



Received

APR 13 2016



VTrans
PDD-LTF

FY17 Vermont Better Roads Grant Application

Please complete this page ONCE and return with your Grant Category Application(s)

Town/Organization: Town of Barnard Contact Person(s): Preston Bristow, Selectboard Assistant
Address: 115 North Road, Barnard, VT 05031

Street Address *Town* *Zip*
Email: selectboard@barnardvt.us Phone: (802) 234 - 9211

DUNS #: 781155353 Fiscal Year End Month (MM): 6

Accounting System: Automated Manual Combination

Please use the suggested documentation checklist below to ensure that all of the relevant items regarding your application have been included.

- Grant application cover sheet (Only submit one)
- Grant application form (One per category/project)
- Itemized Cost estimate for labor, equipment, and materials (see enclosed Cost Estimate Worksheet). If applicable, please break down funding by source (i.e. different grant sources)
- Project Location Map (please show location of affected water)
- Sketch of proposed erosion control measures or other management practices, including distances in feet
Also show approximate location of town/other right-of-way and/or property lines
- Photo(s) of the project area
- Letters of Support (RPC, VTrans District Technical Staff, ANR Rivers and Streams Engineers, etc.)
- If Category C River/Road Conflict or Category D River/Stream Structure or Culvert, you must attach ANR/ACOE consultation



7#2



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 Barnard

Project Name: Fort Defiance Culvert Replacement and Ditching

Road Name: Fort Defiance Road TH #: 28 Structure # (if applicable): _____

Road Type: Unpaved Uncurbed
Class 3

Watershed: White basin 9

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

There is a 1000ft stretch of Fort Defiance Road with limited ditching, poor drainage, insufficient number of culverts along a steep slope of road that continuously causes road erosion problems.

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):

To prevent future washouts and erosion from this Poor condition culvert, replace damaged culvert #1 with 24" x 40ft plastic culvert, install 2 additional 18" x 40ft plastic culverts between culvert #1 and culvert #2, and replace culvert #2 with an 18" x 40ft plastic. This will improve hydraulic capacity on Fort Defiance Road. Ditching and creating turnouts on this steep section to help get water off the road will also reduce stormwater erosion.

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

With replacing the 2 culverts and adding 2 more culverts along this 1000ft stretch, this will improve the hydraulic capacity of the culvert. The complementary effort of ditching the road above culvert 1 will help divert water off the gravel road faster reducing road erosion. The stormwater runoff feeds into a small stream that connects to Locust Creek. This increased facilities will reduce the high risk erosion rating at this site.



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

Progress to Date:

Town road crew continues to patch road erosion as it occurs.

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

No

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: 2015 Culvert Inventory

No

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

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

Both. A portion of adding the two culverts will extend beyond the town right of way. The Town has the private owner's consent to work on their property.

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

Yes



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

Please see attached project budget.

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

The 20% match will come out of the highway budget.

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$ 9,000.00

Estimated Total Project Cost (including 20% local match): \$ 10,862.00

Estimated Completion Date: 12/31/2016

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: 

Title: CHAIR- SELECTBOARD

To whom it may concern:

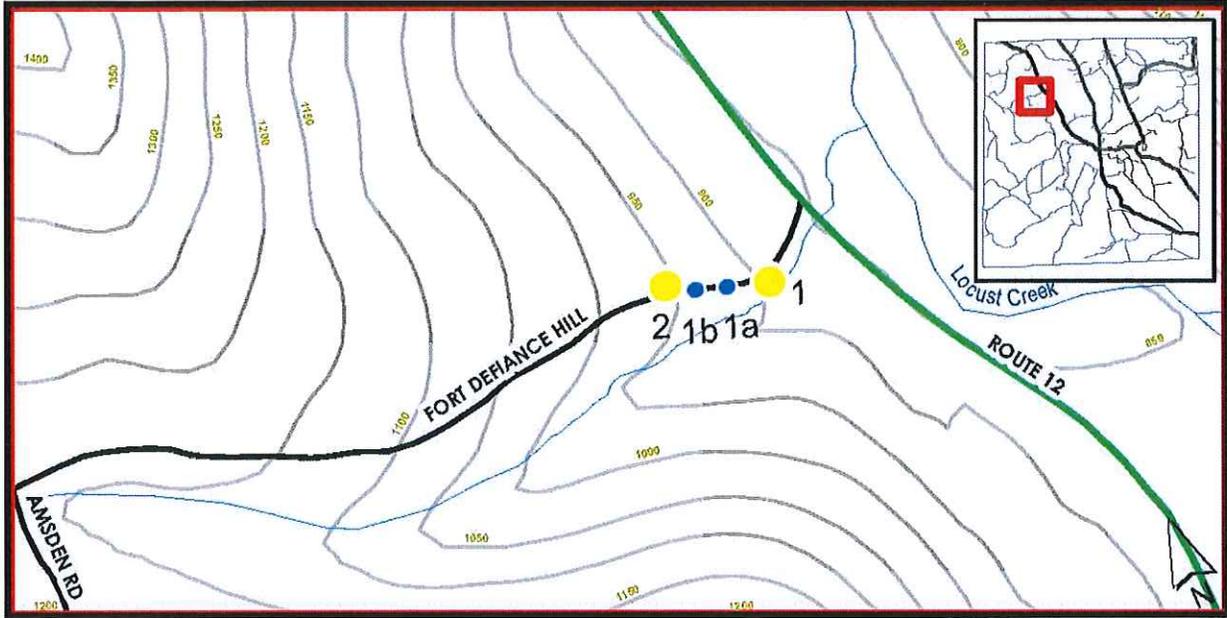
I, Sandra J. Manning, give my consent for the Town of Barnard to work outside the road right-of-way on my property to improve drainage and erosion problems along the first 1000 feet of Fort Defiance Road above its junction with VT Route 12.

Sandra J. Manning

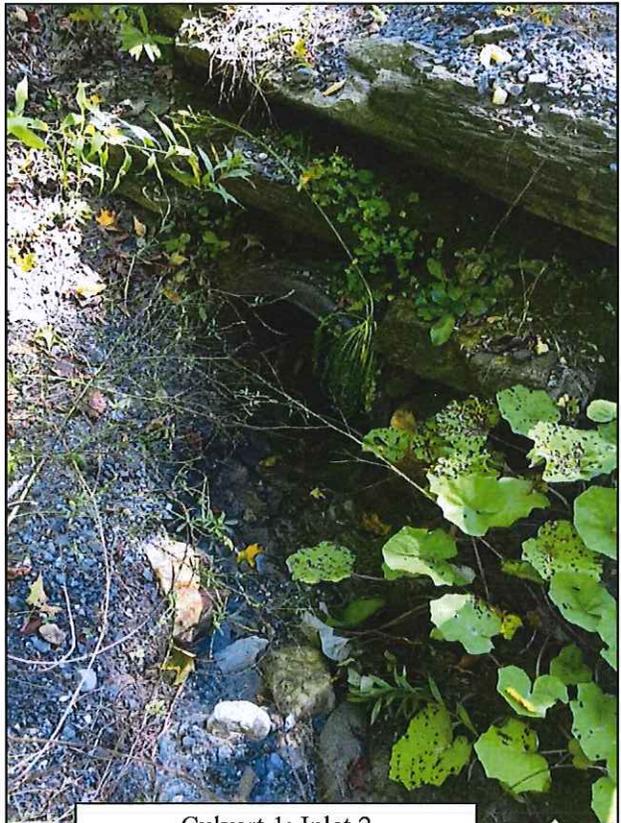
Sandra J. Manning

4-10-16

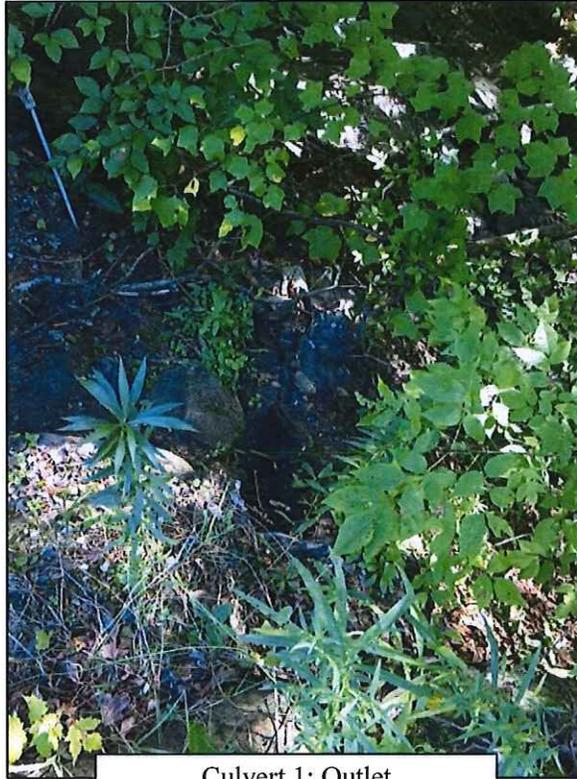
Date



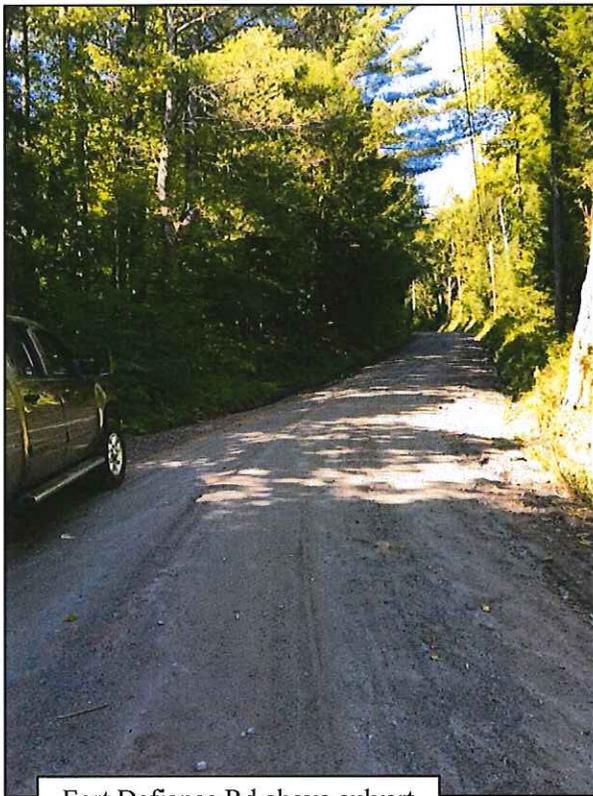
Culvert 1: Inlet 1



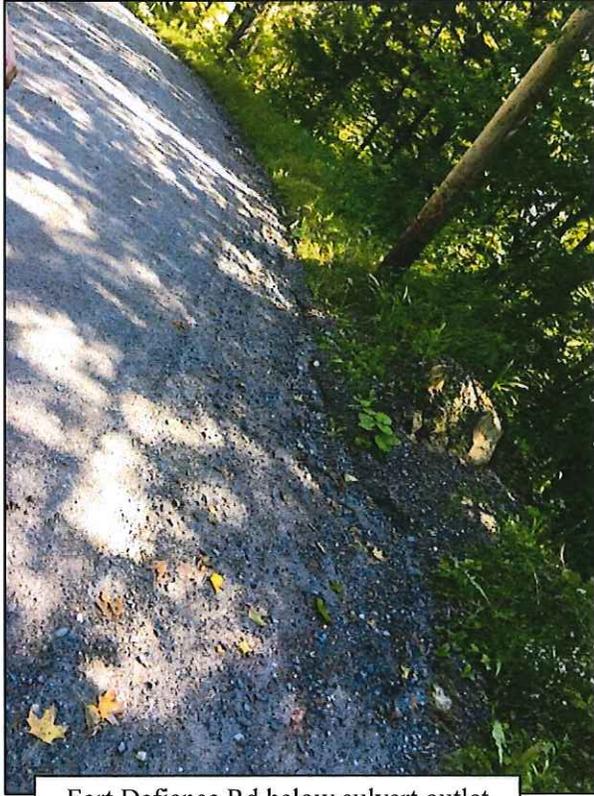
Culvert 1: Inlet 2



Culvert 1: Outlet



Fort Defiance Rd above culvert



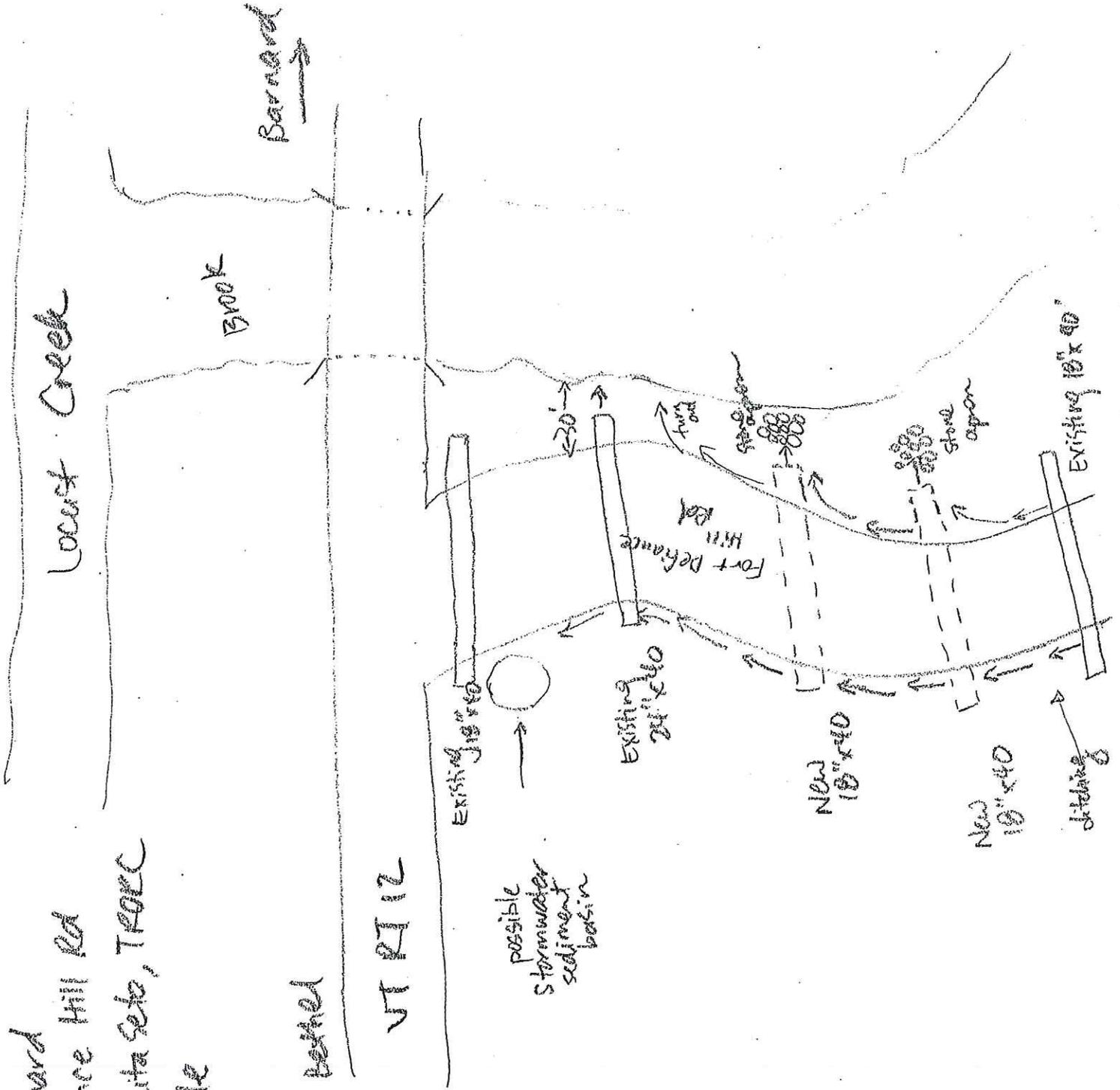
Fort Defiance Rd below culvert outlet

Town of Barnard
Fort DeRance Hill Rd
Drawing by Lita Seto, TRRC
NOT to Scale

← Bethel

VT R112

possible
stormwater
sediment
basin



Site Description

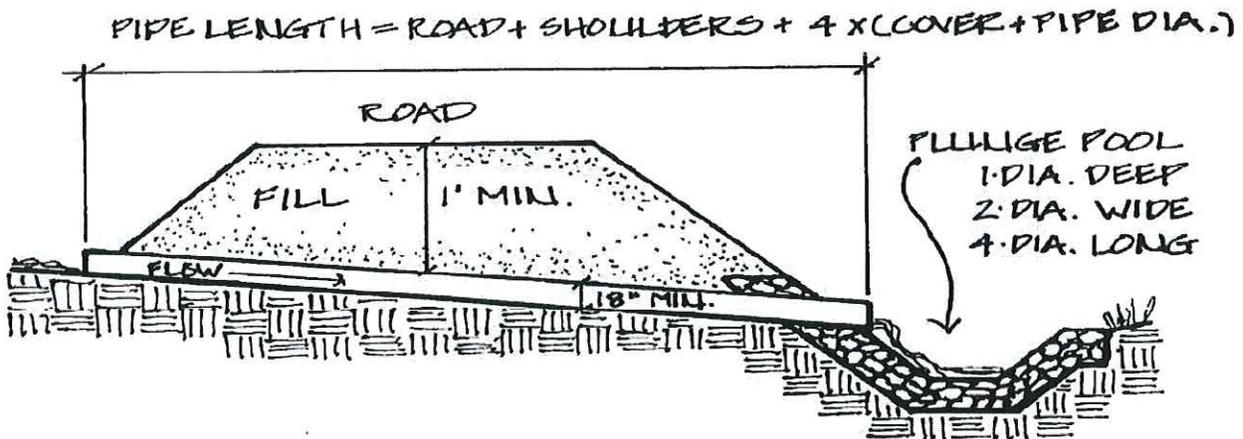
Fort Defiance Road culvert 1 is a 24" x 40' corrugated plastic pipe and is the only pipe for nearly a quarter of a mile up a steep gravel road before culvert 2 which is a 15" x 40' corrugated plastic pipe. Sediment has accumulated around the inlet reducing hydraulic capacity of the culvert during high rainfall events.

Culvert #1: -72.6376 43.7629 24" x 40' corrugated plastic

Culvert #2: -72.6388 43.7631 15" x 40' corrugated plastic

Recommended Treatment

To prevent future washouts and erosion from this culvert, replace damaged culvert #1 with 24" x 40ft plastic culvert, install 2 additional 18" x 40ft plastic culverts between culvert #1 and culvert #2, and replace culvert #2 with an 18" x 40ft plastic. This will improve hydraulic capacity on Fort Defiance Road. Ditching and creating turnouts on this steep section to help get water off the road will also reduce stormwater erosion.



Permit Requirements - A VT DEC Stream Alteration Permit will be required for this project. Contact Todd Menees at (802) 345-3510.

Construction Notes:

- Construction Specifications - See specifications in Vermont Better Backroads Manual, 2009
- Buried Cable/Utilities - Buried cable/utilities may be on site. Call Dig Safe 1-888-DIG-SAFE to locate buried utilities prior to construction
- Crown roads ½ to ¾ inch per linear foot after project installation and maintain there after (p. 5)
- Stabilize all disturbed soils with seed and mulch (p.33)

Possible Funding Sources

- Better Backroads Grant
- Transportation Alternatives Program
- VTrans Structures Grant
- Hazard Mitigation Grant Program

Cost Estimates for Treatment

	Quantity	Cost per Unit	Totals
24 inch plastic culvert (1)	40 linear feet	\$12.95/ft	\$518.00
18 inch plastic culvert (3)	120 linear feet	\$12.95/ft	\$1,554.00
Rip Rap	60 yards	\$11.50/yd	\$690.00
Gravel	250 yards	\$11.60/yd	\$2,900.00
Backhoe	40 hours	\$38.00/hr	\$1,520.00
Truck	30 hours	\$40.00/hr	\$1,200.00
Labor			
1 Supervisor	40 hours	\$21.70/hr	\$868.00
2 Laborers	80 hours	\$18.00/hr	\$1,440.00
Project Total Cost			\$10,690.00

PROOF LOCAL SHARE

MUNICIPAL BUDGET					
	Actual FY14	Actual FY15	Budget FY16	Actual FY16 to 12/31/2015	Budget FY17
TOTAL REVENUES	1,341,929.07	1,564,495.11	1,445,367.00	1,394,123.17	1,558,276.00
SPENDING					
HIGHWAY					
EQUIPMENT OPERATIONS					
Fuels	61,169.83	49,534.63	55,000.00	9,702.34	50,000.00
Insurance	9,375.62	9,868.16	10,300.00	5,152.80	6,000.00
Maintenance: Excavator	0.00	152.74	0.00	63.70	1,500.00
Maintenance: One-Ton	5,278.00	2,555.93	2,500.00	1,243.22	2,500.00
Maintenance: Grader	4,260.28	7,102.85	5,000.00	800.00	5,000.00
Maintenance: Loader	15.98	8,755.39	5,000.00	3,872.60	5,000.00
Maintenance: Misc. Equip.	210.65	866.36	2,500.00	60.83	2,500.00
Maintenance: Trucks	30,744.92	28,587.79	15,000.00	13,472.19	15,000.00
TOTAL, EQUIPMENT OPERATIONS	111,055.28	107,423.85	95,300.00	34,367.68	87,500.00
GARAGE OPERATIONS					
Insurance	2,352.30	1,954.99	2,100.00	5,967.25	6,000.00
Maintenance & Repairs	5,892.56	20,695.26	15,000.00	2,411.31	10,000.00
Supplies & Tools	8,318.90	7,383.34	5,000.00	2,209.39	5,000.00
Utilities	3,102.21	3,297.86	3,500.00	1,558.99	3,500.00
TOTAL, GARAGE OPERATIONS	19,665.97	33,331.45	25,600.00	12,146.94	24,500.00
MATERIALS					
Chloride	3,560.00	4,897.99	4,000.00	2,670.00	5,000.00
Culverts	7,914.12	8,091.87	5,000.00	3,566.62	5,000.00
Gravel & Hardpack	84,459.17	135,043.99	65,000.00	70,138.38	75,000.00
Guardrails & Signs	106.85	1,330.03	4,000.00	2,657.65	4,000.00
Misc. supplies	28.00	178.06	500.00	703.40	1,000.00
Paving	0.00	567.64	0.00	5,547.88	2,000.00
Salt	33,933.09	39,366.68	35,000.00	0.00	35,000.00
Sand	26,250.00	40,000.00	60,000.00	37,500.00	60,000.00
TOTAL, MATERIALS	156,251.23	229,476.26	173,500.00	122,783.93	187,000.00
PROJECTS AND GRANTS*					
Better Back Roads	9,598.96	0.00	0.00	0.00	0.00
Highway Projects	0.00	0.00	0.00	23.96	10,000.00
Green Gate Culvert	55,338.00	12,992.79	0.00	0.00	0.00
CDBG :LOC CRK	0.00	0.00	0.00	8,463.19	74,000.00
Paving/Resurfacing	50,000.00	370.96	75,000.00	220,793.61	100,000.00
TOTAL, PROJECTS & GRANTS	114,936.96	13,363.75	75,000.00	229,280.76	184,000.00
ROAD CREW					
Health Benefits	47,078.31	43,204.77	45,096.00	17,545.76	48,070.00
Insurance - Unemploy & Work.Comp.	11,536.24	13,644.62	17,600.00	13,421.91	18,000.00
Retirement Funding	7,641.78	8,456.58	8,845.00	3,651.56	7,465.00
Social Security Taxes	12,340.83	13,161.31	13,260.00	5,094.30	10,385.00
Uniforms	6,499.43	7,308.73	6,000.00	3,485.16	6,000.00
Wages: Crew Overtime	10,470.19	11,349.75	12,000.00	1,643.63	11,000.00
Wages: Crew	83,801.33	82,240.00	89,440.00	40,680.00	85,800.00
Wages: Foreman Overtime	5,431.22	6,114.01	8,000.00	1,188.00	6,000.00
Wages: Foreman	47,418.03	58,030.50	55,120.00	22,880.00	49,920.00
Wages: Extra Help	9,570.00	8,567.50	10,000.00	200.00	10,000.00
TOTAL ROAD CREW	241,787.36	252,077.77	265,361.00	109,790.32	252,640.00

Plus FA labor, equip, materials

March 23, 2016

Mr. Jeff Tracy
Town of Barnard
115 North Road
Barnard, VT 05031

Dear Jeff:

I am pleased to provide a letter of support for the Town of Barnard's application submission for a Category D Better Back Roads grant for two culvert additions and improved ditching along Fort Defiance Road. During the culvert inventory process, I remember seeing the steep slope of the road with no room for drainage to go and the inadequacy of the hydraulic openings of existing culverts. You identified this site as a high priority project for erosion/water quality control. This will help improve the resiliency of this gravel road and reduce the erosion damage each year.

Please contact me if you have any questions.

Sincerely,



Rita Seto, AICP
Senior Planner

128 King Farm Rd.
Woodstock, VT 05091
802-457-3188
trorc.org

William B. Emmons, III, Chair
Peter G. Gregory, AICP, Executive Director