



# Vermont Better Roads Grant Program Application

Please complete one application per category and/or project you are applying for. You may make copies of the application for multiple applications per category and/or multiple categories.

Please check the Category you are applying for:

- B. Correction of a Road Related Erosion Problem and/or Stormwater Mitigation Retrofit for both gravel and paved roads
- C. Correction of a Stream Bank or Slope Related Problem
- D. Structure/culvert upgrades

Town/Organization: \_\_\_\_\_

Project Name: \_\_\_\_\_

Road Name: \_\_\_\_\_ TH #: \_\_\_\_\_ Structure # (if applicable): \_\_\_\_\_

Road Type:    Paved or Unpaved (circle one)                      Curbed or Uncurbed (circle one)

Class 1    Class 2    Class 3    Class 4 (circle one)

Watershed: \_\_\_\_\_

Please provide a thorough description of the problem (ex. Roadway has steep slope with no ditch which is causing roadway erosion):

Description of Project and how you plan to complete the work (ex. Stone line 500' of ditch by reshaping ditch and stone lining, working from the top of the project down to the bottom):

Expected Effects (+ & -) on water quality (ex. Erosion will be eliminated by placing the stone ditch):



Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). Please circle one:      0-50'                      50-250'                      250'+

Progress to Date:

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Is there an emergency reason this project must be completed quickly? If yes, please explain:

Has this project been identified through a municipal road inventory, capital budget plan, tactical basin plan, culvert inventory, or other management plan? If yes, please list which.

Yes: \_\_\_\_\_

No

Please list any professionals you may have contacted for assistance with this project (ANR River Management Engineer, Army Corps of Engineers, VTrans District Technical staff, Basin Planner etc.):

Is the project located in the town "Right of Way?" Yes, No, Both (if "Both" please explain further).

Will the town road crew complete this work? Yes, No, Some (if "some" please explain further).



Describe how the grant funds will be spent and/or attach a project budget:

Project Budget attached. Would like to complete this work at the same time as the "Austin and Thomas" Project so can save on contractor costs, particularly with blasting. If only one project this year, "Austin and Thomas" is higher priority for the town.

How do you plan to meet the required 20% match on this grant?:

Cash match. All work would be completed by a contractor since the town has no Highway Crew and only has a grader for equipment

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$ 17,894.10

Estimated Total Project Cost (including 20% local match): \$ 22,367.62

Estimated Completion Date: 11/30/2017

**REQUIRED ATTACHMENTS:**

- Itemized Cost Estimate (labor, equipment, materials)  
(For assistance, call Better Backroads at 802-828-4585)
- Project Location Map  
(Please show location of affected water; 1:12,000 USGS map, if possible)
- Sketch of proposed erosion control measures, including:
  - Distances (ft.)
  - N/A  Estimate of waste & borrow quantities
  - Approx. location of town/other right-of-way and/or property lines
- Photo(s) of the project area.
- Agreement for Entry and/or Deed of Easement (if project is outside Town ROW).
- N/A  If project involves stream or river/road conflict, include documentation of consultation with a River Management Engineer. Alan May visited sites in January 2016 and determined that since the culverts are cross culverts they did not need a permit.
- Other appropriate supporting documents.

By signing this application I certify that all the information provided is accurate to the best of my knowledge. We will comply with all the requirements of the grant including making our books available for audit if required.

SIGNATURE OF APPLICANT: (Must be Town Administrator/Manager or Select Board Chair)

Name: Walter I Roth

Title: Select Board Chair

**Cost Estimate Worksheet**

**Town and Road Name: Baltimore - Baltimore Road**

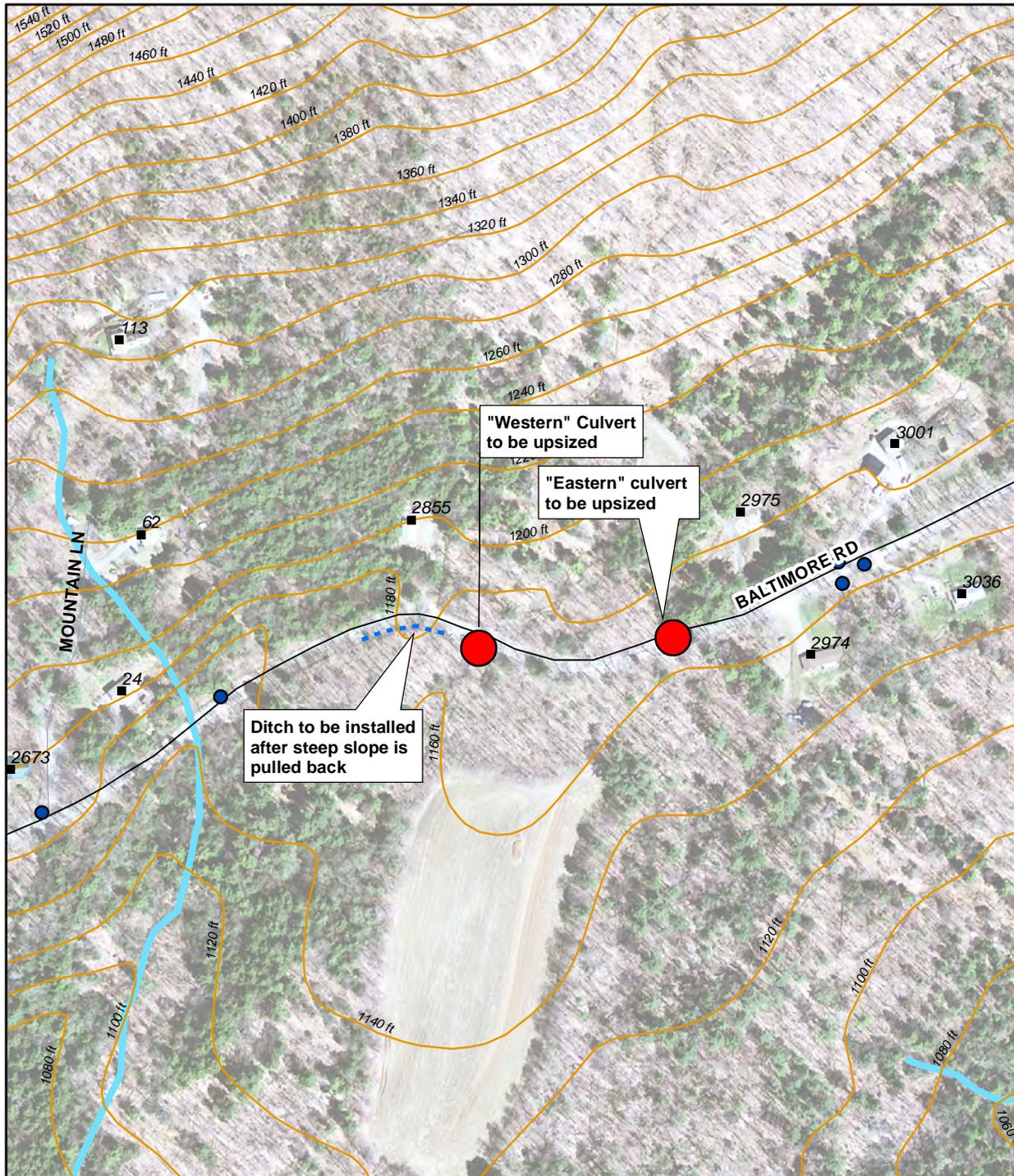
**Project Name: Upham, Basso and Loomis**

<b>Labor</b>	<b>Rate</b>	<b># Hours</b>	<b>Total (Rate x Hours)</b>
Hand Labor	\$45.00	24	\$1,080.00
Hand Labor	\$75.00	4	\$300.00
			\$0.00
<b>Labor Total</b>			<b>\$1,380.00</b>

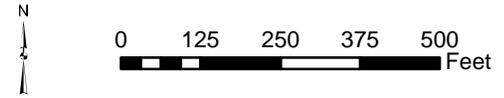
<b>Equipment</b>	<b>Rate</b>	<b># Hours</b>	<b>Total (Rate x Hours)</b>
912 Excavator with operator	\$100.00	40	\$4,000.00
Bale chopper			\$275.00
Chainsaw with Labor	\$50.00	4	\$200.00
Truck 18 with operator	\$75.00	24.5	\$1,837.50
			\$0.00
<b>Equipment Total</b>			<b>\$6,312.50</b>

<b>Materials</b>	<b>Rate</b>	<b>Amount</b>	<b>Total (Rate x Amount)</b>
24 inch culverts (\$21.66 per foot. 40ft length)	\$866.40	3	\$2,599.20
Crushed gravel (yards)	\$12.50	51	\$637.50
Bales of hay with 20#seed	\$7.50	50	\$375.00
			\$0.00
<b>Materials Total</b>			<b>\$3,611.70</b>

<b>Miscellaneous</b>	<b>Rate</b>	<b>Amount</b>	<b>Total (Rate x Amount)</b>
Move 2 loads of stumps			\$30.00
Drill,Blast, trench with materials			\$9,000.00
Contingency Fund for unknowns/ cost changes (Approx 10% of contractor's estimate)			\$2,033.42
			\$0.00
<b>Miscellaneous Total</b>			<b>\$11,063.42</b>
<b>Project Total</b>			<b>\$22,367.62</b>
<b>Grant funds requested</b>			<b>\$17,894.10</b>
<b>Cash Match</b>			<b>\$4,473.52</b>



**Upham Site  
Upham, Basso and Loomis Project  
Town of Baltimore  
Better Roads Application - April 2016**



- Existing Culvert
- Building
- Interstate Highway
- State or US Highway
- Town Highway
- Other
- 20ft Contours
- Rivers and Streams
- Lakes and Ponds
- - - Town Boundary

Data Sources: Roads (Vermont Agency of Transportation 2015), 20ft Contour Lines (United States Geological Survey 2012), Rivers and waterbodies (Vermont Hydrographic Dataset 2008), Town Boundaries (Vermont Center for Geographic Information 2012), Culverts (vtculverts.org inventory updated 2013 by Town and RPC), Buildings (VT E911 Esite July 2015), Aerial (National Agricultural Imagery Program 2011)

Digital parcel data not available for the town.

VT State Plane Meters, NAD 83

Map for planning purposes only.  
Not for regulatory interpretation.

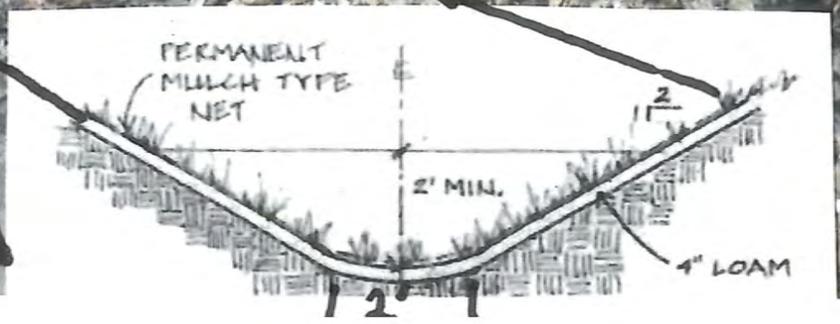
Map drawn April 6, 2016





UPPER LOT  
UP Ham LOT

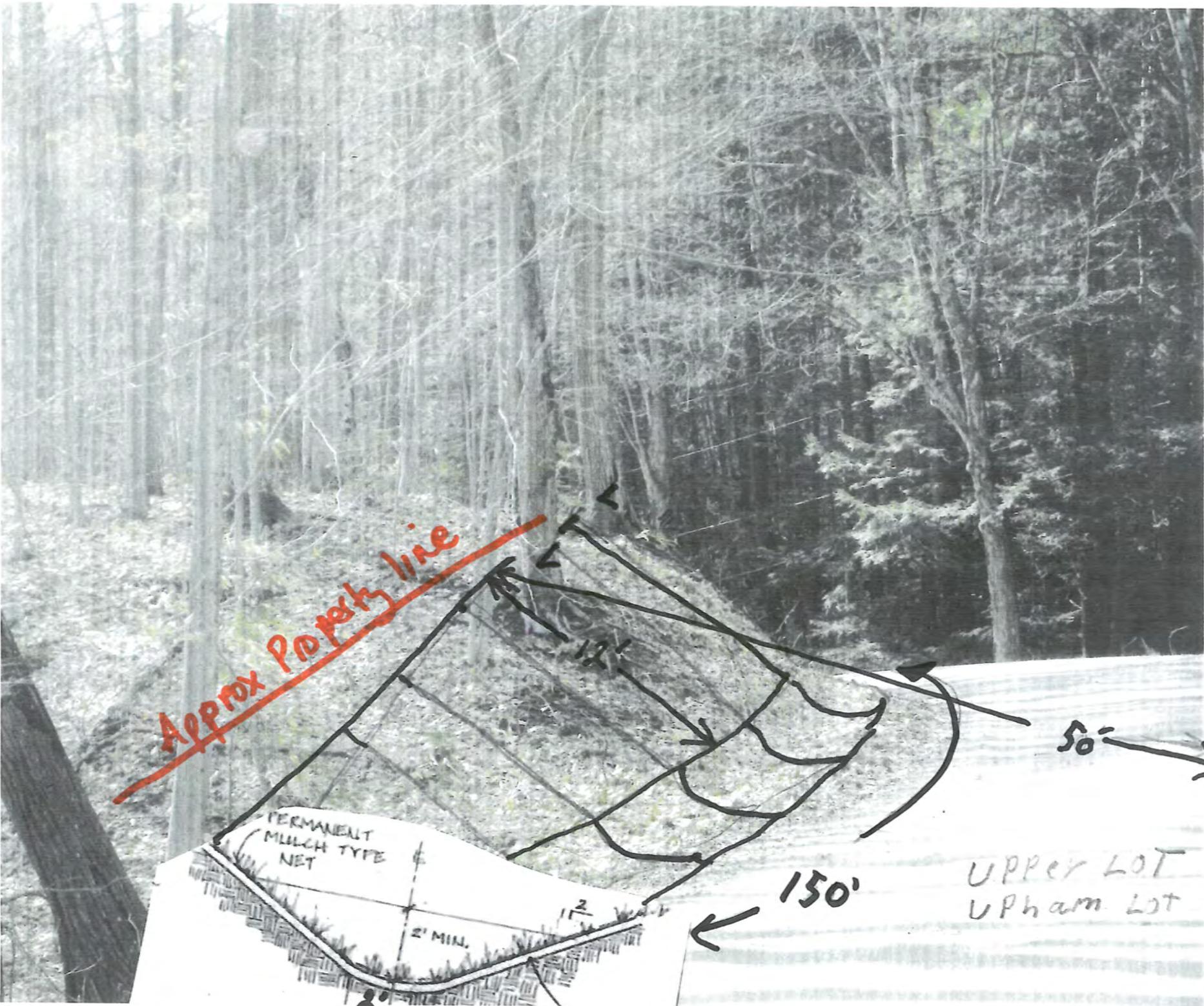
150'



Property line just beyond project boundary

← 6-8ft height





Approx Property line

PERMANENT  
MULCH TYPE  
NET

2' MIN.

12'

150'

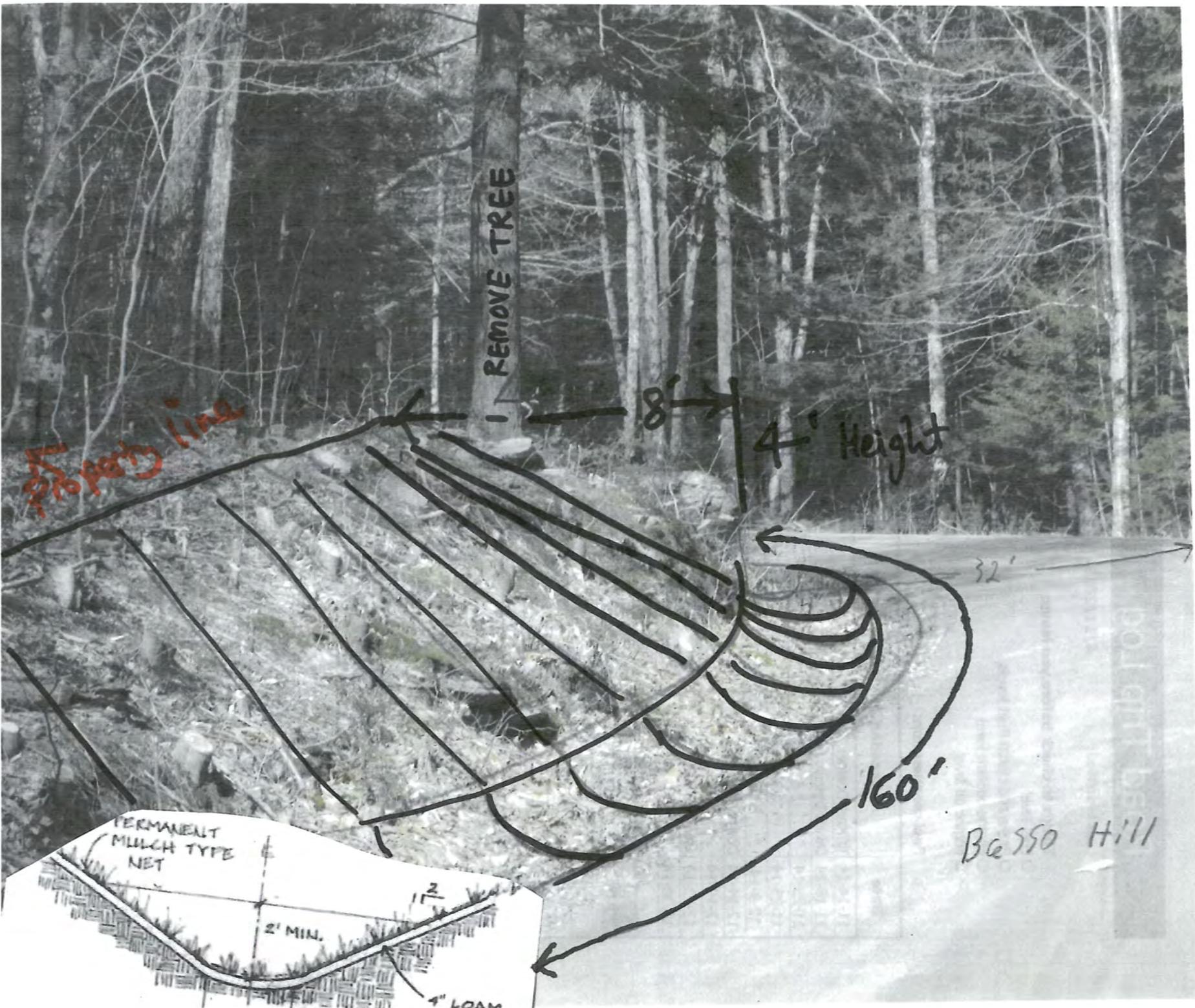
50'

UPPER LOT  
UPham LOT

FROM  
STONE  
wall

500 yds. wall





REMOVE TREE

PROPERTY LINE

8'

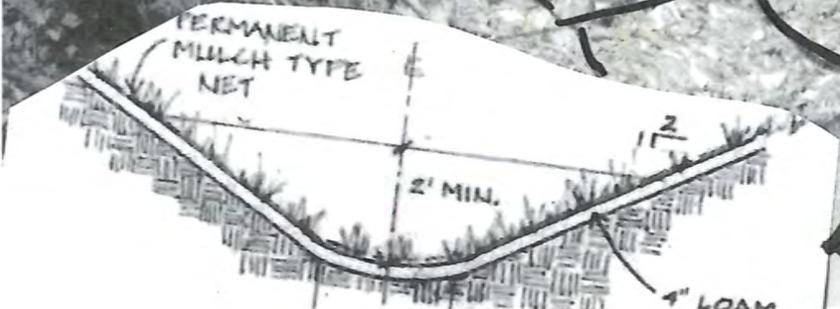
4' Height

32'

160'

BESSO Hill

From Stone wall



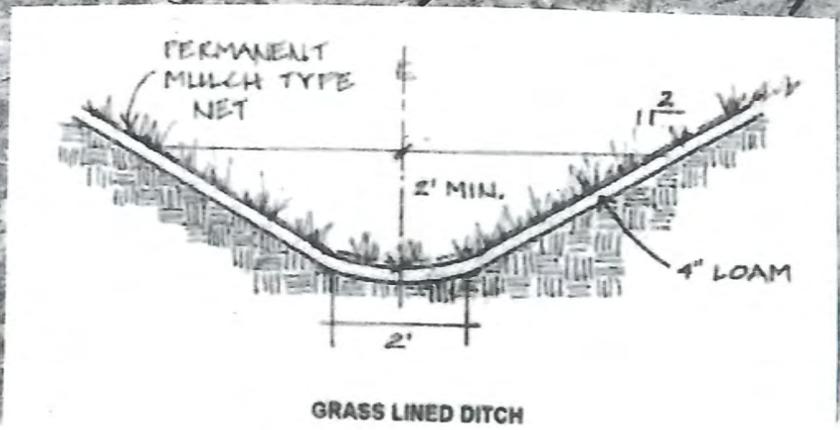
PERMANENT MULCH TYPE NET

2' MIN.

4" LOAM

LUMMIS  
LUMMIS  
PIT SITE

Property line



**Photographs**  
**Upham, Basso and**  
**Lummis Project –**  
**Baltimore**  
**Better Roads Application**  
**2016**

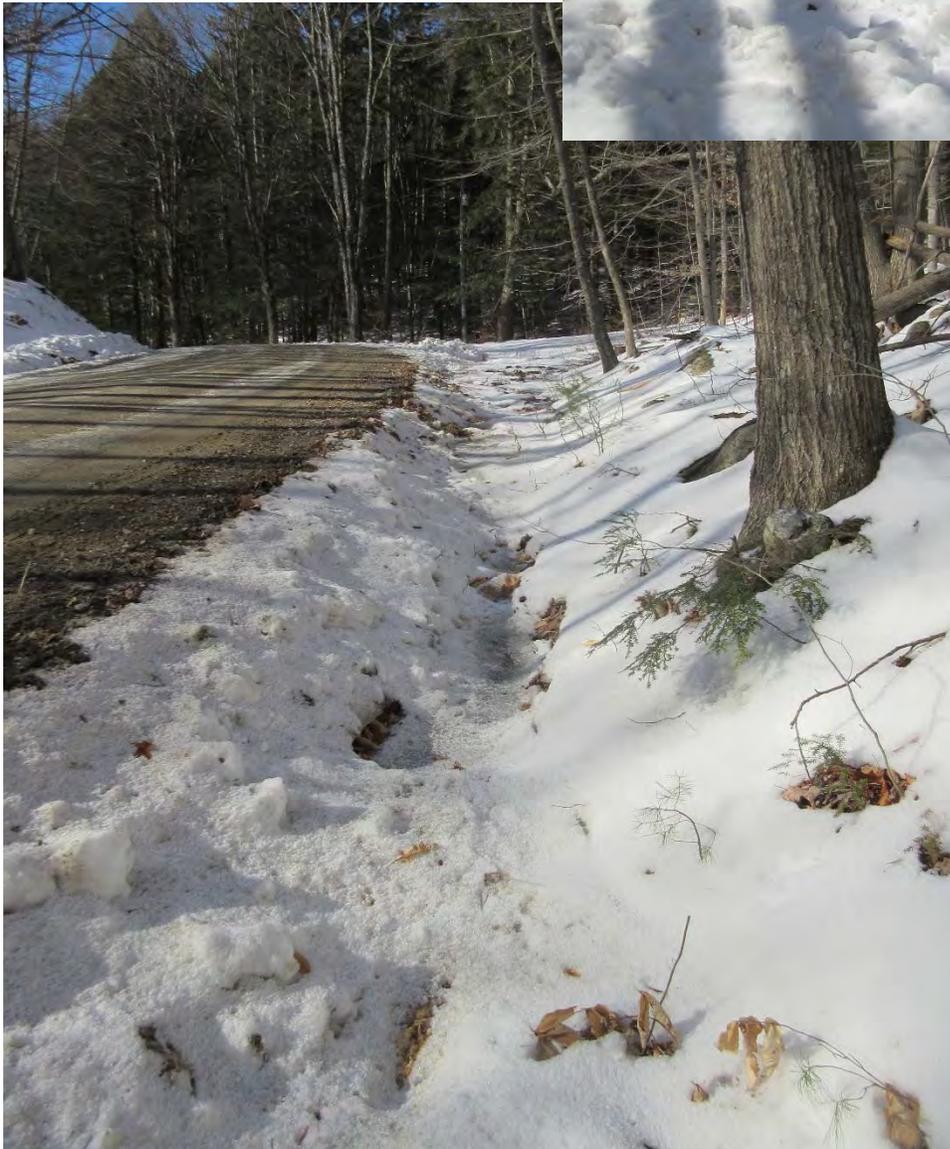
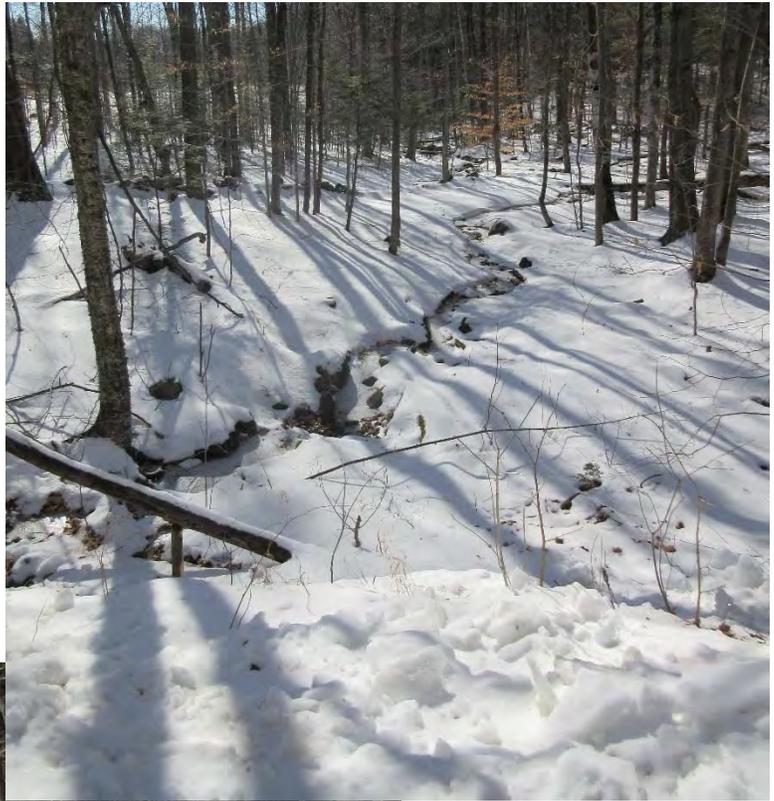
Top: Upham Site – Western culvert inlet

Bottom: Upham Site – Eastern culvert inlet



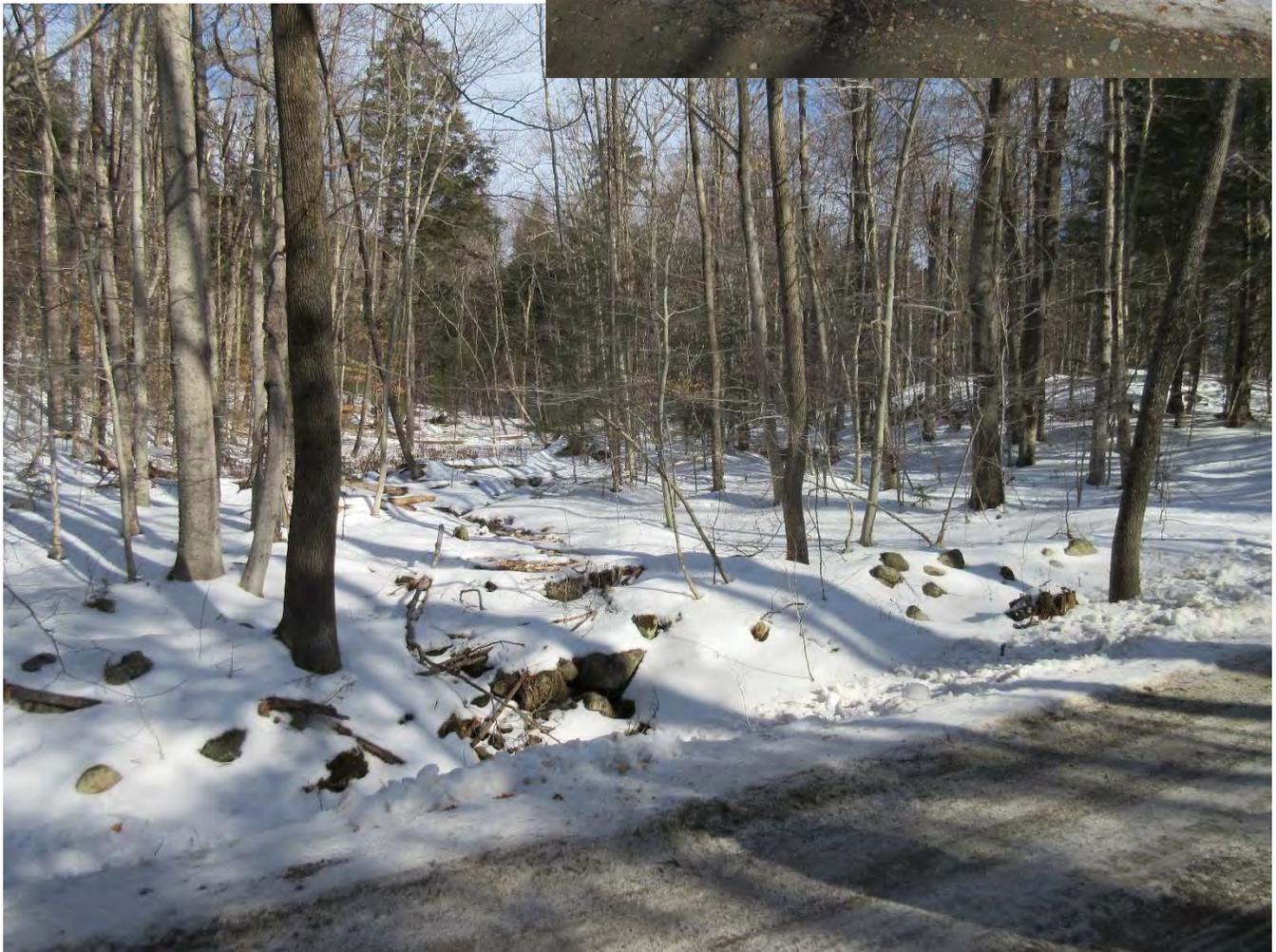
Top: Upham Site – Stream below western culvert

Bottom: Upham Site – Ditch looking uphill from eastern culvert, with sharp bend in road on left of photograph



Top: Upham Site - Stream from private property that flows into the ditch near the western culvert

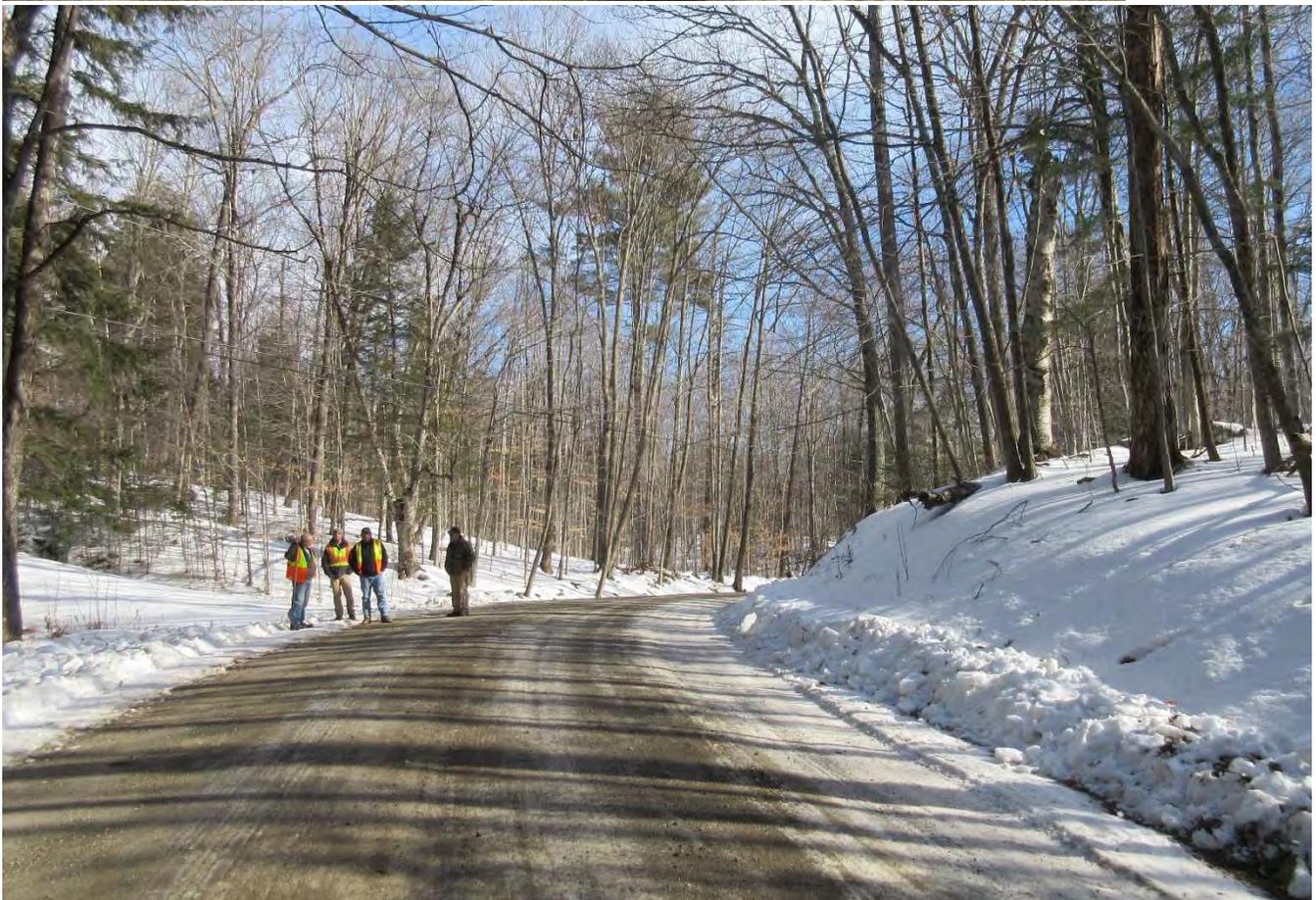
Bottom: Upham Site – Small stream flowing into eastern culvert





Top: Upham Site – Bank to be pulled back so a ditch can be installed. Viewed from the east.

Bottom: Upham Site – Bank to be pulled back. Viewed from the west.



Top: Basso site – Looking east along roadway

Bottom: Basso site – Ditch on north side of road





Top: Lummis Site – Upper Section  
Bottom: Lummis Site – Lower Section





Top: Uphill from Lummis Site  
Bottom: Lummis Site (on left)





Top: Small stream flowing into Lummis site  
Bottom: Debris in ditch downhill from Lummis site





Top: Road gravel in small stream below Lummis site

TOWN OF BALTIMORE

**AGREEMENT FOR ENTRY; LIMITED RELEASE**

**THIS AGREEMENT**, made and entered into this 6 day of April, 2016

by and between the Town of Baltimore, in the State of Vermont, (hereinafter "Town"), and Walter & Sandra Rich (Name), of 2515 Baltimore Road (address), in the Town of Baltimore, Vermont (hereinafter "Owner").

**WHEREAS**, the Owner owns certain land and premises in the Town of Baltimore, which adjoin Baltimore Road maintained by-the Town; and

**WHEREAS**, the Town desires, at its own expense, to perform certain work on or for the benefit of the highway (described more particularly below) (hereinafter "the Work"), which Work also will be of benefit to the Owner's property; and

**WHEREAS**, performance of the Work may require the Town, with its own forces or those of contractors, to enter upon the Owner's property, in areas outside the existing highway right-of-way;

**NOW, THEREFORE**, the parties, intending to be legally bound, hereby agree as follows:

**1. Description of the Work.** The Work will consist of the following: The roadside bank located on the right side of the road when traveling in an easterly direction on the corner of the road at an area known as the Upham Lot is to be graded back to improve sighting of oncoming traffic. The distance measurement is 50 feet from the wall on the opposite side of the road to the high point of the slope to be graded along a 150-foot length of road. This grade may extend onto the owner's property at the top of the grade.

See attached sketches for location and the distance measurements of roadside bank/slope area.

**2. Right of Entry; Limited Release.** The Owner hereby grants the Town, with its own forces or those of contractors, the right to enter upon the Owner's property, with workers and equipment, for the purpose of undertaking the Work, and hereby waives, releases and discharges any claims, whether styled as trespass or otherwise, that may arise from such entry.

**3. Retention of Certain Other Rights.** Notwithstanding paragraph 2 of this Agreement, the Owner retains the right to assert against the Town, its contractors or other parties any claims that may arise from negligent acts or omissions during performance of the Work.

4. **Waiver:** The Owner having been informed of its right to an appraisal to estimate the value of the right-of-entry herein granted and to receive just compensation based on that appraisal, hereby waives these rights.

5. This Agreement for Entry; Limited Release is not binding unless one of the parties signing below receives a Better Backroads grant to perform the Work set forth above in Paragraph 1.

For The Town:

*Orsen Kendall*  
Signature

Orsen Kendall  
Printed Name

Owner:

*Walter Rich  
Sandra Rich*  
Signature

Walter Rich  
Sandra Rich  
Printed Name (must be owner)

Road Commissioner  
Title (must be authorized agent)

In Presence of:

*Deborah W Bean*  
Signature

Deborah W Bean  
Name of Witness (as to both)



**SOUTHERN WINDSOR COUNTY  
REGIONAL PLANNING COMMISSION**

Ascutney Professional Building, Route 5  
Post Office Box 320, Ascutney, VT 05030  
802 674-9201      www.swcrpc.org

April 11, 2016

Alan May  
Vermont Agency of Transportation Municipal Assistance Bureau  
1 National Life Drive  
Montpelier, VT 05633

**Subject: Upham, Basso and Loomis Project in Baltimore - 2016 Better Roads Application**

Dear Alan,

We are writing in support of Baltimore's application for the Upham, Basso and Loomis project. Katharine Otto from our office visited the area in January 2016 with Alan May and town representatives. The proposed work should significantly improve drainage and reduce water quality issues along these sections of Baltimore Road and Harris Road. This area was identified as two different medium priority sites in the Town's 2016 Road Erosion Inventory which was completed by SWCRPC and the Town.

This project also supports the following goals and policies of the 2014 Southern Windsor County Regional Transportation Plan:

- Goal 6 - Strive to provide transportation infrastructures that are resilient to changing weather patterns and that efficiently and safely handle traffic during natural hazard events and other emergency situations.
- Policy 11 - Maintenance of the existing transportation system shall minimize water pollution, in accordance with the current Vermont Town Highway Codes and Standards, State stormwater rules and other best management practices.

Thank you for your consideration of this important project.

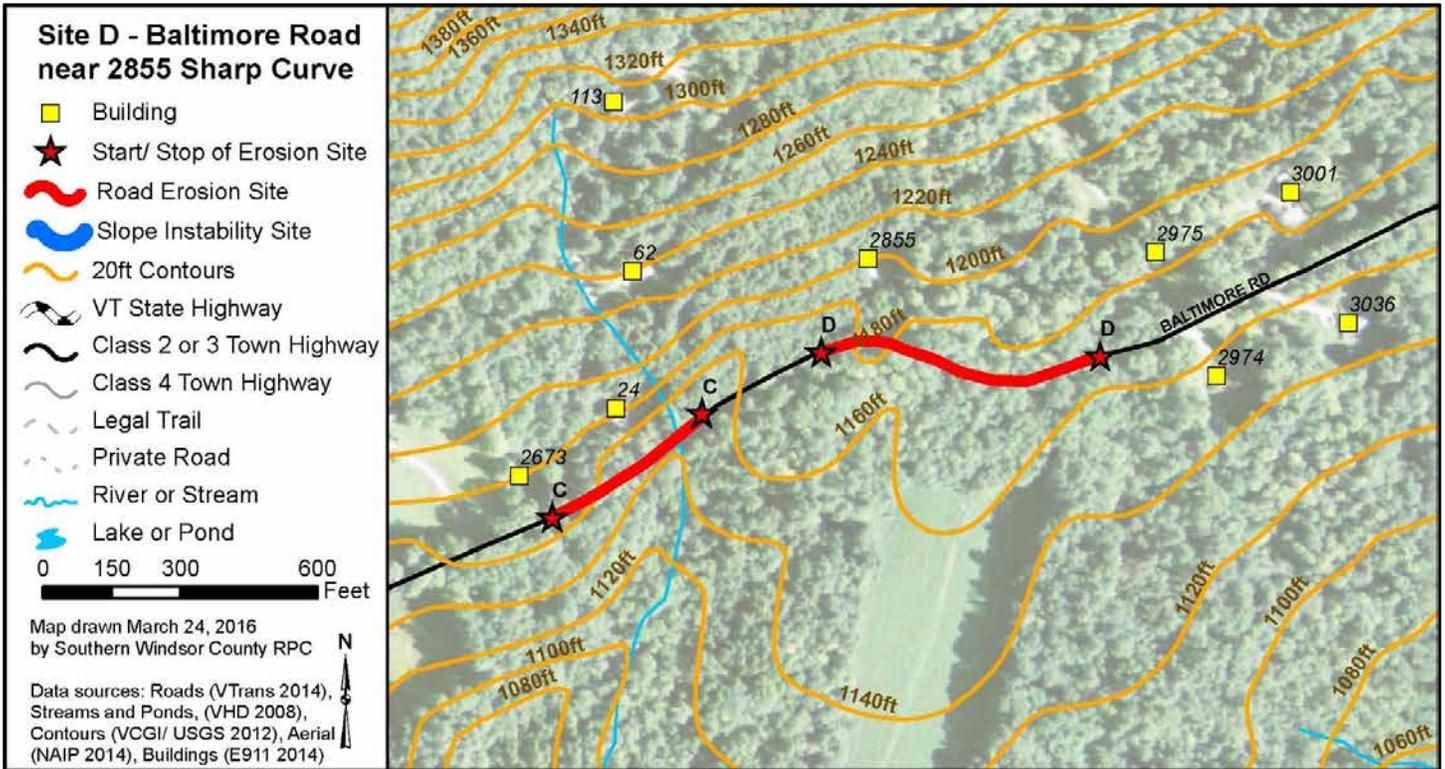
Sincerely,

Thomas Kennedy  
Executive Director

**SITE D – BALTIMORE ROAD NEAR 2855 SHARP CURVE (“S” TURN) (“UPHAM”)**

**Road Name:** Baltimore Road      **TH Number:** TH-1      **TH Class:** 2      **Priority Rank:** Medium  
**From (west):** Just west of sharp corner near 2855 driveway (N 43.36938 W72.55743)  
**To (east):** Culvert 34 (N 43.36936 W 72.55513)  
**Abutting property owners and addresses:** Work on north side of road would not need adjacent landowner permission. Landowner on south side is Walter Rich.

**Site Map**



**Site visits**

- July 2015 – Wayne Wheelock (Town) and Katharine Otto (SWCRPC)
- January 2016 – Alan May (Better Road Program), Orson Kendall and Wayne Wheelock (Town) and Katharine Otto (SWCRPC)

**Description of problem**

- Two culverts are inadequate size for increasing water flow which comes off the steep mountain behind
- Drainage is poor on the south side of the road around a sharp bend

Water quality problem?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Poor road drainage
Waterbody affected?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Intermittent stream running through culvert
Site identified in ANR Road Erosion Risk map?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Only low or no risk

**Proposed solution**

- Replace two culverts (24 inch?)
- Pull back steep slope on sharp bend, remove hazardous tree and install ditch around the sharp bend

Further Engineering needed?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Need cost estimates?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	No recent costs available for estimates
VTrans Hydraulics Study needed?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

ANR Stream Alteration Permit needed?  
Army Corp permission needed?

Yes  
Yes

No  
No

Stream crossings drain less than 0.5 square miles

Unknown

### Site Photos



Top: Sharp bend in road with inadequate drainage on south side of road where there is a steep bank (left side of photo)

Left: Ditch on north side of the road

Right: Run-off from driveway that feeds into the beginning of the ditch on the north side.





Top: Lowest culvert (eastern end of site) which has a stream feeding in.

Bottom: Stream below lowest/ eastern culvert



## SITE A – HARRIS ROAD (INCLUDING “BASSO” AND “LUMMIS”

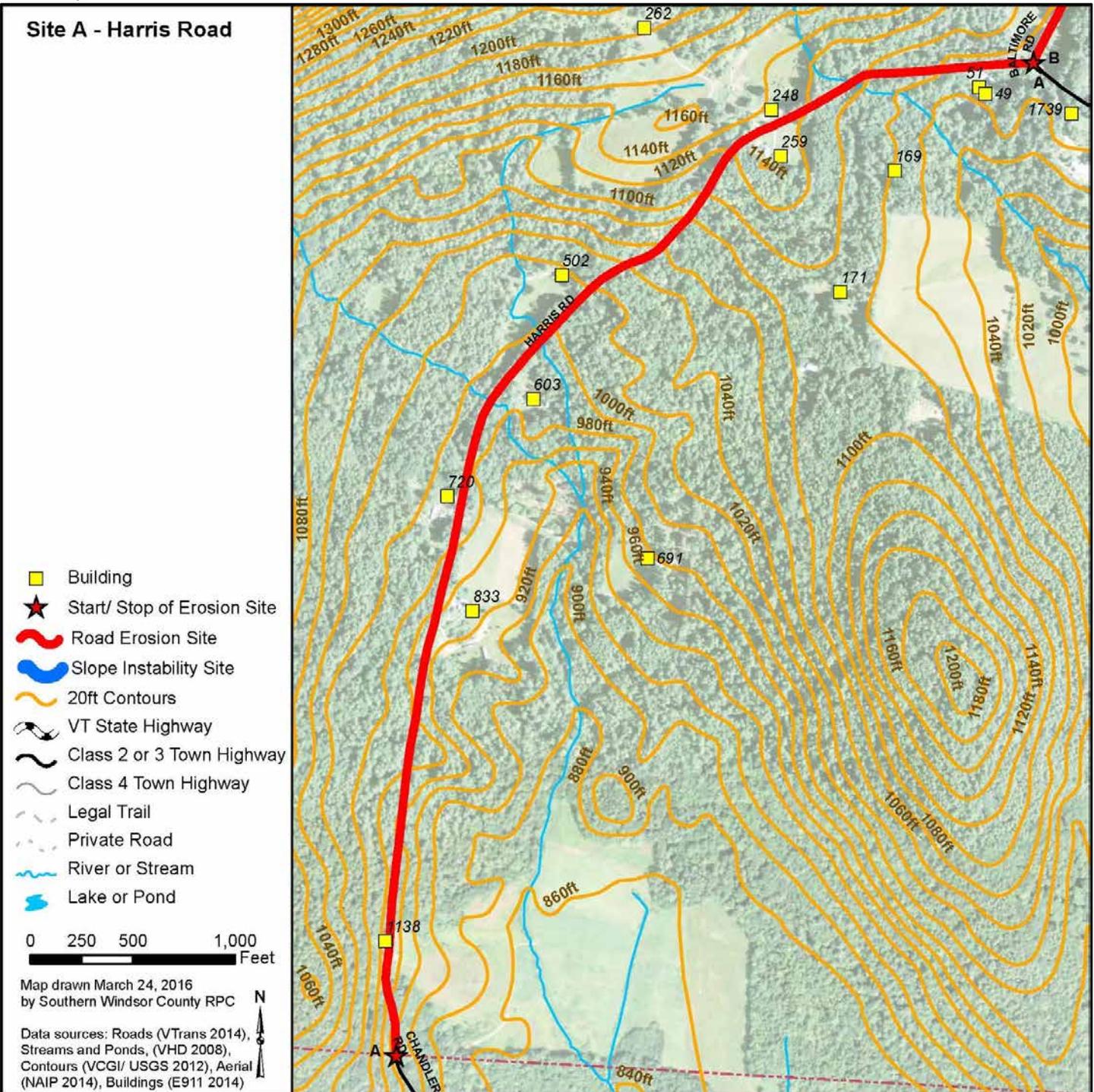
Road Name: Harris Road TH Number: TH-11 TH Class: 3 Priority Rank: Medium

From (West): Chester townline (N 43.34701 W 72.58417)

To (east): Baltimore Road (N 43.36033 W 72.57247)

Abutting property owners and addresses: Not needed since ROW only

### Site Map



**Site visits**

- July 2015 – Wayne Wheelock (Town) and Katharine Otto (SWCRPC)
- January 2016 – Alan May (Better Road Program), Orson Kendall and Wayne Wheelock (Town) and Katharine Otto (SWCRPC)

**Description of problem**

- North side of road needs ditching to improve drainage. Some ditches may be needed occasionally on the north side.
- Some culverts also need replacement.
- Roads need to be built up in some places so the water flows better into the wooded and vegetated land on the south side of the road.

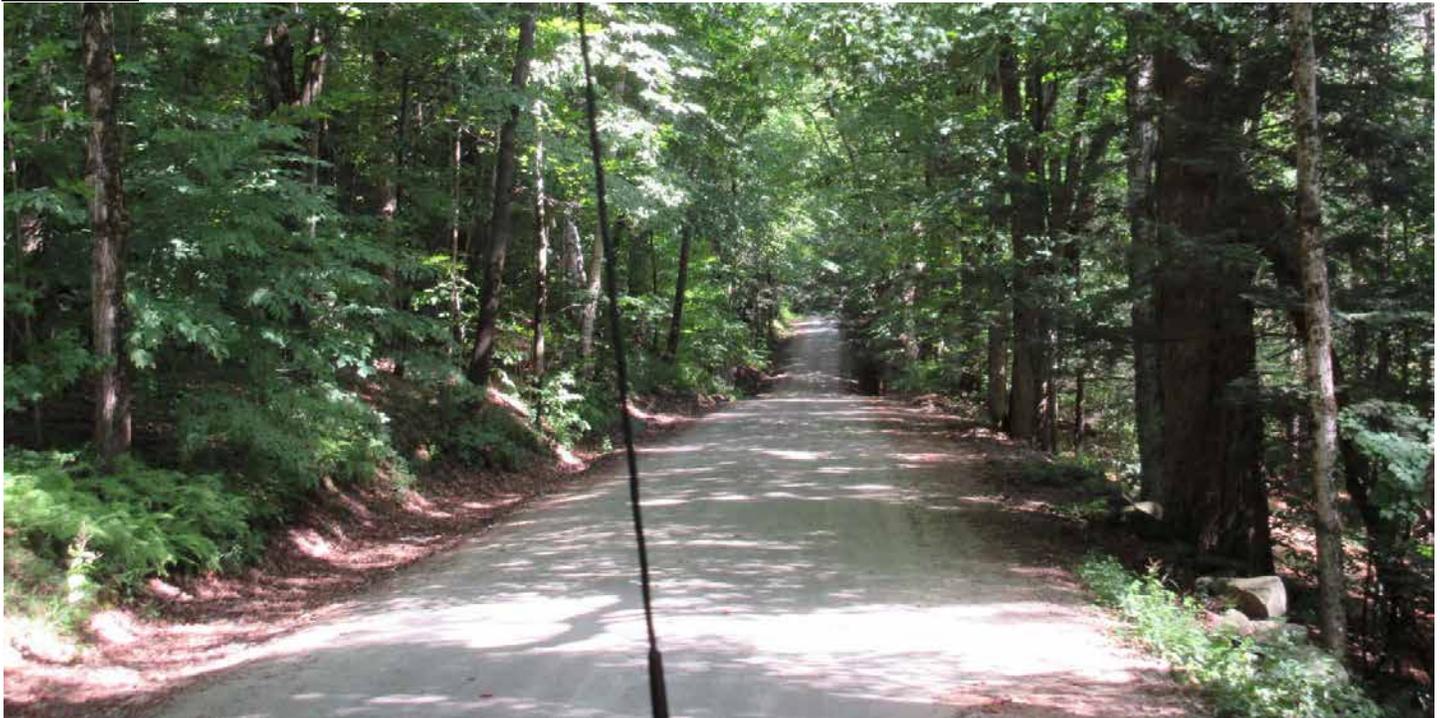
Water quality problem?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	
Waterbody affected?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Gravel in stream below roadway
Site identified in ANR Road Erosion Risk map?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	A few sections have medium risk

**Proposed solution**

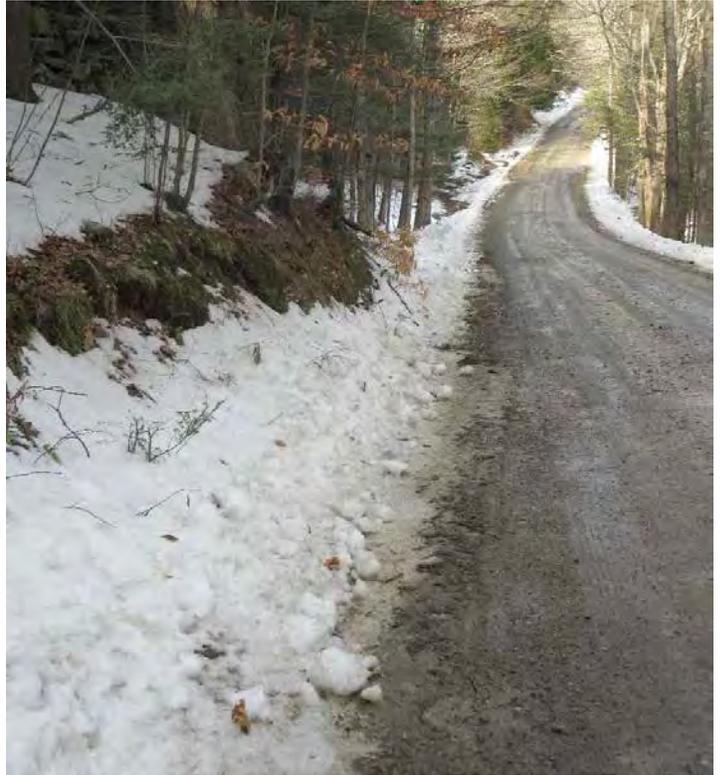
- Improve ditching on north side of road. Line ditches with stone. 6,600ft of roadway in total, but only specific smaller sections need particular attention such as “Basso Hill” and “Lummis sand pit” areas.
- Some blasting may be needed in areas where ledge is very close to the surface.

Further Engineering needed?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	
Need cost estimates?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	No recent costs available for estimates
VTrans Hydraulics Study needed?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	
ANR Stream Alteration Permit needed?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	Stream crossings drain less than 0.5 square miles
Army Corp permission needed?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Unknown

**Site Photos**



Harris Road looking east with steep slope down to the road on left and steep slope down from the road on the right. Ditching needed on left side to enable better waterflow.



Top left: Gravel in stream below roadway

Top right: Ditch on northern side that needs work which has ledge/ stone near the surface.

Bottom left: Section of road that may need to be built up, or better access to adjacent land created. Note that the stone wall is notably below the height of the road.

Bottom Right: Section of road that has good access to adjacent land for water drainage.

