



Benefits of pipe lining

- Reduced design and construction
- Extends life of culvert up to 25 years
- Eliminates aerial utility relocation
- Reduced impacts to neighboring properties, right-of-way, environmental resources, and cultural resources

Londonderry

Vermont Route 11

Bridge 24 over Unnamed Brook

Londonderry BF 016-1(33)

Project Location: Town of Londonderry in Windham County on VT Route 11 approximately 1.6 miles west of the intersection with VT 100 (this refers to the western intersection of VT Route 11 and VT Route 100). Bridge 24 is a 6' diameter culvert located at approximately mile 0.27.

The Londonderry VT Route 11 Bridge 24 project will involve lining the inside of the existing culvert, which is considered in serious condition. The existing culvert is a 6-foot in diameter by 66' long Asphalt Coated Corrugated Galvanized Metal Pipe (ACCGMP) constructed in 1948. Age, weather, and use have taken a toll on the pipe resulting in scattered perforations throughout the length of the culvert. Although there is no apparent serious crushing noted by the inspectors, there are signs of settlement in the roadway above. Roadway deficiencies include banking, K-values (sag) and sight distance.

VTrans evaluated several rehabilitation and replacement alternatives for this location in an engineering scoping study completed in March 2015. The study assessed proposed design criteria, right-of-way impacts, hydraulics, archaeological, and historical resources. Several culvert rehabilitation and replacement options were considered including no action, culvert rehabilitation, and culvert replacement with a new structure along with a number of maintenance of traffic options including a short term road closure, phased construction and a temporary bridge. Given the site characteristics and condition of the existing structure, the engineering study recommended full replacement with a new concrete box during a 5 day short term road closure with traffic maintained on an offsite detour.

Since the study was conducted aquatic organism passage was found to be not required by the Agency of Natural Resources. Given the condition of the pipe, the extensive utility relocation required to construct a new structure and the impact to traffic on Route 100, the decision was made to line the culvert extending its life by up to 25 years as opposed to replacing it with a new structure.

It is anticipated that the culvert will be lined during the summer of 2018. Impacts to traffic will include lane closures to accommodate equipment and material brought to the site to install the culvert liner.



Interior of Pipe

Target Construction Schedule: Construction activities are estimated to begin in June 2017 and last approximately 10 weeks. The bridge closure will be limited to 5 days, and will allow 24 hour activities.

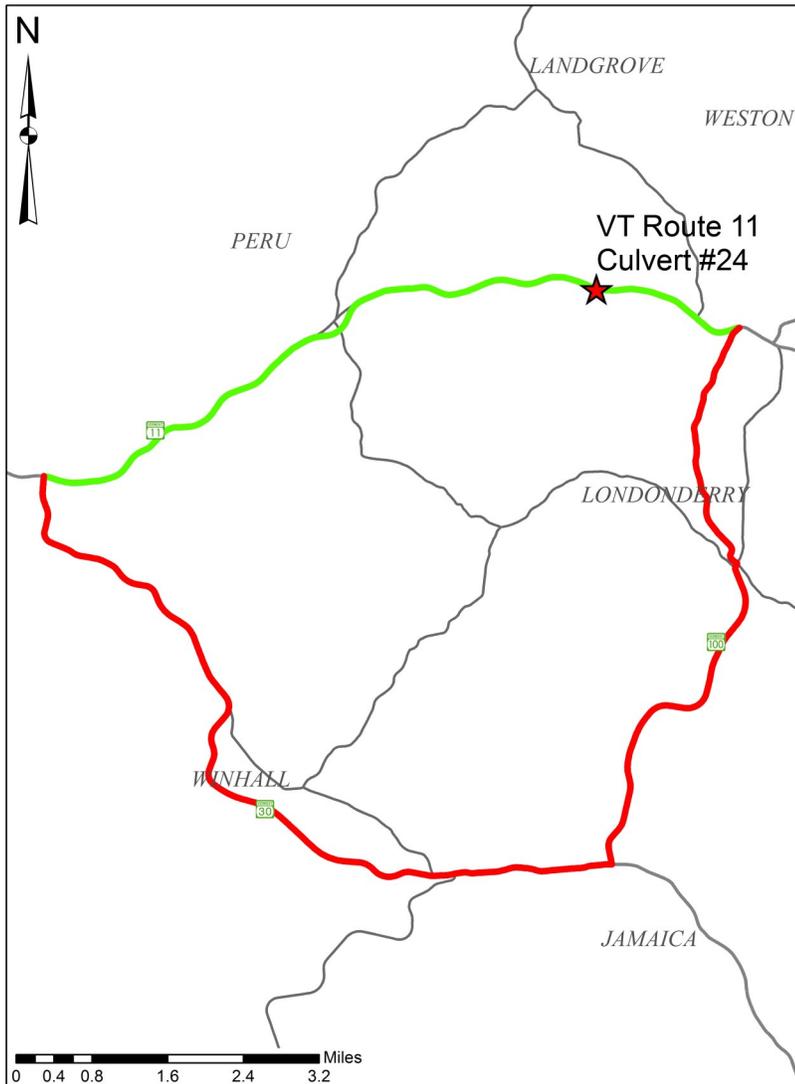
Contractor: TBD

Cost: TBD

VTrans Project Manager: Kristin Higgins, PE

VTrans Resident Engineer: Unknown at this time

Detour Route: From east end of detour, travel south on VT Route 100. Continue 6.7 miles to VT 30. Turn right on VT Route 30 and travel 9.0 miles back to VT Route 11.



Bridge Location Map



Interior deterioration



Slight roadway settlement



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