





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



Progress to Date:  
None in this area

Is there an emergency reason this project must be completed quickly? If yes, please explain:  
Yes, due to the continuing scour along the roadway.

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: Capital Budget and 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.):  
We have consulted with Enman Kesselring Consulting Engineers regarding this project and the attached plans an estimate were prepared by them.

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).  
No, this work will be performed by a contractor.



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

How do you plan to meet the required 20% match on this grant?:  
Capital Funds for Bridges and Large Culverts

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

Estimated Total Project Cost (including 20% local match): \$ 59,550.00

Estimated Completion Date: 11/01/2016

REQUIRED ATTACHMENTS:

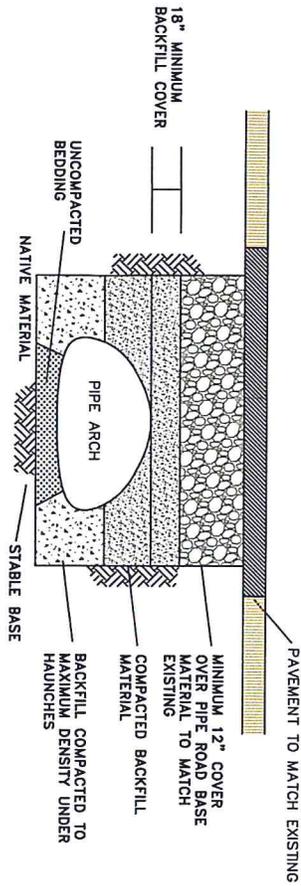
- Itemized Cost Estimate (labor, equipment, materials)  
(For assistance, call Better Backroads at 802-828-4585)
- Project Location Map  
(Please show location of affected water; 1:12,000 USGS map, if possible)
- Sketch of proposed erosion control measures, including:
  - Distances (ft.)
  - Estimate 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: Paul J. Ham

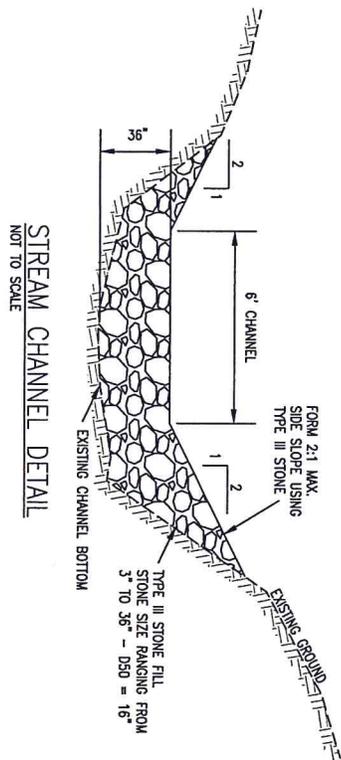
Title: INTERIM TOWN MANAGER



1. THE CONTRACTOR SHALL FOLLOW MANUFACTURERS GUIDELINES FOR INSTALLATION OF THE PIPE ARCH CULVERT1.
2. THE TRENCH SHALL BE PREPARED SO THAT THE CULVERT MAY BE INSTALLED ON A FIRM, UNIFORM BASE, WITH STABLE EARTH OR FINE GRANULAR FOUNDATION. IF UNSTABLE TRENCH CONDITIONS ARE FOUND TO EXIST THE CONTRACTOR SHALL NOTIFY THE ENGINEER. WHERE LEDGE OR BOULDERS ARE ENCOUNTERED AT THE INVERT GRADE OF PIPES, THE FORMATION SHALL BE REMOVED TO A MINIMUM OF 12" BELOW THE INVERT GRADE AND REPLACED WITH GRANULAR BACKFILL FOR STRUCTURES OR CRUSHED STONE.
3. PIPE SHALL BE BEDDED ON A BLANKET OF LOOSE SAND THAT HAS BEEN GRADED AND SHAPED WITH A TEMPLATE TO FIT THE BOTTOM CURVATURE OF THE PIPE. MINIMUM BEDDING THICKNESS SHALL BE TWICE THE HEIGHT OF THE CORRUGATION.
4. BACKFILL SHALL MEET VTRANS STANDARD 704.08A GRANULAR BACKFILL FOR STRUCTURES.
5. BACKFILL MATERIAL UNDER HAUNCHES SHALL BE COMPACTED/TAMPED TO ELIMINATE ALL VOIDS UNDER STRUCTURE.
6. BACKFILL AROUND STRUCTURE SHALL BE INSTALLED IN 6" LIFTS, UNIFORMLY AROUND STRUCTURE, COMPACTED TO 90% DENSITY PER AASHTO T-180.
7. PAVEMENT REPAIR AND BACKFILL MATERIALS SHALL MEET TOWN STANDARDS.

**TRENCH DETAIL FOR CULVERT REPLACEMENT**

NTS



**NOT FOR  
CONSTRUCTION**

**PHASE 1  
CULVERT REPLACEMENT  
& STREAM BED  
RECONSTRUCTION**

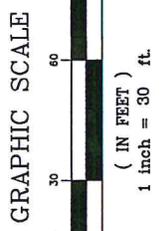
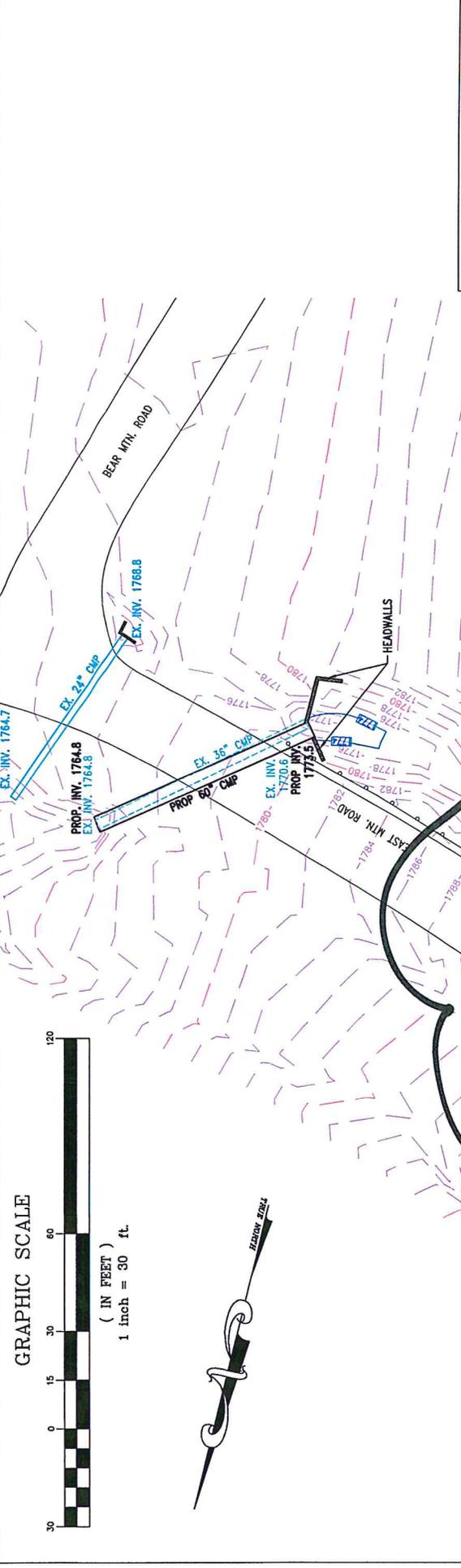
JOB# 1107.01  
6/2/14

**EAST MOUNTAIN ROAD**

KILLINGTON, VT

**ENMAN • KESSELRING**  
CONSULTING ENGINEERS

Environmental • Civil  
61 Prospect Street  
Rutland, Vermont 05701  
www.EnmanEngineering.com  
(802)775-3437  
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<b>NOT FOR CONSTRUCTION</b>
<b>PHASE 1 CULVERT REPLACEMENT CONCEPTUAL</b>
JOB# 1107.01 8/13/12 SCALE: 1"=30'
<b>EAST MOUNTAIN ROAD KILLINGTON, VT</b>
 <b>ENMAN • KESSELING CONSULTING ENGINEERS</b> Environmental ■ Civil 61 Prospect Street Rutland, Vermont 05701 (802)775-3437 Copyright © 2012 All rights reserved.

**PROTECT  
AREA**

**Engineer's Opinion of Probable Construction Cost  
Culvert Replacement and Stream Channel Reconstruction**

Item #	Quantity	Unit	Task Description	Unit \$	Est Cost
	1	LS	Mobilization/Demobilization	\$2,500.00	\$2,500.00
649.52	200	SY	Silt Fence Geotextile	\$9.25	\$1,850.00
	1	LS	Clearing and Grubbing	\$1,000.00	\$1,000.00
204.20	220	CY	Trench Excavation of Earth for Pipes	\$12.64	\$2,780.80
601.26	100	LF	60" Equivalent Arch Pipe Corugated Metal Pipe	\$125.00	\$12,500.00
203.32	144	CY	Granular Borrow	\$26.64	\$3,836.16
	2	EA	Concrete Headwall	\$3,000.00	\$6,000.00
613.12	155	CY	Bottom of Channel (Stone Fill, Type III)	\$39.89	\$6,182.95
613.12	225	CY	Side of Channel Armoring (Stone Fill, Type III)	\$39.89	\$8,975.25
	200	LF	Guard Rail	\$20.00	\$4,000.00
			<b>Sub total</b>		<b>\$49,625.16</b>
			Contingency	20%	\$9,925.03
			<b>Estimated Construction Cost</b>		<b>\$59,550.19</b>

The ENGINEER has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the ENGINEER's opinions of probable construction costs are made on the basis of the ENGINEER's professional judgment and experience. The ENGINEER makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the ENGINEER's opinion of probable construction cost. These construction costs have been derived in part from the agency of Transportation, 2 Year Average Price List, 2009 to 2011.