



Strafford

FAS 0177 (VT132), Bridge 29 over the West Branch of the Ompompanoosuc River

Strafford BF 0177(10)

Project Location: Town of Strafford in Orange County on Route 132 approximately 6.5 miles northeast of exit 2 on Interstate 89.

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

Strafford Bridge 29 is a Town-owned bridge. This project will replace the existing bridge, which is structurally deficient and substandard in width, substandard in several geometric parameters, and does not meet Hydraulic standards. The existing bridge is a single span concrete T-beam bridge constructed in 1923, and is 46 feet long and 20.6 feet wide. The deck is in poor condition and the bridge substructure is only in fair condition.

VTrans evaluated alternatives for replacement of Bridge 29 in an engineering study completed in August 2013. The study assessed the proposed design criteria for the bridge and roadway, Right-of-Way impacts, hydraulics, and impacts to potential environmental and cultural resources. Several alternatives were considered including no action, rehabilitation, 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.

The new bridge will be comprised of a prefabricated superstructure and integral abutments supported by driven piles. The width of the new bridge will be 26 ft. rail to rail and will span approximately 60 ft. A sidewalk is not proposed as the shoulder widths will be appropriate for shared use by bicycles and pedestrians. Most new bridge and roadway standards will be met including strength, width, horizontal and vertical alignment, and hydraulics. The one exception to satisfied standards is bridge approach rail, which cannot be constructed fully to standard due to the proximity of residential driveways off the southern end of the bridge.

It is anticipated that 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 4 week 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 less than 1 mile to the through route, and have an end-to-end distance of less than 2 miles.



Looking North Over Bridge

Target Construction Schedule: It is anticipated that construction activities will take place beginning in June 2017 and last one construction season. The allowable bridge closure period is 4 weeks, the beginning of which is to be determined at a later date.

Contractor: Miller Construction Inc.

Estimated Total Project Cost: \$1,347,505.50

VTrans Project Manager: Kristin Higgins, PE

VTrans Resident Engineer: Tom Chase

Traffic Maintenance: The bridge will be closed for 4 weeks between July 24, 2017 and September 1, 2017, with traffic being maintained on an offsite detour. A local bypass is available for local traffic but will not be signed by VTrans.



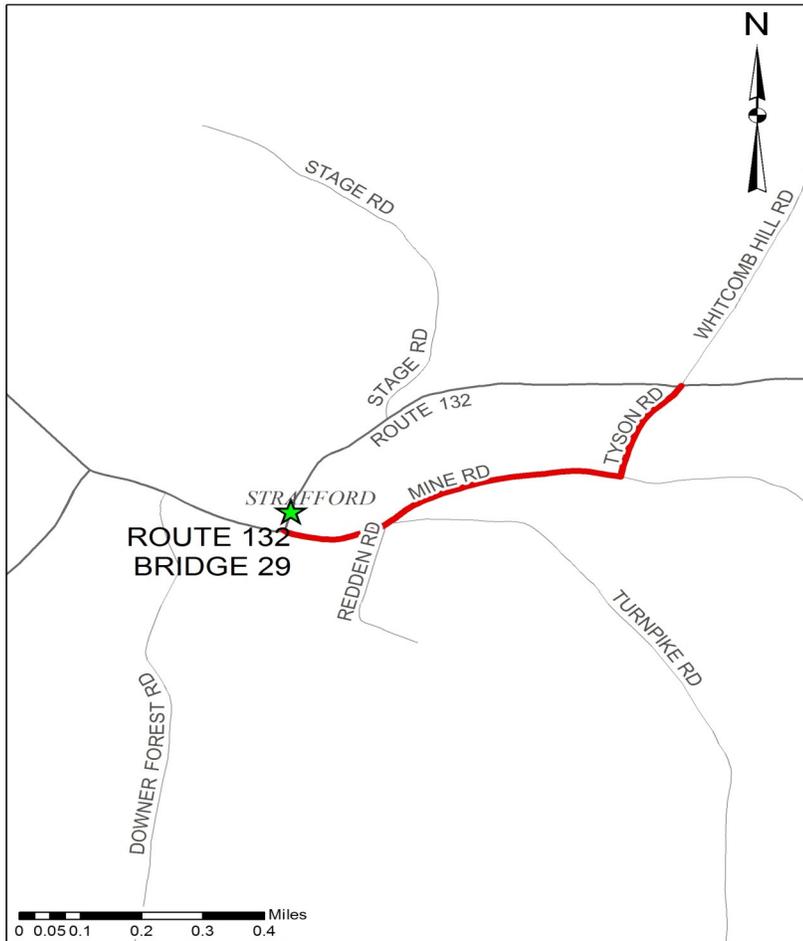
Abutment (Substructure) Deterioration



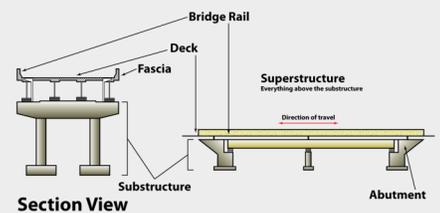
Pier (Substructure) Deterioration



Deck Deterioration



Local Bypass Bridge Location



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