

BUILD 2018

EXECUTIVE SUMMARY

Submitted by: 



Anna Hunt Marsh Bridge



Charles Dana Bridge

Hinsdale, NH - Brattleboro, VT - NH Route 119 Bridge Project

Project Website: <https://www.nh.gov/dot/projects/hinsdalebrattleboro12210/index.htm>

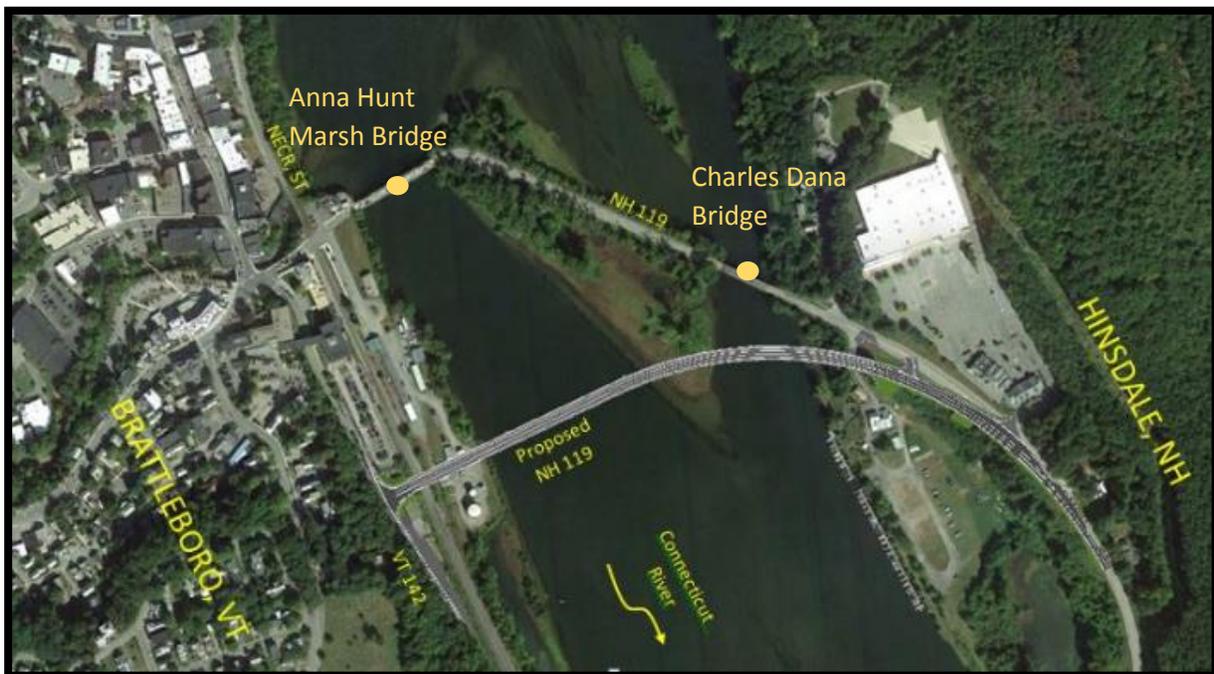
The Hinsdale, NH – Brattleboro, VT NH Route 119 Bridge Project bypasses two (2) bridges carrying NH Route 119 over the Connecticut River by constructing a new bridge approximately 1,000' downstream. The Anna Hunt Marsh Bridge and the Charles Dana Bridge connect the Towns of Hinsdale, New Hampshire and Brattleboro, Vermont by way of a small island (Hinsdale Island) located in the Connecticut River. The bridges were originally constructed in 1920. The Project proposes a single new bridge to bypass the current bridges, leaving the historical structures to be maintained for use by pedestrians and bicyclists and for other recreational opportunities available on the island.

Hinsdale, NH - Brattleboro, VT - NH Route 119 Bridge Project

Project Description

The New Hampshire Department of Transportation (NHDOT) proposes to bypass the Anna Hunt Marsh Bridge (NHDOT Bridge No. 041/040, CT. River Br. No. 2) and the Charles Dana Bridge (NHDOT Bridge No. 042/044, CT River Br. No. 1) which carry the Connecticut River between the rural Town of Hinsdale, New Hampshire and Brattleboro, Vermont. The Anna Hunt Marsh Bridge is jointly owned by the NHDOT (93%) and the Town of Brattleboro (7%) and maintained by the NHDOT, while the Charles Dana Bridge is owned and maintained solely by the NHDOT. The proposed project will create a bypass for the functionally-obsolete and structurally-deficient bridges by way of a new, single, 8-span bridge located downstream of the current location.

The existing structures were constructed in the 1920s. The Anna Marsh Bridge is a fracture-critical Parker Truss with a span length of 324 feet (324') and is in poor condition (Note: the superstructure condition rating was reduced from 5 (fair) to 4 (poor) as a result of a June 2018 detailed hands-on fracture-critical inspection). The bridge is posted for a minimum vertical clearance of 11'4" which is well below the minimum required vertical clearance of 16'6". The Charles Dana Bridge is also now in poor condition and has a total length of 297' consisting of a 200' span fracture-critical Parker Truss and two steel girder approach spans. The bridge is posted for a minimum vertical clearance of 11'10", also well below the minimum required vertical clearance noted above. Both bridges have a roadway width of 20'4 inches (20'4") (two 10'2" travel lanes and no shoulders) and both bridge sidewalk configurations include 6-foot cantilevered sidewalks outside the upstream trusses.



Aerial View of the Existing Bridges Carrying NH Route 119 over the Connecticut River with Proposed Project Location (Looking Upstream/North)

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Annual Average Daily Traffic (AADT) over the bridges was 8,900 vehicles per day (vpd) (3,248,500 annually) and 11,100 vpd at the adjacent railroad crossing and intersection in Brattleboro in 2016, with 5.6% being trucks. NH Route 119 is classified as an Urban Collector and is the southernmost Connecticut River crossing between New Hampshire and Vermont. According to the New Hampshire Employment Security, Economic and Labor Market Information Bureau's 2010 statistics, approximately 46% of working Hinsdale residents commute to Vermont to their jobs, or 932 out of 2,036 workers. Without this crossing, nearly half of the working population of this rural community would be required to take a 16.9-mile detour to and from work each day or seek other employment.

The project includes bypassing the existing bridges with a new concrete deck and steel girder bridge downstream of the existing bridges on an improved roadway alignment. The new bridge will be a 1,782' long, 8-span, curved steel girder structure with a typical section of two 12' travel lanes, two 8' shoulders and one 6-foot sidewalk, for a rail-to-rail width of 46'.

A new bridge will result in unlimited vertical clearance and eliminate the substandard existing vertical clearance and the potential for vehicular impact with the bridge. Improvements will also include raising the elevation of the bridge to eliminate a dangerous at-grade railroad crossing for vehicles with the New England Central Railroad (NECR) at the westerly end of the Anna Marsh Bridge in Brattleboro. Although pedestrians and bicyclists will still be able to use the rehabilitated truss bridges, the new bridge will provide a substantial safety improvement for operators of vehicles, pedestrians, bicyclists and train operators.

In 2015, New Hampshire's Southwest Regional Planning Commission (SWRPC) adopted the Southwest New Hampshire Broadband Plan which outlines priorities for encouraging further distribution and enhancement of broadband services throughout the rural southwestern region of New Hampshire. Specifically, two of the high priorities that were identified were:

- 2.a.ii – Encourage policies that promote the installation of broadband conduit when construction occurs in roadway rights of way and;
- 2.a.iii – Promote the inclusion of broadband infrastructure development & maintenance in public works projects.

To aid in achieving these goals, NHDOT is committed to installing broadband conduit on the new downstream bypass bridge as part of this project to provide for future broadband distribution and enhancement.

The safe and dependable operation of this crossing is critical to providing connectivity of the regional transportation network between these two states and providing access to employment in Vermont for residents of the rural southwestern region of New Hampshire. BUILD funding will accelerate the construction of this important project.

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Beneficial outcomes of the project will include but not be limited to:

- Improved reliability and safety of the crossing
- Improved multi-modal safety for trains, vehicles, pedestrians, and bicyclists
- Quicker emergency response times due to the elimination of vehicle delays caused by the at-grade railroad crossing and Malfunction Junction
- Improved access to economic opportunities in the rural region for businesses and residents
- Addresses regional transportation needs and improves the economic competitiveness of the two communities and region
- Facilitates the movement of goods to national and international export markets
- Creates local jobs during construction activities
- Enhances pedestrian, bicycle, and recreational opportunities
- Enhances the quality of life in the two communities and region
- Ensures continued access to nearby medical and educational facilities in the area
- Maintains two historic truss bridges and;
- Provides the ability for the Town of Brattleboro, Amtrak, the Brattleboro Museum and Art Center to move forward with several exciting safety and quality-of-life improvement projects in the area of Bridge Street, Malfunction Junction and Hinsdale Island.

This project and application meet the criteria for the rural designation of the BUILD Discretionary Grant Program and NHDOT and VTrans believe that it represents the type of project envisioned under the program. Receipt of BUILD Grant funds will also allow NHDOT to reduce the need to secure GARVEE bonding and to focus, near-term, toward addressing the needs of other bridges which would not otherwise be possible without BUILD funding for this project. BUILD funding will accelerate the construction of this important project and effectively mitigate the ongoing safety and operational maintenance issues.

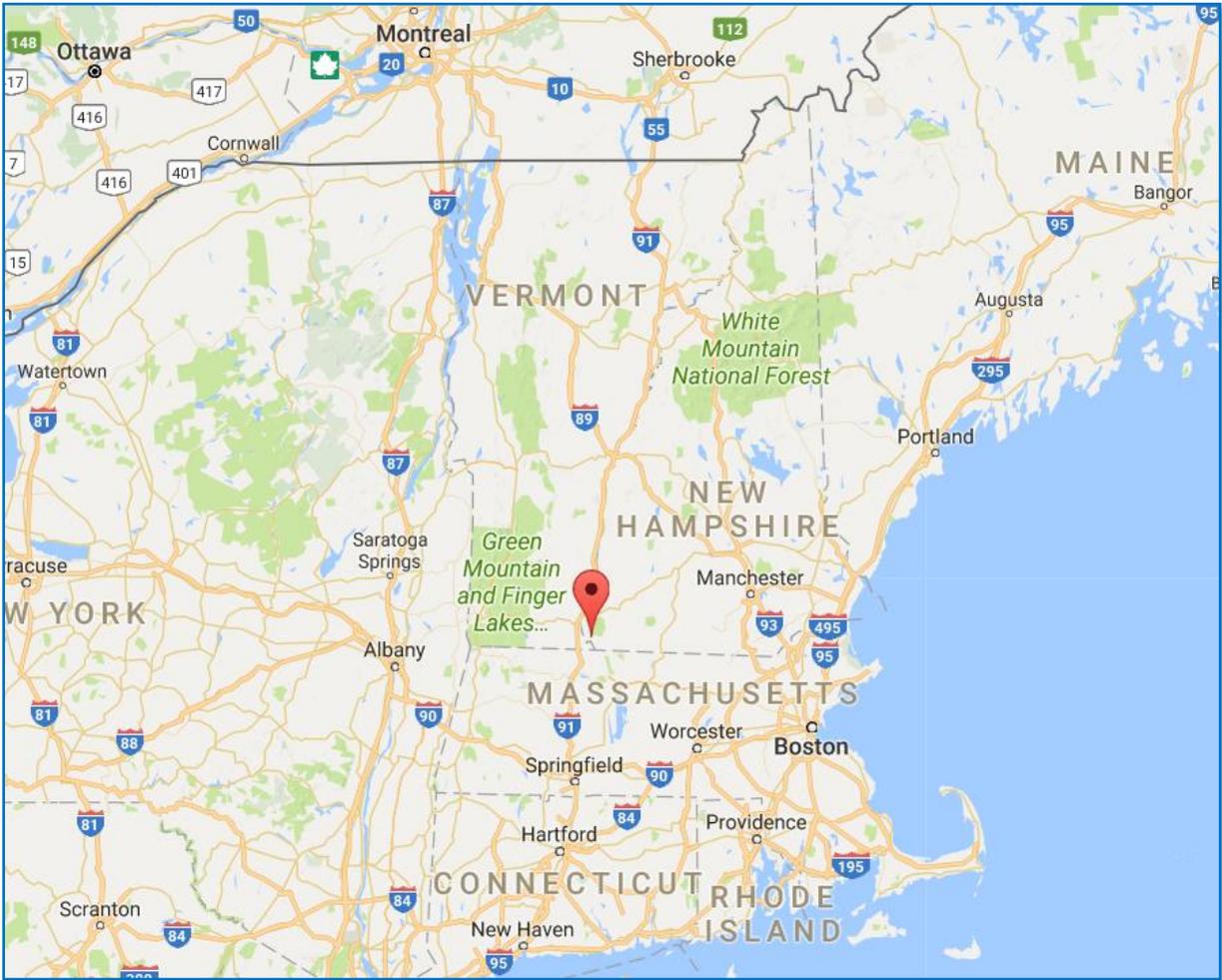
Project Location

The project location extends from Hinsdale to Brattleboro over the Connecticut River via NH Route 119, by way of two bridges spanning either side of Hinsdale Island situated mid-way between the two shorelines. The western bridge, the Anna Hunt Marsh Bridge, is located on the Brattleboro side and intersects at a grade crossing of the NECR and Vermont Routes 5 and 142, known locally as “Malfunction Junction”. The eastern side of the channel is home to the Charles Dana Bridge where NH Route 119 follows the river shoreline into the town of Hinsdale.

For the purposes of the BUILD Transportation Discretionary Grants Program, the project location is considered rural, with Brattleboro being identified as an Urban Cluster. Based upon the 2010 census, the populations of Brattleboro and Hinsdale were 12,046 and 4,046, respectively.

The bridge is a critical facility for the movement of people and goods, locally, regionally, nationally, and internationally. NH Route 119 is the southernmost connection from the rural southwest region of New Hampshire to Interstate 91 in Vermont connecting the region to Canada to the north, and New England’s larger ports and intermodal facilities to the south.

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Connections to Existing Transportation Infrastructure

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Project Costs

This project has an estimated total cost of \$59.44 million, of which, \$25 million is being requested in BUILD funding and \$34.44 million will come from other New Hampshire and Vermont state and federal funding sources. BUILD investments represent approximately 42% of the total project's funding. The project cost breakouts are as follows:

Project Costs by State and Project Component

| | PE | ROW | Construction | Total |
|---------------|-------------|-------------|--------------|--------------|
| New Hampshire | \$900,550 | \$270,000 | \$42,580,000 | \$43,750,550 |
| Vermont | \$184,450 | \$8,080,000 | \$7,420,000 | \$15,684,450 |
| Total \$\$ | \$1,085,000 | \$8,350,000 | \$50,000,000 | \$59,435,000 |
| Total % | 1.8% | 14.1% | 84.1% | 100.0% |

Construction Project Costs by State and Funding Source

| | New Hampshire | Vermont | Total \$\$ | Total % |
|----------------------------|---------------|-------------|--------------|---------|
| BUILD Grant Funds | \$20,750,000 | \$4,250,000 | \$25,000,000 | 50.0% |
| Federal Formula | ----- | \$1,686,000 | \$1,686,000 | 3.4% |
| VT State Funds | ----- | \$1,484,000 | \$1,484,000 | 3.0% |
| NH State Funds (SB 367) | \$8,516,000 | ----- | \$8,516,000 | 17.0% |
| State Funds (Toll Credits) | \$13,314,000 | ----- | \$13,314,000 | 26.6% |
| Total \$\$ | \$42,580,000 | \$7,420,000 | \$50,000,000 | 100.0% |
| Total % | 85.2% | 14.8% | 100.0% | |