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Harvey Road Feasibility Study

Town of Bristol

Bristol, Vermont

Draft Report
August 2025

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Town of Bristol, VT

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1 Introduction

1.1 Background

The Town of Bristol in conjunction with the Addison County Regional Planning Commission (ACRPC) have retained Fuss & O'Neill to conduct a feasibility study to identify improvements needed to upgrade Harvey Rd in Bristol, VT from a Class 4 to a Class 3 Town Highway and assess improvements to the roadway and Bridge number 00020.

The feasibility study process includes assessing existing conditions, gathering public input, establishing the project purpose and need, identification of the necessary process to reclassify, and developing and evaluating alternatives for improvements.

The project team for this project includes:

- Ian Albinson – Town of Bristol
- Frida Powers – Town of Bristol
- Michael Winslow – ACRPC
- Nicole Fox, PE – Fuss & O'Neill, Project Manager
- Jacob Fowler, EIT – Fuss & O'Neill, Project Engineer
- Jaime French, PE – Fuss & O'Neill Senior Bridge Engineer
- Ethan Carrier, EIT – Fuss & O'Neill Bridge Engineer

This report is the result of these efforts.

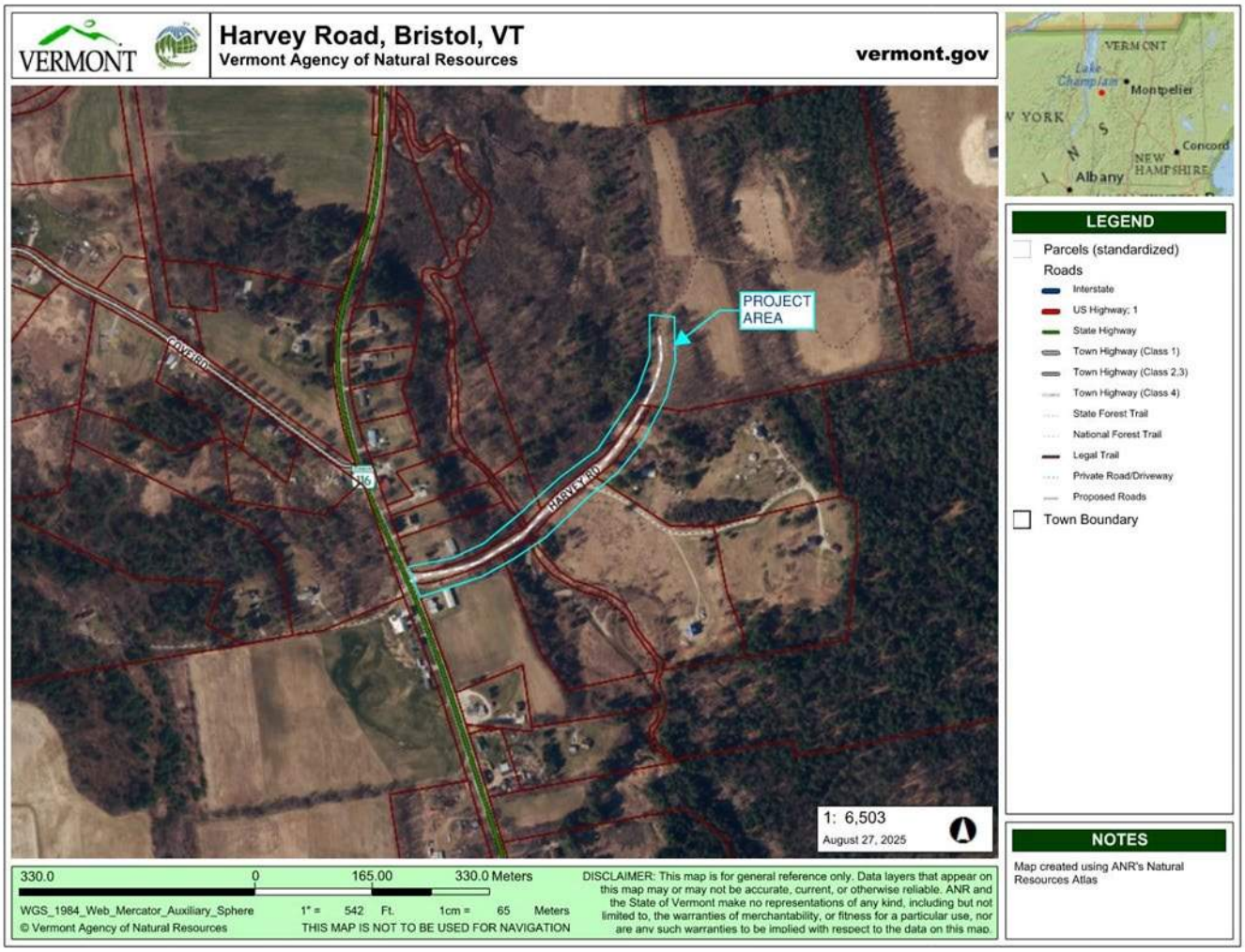
2 Project Purpose and Need

2.1 Purpose

The purpose of this project is to change the classification of Harvey Road from a Class 4 to a Class 3 Town Highway and to improve the roadway and bridge to meet a higher demand for future use.

2.2 Need

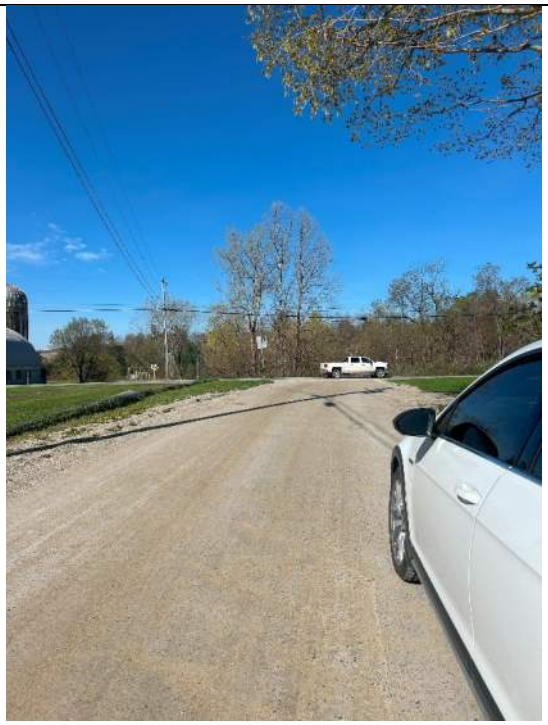
Harvey Road is a narrow, dead-end, gravel Class 4 Town Highway with a one-lane bridge over Little Notch Brook. This bridge is in satisfactory condition, but is scour critical, making it more vulnerable to damage in future flooding events. With the potential for further development off Harvey Road, the Town wants to change the classification of the road to allow for future improvements with the potential for participation in grant programs. The existing narrow roadway and bridge limit the functionality of the roadway for future heavier use.



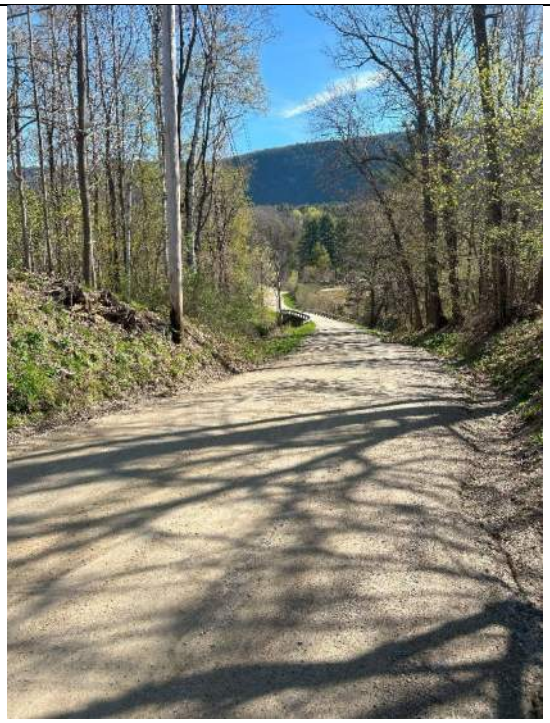
3 Existing Conditions

3.1 Roadway

Beginning at the intersection of Harvey Road and VT Route 116, the southwest end of the project area includes a two-way gravel roadway with an approximately 16-foot-wide traveled way. There is no posted speed limit on the roadway, however the statutory speed limit in Bristol is 35 mph. The 2024 bridge inspection report notes that the Average Daily Traffic on Harvey Road is 20 vehicles. The road continues northeast before crossing a bridge (00020) over Little Notch Brook approximately 600 ft northeast of VT 116. Continuing northeast approximately 300 ft there is a T-intersection with a private, dead-end road named Shermans Lane, with Shermans Ln travelling southeast and Harvey Rd continuing northeast for about 400 ft to its dead end with a small turnaround. Between the intersection of VT 116 and the bridge, there is one private driveway. Beyond the bridge, continuing toward the end of the project area, there is an additional paved private driveway. Both driveways are approximately 9 feet wide and provide access to adjacent private properties.



Harvey Rd towards S 116 Rd with 9 ft lane for one direction with no paved sidewalk/ shoulder.



Hervey Rd towards Bridge across stream river.

Wetland adjacent to Harvey Rd

Roadside ditches with cross pipe (culvert) across the road

3.2 Right-of-Way

The Right-of-Way for Harvey Road, shown on the Vermont Center for Geographic Information parcel layer, reflects a statutory three rod or 49.5-foot-wide Right-of-Way. The statutory Right-of-Way is centered on the existing road; however, the GIS layer representing the Right-of-Way is approximate and does not appear centered.

3.3 Utilities

Within the project area, overhead electrical wires enter from the south at the intersection of VT 116 and Harvey Road and cross the roadway multiple times within the project area. Utility poles are positioned approximately five feet or less from the edge of the roadway along the entire length of the Harvey Road.

Overhead wire swings along project alignment

Electric pole position

3.4 Drainage and Culverts

At the beginning of the project (VT 116 road and Harvey Rd), the existing roadway drains via overland flow into shallow ditches on both sides. These ditches convey stormwater northeast toward a low point at Little Notch Brook. From the bridge the water drains towards Little Notch Brook from northeast where an 18" HDPE (high-density polyethylene plastic) culvert is located.

At approximately 30 feet from eastern end of Harvey Road, there is an existing 18" HDPE cross culvert in good condition. The culvert conveys surface runoff from the east side to the west side of the roadway where it drains to an adjacent wetland. On the east side stone protection has been placed to reduce the velocity of incoming flow and help minimize erosion around the pipe entrance. The west side has no energy dissipation measures currently observed.

Shallow ditches run toward the bridge from the T-intersection at S 116 Rd and Harvey Road.

The roadside slope after the bridge drains water to a low-lying area that connects to a wetland.

An 18-inch HDPE inlet pipe on the east side drains water across the road to the west side

An 18-inch HDPE outlet pipe conveys stormwater from the hillside on the east side to the west side, adjacent to the wetland

3.5 Bridge

There is one bridge (00020) with a 44-foot span and an approximately 16-foot-wide deck located approximately 600 feet northeast of VT 116 crossing over Little Notch Brook. The bridge is constructed with steel beams (girders) and a timber deck and is supported by concrete abutments and wing walls on both sides. The bridge was constructed in 1919 and last rehabilitated in 2002.

Due to the bridge's age, the steel beams exhibit a significant amount of rust on their undersides, which may present safety concerns in the coming years if not addressed. Additionally, the fascia mounted guardrail system is showing signs of rotating with supporting elements experiencing corrosion and section loss. This is not preferred because there is currently no curb on the bridge deck and water will continue to fall on the supporting elements which will increase the deterioration. However, the concrete wing walls and abutments remain in good condition. However, these substructure elements are experiencing local scour because of the existing alignment of the stream underneath. The existing footings are exposed but do not appear to be undermined. It is unclear how the abutments are supported because there are no existing plans available. More information on the bridge can be found in the "Harvey Road over Little Notch Brook – Bridge Evaluation" attached as Appendix F.

Bridge beams(girder), deck and wing wall conditions.

Closer look on bridge beam condition with noticeable rust.

River stream sides conditions

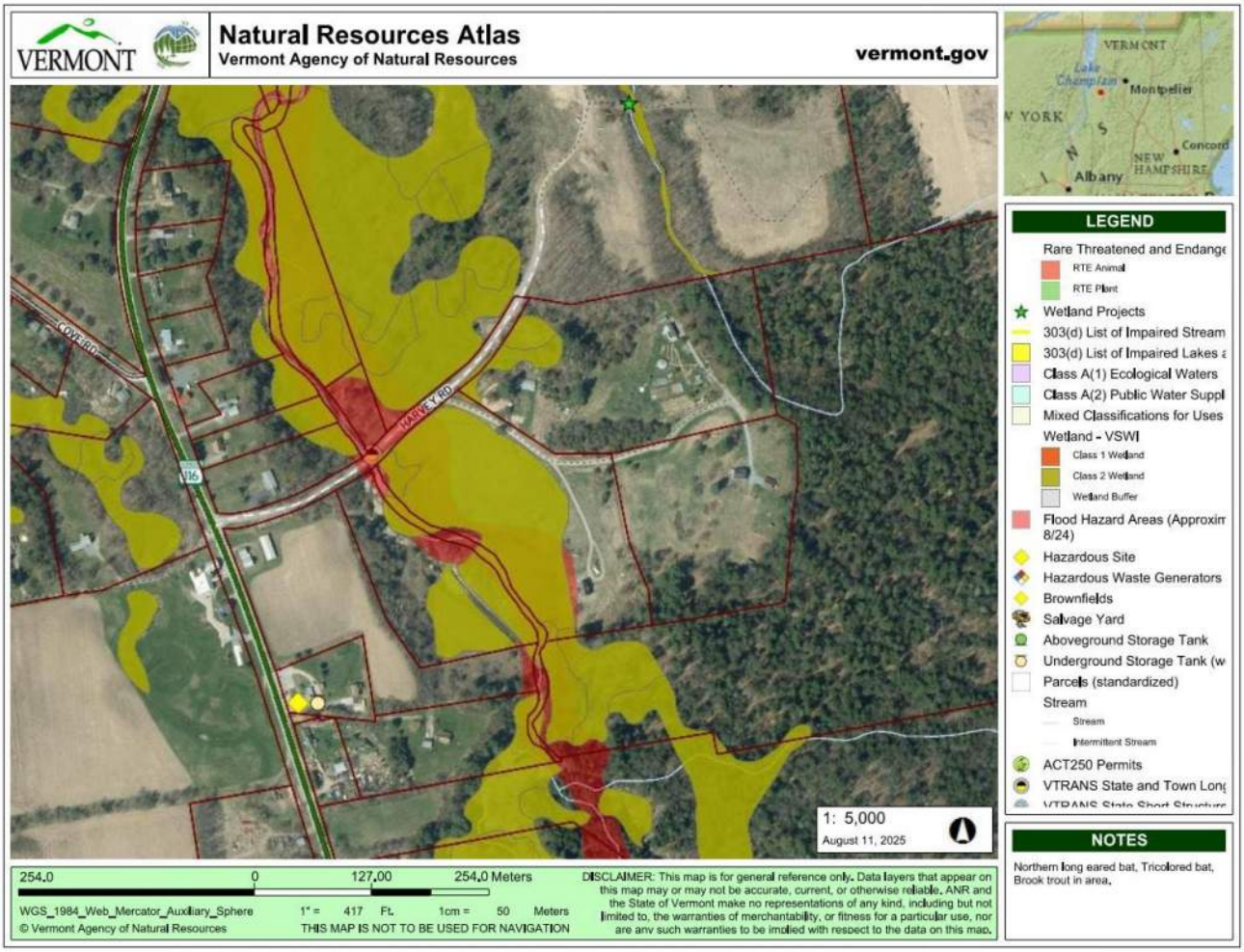
Guard rail condition

3.6 Lighting

No street lighting is present within the project limits.

3.7 Natural Resources

Little Notch Brook crosses Harvey Road approximately 550 feet east of VT 116. Little Notch Brook is a perennial stream with a poorly defined stream channel that is subject to migration during significant storm events. There are wetlands and a floodplain associated with the brook that crosses Harvey Road and extends from approximately 50 feet west of the brook to its intersection with Shermans Lane. No hazardous waste sites or invasive species were mapped within the project area. The area does have the potential for bat habitat, which would need to be considered during design and construction. No cultural resource work was completed for this study, but historic and archeological studies would be needed as part of the design process.



4 Summary of Public Input

4.1 Local Concerns Meeting

The Local Concerns Meeting for the Bristol project was held on 6/09/2025. Meeting Minutes from the Town of Bristol are included in Appendix E.

5 Town Highway Reclassification

5.1 Relevant Vermont Statutes and Procedures

The applicable Vermont State Statutes regulating Class 3 Town Highways are as follows:

Title 19: Highways
Chapter 3: Town Highways
§ 302. Classification of town highways
(3) Class 3 town highways:

(A) Class 3 town highways are all traveled town highways other than class 1 or 2 highways. The selectmen, after conference with a representative of the Agency, shall determine which highways are class 3 town highways.

(B) The minimum standards for class 3 highways are a highway negotiable under normal conditions all seasons of the year by a standard manufactured pleasure car. This would include sufficient surface and base, adequate drainage, and sufficient width capable to provide winter maintenance, except that based on safety considerations for the traveling public and municipal employees, the selectboard shall, by rule adopted under 24 V.S.A. chapter 59, and after following the process for providing notice and hearing in section 709 of this title, have authority to determine whether a class 3 highway, or section of highway, should be plowed and made negotiable during the winter. However, a property owner aggrieved by a decision of the selectboard may appeal to the Transportation Board pursuant to subdivision 5(d)(9) of this title.

(C) A highway not meeting these standards may be reclassified as a provisional class 3 highway if within five years of the determination it will meet all class 3 highway standards.

The procedure for reclassifying highways is provided in Title 19: Highways, Chapter 7: Laying Out, Discontinuing, and Reclassifying Highways. The selectboard may initiate reclassification by its own motion. The selectboard must then provide for a properly noticed public hearing as follows from **§ 709. Notice and hearing:**

The selectboard shall promptly appoint a time and date both for examining the premises and hearing the person(s) interested, and give 30 days' notice to the petitioners, and to persons owning or interested in lands through which the highway may pass or abut, of the time when they will inspect the site and receive testimony. The selectboard shall also give notice to any municipal planning commission in the town, post a copy of the notice in the office of the town clerk, and cause a notice to be published in a local newspaper of general circulation in the area not less than ten days before the time set for the hearing. The notice shall be given by certified mail sent to the official residence of the person(s) required to be notified. (Added 1985, No. 269 (Adj. Sess.), § 1.)

The Town will then need to survey the roadway, per **§ 710. Survey or order of discontinuance:**

After examining the premises and hearing any interested parties, and if the selectboard judges that the public good, necessity, and convenience of the inhabitants of the municipality require the highway to be laid out, altered, or reclassified as claimed in the petition, it shall cause the highway to be surveyed in accordance with the provisions of section 33 of this title if the highway right-of-way cannot be determined and shall place suitable monuments to properly mark the bounds of the survey. If the selectboard decides to discontinue a highway, the discontinuance shall be in writing, setting forth a completed description of the highway. (Added 1985, No. 269 (Adj. Sess.), § 1; amended 1993, No. 195 (Adj. Sess.), § 4; 2021, No. 105 (Adj. Sess.), § 353, eff. July 1, 2022.)

Following the hearing and the survey, the Selectboard will need to provide a report of its findings with the survey to be recorded by the Town Clerk, as described in **§ 711. Selectboard's return; recording:**

(a) Within 60 days after the examination and hearing, the selectboard shall return the original petition with a report of its findings and of the manner of notifying the parties together with the survey or discontinuance, to the town clerk's office. The selectboard's order laying out, altering, reclassifying, or discontinuing the highway, with the survey, shall be recorded by the clerk.

Harvey Road already meets the minimum standards for a Class 3 Town Highway. Following reclassification, the Town will need to begin year-round maintenance of Harvey Road, including snow plowing.

In summary, the steps to reclassify a town highway are:

1. Initiate reclassification by a motion of the selectboard;
2. Hold a public hearing with a minimum 30-day notice;
3. Have a survey completed of the Right-of-Way;
4. Within 60 days of the public hearing, return a report including the initial motion, documentation of the hearing notice, findings, and survey to the Town Clerk for recording.
5. The Town will need to maintain a Class 3 Town Highway year-round, including snow plowing.

6 Improvement Alternatives

6.1 Alternative 1: No Build

The No Build Alternative maintains the existing cross sections of Harvey Road. This alternative does not address the project Purpose & Need, nor does it provide any improvements to the roadway cross section or bridge, however it does not have any impacts to natural resources, Right-of-Way, or utilities. This alternative does not include a bridge replacement. The existing bridge is in satisfactory condition but remains scour-critical and susceptible to damage during flood events. There are no additional costs beyond standard maintenance. An overview plan for Alternative 1 is included as Appendix A.

6.2 Alternative 2: One-Lane Bridge

Alternative 2 would provide for a replacement of the existing bridge with a new, one-lane bridge. This bridge is proposed to have a 17-foot roadway width and an approximately 21-foot out-to-out width and for the purposes of estimating an order-of-magnitude cost, a 100-foot span. This assumed span length is longer than the existing bridge and is intended to reduce the likelihood of scour at the abutments. A hydraulic analysis of Little Notch Brook and a complete type, span, and location study will need to be conducted to determine the ultimate span and dimensions of the bridge. The roadway section would be widened to 18 feet to allow for easier two-way vehicle travel on Harvey Road, with a wider area at either end of the bridge to allow for one vehicle to wait while a vehicle traveling in the other direction is crossing the bridge. This width is considered a minimum for two-way travel. The layout of Harvey Road is proposed to be modified slightly to improve the alignment. The existing roadway appears to have geometry controlled by the angle of the existing bridge that creates reversing curves. It has been assumed that the location of the new bridge would be in generally the same location as the existing bridge, which would require a temporary bridge. During design, it could be determined that an off-alignment location would be preferred, which might eliminate that cost, but which would require significantly more right-of-way acquisition. Conceptual costs for this alternative include assumptions for full reconstruction of the gravel roadway, new bridge, and the temporary bridge. Approximate costs for design engineering include a hydraulic

analysis of Little Notch Brook, necessary geotechnical investigations, a type, span, and location study for the bridge, as well as design of both the bridge and the roadway. Plans for Alternative 2 are included as Appendix B.

6.3 Alternative 3: Two-Lane Bridge

Alternative 3 would include a wider replacement bridge allowing for two-way vehicular traffic. This bridge is assumed to have a 24-foot roadway width and 28-foot out-to-out width and for the purposes of estimating an order-of-magnitude cost, a 100-foot span. This assumed span length is longer than the existing bridge and is intended to reduce the likelihood of scour at the abutments. A hydraulic analysis of Little Notch Brook and a complete type, span, and location study will need to be conducted to determine the ultimate span and dimensions of the bridge. The roadway section would be widened to 22 feet to allow two vehicles to pass more easily. This alternative would include the same layout changes to Harvey Road as Alternative 2 and assumes that the new bridge would be in generally the same location as the existing bridge and would require a temporary bridge. A small amount of right-of-way acquisition is anticipated for the wider bridge section as well as temporary impacts during construction. Conceptual costs for this alternative include assumptions for full reconstruction of the gravel roadway, new bridge, and the temporary bridge. Approximate costs for design engineering include a hydraulic analysis of Little Notch Brook, necessary geotechnical investigations, a type, span, and location study for the bridge, as well as design of both the bridge and the roadway. Plans for Alternative 3 are included as Appendix C.

6.4 Evaluation of Alternatives

The Alternatives Evaluation Matrix in the table below provides a comparison of the No Build and two Build Alternatives for the proposed pedestrian improvements on Harvey Road. The evaluation matrix includes categories for conceptual construction costs, how well the alternative meets the Purpose & Need for the project, impacts, operations, and anticipated permits needed for each alternative. Conceptual costs for each alternative are included in Appendix D. Conceptual bridge costs are included in the Bridge Report included in Appendix F.

Evaluation Matrix - Harvey Road Feasibility Study			
Alternatives Evaluation Matrix			
	Alternative 1	Alternative 2	Alternative 3
	No Build	Single-Lane Bridge w/ 18-foot Gravel Road	Two-Lane Bridge w/ 22-foot Gravel Road
Estimated Total Costs	$0	$3,000,000	$3,430,000
Estimated Bridge Costs		$2,240,000	$2,530,000
Estimated Roadway Costs		$750,000	$900,000
Meets Purpose & Need	No	Yes	Yes
Impacts			
Drainage	None	Moderate	Moderate
ROW	None	Minimal	Minimal
Utilities	None	Yes - Pole Relocation	Yes - Pole Relocation
Bridge	None	Replace	Replace
Historic	None	Minimal	Minimal
Archeological	None	Potential	Potential
Wetlands	None	Yes	Yes
Hazardous Materials	None	None	None
Floodplain	None	Probable	Probable
Threat. & End. Species	None	None	None
Operation			
Acceptable as Class 3 TH	Yes	Yes	Yes
Two-Way Traffic	Limited	Restricted	Yes
Flood-Resilient Bridge	No	Yes	Yes
Permits & NEPA			
Act 250	No	No	No
NEPA	No	CE	CE
401 Water Quality	No	No	No
404 COE Permit	No	Possible	Possible
Stream Alteration	No	Yes	Yes
Stormwater Discharge	No	Yes	Yes
Section 4(f)	No	Unlikely	Unlikely
NPDES Construction Stormwater	No	Yes	Yes
VT Operational Stormwater	No	Possible	Possible
11.11 Permit	No	Yes	Yes

7 Conclusions

The alternatives were presented to the Town of Bristol on August 25, 2025. The Town is considering a number of issues related to potential reclassification and future improvements and will continue to consider benefits and impacts before coming to a determination on the next steps. This report is intended to provide the Town with the necessary background to make an informed decision at the appropriate time.

There are no impediments to reclassifying Harvey Road from a Class 4 to a Class 3 Town Highway if the Town chooses to do so. The existing bridge is in satisfactory condition; however, it may be susceptible to damage in future flooding events due to scour which could cut off access to properties beyond the bridge.