



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:

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:

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

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

Estimated Total Project Cost (including 20% local match): _____

Estimated Completion Date: _____

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. [2012 Road Study and Capital Plan](#)

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: _____

2016 Better Back Roads Grant Budget - Bornemann Rd TH#17

CATEGORY B APPLICATION

	Task 1	Task 2	Task 3	Task 4	Task 5	Total QTY	Rates	Total Cost
Correct Erosion Problem along entire length of gravel road from Garfield Rd (TH07) to Sighs Drive (PVT) - Est. 4 work days	Excavate & reshape roadsides (includes hauling culverts)	Hauling ledge and gravel to site & setting pipe	Seed & Mulch roadsides	Install culvert headers & shape road	Photos and grant conditions			
	QTY	QTY	QTY	QTY	QTY			
LABOR								
Ken	18.00	18.00		4.00		40.00	\$ 36.02	\$ 1,440.80
Mike	1.00	15.00	4.00			20.00	\$ 32.44	\$ 648.80
Mike on Excavator	18.00	18.00						
Ryan	21.00	17.00	4.00	1.00		43.00	\$ 30.14	\$ 1,296.02
Mark	21.00	15.00	4.00	2.00		42.00	\$ 21.72	\$ 912.24
Ron					6.00	6.00	\$ 38.11	\$ 228.66
SUBTOTAL LABOR								\$ 4,526.52
EQUIPMENT								
2009 Freightliner - Tandem Dump	21.00	15.00				36.00	\$ 75.00	\$ 2,700.00
2012 International - Tandem Dump	21.00	17.00		1.00		39.00	\$ 75.00	\$ 2,925.00
2015 International - Tandem Dump	1.00	15.00				16.00	\$ 75.00	\$ 1,200.00
Road Grader				2.00		2.00	\$ 100.00	\$ 200.00
Backhoe	18.00	18.00		4.00		40.00	\$ 37.00	\$ 1,480.00
Ton truck (for towing mulcher trailer)			4.00			4.00	\$ 26.00	\$ 104.00
Mulcher & trailer			4.00			4.00	\$ 11.75	\$ 47.00
Town Pickup; round trip four days	2.00	1.00	1.00			4.00	\$ 35.00	\$ 140.00
SUBTOTAL EQUIPMENT								\$ 8,796.00
MATERIALS								
Fertilizer and Grass Seed - per pound			50.00			50.00	\$ 1.80	\$ 90.00
Hay bales			150.00			150.00	\$ 3.00	\$ 450.00
12" minus stone, yards -(1.6 tons = 1 cu yd)		616.00				616.00	\$ 14.75	\$ 9,086.00
Ditch fabric filter, \$200/360' roll =\$0.55 per foot			1350.00			1350.00	\$ 0.55	\$ 742.50
Large ledge, yards - not uniform				8.00		8.00	\$ 12.50	\$ 100.00
Crushed gravel, Town's material		28.00				28.00	\$ 12.00	\$ 336.00
18" culvert, feet, Town's material	100.00					100.00	\$ 10.21	\$ 1,021.00
SUBTOTAL MATERIALS								\$ 11,825.50
RENTED								
Excavator; Move fee; Small-Time Ent.LLC /hour	2.00					2.00	\$ 120.00	\$ 240.00
Excavator; per hour, Gary Tatro Equipment	18.00	18.00				36.00	\$ 75.00	\$ 2,700.00
SUBTOTAL RENTED								\$ 2,940.00
GRAND TOTAL								\$ 28,088.02

Project Estimated Cost	\$ 28,088.02
Max BBR Grant	\$ (20,000.00)
Balance is Town Share =	\$ 8,088.02
Local Match %	28.8%

Estimate Completed 02/18/2016 KA

* 2016 Better Back Roads Grant max increased from \$10,000 to \$20,000 with same 20% local match required

4.4 **BORNEMANN ROAD, TH #17, EROSION OF ROADWAY PARALLEL TO ALIGNMENT AND DITCHES**

4.4.1 *Site Location (Site N4)*

From the Town of Hyde Park Town Hall located at 344 Route 15 West, Hyde Park, Vermont, drive east along Route 15 for 0.3 miles straight through the traffic circle. Follow Route 15 for another 0.3 miles. Turn left onto Centerville Road for 0.6 miles. Turn right onto Noyes Farm Road for 0.5 miles. Turn left onto Cleveland Corner Road for 1.6 miles. Turn slight left onto Carpenter Hill Road for 1.5 miles. Continue onto Garfield Road for 4.0 miles. Turn left onto Bornemann Road and the site. See the attached project locus map for approximate site location and designation. The site is located at the following coordinates in the North American Datum of 1983 (NAD83) system:

Latitude	44.6387 N
Longitude	72.4855 W

4.4.2 *Site Description*

Bornemann Road (Site N4) is a dead end road that serves residential homes. The site starts at the intersection with Garfield Road at the bottom of the hill and extends to the top of the hill approximately 1,600 feet in the northern direction. The road reportedly has low traffic volumes. The roadway in the project area is surfaced with gravel and grades generally meet or exceed 5%. The traveled road width is approximately 20 feet. The road is built through the low point of a longitudinal valley that that prevents shedding of stormwater along the reach. The road is lined on both the east and west sides with ditches that are offset from the edge of road by as much as approximately 10 feet. A grassed sloping area is generally present between the edge of the shoulder and the ditches.



Site from top of hill



Site near the center of the hill

The ditch along the western side of the roadway generally appears to be unlined. The ditch intersects three culverts at approximately third points along the project site that convey flow from the ditches to the eastern side of the road. The ditches appear to generally be unlined. Between the middle and bottom culvert, there is a woods access road that intersects the ditch. Flow is conveyed through the access road by a culvert.

The ditch along the eastern side of the roadway also appears to be generally unlined. The ditch receives flow from three cross culverts as noted above. Down gradient of the outlet of the most upstream culvert, the ditch extends out away from the edge of the road by approximately 20 to 30 feet before intersecting a camp road. Flow is conveyed through the camp road by a 24 inch diameter corrugated metal pipe culvert. The ditch continues along the roadway away from the edge of the road, before intersecting Garfield Road downstream of the site.



There are 3 cross culverts along the problem area as noted above. The first located approximately 750 feet from the top that conveys flow from the western ditch to the eastern ditch. The culvert is an 18 inch diameter corrugated plastic pipe that was reportedly replaced earlier this year. The next cross culvert is located approximately 450 feet down the roadway and is a 24 inch diameter corrugated plastic pipe that conveys flow from the western ditch to the eastern ditch. The third cross culvert is an 18 inch diameter corrugated plastic pipe located near the intersection with Garfield Road that conveys flow from the western ditch to the eastern ditch.

4.4.3 Site Issues

In general, the main issue at this site is related to stormwater running parallel with the roadway during storms and eroding the side of the road. It is not clear if the ditches become full with stormwater and overflow, exacerbating the problem.

4.4.4 Current Maintenance

Regular seasonal maintenance and grading is reportedly performed at this site to fill in eroded sections and maintain a roadway crown. Ditch improvements and a new cross culvert were installed on the upper portion of the site this year. The culvert is reportedly occasionally monitored and has not been a past issue with regards to condition or flooding.

4.4.5 Suggested Solution

Weston & Sampson recommends that the edges of the roadway be cleared and steepened to promote better positive flow to the ditches. In areas where this distance is too great to overcome, consider installing a ditch along the edge of the roadway, such as the western side of the site near the top, in the center of the site on the east and west near the camp road, and along the eastern side of the site on the lower portion. For all recommended ditch installation and improvements, in areas graded steeper than 5% the ditch should be lined with stone. In areas graded milder than 5%, the ditch should be lined with fabric and seeded for vegetative growth.

Adding two additional cross culverts, one in the upper portion and one in the lower portion of the site to collect flow from the western side of the site and discharge to the eastern side of the site would also be beneficial.

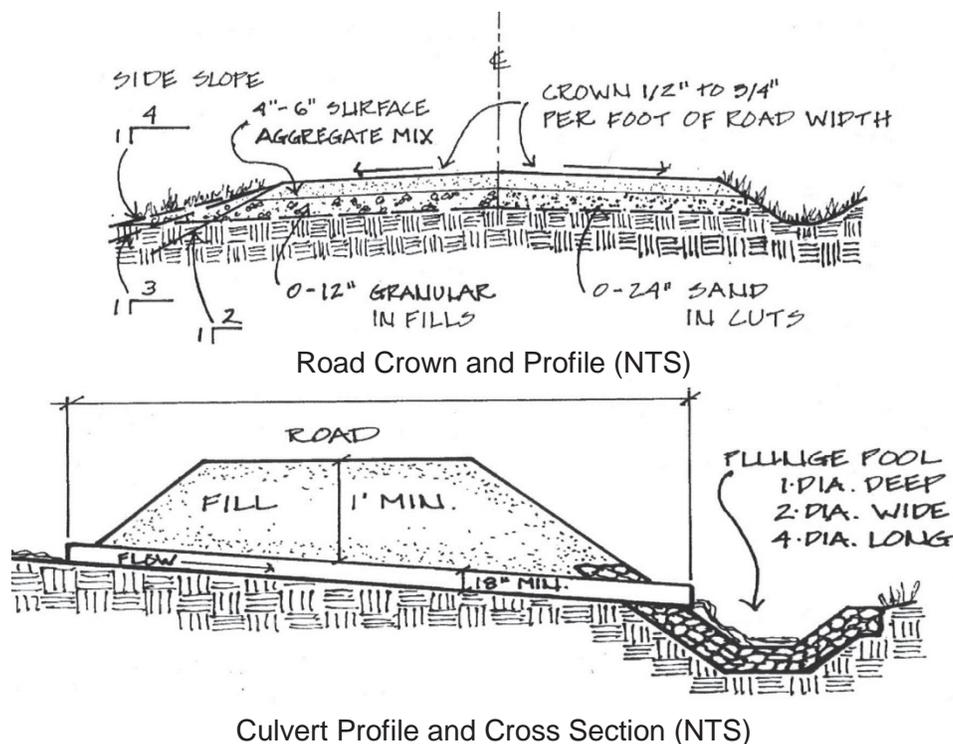
The discharge areas of all ditches and culverts should be suitably armored to prevent erosion. All disturbed areas should be seeded and mulched to promote a protective vegetative cover. Given the length and grade of this site, recommended culvert sizes and ditch geometries should be verified with a hydraulic study prior to the start of work. Replacing culverts with larger units and increasing ditch geometries along lower portions of the site may be warranted based on the results of the hydraulic studies. Since this is a dead end road, it does not appear as though including provisions for pedestrian or bicycle traffic at this site would be practical.

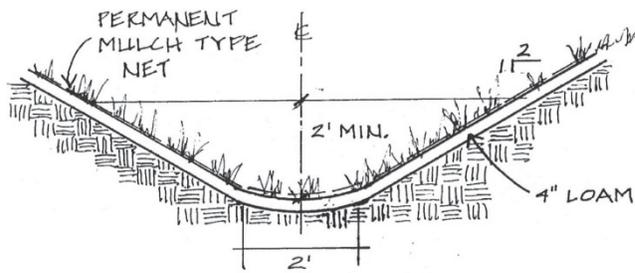
4.4.6 Suggested Design References

Suggested design references include the following documents:

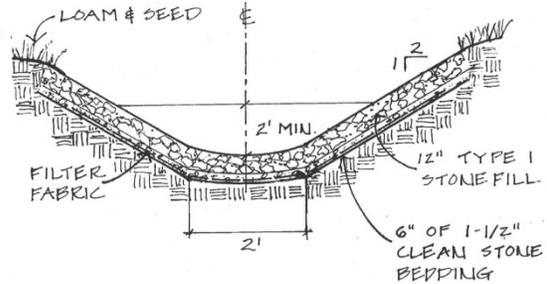
- Vermont Better Backroads Manual, 2009
- Vermont State Design Standards for Local Roads and Streets (Section 6.0)
- Vermont Agency of Transportation Standard Specifications for Construction
- The Low Risk Site Handbook for Erosion Prevention and Sediment Control, August 2006
- VTrans Structures Design Manual, 2010

The following details from the Vermont Better Backroads Manual may be helpful:





Grass Lined Swale (<5%)



Stone Lined Swale (>5%)

4.4.7 Opinion of Probable Project Cost

The Opinion of Project Cost to perform engineering, excavate and shape the new ditch, install stone armoring, install an 18 inch diameter culvert with end sections, install erosion matting, and clean-up/hydro-seed is approximately \$43,000. Refer to the Opinion of Project Cost spreadsheet provided in Appendix A. Please also refer to the Site Sketch on the next page for additional detail.

Vermont Department of Environmental Conservation

Watershed Management Division
1 National Life Drive, Main 2
Montpelier, Vermont 05620-3522

Agency of Natural Resources

[phone] 802-490-6176
[e-mail] danielle.owczarski@vermont.gov

April 21, 2016

Alan May
Better Backroads Coordinator
Municipal Assistance Bureau
Highway Division
1 National Life Drive
Montpelier, VT 05633

Dear Alan,

I'm writing in support of the Town of Hyde Park's Better Roads grant proposal to address road washouts and stormwater runoff from Bornemann Road in Hyde Park, VT. The roadway has a moderate road erosion risk ranking of 3.5 for slope constraints and highly erodible soils and drains to an unnamed tributary of the Wild Branch, which is identified in the State of VT 2014 Stressed Waters List for sediment. Although the site is not identified as a high priority for water quality concerns, the project will protect the headwaters of the Wild Branch from stormwater impacts.

The project is identified in the 2012 Road Inventory and Capital Budget Planning Study. The 2009 VTDEC Lamoille Basin Plan specifically identifies the action to inventory and prioritize transportation related projects for municipal officials, ultimately reducing maintenance, improving water quality and aquatic habitat, and saving funds for towns.

As DEC's Watershed Coordinator for the Lamoille basin, I support this proposal.

Please feel free to contact me with any questions or if I can be of further assistance.

Sincerely,



Danielle Owczarski, Watershed Coordinator

CC: Ron Rodjenski – Hyde Park Town and Zoning Administrator

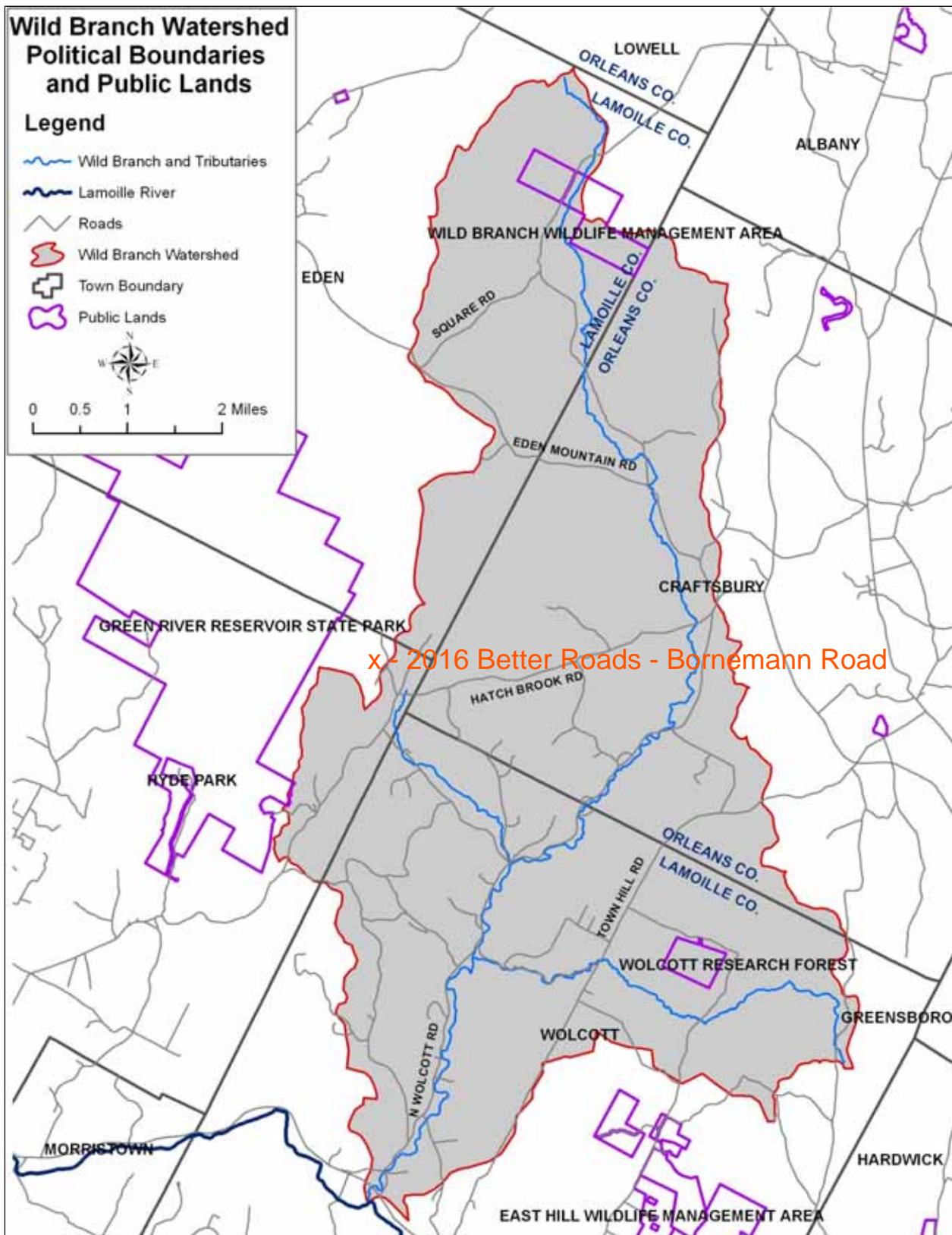


Figure 3.2. Wild Branch Political Boundaries and Public Lands

PROJECT DESCRIPTION – BORNEMANN ROAD, HYDE PARK, VERMONT
BETTER BACK ROADS FY2017

Current Situation 😞

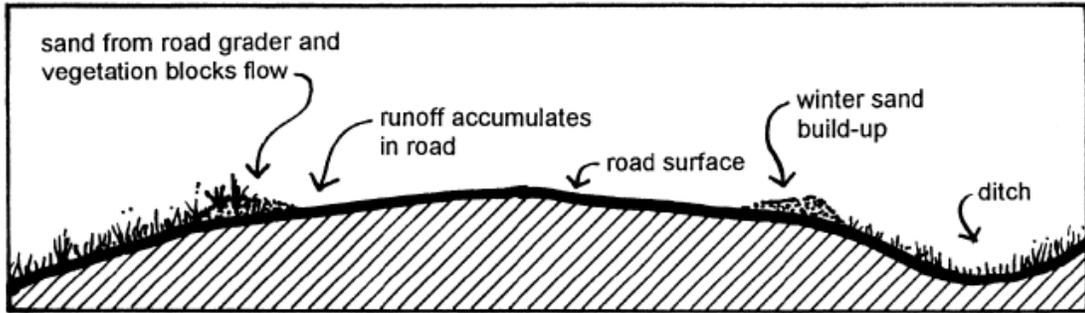
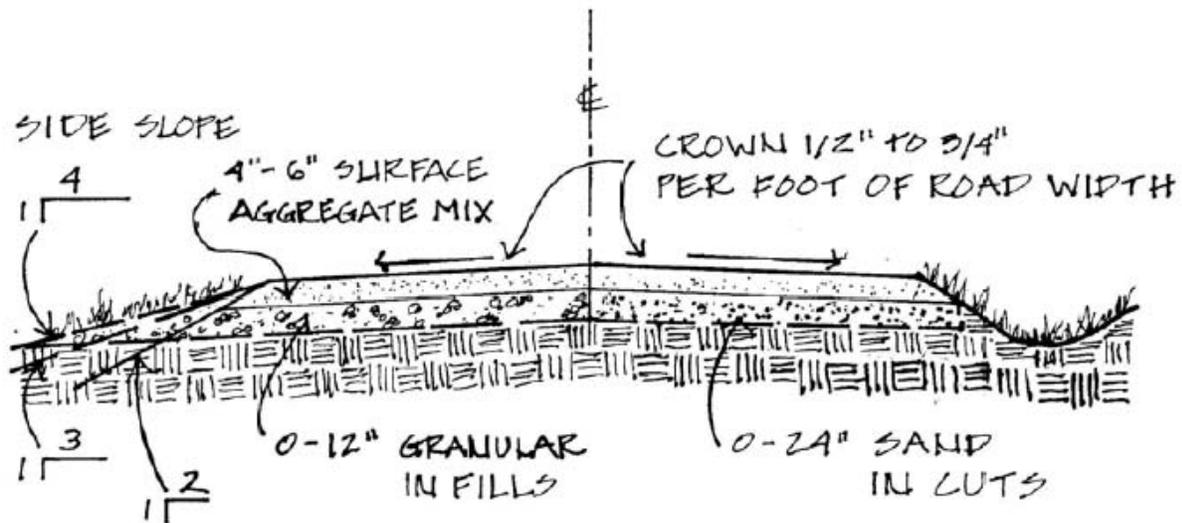
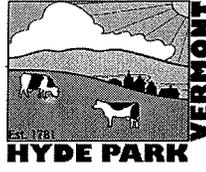


Figure 12. Sand and vegetation build-up prevents drainage to sides of road.

Our Goal ! 😊



Two 12-foot lanes (includes shoulder)



Selectboard
PO Box 98
Hyde Park, VT 05655

April 14, 2016

Alan May
Better Roads
Vermont Agency of Transportation
Alan.may@vermont.gov

Re: Town of Hyde Park, VT
2016 Category B Grant Application

Dear Mr. May:

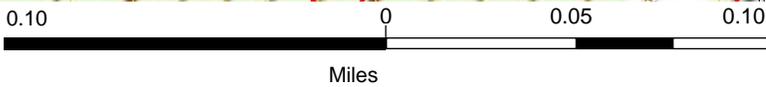
The Hyde Park Selectboard discussed this grant application at its April 14, 2015 regular meeting. We are pleased to provide this letter of support for this application.

The Town has been successfully working on completing erosion control projects identified in our 2012 Road Inventory and Capital Planning Study (also funded by Better Roads). This application will complete the erosion projects, leaving structural replacement projects that still require engineering and funding. See attached summary with notes on work completed to date or date expected to be completed.

We have been and will be in close contact with the staff from Lamoille County Planning Commission's, VTrans and ANR for guidance as we work to improve both our highway network and the state's waterways.

Sincerely,

David Gagnier, Chair
Hyde Park Selectboard



January 28, 2016



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. E911 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.

VERMONT LEAGUE OF CITIES & TOWNS



Issue Date: 01/01/2016

Policy Number: P3082016

CERTIFICATE OF COVERAGE

Company Affording Coverage

Named Member

Town of Hyde Park
Attn: Ron Rodjenski
PO Box 98
Hyde Park, VT 05655

VLCT Property & Casualty Intermunicipal Fund, Inc.
89 Main Street Suite 4
Montpelier, VT 05602

Type of Coverage	Term	Limits of Liability
Commercial General Liability Coverage Includes: Premises/Operations Products/Completed Operations Personal Injury Contractual Independent Contractors Broad Form Property Damage	01/01/2016 - 01/01/2017	\$10,000,000 Per Occurrence
Automobile Liability Any Auto Hired Autos Non-Owned Autos Comprehensive/Collision	01/01/2016 - 01/01/2017	\$10,000,000 Per Occurrence ACV
Workers Compensation And Employers Liability	01/01/2016 - 01/01/2017	Statutory \$5,000,000 Per Occurrence and in the Aggregate
Property	01/01/2016 - 01/01/2017	\$10,000,000 Per Occurrence
Other: The State of Vermont and its officers and employees are included as an additional covered party (additional insured), but only in respect to operations by or on behalf of the Named Member, as respects the grant.		
Certificate Holder: State of Vermont	This Certificate is issued as a matter of information only and confers no rights upon the Certificate Holder. This Certificate does not amend, extend or alter the coverage afforded by the policies above. Should any of the above described policies be cancelled before the expiration date thereof, the issuing insurer will endeavor to mail 30 days written notice to the Certificate Holder named to the left, but failure to do so shall impose no obligation or liability of any kind upon the insurer, its agents, or representatives.	

Authorized Representative: _____



Lamoille County Planning Commission

PO Box 1637

Demars Building, 52 Portland Street, Second Floor

Morrisville, Vermont 05661

www.lcpcvt.org

(802) 888-4548 • e-mail: lcpc@lcpcvt.org • fax: (802) 888-6938

April 14, 2016

Alan May
Agency of Transportation
Municipal Assistance Bureau
1 National Life Drive
Montpelier, Vermont 05633
Phone (802) 828-4585

To the Review Committee,

The Lamoille County Planning Commission is pleased to offer our support for the Town of Hyde Park's FY17 Better Roads grant proposal to complete a project on Bornemann Road. The proposed project will address water quality degradation related to excessive sediment being carried from gravel roads into streams, by identifying erosion problems and implementing corrective actions. The proposed corrective actions are in accordance with guidance documents and past evaluations of problematic locations in town.

Erosion from gravel roads has been documented as a significant source of sediment and nutrients to Vermont's waterways. This project will result in better road management, improved water quality and improved habitat and inform local stakeholders/user groups on erosion issues from town roads.

Best regards,

Robert Moore
Regional Transportation Planner