



Newfane

FAS Route 106 (Depot Road/TH-2), Bridge 12

Newfane Bridge 12—BF 0106(6)

Project Location: Town of Newfane in Windham County on FAS Route 106 (Depot Road/ TH-2) over the Rock River. The bridge is located approximately 1.9 miles west of the intersection of FAS Route 106 and VT Route 30.

PROJECT MILESTONES

Preliminary Plans

June 2016

Permitting

January 2018

Final Design

May 2018

Right-of-Way Complete

October 2018

Bid Advertisement

November 2018

Contract Award

December 2018

Target Construction Schedule

Summer 2019

Bridge 12, located along Depot Road over the Rock River in the Town of Newfane, is a historic reinforced concrete closed spandrel elliptical arch, constructed in 1908. The bridge is currently a one lane structure 100-feet long and 18-feet wide. In accordance with Vermont State Design Standards, the bridge is considered narrow with shoulder widths of 3.8-ft and a single lane width of 10-ft. The arch is in poor condition, considered structurally deficient and has a substandard vertical alignment and bridge railing. The subject project will replace the existing arch with a new arch meeting historic requirements.

VTrans evaluated alternatives for replacement of Bridge 12 in an engineering study completed in February 2015. The study assessed the proposed design criteria for the bridge and roadway alignment, Right-of-Way impacts, hydraulics and historic and cultural resources. Several alternatives were considered including no action, rehabilitation of the existing historic arch, full replacement with a new reinforced concrete arch, and full replacement with a prefabricated steel beam bridge with a concrete arch façade to mimic the original structure. Given the age of the structure and structural deficiencies, the engineering study recommended full bridge replacement with an offsite detour.

The new structure will be a functioning reinforced concrete arch similar to the original structure, with a major axis length of 76.5-ft and a minor axis length of 31.0-ft, to match the original bridge profile. This clearspan meets the hydraulic standard of passing the Q50 storm event with at least 1.0-foot of freeboard, and meets bank full width requirements. The new arch will continue to perform as a one-lane bridge but will be widened to 28-ft to accommodate any potential future two-lane traffic requirements. The lines and concrete details of the original spandrel walls will be replicated as close as possible. Additionally, all dimensions and proportions of the original arch will be maintained where possible in the new structure.

It is anticipated that the bridge will be constructed during the summer of 2019. There will be an approximate 20 week road closure. The detour for this project location will utilize Grimes Hill Road and VT 30. This detour will add approximately 0.5 miles to the through route, and have an end-to-end distance of 4.5 miles.



Arch Ring Map Cracking



Target Construction Schedule: Construction activities will take place during the summer of 2019. There will be an allowable 20 week road closure period during which time traffic will be detoured around the project site.

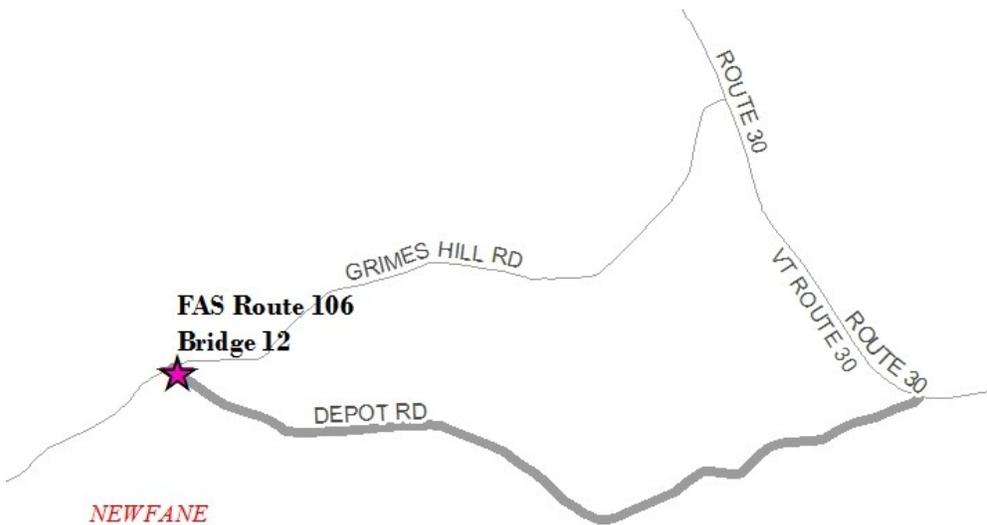
Contractor: TBD

Estimated Total Project Cost: TBD

VTrans Project Manager: Carolyn W. Carlson, P.E.

VTrans Resident Engineer: TBD

Detour Route: Traffic will be maintained on an off site detour. Detoured traffic will utilize VT30 and Grimes Hill Road during construction. This route will add roughly .5 miles to the through route, for an end-to-end distance of 4.5 miles. Due to site constraints it is anticipated that the detour may need to be reduced to one lane, alternating traffic at the intersection of Depot Road and Grimes Hill Road/ Dover Road at the project site.



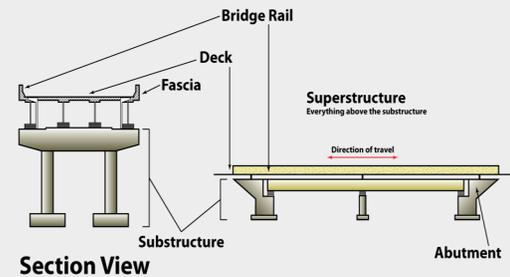
Bridge Location Map



Poor Condition of the Arch Wall



Deteriorated Bridge Railing



Generic Bridge Element Description



<https://www.facebook.com>



<https://twitter.com/511VT>

For more details, click here.

