

FASTLANE GRANT APPLICATION EXECUTIVE SUMMARY



2017

Rogers' Ranger Bridge Replacement Project

The U.S. Route 2 (Rogers' Rangers) Bridge which connects Lancaster, New Hampshire and Guildhall, Vermont over the Connecticut River, was constructed in 1950. It is a High Parker Steel Through-truss bridge with reinforced concrete and a timber sidewalk deck used by pedestrians and snowmobilers as part of the local trail system.

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Project Description

The New Hampshire Department of Transportation (NHDOT) and Vermont Agency of Transportation (VTRans) propose to replace the Rogers' Rangers Bridge (NHDOT Br. No. 111/129; CT. River Br. No. 26), which carries U.S. Route 2 over the Connecticut River between the towns of Lancaster, New Hampshire and Guildhall, Vermont. The structure is jointly owned by the NHDOT (80%) and the VTrans (20%). The NHDOT is the lead State agency for the project. The proposed project will replace the deteriorated bridge with a new bridge located upstream of the current location.

The existing structure, comprised of two High Parker Through Steel Trusses with span lengths of 198 feet (ft) each and an overall length of 396 feet ('), was constructed in 1950. The structure has a roadway width of 28' (two 12'-0 inches (") travel lanes and 2'-0" shoulders). The bridge is currently posted as "E-1", which excludes certified single unit vehicles from crossing the bridge. The bridge has a 14'-0" measured vertical clearance, which is below the minimum required vertical clearance of 16'-6", making the bridge the only vertical obstruction on US Route 2 in New Hampshire.



FIGURE 1 - AERIAL VIEW OF THE BRIDGE CARRYING US ROUTE 2 OVER THE CONNECTICUT RIVER

Annual Average Daily Traffic (AADT) on U.S. Route 2 over the bridge was 3,500 vehicles per day in 2015, with 10% trucks. The forestry industry is an important industry in this region; therefore, many of the trucks that use the bridge are log trucks, which can easily be loaded to exceed the vertical clearance of the bridge. Residents have shared anecdotes of logs occasionally getting knocked off trucks and into the roadway. During the in-depth bridge inspection in September 2011, the bridge was hit three times during the two-week inspection timeframe.



FIGURE 2 - DAMAGE TO INBOUND OVERHEAD

A cantilevered sidewalk was added to the bridge in 1996 as part of a federal aid bridge enhancement project. The sidewalk also serves as a means for snowmobile users to cross the Connecticut River as part of the local trail system during the winter months.

The project includes replacing the existing truss bridge with a new concrete deck and steel girder bridge upstream of the existing bridge with unlimited vertical clearance to eliminate the potential of vehicular impact

with the bridge, provide a pedestrian sidewalk, improve stormwater collection and treatment, improve the intersection of US Route 2 with VT Route 102 in Guildhall by reducing conflict points and the potential for crashes, and to maintain snowmobile movements across the bridge.

It is critical to reconstruct the U.S. Route 2 bridge. The safe and dependable operation of this complex structure is critical to providing connectivity for the regional transportation system between these two states and the larger trade corridor. The bridge is a critical facility for the movement of goods and

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people locally, regionally, nationally and internationally. FASTLANE funding will accelerate the reconstruction of the bridge. The reconstruction of the bridge will:

- Improve reliability and safety
- Address significant deficiencies in the regional transportation system by reconstructing the structurally-deficient and functionally-obsolete bridge
- Address regional transportation needs, and ensure the continued economic vitality of these two communities and the region
- Facilitate the movement of goods to national and international export markets
- Provide / create jobs in the region for the entire duration of the construction activities
- Enhance the livability of these two communities and the wider region
- Meet USDOT goals on system preservation, and targeting federal funding towards critical National Highway System facilities

New Hampshire and Vermont believe this application meets the criteria for the FASTLANE Grant Program and further, that it represents the type of project envisioned. Receipt of FASTLANE Grant funds will also allow both states to focus on near-term toward addressing the needs of other bridges which would not otherwise be possible without FASTLANE funding for this project.

Project Location

The project's location spans the Connecticut River between Lancaster, New Hampshire and Guildhall, Vermont. These two communities are rural with populations being an estimated 3,300 in Lancaster and 260 in Guildhall, according to U.S. Census reports. US Route 2 provides an important connection to US Route 3 in New Hampshire which allows access to the northernmost New Hampshire Communities. It also connects Interstate 89 and 93 in Vermont allowing for connection from Montreal to Boston.

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Project Costs

Due to the location of the state line, NHDOT and VTrans have agreed to fund the project utilizing an 80/20 split, with New Hampshire paying 80% of the project costs. Furthermore, NHDOT has agreed to administer the design and permitting portion of the project.

Project Costs by State and Project Component

	PE	ROW	Construction	Total
New Hampshire	\$ 1,037,000	\$ 124,500	\$ 9,000,000	\$ 10,161,500
Vermont	\$ 259,000	\$ 124,500	\$ 1,000,000	\$ 1,383,500
Total	\$ 1,296,000	\$ 259,000	\$ 10,000,000	\$ 11,545,000

Project Costs by State and Funding Source

	New Hampshire	Vermont	Total
FASTLANE	\$ 5,000,000	\$ -	\$ 5,000,000
Federal Formula	\$ 1,161,500	\$ 383,500	\$ 1,545,000
State Funds	\$ 4,000,000	\$ 1,000,000	\$ 5,000,000
Total	\$ 10,161,500	\$ 1,383,500	\$ 11,545,000