Accelerated Bridge Program
VTRANS

Bridge 11 Looking North

Chelsea

VT Route 110 Bridge 11

Chelsea BHF 0169 (10)

Project Location: Town of Chelsea in Orange County on Vermont Route 110. Bridge 11 carries VT 110 over So. Washington Brook and is located approximately 0.3 miles north of the intersection of VT 110 and VT 113.

This Chelsea Vermont Route 110 Bridge project will replace the deck and superstructure on Bridge 11. Bridge 11 has substandard lane and shoulder widths, substandard approach and bridge railing, is inadequate for pedestrian and bicycle use, has inadequate hydraulic capacity, and is considered structurally deficient. Bridge 11 is also substandard in banking. The existing structure, constructed in 1939, is a single span rolled steel bridge 86' in length.

VTrans evaluated alternatives for the improvement of Bridge 11 in an engineering study completed in May 2014. The study assessed the proposed design criteria for the bridge and roadway alignment, Right-of-Way impacts, hydraulics, and historical and archaeological resources. Several alternatives were considered including no action, repair and rehabilitation, superstructure replacement, and complete replacement. Given the age of the structure, existing deficiencies, and the need to expedite project delivery, the engineering study recommended superstructure replacement using Accelerated Bridge Construction (ABC) methods with an offsite detour.

The improvements will consist of a new Precast Concrete Bridge superstructure supported on the existing, but widened substructures. This solution has a relatively short construction period and comparatively low construction and maintenance costs. Bridge 11 will maintain its line, grade, and span, but will be widened to provide standard lane and shoulder widths and a new raised sidewalk on one side. New crash-tested bridge and approach rails will be included. It has been determined that meeting the hydraulic standards is not feasible, as it would necessitate raising the bridge and approach roadways an undesirable amount, while likely just relocating floodwater elsewhere.

The bridge will be constructed during the summer of 2017 using ABC methods, which will expedite construction and reduce disturbance to the public. There will be an allowable 12 day road closure with periodic short term single lane closures prior to and following the bridge closure period. The community will have the opportunity to provide input on the closure periods and timing within the summer construction window. The new bridge is expected to have a service life of approximately 40 years.

PROJECT MILESTONES

Preliminary Plans
June 2015
Permitting
October 2015
Final Design
January 2016
Right-of-Way Complete
October 2016
Bid Advertisement
November 2016
Contract Award
December 2016
Target Construction Schedule
June 2017 – August 2017

Bridge 11, East Face

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Target Construction Schedule: Construction activities will take place during 2017.

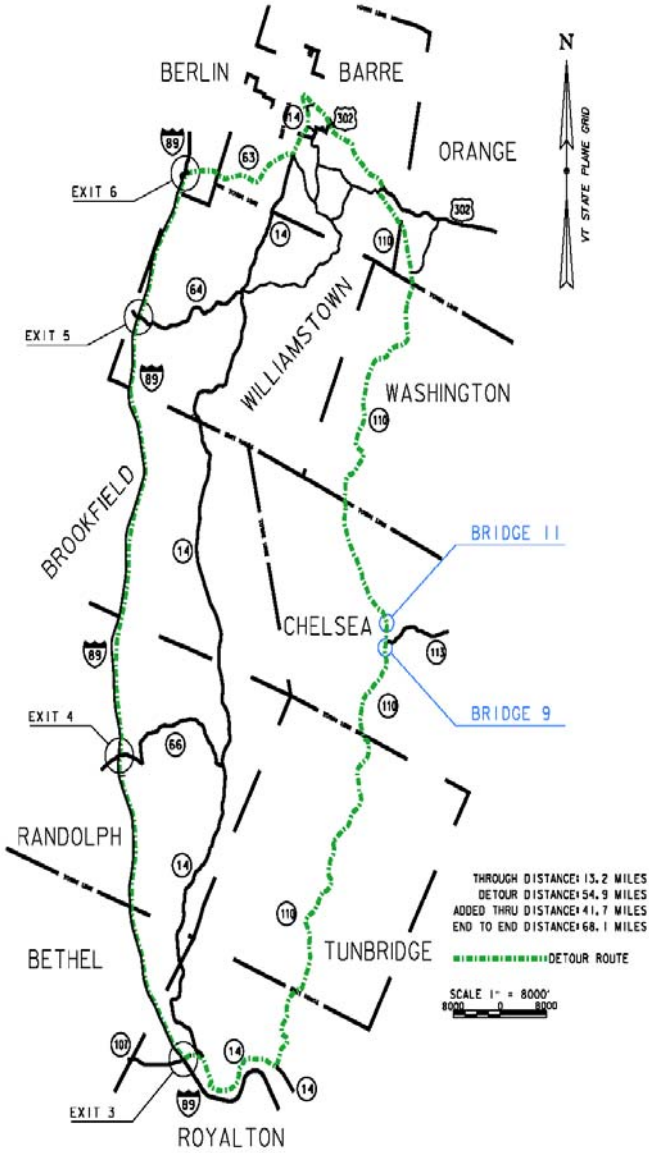
Contractor: TBD

Cost: TBD

VTrans Project Manager: Jennifer Fitch, P.E.

VTrans Resident Engineer: TBD

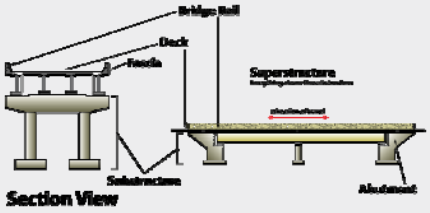
Detour Route: The detour route will be the responsibility of the State of Vermont. Traffic south of the project is diverted from VT 110 onto VT 14 in South Royalton and then onto I-89 to Berlin. Then follow VT 63 through Barre onto US 302, and south to VT 14 in East Barre, and back to VT 110.



Detour Map

Bridge 11, Looking South

Past Deck Patching



Generic Bridge Element Description

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