



# 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: Town of Wallingford

Project Name: Culvert Replacement

Road Name: Sugar Hill Road TH #: 6 Structure # (if applicable): 18

Road Type: Unpaved Uncurbed  
Class 3

Watershed: Roaring Brook and eventually Otter Creek

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

Culvert rusted out and undersized resulting in road erosion into the stream that runs to Roaring Brook.

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):

Replace culvert with new culvert 40-feet long, install head wall with existing rock and material

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

Reduce flooding on roadway, which will decrease the amount of silt flowing into the stream



Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). 250'+

Progress to Date:

\*\*Please note the culvert will be in the stream bed and the nearest large river is 250' plus feet away.

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: Culvert Inventory

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.):  
Agency of Natural Resources - Josh Carvajal, VTrans Brian Sanderson

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

yes

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

Some. Wallingford has a two-man road crew so we will use those employees and municipal equipment to assist a sub-contractor.



Describe how the grant funds will be spent and/or attach a project budget:  
Purchasing a 50-foot culvert, freight, subcontractor

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

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): 6,239.00  
Estimated Total Project Cost (including 20% local match): 2,400.00  
Estimated Completion Date: 10/01/16

**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.)
  - 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).
- If project involves stream or river/road conflict, include documentation of consultation with a River Management Engineer.
- 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: Sadi Sf

Title: Town Administrator

Cost Estimate Worksheet

Town and Road Name: Sugar Hill Road

Project Name: Culvert Replacement

Equipment	Rate	# Hours	Total (Rate x Hours)
Subcontractor	\$40/hr	10	\$400.00
Labor Total			\$400.00
Total (Rate x Hours)			\$400.00

Equipment	Rate	# Hours	Total (Rate x Hours)
EXCAVATOR	\$140/hr	10	\$1400.00
Dump truck + driver	\$75/hr	16	\$1200.00
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Equipment Total			\$4000.00
Total (Rate x Amount)			\$4000.00

Materials	Rate	Amount	Total (Rate x Amount)
Crushed gravel	\$8/ton = \$150/100yd	5 loads	\$750.00
Mat	\$125.00	1	\$125.00
36" culvert	\$38.90/foot	600-feet	\$2334.00
Materials Total			\$3209.00
Total (Rate x Hours)			\$3209.00

Miscellaneous	Rate	Amount	Total (Rate x Amount)
Freight	150.00	1	\$150.00
Miscellaneous Total			\$150.00
Total (Rate x Hours)			\$150.00

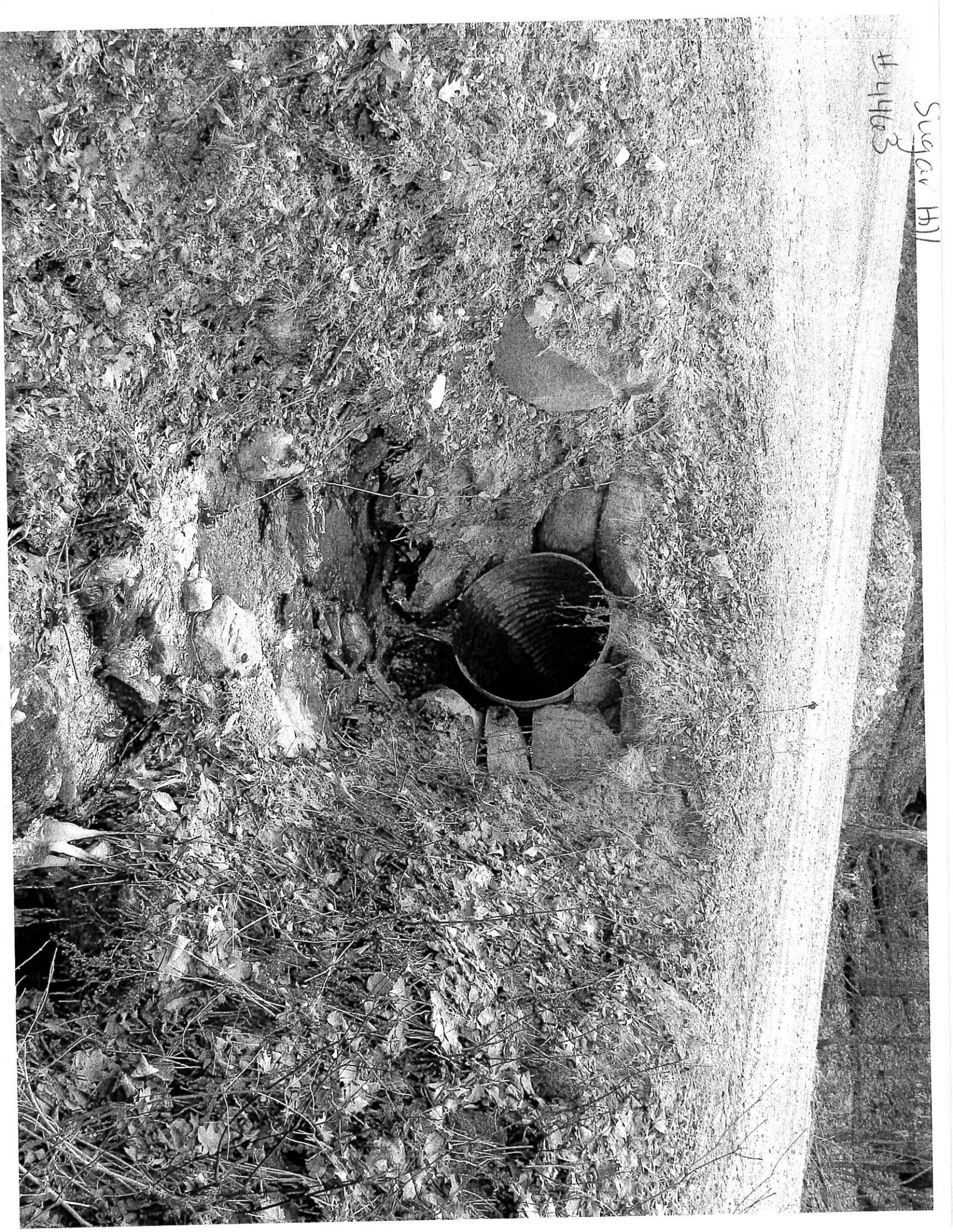
Subcontractor Note: Jack-hammering pump or stream diversion + ledge is extra

Grand Total 6239.00  
Match 2400.00

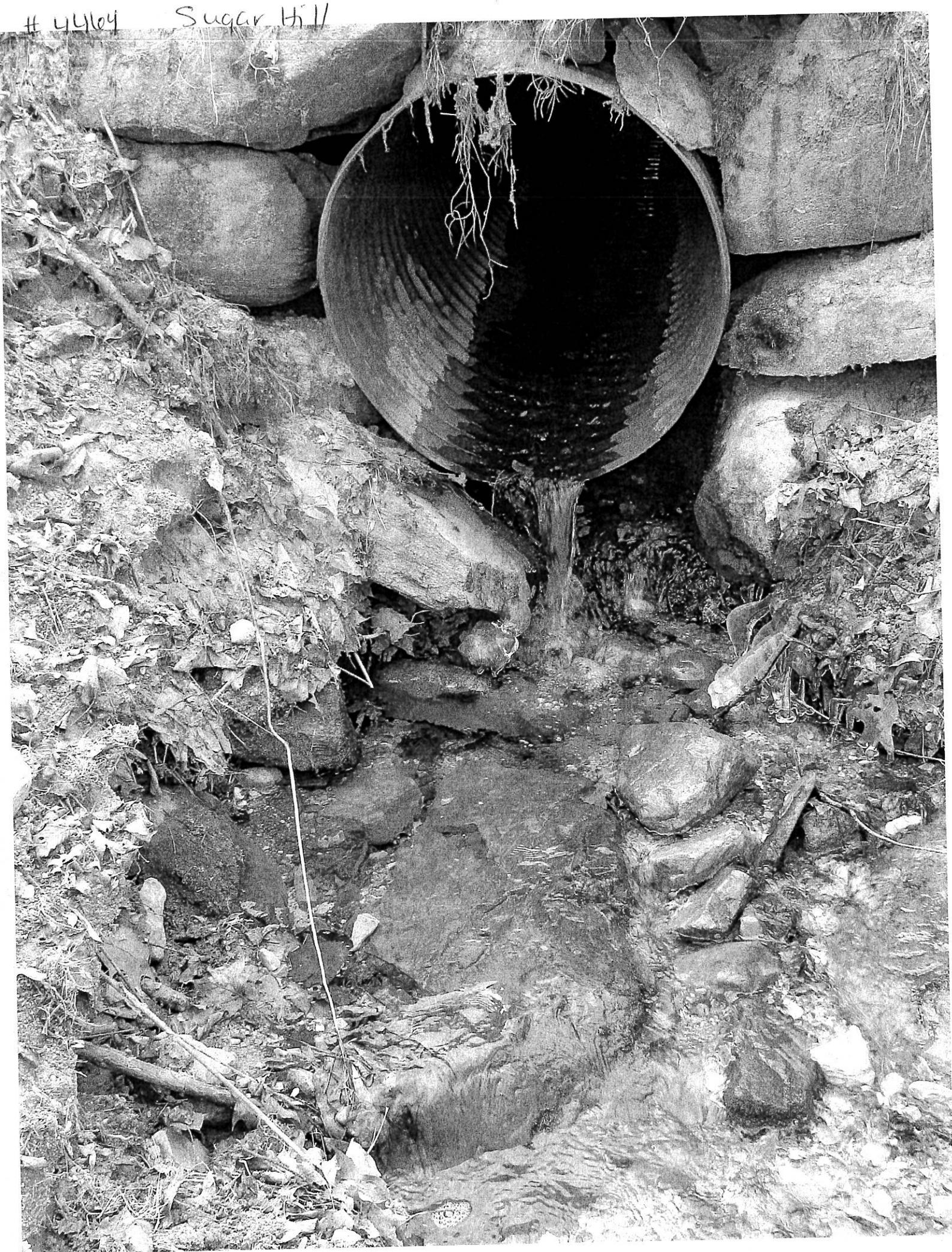
\* match  
\* match



Sugar Hill  
#4463



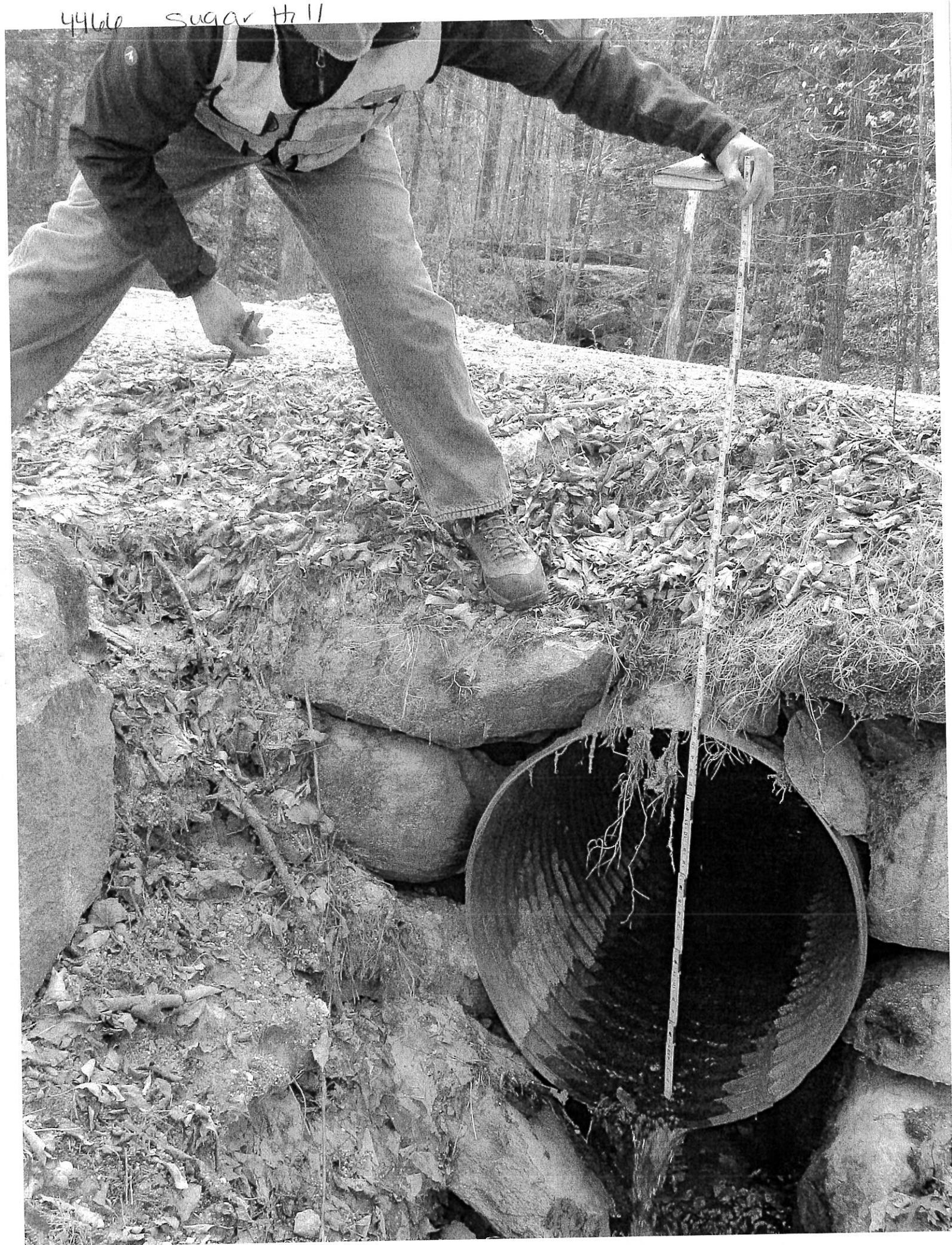
# 4464 Sugar Hill



4/15/85 Sugar Hill



4466 Sugar H 11



4468 Sugar Hill





# Wallingford Vern Sugar Hill Road Culverts: 11, 13, 18, 20

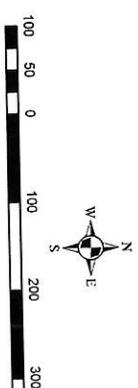
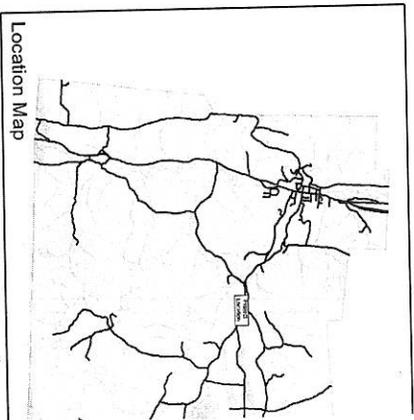
## Culverts

- ⑪ Culvert 11
- ⑬ Culvert 13
- ⑱ Culvert 18
- ⑳ Culvert 20

Rivers and Streams

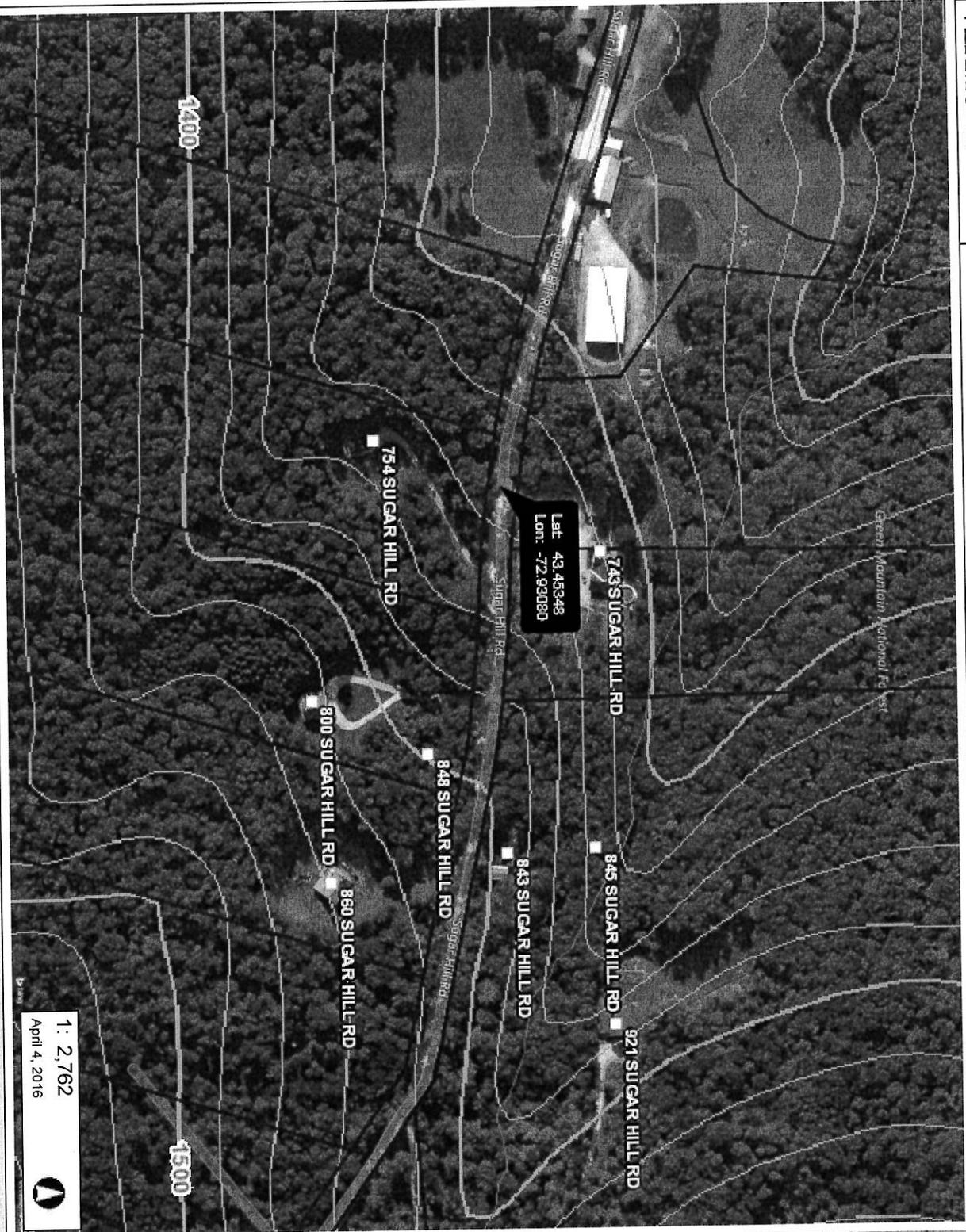
Roads

Lakes and Major Ponds



1 inch = 0.03 miles



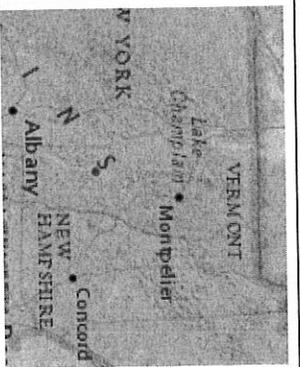


1: 2,762  
 April 4, 2016



140.0 0 70.00 140.0 Meters  
 1" = 230 Ft. 1cm = 28 Meters  
 THIS MAP IS NOT TO BE USED FOR NAVIGATION

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



**LEGEND**

- DFIRM Floodways
- DFIRM Preliminary Floodways
- Special Flood Hazard Areas (A Counties)
- AE (1-percent annual chance flood)
- A (1-percent annual chance flood)
- AO (1-percent annual chance zone (feet))
- 0.2-percent annual chance flood ha
- Special Flood Hazard Areas (F DFIRM)
- AE (1-percent annual chance flood)
- A (1-percent annual chance flood)
- AO (1-percent annual chance zone (feet))
- 0.2-percent annual chance flood ha
- Buildings (E911)
- VTRANS State and Town Long
- VTRANS State Short Structure
- Town Bridge
- Town Culvert
- Stream
- Parcels (where available)
- Town Boundary

**NOTES**

Map created using ANR's Natural Resources Atlas

## View Structure

▼ Expand fields

🔗 Help

✕ Close (/structures)

ID: 44674e59-ff9f-463f-bc61-03cb77473207

### Municipality

WALLINGFORD



### Road

SUGAR HILL RD



### Local ID

18

### X-coordinate (or lat)

465133.51846885

### Y-coordinate (or lng)

106010.042514197

### Inventory date

6/19/2014

### Culvert type

Round



### Culvert material

Steel Corrugated



### Height

28

in

### Width

28

in

### Length

35

ft

### Overall condition

Fair



## Town Admin

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**From:** Carvajal, Joshua <Joshua.Carvajal@vermont.gov>  
**Sent:** Tuesday, March 29, 2016 10:13 PM  
**To:** Sandi Switzer  
**Subject:** Wallingford\_Sugar Hill Road

Hi Sandi,

Thanks for meeting with me to discuss this project for which the Town plans to apply to the Better Roads grant program for funding.

Due to the size of the watershed, this stream is not jurisdictional under the Stream Alteration General Permit (SAGP) - [www.watershedmanagement.vt.gov/rivers/docs/2014\\_04\\_10\\_Stream\\_Alteration\\_GP.pdf](http://www.watershedmanagement.vt.gov/rivers/docs/2014_04_10_Stream_Alteration_GP.pdf).

The following comments are recommendations:

The current pipe appears to be undersized based on the drainage area and stream channel width. There is corrosion on the flow line of the existing 30" corrugated metal pipe (CMP).

Extending the existing pipe is an option, though the current alignment makes this a bit difficult the downstream end is a better location for the extension. I'd recommend a head wall at the end to support the pipe and to hold back the road edge. Stone armor will be needed to stabilize the channel and reduce scour of the bed.

A better alternative is to install a new pipe sized to the channel width to transport sediment and debris. The new pipe may be either a 48" HDPE or CMP. If road cover thickness or raising the road bed is a concern, a CMP pipe arch is also a suitable option for this site and will need to be 57" x 38" to have an equivalent waterway opening.

Please let me know if you have any questions.

\*\*\*\*\*

**Josh Carvajal, P.E. CFM**

Rivers Program

**Agency of Natural Resources**

**Department of Environmental Conservation**

cell: (802) 490-6163

[www.watershedmanagement.vt.gov/rivers.htm](http://www.watershedmanagement.vt.gov/rivers.htm)

[floodready.vermont.gov](http://floodready.vermont.gov)

**Our email addresses have changed ([@vermont.gov](mailto:@vermont.gov))**

**NEW: [joshua.carvajal@vermont.gov](mailto:joshua.carvajal@vermont.gov)**

**Please update your address book!**

