



Clarendon

Walker Mountain Rd (Town Highway 3), Bridge 11

Clarendon BRO 1443(48)

Project Location: Town of Clarendon in Rutland County on Walker Mountain Rd over Clarendon River. The bridge is located approximately 1 mile east of the intersection of Walker Mountain Rd and VT Route 133.

Benefits of Accelerated Bridge Construction:

- Reduced design and construction duration
- Reduced road user cost
- Safer for workers and traveling public
- Increased strength and quality of bridge components
- Eliminates need for temporary bridge construction
- Reduced impacts to:
 - Environmental Resources
 - Utilities
 - Right-of-Way

The Clarendon Bridge 11 project will replace the existing bridge, which is considered structurally deficient, with a new bridge on the existing horizontal alignment. The existing bridge is a single-span concrete T-beam bridge constructed in 1927, and is 31-feet long and 23.4-feet wide. The bridge superstructure (deck and beams) components are in poor condition and the bridge substructure is in fair condition.

VTrans evaluated alternatives for replacement of Bridge 11 in an engineering study completed in August 2012. The study assessed the proposed design criteria for the bridge and roadway alignment, Right-of-Way impacts, hydraulics, and historic resources. Several alternatives were considered including no action, permanent bridge closure, and full bridge replacement. Given the age of the structure and existing hydraulic and structural deficiencies, the engineering study recommended full bridge replacement with a single span bridge using Accelerated Bridge Construction (ABC) methods with an offsite detour. Because the bridge is in a historic district new concrete bridge rail with box beam approach has been incorporated into the project at the direction of VTrans Historic Preservation Officer to be in compliance with federal historic regulations.

The new bridge will be comprised of a superstructure that has the minimum depth possible for the design span, in order to maximize hydraulics. The proposed bridge will include a completely new bridge that is 22 feet wide rail to rail. The proposed structure will match the existing geometry in regards to horizontal and vertical alignment. The current structure does not meet the minimum hydraulic standard, therefore, the new superstructure span has been increased and the structure depth has been minimized.

The project will be advertised in October 2015 and will be constructed during the summer of 2016 using ABC methods, which will expedite construction and reduce disturbance to the public. There will be an allowable 28 day road closure with temporary single lane closures two weeks prior to and two weeks following the bridge closure period. The most likely detour for this project location would add approximately 0.7 miles to the through route, and have an end-to-end distance of 1.7 miles.



Looking North Over Bridge

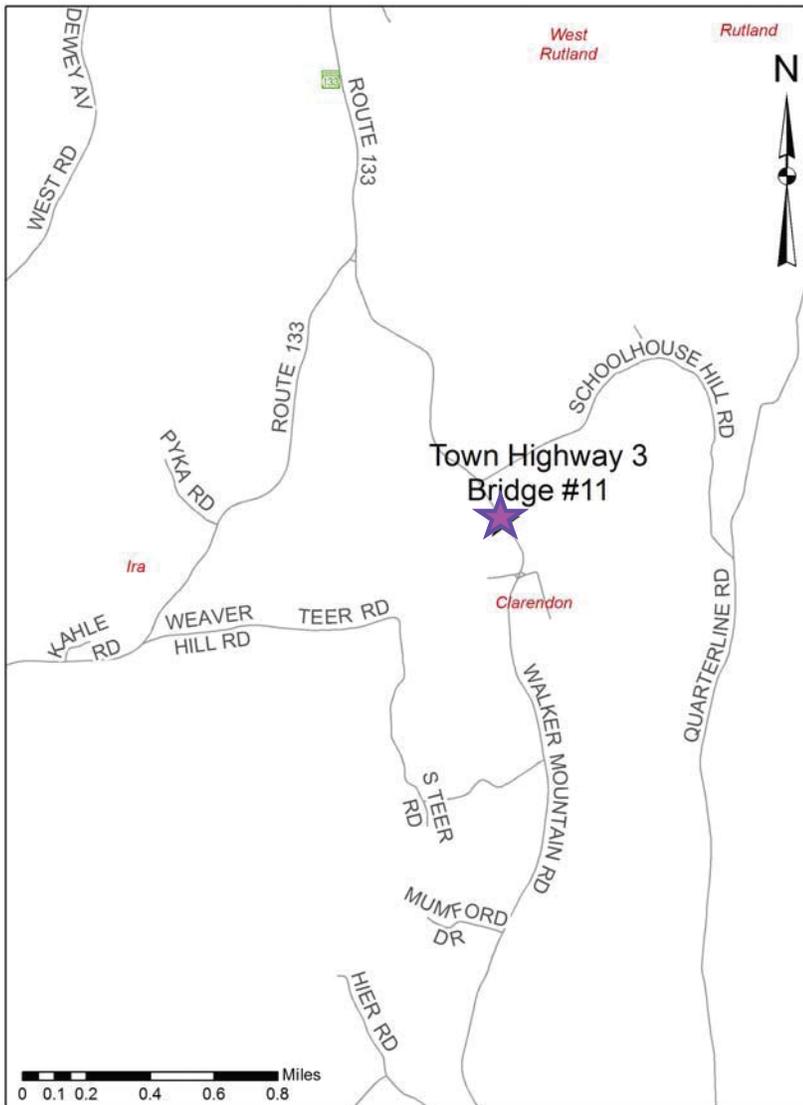
Target Construction Schedule: It is anticipated that construction activities will take place beginning in June 2016 and be complete by early September 2016. The allowable bridge closure period is 28 consecutive days to be scheduled by the contractor between June 20th and August 19th. The contractor is planning to close the bridge from July 11 through August 8, 2016

Contractor: J.A. McDonald

Estimated Total Project Cost: \$1,353,469.50

VTrans Project Manager: Kristin Higgins

Traffic Maintenance: The bridge will be closed for 28 days and traffic will be maintained on an offsite detour. The town is responsible for choosing and signing the detour route.



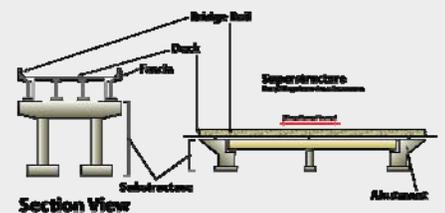
Bridge Location Map



T-Beam Deterioration



Fascia Deterioration



Section View



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