

North Hero – Grand Isle Drawbridge Replacement

Estimated Completion: July 2023

Jonathan Griffin P.E. – Project Manager

Taylor Waring M.C.E – Resident Engineer

Project Summary

- \$84.65 million Construction project
- Temporary Bridge completed May 2019
- Existing bridge completely removed Fall of 2020
- Construction of first permanent components of the bridge in winter 2020 (sub-footings under water)
- Fabrication of new bridge components
- Construction of new bridge piers through Winter/Spring/Summer of 2021
- New bridge opening delayed one year to June 2022 (due to hazardous contaminant management)



Document Management

- 506 Total Submittals to date
- 237 Request For Information to date
- 92 Written Orders
- 71 Material Certifications
- Many other project correspondences

The screenshot displays a web application interface for document management. At the top, a navigation bar includes the text 'Contracts / North Hero - Grand Isle BHF 028-1(26) / Submittals' and a search bar with the placeholder 'Search for documents'. A dark sidebar on the left contains navigation icons and labels: 'CONTRACTS', 'DOCUMENTS', 'DASHBOARD', and 'NOTIFICATIONS'. The main content area is titled 'Submittals' and shows a list of items for 'North Hero - Grand Isle BHF 028-1(26) - US Route 2, Bridge 8'. Each item includes a title, a category tag, an 'update' button, the company name 'Cianbro Corporation', a due date, and a list of recent activity.

Contracts / North Hero - Grand Isle BHF 028-1(26) / Submittals

Search for documents

Submittals

North Hero - Grand Isle BHF 028-1(26) - US Route 2, Bridge 8

- Warning Gates & Tender House HR** Fabrication Drawing - Other update
Cianbro Corporation
Warning Gates & Tender House HR is due on **Wednesday, Mar 31 2021**.
3 comments 2 supporting documents
Mar 18 09:59 AM EDT Received - Ready for Review
Lead review by PM and HDR. PM is primary transitioner
2021 Document transitioned from Submitted to Received - Ready for Review.
Vermont Agency of Transportation - Taylor Waring
- Bridge Control System Spare Parts List** Construction Drawing - Other update
Cianbro Corporation
Bridge Control System Spare Parts List is due on **Tuesday, Mar 30 2021**.
4 comments 2 supporting documents
Mar 18 09:59 AM EDT Due Date changed from blank to 03/30/2021
Document Due Date changed from blank to 03/30/2021.
2021 Vermont Agency of Transportation - Taylor Waring
- Bascule Walkway Grating Support Clip Angles** Fabrication Drawing - Steel update
Cianbro Corporation
Bascule Walkway Grating Support Clip Angles is due on **Tuesday, Mar 30 2021**.
3 comments 2 supporting documents
Mar 18 09:58 AM EDT Received - Ready for Review
Lead review by PM and HDR. PM is primary transitioner
Document transitioned from Submitted to Received - Ready for Review.
Vermont Agency of Transportation - Taylor Waring
- Plumbing and HVAC Insulation** HVAC update



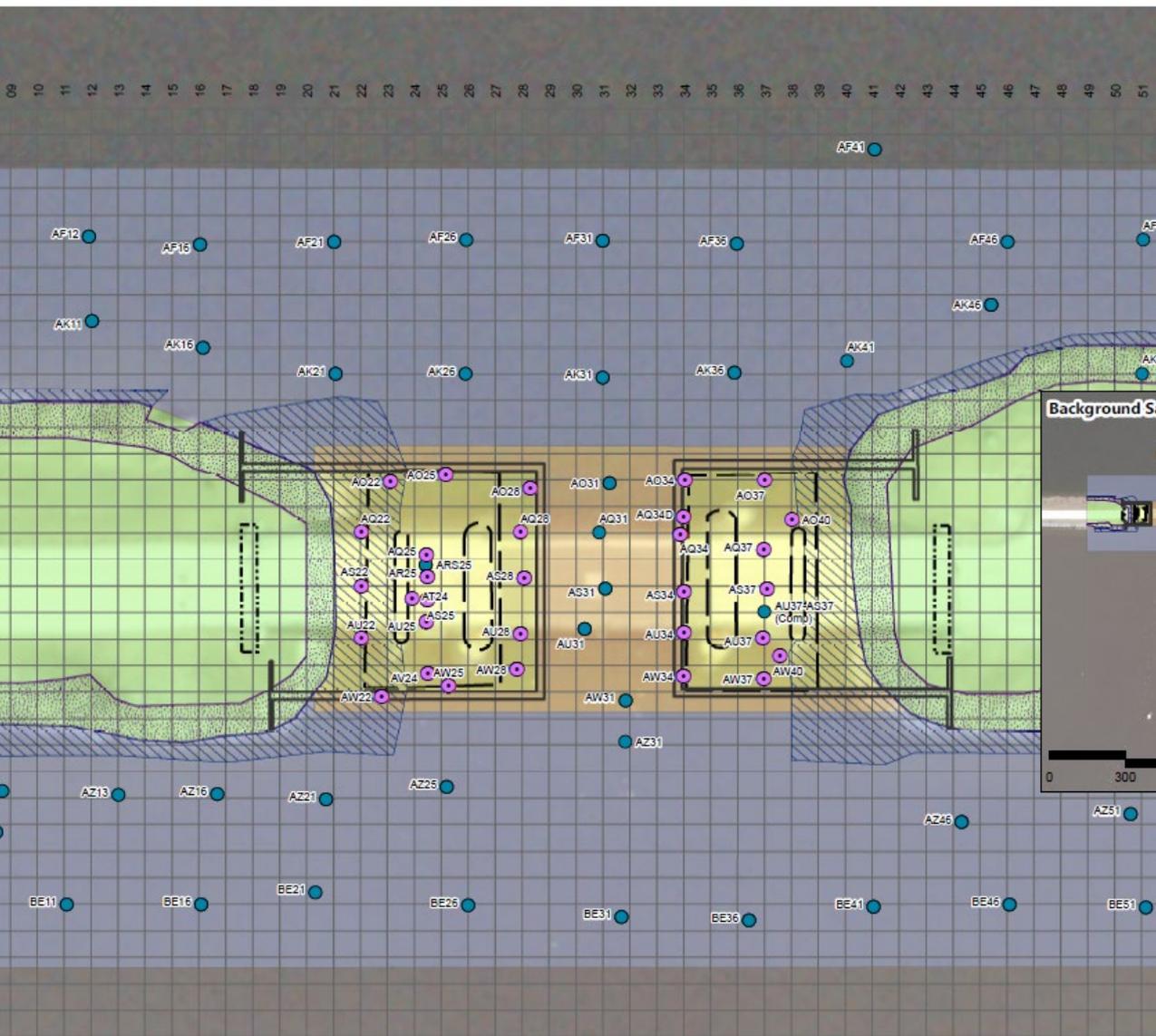
Temporary Construction

- Temporary Bridge Opened 2019
- Total Length – 541'
- Movable Span – 60'
- Provides a 40' Channel
- Total Cost - \$13 Million



Bridge Demolition

- Demolition of Bascule Span
- Complicated demolition because the span is balanced.



North Hero Drawbridge Site Investigation

Sources: Background Orthoimagery by VCGI (2018)
 VHB - Digitized (2019)
 VCGI - Vermont Center for Geographic Information (Various Years)
 VTTrans - Vermont Agency of Transportation

Regulated Soils

- Contaminates of concern were identified in spring of 2019
- AOT retained Environmental consultant to perform extensive site characterization in sediment and causeway soils.
- The identification of contaminated materials changed the sequence of work and cofferdam requirements.
- Delayed new bridge opening one calendar year
- Channel open May to November



Regulated Soils

- Originally site was considered jurisdictional under TSCA (EPA oversight).
- Through Rapid Site investigation and sample analysis the source was identified.
- By review of maintenance records the contaminate release date was identified and determined that TSCA was no longer jurisdictional.
- Eliminated EPA oversight and allowed VTrans to work with DEC. (Anticipated this saved one year and over \$1M)



Temporary Construction

- Lateral support of cofferdam



Temporary Construction

- First row of cofferdam sheets
- Two rows of sheets installed to contain sediment during pier demolition



Current Construction

- Pier 1 tremie 1,100 CY of concrete
- Pier 2 tremie 1,000 CY of concrete



Current Construction

- Pier Construction (Reinforced Concrete)
- Approximately 15' below lake elevation to the bottom of the footing



Current Construction

- View from inside the Pier 2 footing rebar cage
- Mass concrete pour on March 1st.
- 660 CY of Concrete Placed



Current Construction

- Fabrication of all structural steel nearly complete
- Photo of the bascule steel and trunnion shown



Looking Ahead

- Spring 2021
 - Cianbro begins two shifts continues pier construction
 - 9:00 PM – 6:30 AM
 - 6:30 AM – 5:00 PM
- Summer 2021
 - Bascule Steel, Counterweight, Hydraulics, Set Machinery
- Fall/Winter 2021
 - Control House, Mechanical, Electrical, Abutments, Begin Approach Work



Looking Ahead

- Spring 2022
 - Pour Approach Deck
 - Pour Bascule Spans Deck
 - Continue Approach Work, Gates and Signals
- May 2022
 - Bridge Operational
- Summer 2022 – Summer 2023
 - Removing Temporary Bridge
 - Final Approach work & Paving
 - Cleanup