includes a pedestrian walkway to allow access to the control cabin. Acrow's structure is currently scheduled to be in service until May 2021, when traffic will begin to use the new drawbridge.



Specifications

Bridge length:

Movable bascule span is 60' long with a 70' back span for an overall length of 130'.

Bridge width:

30' for two lanes of traffic plus pedestrian walkway on back span to enable access to control cabin.

Live load:

2 lanes of HS20-44

60 PSF pedestrian loading (back span only)

600 pounds per foot guardrail loading

Deck surface:

Anti-skid epoxy coated deck

Bridge design:

- (A) Panel chords, diagonals & verticals, panel raker to AASHTO M223 Gd 65
- (B) Decking, raker brace, transom, diagonal brace, top chord brace, swaybrace, transom brace to AASHTO M223 Gd 50
- (C) Panel pins to ASTM A193 Gd B7
- (D) Bolts to AASHTO M164M - A325

Bridge finish:

- All major components galvanized to AASHTO M111-ASTM A123
- All bolts are hot dipped galvanized
- All pins are electro galvanized