

CONNECTING THE NORTH

BISSETT CREEK OVERPASS

Executive Summary

The County of Renfrew is seeking funding and support for the replacement of a 60-metre-long bridge over Highway 17 and Bissett Creek. The severe condition of the bridge breaks a critical link for the Algonquin Trail, the County's portion of the Ottawa Valley Recreational Trail and the Trans Canada Trail, northward to Mattawa.

Replacing the bridge will restore vital trail connection for the region to Northern Ontario's trail network, support tourism by attracting more than 150 users per day and provide alternative transportation modes parallel to Highway 17.

We wish to express our sincere appreciation to the Province of Ontario for its ongoing support on numerous projects, including the provision of granular material for the development of the Algonquin Trail. We look forward to strengthening this collaborative relationship moving forward on significant projects such as this.

Support Opportunities

Category	Description	Estimated Budgetary Needs
Consultation	Continued communications between County and Ministry of Transportation throughout the project, providing input on design concepts and recommendations.	Staff Time
Investigations and Preliminary Design	Formal evaluation of the overall existing structure, confirmation of feasible design alternatives, and identification of preferred design alternative.	\$120,000
Detailed Design	Completion for detailed design drawings and specifications for the approved design alternative. Potential for inclusion with construction in a Design-Build Contract.	\$60,000
Construction	Construction of the new crossing by a General Contractor.	\$2,500,000

Impacts and Outcomes

The Algonquin Trail has quickly been established as a key destination for recreation and active lifestyle enthusiasts since its development began in 2017. The Algonquin Trail, as part of the Ottawa Valley Recreational Trail (OVRT), will connect from Smiths Falls in Lanark County, through Renfrew County, to Mattawa in Papineau-Cameron Township once completed; a 296-kilometre linear park showcasing the greatest aspects of rural Ontario. Supporting a wide range of user types, including snowmobiles, all-terrain-vehicles, off-road motorcycles, walkers, cyclists, equestrians, and more; the Algonquin Trail will provide a legitimate route for alternative modes of transportation, parallel to, but separate from, Highway 17. This will provide a vital boost in tourism to all areas along the Algonquin Trail.

The Bissett Creek Overpass is a key component to connecting and completing this monument to rural Ontario, fostering greater economic growth for many communities, and even further establishing the County of Renfrew as the destination for recreation and activity.

Background

The Algonquin Trail, when completed, will stretch from our border with Lanark County at the Town of Arnprior to our border with Papineau-Cameron Township near Deux Rivières, a distance of approximately 216 kilometres. The Algonquin Trail, part of the Ottawa Valley Recreation Trail (OVRT), developed and owned in partnership between Renfrew County, Lanark County, and Papineau-Cameron Township, connects Smiths Falls to Mattawa, a distance of approximately 296 kilometres. On the national scale, the Algonquin Trail is also part of the Trans Canada Trail network. Renfrew County has been developing the Algonquin Trail since a Land Acquisition Agreement was reached with Canada Pacific Rail Company for their former rail corridor in 2016. By the end of 2025, the Algonquin Trail will be completed and open from Arnprior to Bissett Creek, a distance of approximately 176 kilometres.

County Structure AT032 (Bissett Creek Overpass) is a former train bridge in Bissett Creek, which would carry the trail over Highway 17 and Bissett Creek. The existing three-span, steel girder bridge is in poor condition with severe corrosion on much of the steel structural members and very severe spalling on the concrete piers. In its current condition, the bridge cannot support additional weight for installation of barriers, construction equipment, or the snowmobile trail groomer. As such, the County has been exploring several alternatives for the bridge:

1. **Removal of the bridge and construction of an on-grade crossing over Highway 17 using an existing concrete box culvert to cross Bissett Creek nearby**

This alternative is considered unsafe due to the poor sight lines along Highway 17 in the area and high speed of traffic. Moving the crossing further from the Bissett Creek Overpass would incur a large cost making this alternative not viable.

2. **Rehabilitation of the bridge to similar geometry**

This alternative is not considered to be a cost-effective long-term solution for the bridge/overpass. The poor condition of the bridge would incur a great cost to rehabilitate and would result in a low added design life for the bridge.

Additionally, one of the existing piers is immediately adjacent to Highway 17, which presents several challenges should MTO consider even minor expansion of the Highway in this area.

3. Removal of the bridge and construction of a tunnel carrying the trail under Highway 17, using an existing box culvert to cross Bissett Creek nearby

This alternative is being further explored with the assistance of an Engineering Consultant and in consultation with the Ministry of Transportation. It would be a significant cost (approximately \$2.8 million); however, it could be a viable long-term solution.

4. Removal of two piers and replacement of superstructure with a modular bridge on the existing abutments

This alternative is going to be further explored with the assistance of an Engineering Consultant and in consultation with the Ministry of Transportation. It would be a significant cost (approximately \$2.5 million); however, it would be a viable long-term solution.

5. Full replacement of the existing overpass, including substructure

This alternative is going to be further explored with the assistance of an Engineering Consultant and in consultation with the Ministry of Transportation. It would be a significant cost (approximately \$4 million); and would likely only proceed if existing abutments were confirmed not viable for reuse.



Figure 1: Highway 17 Bridge under Algonquin Trail's Bissett Creek Overpass



Figure 2: Bissett Creek Overpass

The County has been in discussions with the Ministry of Transportation regarding the above alternatives and will continue to be as the viable alternatives are further evaluated. We have solicited the services of Dillon Consulting Limited to complete a more detailed replacement study report on the three viable alternatives above.

Regardless of the alternative to proceed, completing this important connection for the Algonquin Trail will incur significant cost and burden the overall budget for the County of Renfrew. Any supports which may be available would be of tremendous assistance in ensuring a viable transportation connection from Smiths Falls to Mattawa.