

<b>PA-01-VT-4066-PW-00027(2)</b> <a href="#">P</a>	
Applicant Name:	Application Title:
LOWELL (TOWN OF)	JCLOC10 Mines Rd Culvert 26
Period of Performance Start:	Period of Performance End:
06-22-2012	06-22-2016

## Subgrant Application - Entire Application

**Application Title:** [JCLOC10 Mines Rd Culvert 26](#)

**Application Number:** [PA-01-VT-4066-PW-00027\(2\)](#)

**Application Type:** [Subgrant Application \(PW\)](#)

Preparer Information	
Prefix	
First Name	JOSEPH
Middle Initial	
Last Name	COMBES
Title	Project Specialist
Agency/Organization Name	FEMA
Address 1	30 Allen Martin Drive
Address 2	
City	Essex Junction
State	VT
Zip	05452
Email	kim.canarecci@state.vt.us
Is the application preparer the Point of Contact?	No

Point of Contact Information	
Prefix	
First Name	Alden
Middle Initial	
Last Name	Warner
Title	Select Board
Agency/Organization	Town of Lowell
Address 1	2170 Route 100
Address 2	

City	Lowell
State	VT
ZIP	05847
Phone	802-744-6127
Fax	
Email	alden@brrecords.com

Alternate Point of Contact Information	
Prefix	
First Name	Reg
Middle Initial	
Last Name	Pion
Title	Road Commissioner
Agency/Organization	Town of Lowell
Address 1	2170 Route 100
Address 2	
City	Lowell
State	VT
ZIP	05847
Phone	802-744-6129
Fax	
Email	

Project Description	
Disaster Number:	4066
Pre-Application Number:	PA-01-VT-4066-RPA-0010
Applicant ID:	019-40525-00
Applicant Name:	LOWELL (TOWN OF)
Subdivision:	
Project Number:	JCLOC10
Standard Project Number/Title:	399 - Road System Damage
Please Indicate the Project Type:	Neither Alternate nor Improved
Application Title:	JCLOC10 Mines Rd Culvert 26
Category:	C.ROADS & BRIDGES
Percentage Work Completed?	100.0 %
As of Date:	11-04-2014

Comments
<p>*** 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT 14' x 6' box culvert deemed eligible for 406 HM funding, as larger box culvert cost is less than two times the estimated base construction costs for PW size identified 112" x 75" CMPA culvert. The box culvert structure will include full height headwalls at the inlet and outlet, extending approximately 5 ft below the stream bed, cut-off walls and stone armor for erosion protection. *** ### CLOSEOUT AMENDMENT – Completion date of 11/4/14 is based on the date of the letter from the Applicant to the State PA Officer requesting the PW be processed for closeout stating that all work has been completed. Refer to Lowell PW27 Closeout Submittal Package_File 1 of 3 page 3. RS Melillo, FEMA PS 05/28/15 ###</p>

Attachments						
User	Date	Document Type	Description	Hard Copy File Reference	File Name	Action
JOSEPH COMBES	08-07-2012	Map	Location map		Mine Road Location Plan.pdf(4.40 Mb)	<a href="#">View</a>

## Damage Facilities (Part 1 of 2)

Facility Number	Facility Name	Address	County	City	State	ZIP	Site Previously Damaged?	Action
1	Mines Rd Culvert 26 (Town of Lowell)		Orleans	Lowell	VT		No	

## Comments

## Attachments

User	Date	Document Type	Description	Hard Copy File Reference	File Name	Action
JOSEPH COMBES	08-06-2012	Photos	Damage Photo		Inlet site 3.JPG(3.52 Mb)	<a href="#">View</a>
JOSEPH COMBES	08-06-2012	Photos	Damage Photo		Site 3 outlet Mines Rd.JPG(5.90 Mb)	<a href="#">View</a>
JOSEPH COMBES	08-06-2012	Additional Information	Hydraulic Study		State of Vermont Hydraulics Study Site 3 Mines Rd..pdf(168.93 kb)	<a href="#">View</a>
GREGORY MORLEY	08-07-2012	Additional Information	Culvert Sizing Evaluation		Mine Road Bridge Evaluation-Lowell .pdf(1.90 Mb)	<a href="#">View</a>
KENNETH PINKHAM	12-04-2013	Additional Information	Adopted codes and standards		Codes_&_Standards[1].pdf(101.96 kb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Calculation Sheet	Culvert Sizing Eval_updated 12.06.13		Culvert Sizing Eval_updated 12.06.13.pdf(209.71 kb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Drawings/Sketches	Eng Plans_13062 C-1 SITE PLAN		Eng Plans_13062 C-1 SITE PLAN (2).pdf(1.11 Mb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Drawings/Sketches	Eng Plans_13062 C-2 DETAILS		Eng Plans_13062 C-2 DETAILS.pdf(194.50 kb)	<a href="#">View</a>

Facility Name:	Mines Rd Culvert 26 (Town of Lowell)
Address 1:	
Address 2:	
County:	Orleans
City:	Lowell
State:	VT
ZIP:	
Was this site previously damaged?	No
Percentage Work Completed?	100.00 %
	PA-01-VT-4066-PW-00027(0): Cheney Rd. A class III rural local asphalt road is located .421 miles from the intersection with VAG Rd. in the town of Lowell, VT.

Location:	<p>PA-01-VT-4066-PW-00027(1): 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT - No change to location.</p> <hr/> <p>***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist *****</p> <p>No change in project location.</p>
Damage Description and Dimensions:	<p>PA-01-VT-4066-PW-00027(0): During the incident period of May 29, 2012, a severe storm traversed northern Vermont resulting in flooding, high winds and a possible tornado. This resulted in Addison, Lamoille and Orleans counties being designated as eligible to receive reimbursement for recovery efforts that included both emergency and permanent work. This project worksheet (PW) covers the permanent repairs to be completed on the stream crossing where Burgess Branch crosses Mines Road (TH-2), a class 2 road (GPS Coordinates 44.77016, -72.51835 The Stream crossing consists of a 72 inch x 65 foot corrugated metal pipe (CMP) culvert. Heavy rain water flow caused the stream to run under the culvert damaging more that 50 per cent of the culvert. PA-01-VT-4066-PW-00027(1): 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT - No change to damage description and dimensions.</p> <hr/> <p>***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist *****</p> <p>No change in project damage description and dimensions.</p>
	<p>PA-01-VT-4066-PW-00027(0): Scope of Work The repairs at this site will require the removal and disposal of the existing 72in x 65ft CMP and replacement with a new culvert. The Vermont Agency of Transportation (VAOT) completed a preliminary hydraulic study for this site which determined the Q25 for this site and recommended replacement structures as well; however, eligible reimbursement costs under FEMA's Public Assistance (PA) Program are limited to an "in-kind" replacement structure that is upgraded in accordance with eligible codes and standards. Consistent with the Road and Bridge Standards adopted by the Town of Lowell (29 March 2011), FEMA performed a Culvert Sizing Evaluation (attached) to determine the size of an hydraulically adequate in-kind replacement structure.____ While the Culvert Sizing Evaluation determined that a 78 in x 65ft diameter was adequate for this location FEMA considers Corrugated Metal Multi-plate Arch Culvert measuring 69in x 98in x 65ft to be a cost-effective replacement to limit the need to change road grades to assure sufficient depth of cover material over the culvert.____ This approach will require excavation of material over an area 65ft x 24ft x 8ft (approx. 462 cubic yards (CY)). The new culvert will be re-covered with gravel and soil and a new roadway approach consisting of sub-base gravel will be installed over the excavation ((24ft x 65ft x 8in)/27 = 38 CY). The road surface will be finished with a 3 in-thick layer of bituminous concrete pavement 24' x 65' x.25 = 28.71T and 4" yellow line will be applied.____ Additional costs associated with non-permanent items during construction were accounted for in the attached Cost Estimate Format (CEF) and include: a sandbag check dam, a 130 gpm water pump to serve as a by-pass for stream flow across the installation site, and highway barricades to close the road during culvert work. The attached CEF itemizes the estimated costs associated with the completion of this scope of work.____  In addition to the eligible scope of work described above, Hazard Mitigation opportunities were identified for this project and include the construction of concrete Class B, steel reinforced head wall and wing-walls at both the entrance and outlet of</p>

the culvert. The estimated cost of the HMP is \$12,193.00 \_\_\_\_  
 The total estimated cost for the eligible scope of work, including the HMP and potential construction contingencies is \$82,930.00 The Applicant has elected to not request any direct administrative costs directly chargeable to this specific project.

\_\_\_\_  
 The costs associated with the eligible scope of work for this project have been estimated. Large project funding (>\$63,900) is based on documented actual costs for the eligible scope of work. This will require an amendment to the original project worksheet to be written, after the work is complete, to capture the over-run/under-run. \_\_\_\_

If the applicant decides to make improvements to the facility beyond that described in the eligible scope of work (e.g. changes in size, footprint, structure type), the applicant must request approval for an improved project from the State of Vermont prior to the start of construction. If approved, reimbursement through the PA program will be capped at the cost of the eligible scope of work. Failure to obtain approval for an improved project can place funding at risk. \_\_\_\_

Federal funding is contingent upon the Applicant acquiring all necessary federal, state and local permits. Non compliance with this requirement may jeopardize the receipt of federal funds. \_\_\_\_

The Applicant has indicated that this work will be completed using a contractor. The Applicant must comply with its Local, State and/or Federal procurement laws, regulations and procedures when seeking proposals and letting contracts for eligible work. \_\_\_\_

The Project Specialist has reviewed all documentation required for this Project Worksheet (PW). These documents are attached to the PW and are on file at the Applicant's offices. The project specialist has advised the Applicant to retain these records for a period of three years from the date of closeout. \_\_\_\_

PA-01-VT-4066-PW-00027(1):

30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT

Culvert sizing reevaluated at request of VT State representatives that original PW culvert evaluation neglected to take into account the Q100 conditions for headwater depths established by VAOT. Upon conducting this further evaluation it was concluded to increase the size of the PW replacement structure from a 98" x 69" CMPA to a 112" x 75" CMPA and corresponding road height changes to provide adequate cover over the larger size pipe.

In summary, the resulting updated SOW is described as follows:

\* VAOT CC 204.25 Structure Excavation 15.3' wide x 8' deep = 122.4 SF less area of existing CMP (28.274 SF) = 94.126 SF x 65' long = 6118.19 CF /27 = 227 CY

\* 334216153360 257 lbs/LF x 65' long = 16,705 Lbs

\* VAOT CC 204.30 Granular Backfill For Structures 15.3' wide x 8' deep = 122.4 SF less area of new CMPA (50.3 SF) =72.1 SF x 65' long = 4686.5CF /27 = 174 CY

\* VAOT CC 301.15 Subbase Of Gravel 15.3' wide x 24' long x 1.25' deep = 459 SF/27 = 17 CY

\* VAOT CC 203.28 Excavation Of Surfaces And Pavements 125' long x 22' wide x 0.25' thick x 2 (approach & departure) = 1375 CF/27 = 51 CY

\* VAOT CC 203.15 Common Excavation (for taper area) 125' long x 24' wide x 1.25' deep x 1/2 x 2 (approach & departure) = 3750 CF/27 = 139 CY

\* VAOT CC 301.15 Subbase Of Gravel (for taper area) 125' long x 24' wide x 1.25' deep x 2 (approach & departure) = 7500 CF/27 = 278 CY

\* VAOT CC 406.25 Bituminous Concrete Pavement 3" thick 125' long x 24' wide x 2 (approach & departure) + 15.3' long x 24' wide CMPA cover area = 55 Tons x 2 + 6.7 Tons = 117 Tons

\* VAOT CC 646.412 Durable 4 Inch Yellow Line, Thermoplastic as double line 125' long x 2 (approach & departure) + 15.3' long CMPA cover area = 531'

\* VAOT CC 621.20 Steel Beam Guardrail, Galvanized per codes and standards 50 LF

- \* VAOT CC 621.21 HD Steel Beam Guardrail, Galvanized per codes and standards 174 LF
- \* VAOT CC 501.34 Concrete, High Performance Class B for head and wing walls, per codes and standards, upstream and downstream with footings 19 CY
- \* VAOT CC 507.15 Reinforcing Steel (Rebar) for head and wing walls 320 LBS

The Applicant, working with the firm of Ruggiano Engineering, requested a scope change to install a 14' x 6' box culvert based on the hydrology report recommendations.

Reference the attached correspondence documenting the scope change request:

- Ruggiano Engineering Estimate letter dated 09/25/13
- Town of Lowell Scope Change Request letter dated 11/14/13
- VEM&HS Scope Change Request letter dated 11/20/13

In summary the 14' x 6' box culvert SOW, based on Ruggiano Engineering plans and estimated unit quantities, is to:

- \* Excavate to remove existing structure and prepare for box culvert 800 CY
- \* Crushed Stone under culvert (12") 35 CY
- \* Precast concrete box 14' x 6' x 55' including headwalls, wing walls & cut-off walls
- \* Granular Backfill over box culvert 400 CY
- \* Roadway Sand Cushion (6") 35 CY
- \* Roadway Gravel Subbase (18") 100 CY
- \* Roadway Pavement (3") 30 TONS
- \* Guardrail 150 LF
- \* Type II Rip-Rap 30 CY
- \* Type III Rip-Rap 100 CY

FEMA has recently addressed the eligibility of culvert enlargements in Vermont as part of a second appeal by an Applicant under PW #1803. FEMA determined that the cost of the upgrade for PW #1803 was an eligible Section 406 hazard mitigation project under 44 C.F.R. § 206.226 (e) and RP No. 9526.1 because the upgrade did not exceed 100 percent of the project cost and will reduce the likelihood of future similar damage. Recovery Policy (RP) 9526.1, Hazard Mitigation Funding under Section 406 (Stafford Act) dated March 30, 2010, provides guidance on the application and eligibility of hazard mitigation measures. Appendix A of the policy states that the replacement of a destroyed drainage structure with a larger structure is among the eligible hazard mitigation measures that are pre-determined to be cost effective when they do not exceed 100 percent of the project cost

Scope of Work:

The total cost of the 14' x 6' box culvert installation is estimated as \$195,022 of which \$120,090.90 are the base construction costs. (Reference Box Culvert CEF Part A attachment.) The PW costs to install a 112" x 75" CMPA to replace the 72" diameter destroyed CMP culvert was estimated at \$141,488 of which \$84,044.68 are the base construction costs. (Reference CMPA Mines Rd CEF Part A attachment.) The net additional cost of \$36,046.22 (\$120,090.90 - \$84,044.68) represents 42 percent of the base eligible repair cost and as such is eligible for Section 406 hazard mitigation funding.

From referenced CEF's, the difference in replacement costs of \$53,534 (\$189,040 - \$135,506) will be assigned to 406 HM thus bringing Total HMP to \$59,516 (\$53,534 + \$5,982).

END OF AMENDMENT

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\*\*\*\*\* CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist  
This project worksheet is written as a closeout version to PW# 27. It is intended to reimburse the applicant for expenses associated with eligible Category C work completed.

The Project Specialist (PS) reviewed the documentation provided by the Applicant and summarized the documentation in the project closeout checklist, filled out by the PS, referencing the applicable page numbers. Files titled "Lowell PW27 Closeout Submittal Package\_File 1 of 3.pdf", ... files 2 of 3, and ... 3 of 3 attached details this documentation.

During August 2011, the time frame this project was initially formulated, the work was reported as 17.7% complete and the remaining costs were established in PW based on a CEF estimate. This appears to be in error and should have been noted as "0%" complete as there is no evidence in the form of invoices indicating work completed or reflected as such in the initial CEF estimate. The PW was later amended in January 2014 as a Scope Change / 406 HM Amendment to install a box culvert with a new CEF estimate.

The Applicant hired the services of a local Engineering firm, who prepared the construction specifications and Engineering plans, and a local Contractor for the work outlined in the PW amendment to install a 14' x 6' box culvert. The work contained in this closeout version is 100% completed. All work included in this PW was documented through initial damage assessment, site visit, Engineering Plans, contract documents, and invoices. The scope of work was verified using the aforementioned records as well as documentation compiled by the Applicant and included herein and in the original PW.

The following summarizes the final closeout costs:

Contracts \$182,015.81  
Direct Administrative Costs (DAC) \$391.40  
TOTAL PROJECT FINAL COSTS \$182,407.21

In summary, by reviewing the documentation, the completed permanent work was: (a) competitively procured per established local practices; (b) properly permitted; (c) apparently performed following the scope of work and associated Contractor proposal; and (d) performed for a reasonable cost with the contracted work costs supported by invoices and associated check payment records.

#### SUMMARY OF ELIGIBLE WORK:

1. Excavate to remove existing structure and prepare for box culvert
2. Install precast concrete box 14' x 6' x 55' including headwalls, wing walls & cutoff walls
3. Granular Backfill over box culvert
4. Prepare roadway subbase
5. Roadway Pavement
6. Guardrail
7. Type II and III rip rap

The Applicant provided photographs showing the completed installed box culvert with head and wing walls, guardrail, and rip rap in place. Refer to Lowell PW27 Closeout Submittal Package\_File 3 of 3 file pages 104 thru 107 which shows the work completed.

#### HAZARD MITIGATION:

Hazard mitigation was accomplished and incorporated in the Engineering Plans to install a 14' x 6' box culvert under the approved PW Scope Change / 406 HM Amendment. Dollar value included in Contractors invoices and claims here.

#### PERMITS:

The Applicant obtained the obligatory permits from the VT Department of Environmental Conservation and the US Army Corps of Engineers. Refer to Lowell PW27 Closeout Submittal Package\_File 3 of 3 file pages 3 thru 46.

#### PROCUREMENT:

The Applicant procured Engineering services and construction contract work thru public solicitations, chosen and deliberated during Selectboard open meetings and awarded competitively to the lowest bidder. The Applicant does not have a written procurement procedure per say. The Applicant did provide a statement that "The Town of Lowell follows the procurement policy in accordance with State and Federal regulations". Refer to file PW27 Closeout Submittal Package\_File 3 of 3 Page 54. This established local procurement practice appears to act in accordance with the spirit of 44CFR Part 13 although without a specific written policy/procedure.

**CHANGE ORDERS:**

Change Order 1 was executed with GW Tatro Construction to added additional crushed stone and related excavation due to site wet spongy soil conditions encountered when installing the box culvert.

DAC: Direct administrative costs were included and documented in PW Closeout submittal package.

**INELIGIBLE COSTS:**

There were no ineligible costs discovered in this closeout review. All closeout costs reviewed related to the eligible scope of work were determined to be as defined in the project worksheet.

**PROJECT WORKSHEET SUMMARY:**

Inspection of the supporting documentation has substantiated a total eligible amount of \$182,407.21. This represents an underrun of \$12,614.79 (-6.5%) from the prior PW Amendment obligated Total of \$195,022.00.

**ATTACHMENTS / DOCUMENTATION:**

1. Town of Lowell closeout request
2. Cost summary sheet
3. DAC
4. Bid advertisements and bid selection documentation
5. RFP Engineering services
6. Engineering services and bid award documentation
7. Contract summary sheets
8. Invoices and proofs of payment
9. Procurement documentation
10. Construction Specifications and Engineering Plans
11. Contracts
12. Approved change order
13. ANR and USACE Permits
14. Completed work pictures

PWs are subject to federal audit. Grantee's and/or sub grantee's must maintain copies of all pertinent records related to this PW for a minimum of three years from the date of the final certification of completion of your last project in accordance with 44 CFR §13.42.

\*\*\*\*\* End of CLOSEOUT AMENDMENT

**Hazard Mitigation Proposal**

* Is effective mitigation feasible on this site?	Yes
If you answered <b>Yes</b> to the above question, the next question is required	
Will mitigation be performed on this site?	Yes
If you answered <b>Yes</b> to the above question, the next question is required	
Do you wish to attach a Hazard Mitigation Proposal?	Yes
If you answered <b>Yes</b> to the above question, the next two questions are required	
*** 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE /	

Please provide the Scope of Work for the estimate: (maximum 4000 characters)	<p>406 HM AMENDMENT</p> <p>Per the Townsend Decision, FEMA can reimburse for a destroyed culvert with a larger structure as a hazard mitigation measure if the cost do not exceed 100% of the project cost. The original damages were estimated at \$82,930.50 for a 98" x 69" arch, which was later determined to be hydraulically inadequate. Codes &amp; Standards required a 112" x 75" arch with a base cost of \$84,044.68. The Applicant chose a box culvert replacement, 14' x 6' with a base cost of \$120,090.90. The net additional cost of \$36,046.22 (\$120,090.90 - \$84,044.68) represents 42 percent of the base eligible repair cost and as such is eligible for Section 406 hazard mitigation funding. The difference in replacement costs of \$53,534 (\$189,040 - \$135,506) is assigned to 406 HM thus bringing Total HMP to \$59,516 (\$53,534 + \$5,982).</p> <p>Box Culvert Hazard Mitigation includes rip rap (\$5,982:  * VAOT CC 613.11 Stone Fill Type II, 30cy slope side rip rap.  * VAOT CC 613.12 Stone Fill Type III, 100cy  ***</p>
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Would you like to add the Hazard Mitigation Proposal as a cost line item to the project cost?	Yes
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## GIS Coordinates

Project Location	Latitude	Longitude
Mines Rd.	44.77016	-72.51835

## Special Considerations

1. Does the damaged facility or item of work have insurance coverage and/or is it an insurable risk (e.g., buildings, equipment, vehicles, etc)?	No
2. Is the damaged facility located within a floodplain or coastal high hazard area and/or does it have an impact on a floodplain or wetland?	Yes

If you would like to make any comments, please enter them below.

(maximum 4000 characters)

Refer to FIRM 500254B, Town Of Lowell, Orleans County, VT

3. Is the damaged facility or item of work located within or adjacent to a Coastal Barrier Resource System Unit or an Otherwise Protected Area?	No
4. Will the proposed facility repairs/reconstruction change the pre-disaster conditions (e.g., footprint, material, location, capacity, use of function)?	Yes

If you would like to make any comments, please enter them below.

(maximum 4000 characters)

Impacted culvert is intended to be up-sized.

5. Does the applicant have a hazard mitigation proposal or would the applicant like technical assistance for a hazard mitigation proposal?	Yes
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If you would like to make any comments, please enter them below.

(maximum 4000 characters)

\*\*\* 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT Per the Townsend Decision ,FEMA can reimburse for a destroyed culvert with a larger structure as a hazard mitigation measure if the cost do not exceed 100% of the project cost. The original damages were estimated at \$82,930.50 for a 98" x 69" arch, which was later determined to be hydraulically inadequate. Codes & Standards required a 112" x 75" arch with a base cost of \$84,044.68. The Applicant chose a box culvert replacement, 14' x 6' with a base cost of \$120,090.90. The net additional cost of \$36,046.22 (\$120,090.90 - \$84,044.68) represents 42 percent of the base eligible repair cost and as such is eligible for Section 406 hazard mitigation funding. The difference in replacement costs of \$53,534 (\$189,040 - \$135,506) is assigned to 406 HM thus bringing Total HMP to \$59,516 (\$53,534 + \$5,982). \*\*\*

6. Is the damaged facility on the National Register of Historic Places or the state historic listing? Is it older than	No
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50 years? Are there more, similar buildings near the site?	
7. Are there any pristine or undisturbed areas on, or near, the project site? Are there large tracts of forestland?	No
8. Are there any hazardous materials at or adjacent to the damaged facility and/or item of work?	No
9. Are there any other environmental or controversial issues associated with the damaged facility and/or item of work?	No

## Attachments

User	Date	Document Type	Description	Hard Copy File Reference	File Name	Action
JOSEPH COMBES	08-06-2012	Floodplain	Firmette		Firmette FM500254B[2].pdf(60.29 kb)	<a href="#">View</a>
NANCY ORTH	08-20-2012	Environmental/Historic Document	Environmental Comments and Conditions		EnvironmentalConditionsMemo_PA-01-VT-4066-PW-00027(0)_4066-VT.docx(82.40 kb)	<a href="#">View</a>

## For Category C, D, E, F, and G Projects only

Is effective mitigation feasible on this project?	Yes
If you answered <b>Yes</b> to the above question, the next question is required	
Will mitigation be performed on any sites in this project?	Yes
If you answered <b>Yes</b> to the above question, the next question is required	
Do you wish to attach a Hazard Mitigation Proposal?	Yes
If you answered <b>Yes</b> to the above question, the next two questions are required	
Please provide the Scope of Work for the estimate:	Concrete Class B Head wall and Wing wall upstream and down Stream Reinforcing Steel (Rebar) Cost of Head wall and wing walls \$21,362.40. Cost of project \$86,108.00 Mitigation cost is 24.8% of the project. Measurements on Head walls and Wing walls are in the CEF.
Would you like to add the Hazard Mitigation Proposal as a cost line item to the project cost?	Yes

## Hazard Mitigation Proposal - 0909

#	Code	Material and/or Description	Unit Quantity	Unit of Measure	Unit Price	Subgrant Budget Class	Type	Cost Estimate	Action
1	9999	Concrete Class B Head & Wing Wall upstream & downstream VT # 501.34	18	CY	\$ 600.85	CONSTRUCTION		\$ 10,815.30	
2	9999	Reinforcing Steel (Rebar)	320	OTH	\$ 1.16	CONSTRUCTION		\$ 371.20	
3	9999	Project Management and Design Costs	1	LS	\$ 1,007.00	CONSTRUCTION		\$ 1,007.00	
*** Version 1 ***									
4	0000	<b>30 January 2014 Robert Melillo, PS Scope Change/406 HM Amendment</b>							
5	9999	De-obligate prior Estimated HMP Cost	1	LS	\$ -12,193.50	CONSTRUCTION		\$ -12,193.50	
6	9000	CEF COST ESTIMATE	1	LS	\$ 59,516.00	CONSTRUCTION		\$ 59,516.00	
*** Version 2 ***									
7	0000	<b>***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist ***</b>							
8	9999	Deobligate prior PW Ammendment HM value	1	LS	\$ -59,516.00			\$ -59,516.00	

Total Cost: \$ 0.00

Comments						
Version 1 Cost of Project \$70,737 Cost of Mitigation \$12,193 or 17%.						
Attachments						
User	Date	Document Type	Description	Hard Copy File Reference	File Name	Action
ANTHONY SAWNEY	08-08-2012	Calculation Sheet	JCABC2 - Calculations		JCABC2 - Calculations.pdf(14.55 kb)	<a href="#">View</a>
ANTHONY SAWNEY	08-08-2012	Mitigation Document	JCABC2 - Culvert Waterway Area		JCABC2 - Culvert Waterway Area.pdf(207.67 kb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Calculation Sheet	JCABC2 - Calculations_Updated 01.06.14		JCABC2_-_Calculations[1]_Updated 01.06.14.docx(13.77 kb)	<a href="#">View</a>
ROBERT MELILLO	01-29-2014	Mitigation Proposal	HMP Mine Road Culvert		HMP Mine Road Culvert.xlsx(20.03 kb)	<a href="#">View</a>

## Cost Estimate

Is this Project Worksheet for	Cost Estimate Format
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(Preferred) Repair									
Sequence	Code	Material and/or Description	Unit Quantity	Unit of Measure	Unit Price	Subgrant Budget Class	Type	Cost Estimate	Action
1	<a href="#">0000</a>	<b>Work to be Completed</b>						\$ 0.00	
2	<a href="#">9000</a>	CEF COST ESTIMATE	1	LS	\$ 70,737.00	CONSTRUCTION		\$ 70,737.00	
*** Version 1 ***									
<b>Work To Be Completed</b>									
3	<a href="#">0000</a>	<b>30 January 2014 Robert Melillo, PS Scope Change/406 HM Amendment</b>					Work To Be Completed	\$ 0.00	
4	<a href="#">9999</a>	De-obligate prior Estimated Project Cost	1	LS	\$ -70,737.00	CONSTRUCTION	Work To Be Completed	\$ -70,737.00	
5	<a href="#">9000</a>	CEF COST ESTIMATE	1	LS	\$ 135,506.00	CONSTRUCTION	Work To Be Completed	\$ 135,506.00	
*** Version 2 ***									
<b>Work Completed</b>									
6	<a href="#">0000</a>	<b>***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist ***</b>					Work Completed	\$ 0.00	
7	<a href="#">9999</a>	Deobligate prior PW Ammendment value	1	LS	\$ -135,506.00		Work Completed	\$ -135,506.00	
8	<a href="#">9003</a>	CONTRACT COSTS	1	LS	\$ 182,015.81	CONTRACTUAL	Work Completed	\$ 182,015.81	
9	<a href="#">9901</a>	DIRECT ADMINISTRATIVE COSTS (SUBGRANTEE)	1	LS	\$ 391.40	OTHER	Work Completed	\$ 391.40	
<b>Total Cost :</b>								<b>\$ 182,407.21</b>	

Insurance Adjustments (Deductibles, Proceeds and Settlements) - 5900/5901									
Sequence	Code	Material and/or Description	Unit Quantity	Unit of Measure	Unit Price	Subgrant Budget Class	Type	Cost Estimate	Action
<b>Total Cost :</b>								<b>\$ 0.00</b>	

Hazard Mitigation Proposal - 0909										
Sequence	Code	Material and/or Description	Unit Quantity	Unit of Measure	Unit Price	Subgrant Budget Class	Type	Cost Estimate	Action	
1	<a href="#">9999</a>	Concrete Class B Head & Wing Wall upstream & downstream VT # 501.34	18	CY	\$ 600.85	CONSTRUCTION		\$ 10,815.30		
2	<a href="#">9999</a>	Reinforcing Steel (Rebar)	320	OTH	\$ 1.16	CONSTRUCTION		\$ 371.20		
3	<a href="#">9999</a>	Project Management and Design Costs	1	LS	\$ 1,007.00	CONSTRUCTION		\$ 1,007.00		
<b>*** Version 1 ***</b>										
4	<a href="#">0000</a>	<b>30 January 2014 Robert Melillo, PS Scope Change/406 HM Amendment</b>							\$ 0.00	
5	<a href="#">9999</a>	De-obligate prior Estimated HMP Cost	1	LS	\$ -12,193.50	CONSTRUCTION		\$ -12,193.50		
6	<a href="#">9000</a>	CEF COST ESTIMATE	1	LS	\$ 59,516.00	CONSTRUCTION		\$ 59,516.00		
<b>*** Version 2 ***</b>										
7	<a href="#">0000</a>	<b>***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist ***</b>							\$ 0.00	
8	<a href="#">9999</a>	Deobligate prior PW Ammendment HM value	1	LS	\$ -59,516.00			\$ -59,516.00		
<b>Total Cost :</b>								<b>\$ 0.00</b>		

<b>Total Cost Estimate:</b>	<b>\$ 182,407.21</b>
(Preferred Estimate Type + Insurance Adjustments + Hazard Mitigation Proposal)	

Comments
30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT a. CEF estimate established using VAOT 5 Year Average Price List July 2008 – May 2013, FEMA Cost Codes, and box culvert manufacturer quote. b. CMPA CEF unit quantities based on Dan Peterson email of Dec 23, 2013 with attached conceptional sketch and estimate. c. Box Culvert CEF unit quantities based on Ruggiano Engineering Engineer's Construction Cost Estimate. d. Ruggiano Engineering Engineer's Construction Cost Estimate for the box culvert Total \$216,040. e. Town of Lowell and VEM&HS Scope Change Request letters shows project Total of \$227,400 (\$216,400 replacement structure) + \$8400 Engineering and design + \$2600 (Construction Engineering) *** ### CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist Hazard mitigation was accomplished and incorporated in the Engineering Plans to install a 14' x 6' box culvert under the approved PW Scope Change / 406 HM Amendment. ###

Attachments						
User	Date	Document Type	Description	Hard Copy File Reference	File Name	Action
ANTHONY SAWNEY	08-08-2012	Force Account	JCABC2 - CEF		JCABC2_-_CEF.pdf(253.37 kb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Calculation Sheet	Dan Peterson email concept sketch & estimate		Dan Peterson email Lowell PW 0027 DR4066_concept sketch & estimate.pdf(1001.22 kb)	<a href="#">View</a>

ROBERT MELILLO	01-27-2014	Calculation Sheet	CMPA CEF		CMPA CEF_Mines Rd_Lowell DR4066 PW 00027 .xslm(345.50 kb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Calculation Sheet	Box Culvert CEF		Box Culvert CEF_Mines Rd_Lowell DR4066 PW 00027 .xslm(345.30 kb)	<a href="#">View</a>
ROBERT MELILLO	01-27-2014	Miscellaneous	CAMP 14' wide x 6' high box culvert quote		CAMP 14' wide x 6' high box culvert quote.pdf(623.59 kb)	<a href="#">View</a>
ROBERT MELILLO	05-30-2014	Calculation Sheet	Box Culvert CEF_Mines Rd_Lowell DR4066 PW 00027		Box Culvert CEF_Mines Rd_Lowell DR4066 PW 00027 .pdf(97.65 kb)	<a href="#">View</a>
ROBERT MELILLO	05-30-2014	Calculation Sheet	CMPA CEF_Mines Rd_Lowell DR4066 PW 00027		CMPA CEF_Mines Rd_Lowell DR4066 PW 00027 .pdf(98.31 kb)	<a href="#">View</a>

## Existing Insurance Information

Insurance Type	Policy No.	Bldg/Property Amount	Content Amount	Insurance Amount	Deductible Amount	Years Required

## Comments


## Attachments

## Comments and Attachments

Name of Section	Comment	Attachment
Preparer Information		<a href="#">Signed 90-91.pdf</a>
Contact Information		<a href="#">Environmental Letter Signed.pdf</a>
Project Description	<p>*** 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT 14' x 6' box culvert deemed eligible for 406 HM funding, as larger box culvert cost is less than two times the estimated base construction costs for PW size identified 112" x 75" CMPA culvert. The box culvert structure will include full height headwalls at the inlet and outlet, extending approximately 5 ft below the stream bed, cut-off walls and stone armor for erosion protection.</p> <p>*** ### CLOSEOUT AMENDMENT – Completion date of 11/4/14 is based on the date of the letter from the Applicant to the State PA Officer requesting the PW be processed for closeout stating that all work has been completed. Refer to Lowell PW27 Closeout Submittal Package_File 1 of 3 page 3. RS Melillo, FEMA PS 05/28/15 ###</p>	<a href="#">Mine Road Location Plan.pdf</a>
Damage Facilities		<a href="#">Inlet site 3.JPG</a> <a href="#">Site 3 outlet Mines Rd.JPG</a> <a href="#">State of Vermont Hydraulics Study Site 3 Mines Rd..pdf</a> <a href="#">Mine Road Bridge Evaluation-Lowell .pdf</a> <a href="#">Codes &amp; Standards[1].pdf</a> <a href="#">Culvert Sizing Eval updated 12.06.13.pdf</a> <a href="#">Eng Plans 13062 C-1 SITE PLAN (2).pdf</a> <a href="#">Eng Plans 13062 C-2 DETAILS.pdf</a>

Special Considerations		<a href="#">Firmette FM500254B[2].pdf</a> <a href="#">EnvironmentalConditionsMemo_PA-01-VT-4066-PW-00027(0)_4066-VT.docx</a>
Mitigation	Version 1 Cost of Project \$70,737 Cost of Mitigation \$12,193 or 17%.	<a href="#">JCABC2 - Calculations.pdf</a> <a href="#">JCABC2 - Culvert Waterway Area.pdf</a> <a href="#">JCABC2 - Calculations[1] Updated 01.06.14.docx</a> <a href="#">HMP Mine Road Culvert.xlsx</a>
Cost Estimate	30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT a. CEF estimate established using VAOT 5 Year Average Price List July 2008 – May 2013, FEMA Cost Codes, and box culvert manufacturer quote. b. CMPA CEF unit quantities based on Dan Peterson email of Dec 23, 2013 with attached conceptional sketch and estimate. c. Box Culvert CEF unit quantities based on Ruggiano Engineering Engineer's Construction Cost Estimate. d. Ruggiano Engineering Engineer's Construction Cost Estimate for the box culvert Total \$216,040. e. Town of Lowell and VEM&HS Scope Change Request letters shows project Total of \$227,400 (\$216,400 replacement structure) + \$8400 Engineering and design + \$2600 (Construction Engineering) *** ### CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist Hazard mitigation was accomplished and incorporated in the Engineering Plans to install a 14' x 6' box culvert under the approved PW Scope Change / 406 HM Amendment. ###	<a href="#">JCABC2 - CEF.pdf</a> <a href="#">Dan Peterson email Lowell PW 0027 DR4066 concept sketch &amp; estimate.pdf</a> <a href="#">CMPA CEF Mines Rd Lowell DR4066 PW 00027 .xlsx</a> <a href="#">Box Culvert CEF Mines Rd Lowell DR4066 PW 00027 .xlsx</a> <a href="#">CAMP 14' wide x 6' high box culvert quote.pdf</a> <a href="#">Box Culvert CEF Mines Rd Lowell DR4066 PW 00027 .pdf</a> <a href="#">CMPA CEF Mines Rd Lowell DR4066 PW 00027 .pdf</a>
Form 90-91	Closeout attachments added by Project Specialist. 05/28/15	<a href="#">Lowell 27 TE.pdf</a> <a href="#">DRAFT Lowell Mines Road Scope Change Request PW-PA-01-VT-4066-PW-00027 reply FEMA lh 02.18.14.docx</a> <a href="#">Lowell PW27 Closeout Submittal Package File 1 of 3.pdf</a> <a href="#">Lowell PW27 Closeout Submittal Package File 2 of 3.pdf</a> <a href="#">Lowell PW27 Closeout Submittal Package File 3 of 3.pdf</a>
Application Level		<a href="#">DR4066 PW 00027 Scope Change Request.pdf</a> <a href="#">town of lowell scope change request.pdf</a> <a href="#">VT State Scope Change Request Letter.pdf</a> <a href="#">Ruggiano Engineering Estimate memo 092513.pdf</a>

Bundle Reference # (Amendment #)	Date Awarded
PA-01-VT-4066-State-0011(10)	06-30-2014

## ***Subgrant Application - FEMA Form 90-91***

**Note:** The Effective Cost Share for this application is 75%

## PROJECT WORKSHEET

DISASTER					PROJECT NO.	PA ID NO.	DATE	CATEGORY
FEMA	4066	-	DR	-VT	JCLOC10	019-40525-00	08-06-2012	C
APPLICANT: LOWELL (TOWN OF)							WORK COMPLETE AS OF: 11-04-2014 : 100 %	
Site 1 of 1								
DAMAGED FACILITY: Mines Rd Culvert 26 (Town of Lowell)						COUNTY: Orleans		
LOCATION:							LATITUDE:	LONGITUDE:
PA-01-VT-4066-PW-00027(0): Cheney Rd. A class III rural local asphalt road is located .421 miles from the intersection with VAG Rd. in the town of Lowell, VT.							44.77016	-72.51835
PA-01-VT-4066-PW-00027(1): 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT - No change to location.								
Current Version: ***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist ***** No change in project location.								
DAMAGE DESCRIPTION AND DIMENSIONS:								
PA-01-VT-4066-PW-00027(0): During the incident period of May 29, 2012, a severe storm traversed northern Vermont resulting in flooding, high winds and a possible tornado. This resulted in Addison, Lamoille and Orleans counties being designated as eligible to receive reimbursement for recovery efforts that included both emergency and permanent work. This project worksheet (PW) covers the permanent repairs to be completed on the stream crossing where Burgess Branch crosses Mines Road (TH-2), a class 2 road (GPS Coordinates 44.77016, -72.51835 The Stream crossing consists of a 72 inch x 65 foot corrugated metal pipe (CMP) culvert. Heavy rain water flow caused the stream to run under the culvert damaging more than 50 per cent of the culvert.								
PA-01-VT-4066-PW-00027(1): 30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT - No change to damage description and dimensions.								
Current Version: ***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist ***** No change in project damage description and dimensions.								
SCOPE OF WORK:								
PA-01-VT-4066-PW-00027(0): Scope of Work The repairs at this site will require the removal and disposal of the existing 72in x 65ft CMP and replacement with a new culvert. The Vermont Agency of Transportation (VAOT) completed a preliminary hydraulic study for this site which determined the Q25 for this site and recommended replacement structures as well; however, eligible reimbursement costs under FEMA's Public Assistance (PA) Program are limited to an "in-kind" replacement structure that is upgraded in accordance with eligible codes and standards. Consistent with the Road and Bridge Standards adopted by the Town of Lowell (29 March 2011), FEMA performed a Culvert Sizing Evaluation (attached) to determine the size of an hydraulically adequate in-kind replacement structure.____ While the Culvert Sizing Evaluation determined that a 78 in x 65ft diameter was adequate for this location FEMA considers Corrugated Metal Multi-plate Arch Culvert measuring 69in x 98in x 65ft to be a cost-effective replacement to limit the need to change road grades to assure sufficient depth of cover material over the culvert.____ This approach will require excavation of material over an area 65ft x 24ft x 8ft (approx. 462 cubic yards (CY)). The new culvert will be re-covered with gravel and soil and a new roadway approach consisting of sub-base gravel will be installed over the excavation ((24ft x 65ft x 8in)/27 = 38 CY). The road surface will be finished with a 3 in-thick layer of bituminous concrete pavement 24' x 65' x.25 = 28.71T and 4" yellow line will be applied.____ Additional costs associated with non-permanent items during construction were accounted for in the attached Cost Estimate Format (CEF) and include: a sandbag check dam, a 130 gpm water pump to serve as a by-pass for stream flow across the installation site, and highway barricades to close the road during culvert work. The attached CEF itemizes the estimated costs associated with the completion of this scope of work.____								
In addition to the eligible scope of work described above, Hazard Mitigation opportunities were identified for this project and include the construction of concrete Class B, steel reinforced head wall and wing-walls at both the entrance and outlet of the culvert. The estimated cost of the HMP is \$12,193.00____ The total estimated cost for the eligible scope of work, including the HMP and potential construction contingencies is \$82,930.00The Applicant has elected to not request any direct administrative costs directly chargeable to this specific project. ____ The costs associated with the eligible scope of work for this project have been estimated. Large project funding (>\$63,900) is based on documented actual costs for the eligible scope of work. This will require an amendment to the original project worksheet to be written, after the work is complete, to capture the over-run/under-run.____ If the applicant decides to make improvements to the facility beyond that described in the eligible scope of work (e.g. changes in size, footprint, structure type), the applicant must request approval for an improved project from the State of Vermont prior to the start of construction. If approved, reimbursement								

through the PA program will be capped at the cost of the eligible scope of work. Failure to obtain approval for an improved project can place funding at risk.\_\_\_\_

Federal funding is contingent upon the Applicant acquiring all necessary federal, state and local permits. Non compliance with this requirement may jeopardize the receipt of federal funds.\_\_\_\_

The Applicant has indicated that this work will be completed using a contractor. The Applicant must comply with its Local, State and/or Federal procurement laws, regulations and procedures when seeking proposals and letting contracts for eligible work.\_\_\_\_

The Project Specialist has reviewed all documentation required for this Project Worksheet (PW). These documents are attached to the PW and are on file at the Applicant's offices. The project specialist has advised the Applicant to retain these records for a period of three years from the date of closeout.

\_\_\_\_  
PA-01-VT-4066-PW-00027(1):

30 JANUARY 2014 ROBERT MELILLO, PS SCOPE CHANGE / 406 HM AMENDMENT

Culvert sizing reevaluated at request of VT State representatives that original PW culvert evaluation neglected to take into account the Q100 conditions for headwater depths established by VAOT. Upon conducting this further evaluation it was concluded to increase the size of the PW replacement structure from a 98" x 69" CMPA to a 112" x 75" CMPA and corresponding road height changes to provide adequate cover over the larger size pipe.

In summary, the resulting updated SOW is described as follows:

- \* VAOT CC 204.25 Structure Excavation 15.3' wide x 8' deep = 122.4 SF less area of existing CMP (28.274 SF) = 94.126 SF x 65' long = 6118.19 CF /27 = 227 CY
- \* 334216153360 257 lbs/LF x 65' long = 16,705 Lbs
- \* VAOT CC 204.30 Granular Backfill For Structures 15.3' wide x 8' deep = 122.4 SF less area of new CMPA (50.3 SF) =72.1 SF x 65' long = 4686.5CF /27 = 174 CY
- \* VAOT CC 301.15 Subbase Of Gravel 15.3' wide x 24' long x 1.25' deep = 459 SF/27 = 17 CY
- \* VAOT CC 203.28 Excavation Of Surfaces And Pavements 125' long x 22' wide x 0.25' thick x 2 (approach & departure) = 1375 CF/27 = 51 CY
- \* VAOT CC 203.15 Common Excavation (for taper area) 125' long x 24' wide x 1.25' deep x 1/2 x 2 (approach & departure) = 3750 CF/27 = 139 CY
- \* VAOT CC 301.15 Subbase Of Gravel (for taper area) 125' long x 24' wide x 1.25' deep x 2 (approach & departure) = 7500 CF/27 = 278 CY
- \* VAOT CC 406.25 Bituminous Concrete Pavement 3" thick 125' long x 24' wide x 2 (approach & departure) + 15.3' long x 24' wide CMPA cover area = 55 Tons x 2 + 6.7 Tons = 117 Tons
- \* VAOT CC 646.412 Durable 4 Inch Yellow Line, Thermoplastic as double line 125' long x 2 (approach & departure) + 15.3' long CMPA cover area = 531'
- \* VAOT CC 621.20 Steel Beam Guardrail, Galvanized per codes and standards 50 LF
- \* VAOT CC 621.21 HD Steel Beam Guardrail, Galvanized per codes and standards 174 LF
- \* VAOT CC 501.34 Concrete, High Performance Class B for head and wing walls, per codes and standards, upstream and downstream with footings 19 CY
- \* VAOT CC 507.15 Reinforcing Steel (Rebar) for head and wing walls 320 LBS

The Applicant, working with the firm of Ruggiano Engineering, requested a scope change to install a 14' x 6' box culvert based on the hydrology report recommendations.

Reference the attached correspondence documenting the scope change request:

- Ruggiano Engineering Estimate letter dated 09/25/13
- Town of Lowell Scope Change Request letter dated 11/14/13
- VEM&HS Scope Change Request letter dated 11/20/13

In summary the 14' x 6' box culvert SOW, based on Ruggiano Engineering plans and estimated unit quantities, is to:

- \* Excavate to remove existing structure and prepare for box culvert 800 CY
- \* Crushed Stone under culvert (12") 35 CY
- \* Precast concrete box 14' x 6' x 55' including headwalls, wing walls & cut-off walls
- \* Granular Backfill over box culvert 400 CY
- \* Roadway Sand Cushion (6") 35 CY
- \* Roadway Gravel Subbase (18") 100 CY
- \* Roadway Pavement (3") 30 TONS
- \* Guardrail 150 LF
- \* Type II Rip-Rap 30 CY
- \* Type III Rip-Rap 100 CY

FEMA has recently addressed the eligibility of culvert enlargements in Vermont as part of a second appeal by an Applicant under PW #1803. FEMA determined that the cost of the upgrade for PW #1803 was an eligible Section 406 hazard mitigation project under 44 C.F.R. § 206.226 (e) and RP No. 9526.1 because the upgrade did not exceed 100 percent of the project cost and will reduce the likelihood of future similar damage. Recovery Policy (RP) 9526.1, Hazard Mitigation Funding under Section 406 (Stafford Act) dated March 30, 2010, provides guidance on the application and eligibility of hazard mitigation measures. Appendix A of the policy states that the replacement of a destroyed drainage structure with a larger structure is among the eligible hazard mitigation measures that are pre-determined to be cost effective when they do not exceed 100 percent of the project cost

The total cost of the 14' x6' box culvert installation is estimated as \$195,022 of which \$120,090.90 are the base construction costs. (Reference Box Culvert CEF Part A attachment.) The PW costs to install a 112" x 75" CMPA to replace the 72" diameter destroyed CMP culvert was estimated at \$141,488 of which \$84,044.68 are the base construction costs. (Reference CMPA Mines Rd CEF Part A attachment.) The net additional cost of \$36,046.22 (\$120,090.90 - \$84,044.68) represents 42 percent of the base eligible repair cost and as such is eligible for Section 406 hazard mitigation funding.

From referenced CEF's, the difference in replacement costs of \$53,534 (\$189,040 - \$135,506) will be assigned to 406 HM thus bringing Total HMP to \$59,516 (\$53,534 + \$5,982).

END OF AMENDMENT

Current Version:

\*\*\*\*\* CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist

This project worksheet is written as a closeout version to PW# 27. It is intended to reimburse the applicant for expenses associated with eligible Category C work completed.

The Project Specialist (PS) reviewed the documentation provided by the Applicant and summarized the documentation in the project closeout checklist, filled out by the PS, referencing the applicable page numbers. Files titled "Lowell PW27 Closeout Submittal Package\_File 1 of 3.pdf", ... files 2 of 3, and ... 3 of 3 attached details this documentation.

During August 2011, the time frame this project was initially formulated, the work was reported as 17.7% complete and the remaining costs were established in PW based on a CEF estimate. This appears to be in error and should have been noted as "0%" complete as there is no evidence in the form of invoices indicating work completed or reflected as such in the initial CEF estimate. The PW was later amended in January 2014 as a Scope Change / 406 HM Amendment to install a box culvert with a new CEF estimate.

The Applicant hired the services of a local Engineering firm, who prepared the construction specifications and Engineering plans, and a local Contractor for the work outlined in the PW amendment to install a 14' x 6' box culvert. The work contained in this closeout version is 100% completed. All work included in this PW was documented through initial damage assessment, site visit, Engineering Plans, contract documents, and invoices. The scope of work was verified using the aforementioned records as well as documentation compiled by the Applicant and included herein and in the original PW.

The following summarizes the final closeout costs:

Contracts \$182,015.81

Direct Administrative Costs (DAC) \$391.40

TOTAL PROJECT FINAL COSTS \$182,407.21

In summary, by reviewing the documentation, the completed permanent work was: (a) competitively procured per established local practices; (b) properly permitted; (c) apparently performed following the scope of work and associated Contractor proposal; and (d) performed for a reasonable cost with the contracted work costs supported by invoices and associated check payment records.

SUMMARY OF ELIGIBLE WORK:

1. Excavate to remove existing structure and prepare for box culvert
2. Install precast concrete box 14' x 6' x 55' including headwalls, wing walls & cutoff walls
3. Granular Backfill over box culvert
4. Prepare roadway subbase
5. Roadway Pavement
6. Guardrail
7. Type II and III rip rap

The Applicant provided photographs showing the completed installed box culvert with head and wing walls, guardrail, and rip rap in place. Refer to Lowell PW27 Closeout Submittal Package\_File 3 of 3 file pages 104 thru 107 which shows the work completed.

HAZARD MITIGATION:

Hazard mitigation was accomplished and incorporated in the Engineering Plans to install a 14' x 6' box culvert under the approved PW Scope Change / 406 HM Amendment. Dollar value included in Contractors invoices and claims here.

PERMITS:

The Applicant obtained the obligatory permits from the VT Department of Environmental Conservation and the US Army Corps of Engineers. Refer to Lowell PW27 Closeout Submittal Package\_File 3 of 3 file pages 3 thru 46.

PROCUREMENT:

The Applicant procured Engineering services and construction contract work thru public solicitations, chosen and deliberated during Selectboard open meetings and awarded competitively to the lowest bidder. The Applicant does not have a written procurement procedure per say. The Applicant did provide a statement that "The Town of Lowell follows the procurement policy in accordance with State and Federal regulations". Refer to file PW27 Closeout Submittal Package\_File 3 of 3 Page 54. This established local procurement practice appears to act in accordance with the spirit of 44CFR Part 13 although without a specific written policy/procedure.

CHANGE ORDERS:

Change Order 1 was executed with GW Tatro Construction to add additional crushed stone and related excavation due to site wet spongy soil conditions encountered when installing the box culvert.

DAC: Direct administrative costs were included and documented in PW Closeout submittal package.

INELIGIBLE COSTS:

There were no ineligible costs discovered in this closeout review. All closeout costs reviewed related to the eligible scope of work were determined to be as defined in the project worksheet.

## PROJECT WORKSHEET SUMMARY:

Inspection of the supporting documentation has substantiated a total eligible amount of \$182,407.21. This represents an underrun of \$12,614.79 (-6.5%) from the prior PW Amendment obligated Total of \$195,022.00.

## ATTACHMENTS / DOCUMENTATION:

1. Town of Lowell closeout request
2. Cost summary sheet
3. DAC
4. Bid advertisements and bid selection documentation
5. RFP Engineering services
6. Engineering services and bid award documentation
7. Contract summary sheets
8. Invoices and proofs of payment
9. Procurement documentation
10. Construction Specifications and Engineering Plans
11. Contracts
12. Approved change order
13. ANR and USACE Permits
14. Completed work pictures

PWs are subject to federal audit. Grantee's and/or sub grantee's must maintain copies of all pertinent records related to this PW for a minimum of three years from the date of the final certification of completion of your last project in accordance with 44 CFR §13.42.

\*\*\*\*\* End of CLOSEOUT AMENDMENT

Does the Scope of Work change the pre-disaster conditions at the site? Yes No	Special Considerations included? Yes No
Hazard Mitigation proposal included? Yes No	Is there insurance coverage on this facility? Yes No

## PROJECT COST

ITEM	CODE	NARRATIVE	QUANTITY/UNIT	UNIT PRICE	COST
1	0000	Work to be Completed	0/LS	\$ 0.00	\$ 0.00
2	9000	CEF COST ESTIMATE	1/LS	\$ 70,737.00	\$ 70,737.00
		*** Version 1 ***			
		Work To Be Completed			
3	0000	30 January 2014 Robert Melillo, PS Scope Change/406 HM Amendment	0/LS	\$ 0.00	\$ 0.00
4	9999	De-obligate prior Estimated Project Cost	1/LS	\$ -70,737.00	\$ -70,737.00
5	9000	CEF COST ESTIMATE	1/LS	\$ 135,506.00	\$ 135,506.00
		*** Version 2 ***			
		Work Completed			
6	0000	***** CLOSEOUT AMENDMENT – 05/28/15 R.S. Melillo, Project Specialist ***	0/LS	\$ 0.00	\$ 0.00
7	9999	Deobligate prior PW Ammendment value	1/LS	\$ -135,506.00	\$ -135,506.00
8	9003	CONTRACT COSTS	1/LS	\$ 182,015.81	\$ 182,015.81
9	9901	DIRECT ADMINISTRATIVE COSTS (SUBGRANTEE)	1/LS	\$ 391.40	\$ 391.40
10	0909	Hazard Mitigation Proposal	1/LS	\$ 0.00	\$ 0.00
				<b>TOTAL COST</b>	<b>\$ 182,407.21</b>
PREPARED BY JOSEPH COMBES			TITLE Project Specialist	SIGNATURE	
APPLICANT REP. Alden Warner			TITLE Select Board	SIGNATURE	

LOWELL (TOWN OF) : PA-01-VT-4066-PW-00027					
Conditions Information					
Review Name	Condition Type	Condition Name	Description	Monitored	Status
Final Review	Other (EHP)	Executive Order 11988 - Floodplains	Applicant must obtain floodplain permit or approval from the local floodplain administrator before work begins. Applicant is required to publish final notice of decision to perform work within the floodway per Executive Order 11988: Floodplain Management 8-step process. The public notice should include location, brief description of work, and the decision making process for the project. The notice should run at least 15 days prior to start of work. See attached 8-Step Process.	No	Approved
Final Review	Other (EHP)	Standard Condition #3	If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.	No	Approved
Final Review	Other (EHP)	Standard Condition #2	This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.	No	Approved
Final Review	Other (EHP)	Standard Condition #1	Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.	No	Approved
Final Review	Other (EHP)	Executive Order 11988 - Floodplains	Applicant must obtain floodplain permit or approval from the local floodplain administrator before work begins. Applicant is required to publish final notice of decision to perform work within the floodway per Executive Order 11988: Floodplain Management 8-step process. The public notice should include location, brief description of work, and the decision making process for the project. The notice should run at least 15 days prior to start of work. See attached 8-Step Process.	No	Approved
Final Review	Other (EHP)	Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA)	The Applicant shall handle, manage, and dispose of potentially hazardous waste, universal waste, and hazardous materials in accordance with the requirements of local, state, and federal regulations. These materials include, but are not limited to asbestos. The applicant shall obtain all necessary permits and consult with all appropriate agencies, including but not limited to the following: • The Water Quality Division of the Vermont Agency of Natural Resource. The contact person is Chris Brunelle, River Management Engineer, 802-879-5631, chris.brunelle@state.vt.us . • The Solid Waste Program of the Vermont Department of Environmental Conservation. The contact person is Carey Hengstenberg, 802-241-2653, carey.hengstenberg@state.vt.us . • The Vermont	No	Approved

			Department of Health (VDH) Asbestos Program. The contact person is Chris Kinnick, 802-863-7236, Christopher.Kinnick@state.vt.us. • Vermont Department of Labor (VDOL): The contact person is J. Stephen Monahan, 802-828-2138, stephen.monahan@state.vt.us		
Final Review	Other (EHP)	Clean Water Act (CWA)	10 VSA Chapter 41 and Act 110 require the Applicant to obtain a Stream Alteration Permit from the Rivers Management Program, Department of Environmental Conservation (DEC), for any stream crossing or work in a permanent stream. The Applicant is advised to contact the River Management Engineer, Chris Brunelle, (802 879-563) to discuss any permit requirements. Any permit conditions become a condition of this FEMA grant.	No	Approved
Final Review	Other (EHP)	Clean Water Act (CWA)	The applicant shall contact Michael Adams or Martha Abair, Vermont Field Office, USACE (802-872-2893) to determine if the undertaking qualifies under the Corps' Programmatic General Permit for Vermont (effective 12/05/2007-12/05/2012).	No	Approved
Final Review	Other (EHP)	Executive Order 11990 - Wetlands	Applicant is required to publish final notice of decision to perform work which affects wetlands per Executive Order 11990 Wetlands Protection 8 Step Process. The public notice should include location, brief description of work and the decision making process for the project. The notice should run at least 15 days prior to start of work. See attached 8-Step Process.	No	Approved
Final Review	Other (EHP)	Executive Order 11990 - Wetlands	Applicant is required to publish final notice of decision to perform work which affects wetlands per Executive Order 11990 Wetlands Protection 8 Step Process. The public notice should include location, brief description of work and the decision making process for the project. The notice should run at least 15 days prior to start of work. See attached 8-Step Process.	No	Approved
Final Review	Other (EHP)	Clean Water Act (CWA)	The applicant shall contact Michael Adams or Martha Abair, Vermont Field Office, USACE (802-872-2893) to determine if the undertaking qualifies under the Corps' Programmatic General Permit for Vermont (effective 12/05/2007-12/05/2012).	No	Approved
Final Review	Other (EHP)	Clean Water Act (CWA)	10 VSA Chapter 41 and Act 110 require the Applicant to obtain a Stream Alteration Permit from the Rivers Management Program, Department of Environmental Conservation (DEC), for any stream crossing or work in a permanent stream. The Applicant is advised to contact the River Management Engineer, Chris Brunelle, (802 879-563) to discuss any permit requirements. Any permit conditions become a condition of this FEMA grant.	No	Approved
			The Applicant shall handle, manage, and dispose of potentially hazardous waste, universal waste, and hazardous materials in accordance with the requirements of local, state, and federal regulations. These materials include, but are not		

Final Review	Other (EHP)	Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA)	limited to asbestos. The applicant shall obtain all necessary permits and consult with all appropriate agencies, including but not limited to the following: • The Water Quality Division of the Vermont Agency of Natural Resource. The contact person is Chris Brunelle, River Management Engineer, 802-879-5631, chris.brunelle@state.vt.us . • The Solid Waste Program of the Vermont Department of Environmental Conservation. The contact person is Carey Hengstenberg, 802-241-2653, carey.hengstenberg@state.vt.us . • The Vermont Department of Health (VDH) Asbestos Program. The contact person is Chris Kinnick, 802-863-7236, Christopher.Kinnick@state.vt.us. • Vermont Department of Labor (VDOL): The contact person is J. Stephen Monahan, 802-828-2138, stephen.monahan@state.vt.us	No	Approved
Final Review	Other (EHP)	Standard Condition #1	Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.	No	Approved
Final Review	Other (EHP)	Standard Condition #2	This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.	No	Approved
Final Review	Other (EHP)	Standard Condition #3	If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.	No	Approved
EHP Review	Other (EHP)	Executive Order 11988 - Floodplains	Applicant must obtain floodplain permit or approval from the local floodplain administrator before work begins. Applicant is required to publish final notice of decision to perform work within the floodway per Executive Order 11988: Floodplain Management 8-step process. The public notice should include location, brief description of work, and the decision making process for the project. The notice should run at least 15 days prior to start of work. See attached 8-Step Process.	No	Recommended
EHP Review	Other (EHP)	Standard Condition #3	If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.	No	Recommended
EHP Review	Other (EHP)	Standard Condition #2	This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.	No	Recommended
		Standard	Any change to the approved scope of work will		

EHP Review	Other (EHP)	Condition #1	require re-evaluation for compliance with NEPA and other Laws and Executive Orders.	No	Recommended
EHP Review	Other (EHP)	Executive Order 11990 - Wetlands	Applicant is required to publish final notice of decision to perform work which affects wetlands per Executive Order 11990 Wetlands Protection 8 Step Process. The public notice should include location, brief description of work and the decision making process for the project. The notice should run at least 15 days prior to start of work. See attached 8-Step Process.	No	Recommended
EHP Review	Other (EHP)	Resource Conservation and Recovery Act, aka Solid Waste Disposal Act (RCRA)	The Applicant shall handle, manage, and dispose of potentially hazardous waste, universal waste, and hazardous materials in accordance with the requirements of local, state, and federal regulations. These materials include, but are not limited to asbestos. The applicant shall obtain all necessary permits and consult with all appropriate agencies, including but not limited to the following: • The Water Quality Division of the Vermont Agency of Natural Resource. The contact person is Chris Brunelle, River Management Engineer, 802-879-5631, chris.brunelle@state.vt.us . • The Solid Waste Program of the Vermont Department of Environmental Conservation. The contact person is Carey Hengstenberg, 802-241-2653, carey.hengstenberg@state.vt.us . • The Vermont Department of Health (VDH) Asbestos Program. The contact person is Chris Kinnick, 802-863-7236, Christopher.Kinnick@state.vt.us. • Vermont Department of Labor (VDOL): The contact person is J. Stephen Monahan, 802-828-2138, stephen.monahan@state.vt.us	No	Recommended
EHP Review	Other (EHP)	Clean Water Act (CWA)	10 VSA Chapter 41 and Act 110 require the Applicant to obtain a Stream Alteration Permit from the Rivers Management Program, Department of Environmental Conservation (DEC), for any stream crossing or work in a permanent stream. The Applicant is advised to contact the River Management Engineer, Chris Brunelle, (802 879-563) to discuss any permit requirements. Any permit conditions become a condition of this FEMA grant.	No	Recommended
EHP Review	Other (EHP)	Clean Water Act (CWA)	The applicant shall contact Michael Adams or Martha Abair, Vermont Field Office, USACE (802-872-2893) to determine if the undertaking qualifies under the Corps' Programmatic General Permit for Vermont (effective 12/05/2007-12/05/2012).	No	Recommended
Initial Review	Program Conditions (Program Specific)	Backup Documentation	05/29/15 - The Applicant is reminded that he/she needs to retain all records related to this claim for at least three (3) years from the time of receipt of the final payment related to this Project Worksheet. Ken Pinkham, PACL	No	Recommended

Internal Comments				
No.	Queue	User	Date/Time	Reviewer Comments
				8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED

22	<a href="#">Mitigation Review</a>	DOWNER RICHARD	05-29-2015 08:07 PM GMT	COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST 8/14/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. . J.LANGEN 2/12/14 Per the Townsend Decision ,FEMA can reimburse for a destroyed culvert with a larger structure as a hazard mitigation measure ,if the cost do not exceed 100% of the project cost. Final Hazard mitigation equals \$59,516.00 / \$ 141,488 = 42%. Project is cost effective per the "Townsend Decision". Richard N. Downer 06/01/2015 Work is 100% complete. Hazard mitigation was accomplished and incorporated in the Engineering Plans to install a 14' x 6' box culvert under the approved PW Scope Change / 406 HM Amendment. Dollar value included in Contractors invoices and claims. Richard N. Downer
21	<a href="#">Mitigation Review</a>	DOWNER RICHARD	05-29-2015 07:55 PM GMT	8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST 8/14/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. . J.LANGEN 2/12/14 Per the Townsend Decision ,FEMA can reimburse for a destroyed culvert with a larger structure as a hazard mitigation measure ,if the cost do not exceed 100% of the project cost. Final Hazard mitigation equals \$59,516.00 / \$ 141,488 = 42%. Project is cost effective per the "Townsend Decision". Richard N. Downer
20	<a href="#">Initial Review</a>	PINKHAM KENNETH	05-29-2015 04:08 PM GMT	02/11/2014 - Initial review has been conducted on 30 January 2014 Robert Melillo, PS Scope Change/HM Amendment and the same has been forwarded to the Mitigation and Environmental Queues for further action in the amount of \$195,022.00, \$112,091.50 more than previous awards. Ken Pinkham, PATFL  05/29/2015 - Initial review has been conducted on this Closeout Amendment - 05/28/15, R. S. Melillo, Project Specialist, backup documentation retainer reminder condition recommended and the PW forwarded to the mitigation, environmental and grantee reviewer's queue in the amount of \$182,407.21, \$12,614.79 less than previous awards. Ken Pinkham, PACL
19	<a href="#">Amendment Review</a>	MELILLO ROBERT	05-28-2015 07:43 PM GMT	Closeout amendment and cost adjustment. R.S. Melillo, PS 05/28/15
18	Award Review	SYSTEM	06-30-2014 04:44 PM GMT	ACCEPTED
17	<a href="#">Final Review</a>	SHERWOOD BRUCE	03-21-2014 02:22 PM GMT	Final Review. This Scope of Work change as outlined in Amendment #1 is being approved as it appears to be accurate and complete. Culvert sizing reevaluated at request of VT State representatives that original PW culvert evaluation neglected to take into account the Q100 conditions for headwater depths established by VAOT. Project includes Mitigation. B Sherwood 3/21/14.
16	<a href="#">Grantee Review</a>	ROSE BENNETT	03-19-2014 06:47 PM GMT	The most recent version of this PW appears to accurately reflect the proposed scope of work (i.e. 14' x 6' box culvert). --Ben Rose

15	<a href="#">Grantee Review</a>	ROSE BENNETT	03-18-2014 01:30 PM GMT	Good to see mitigation included. Please ensure that applicant and AOT District Tech have opportunity to review final PW. Ben Rose 08/21/12
14	EHP Review	TATE MARCUS	02-24-2014 05:06 PM GMT	<p>SCOPE OF WORK: Mine's Road, Lowell, Orleans County, N44.77016 W-72.51835. This project worksheet covers the permanent repairs on a stream crossing for Burgess Branch and Mines Road (TH-2). The crossing consisted of a corrugated metal pipe (CMP) culvert (72-in dia. x 65-ft) damaged beyond repair. The scope of work includes removing and disposing of the existing culvert then replacing it with a corrugated metal multi-plate arch culvert (69-in x 98-in x 65-ft). Excavation will be required (24-ft x 65-ft x 8-ft, approx. 462 cubic yards). The new culvert will be re-covered with gravel and soil. A new roadway approach consisting of sub-base gravel will be installed over the excavation (24-ft x 65-ft x 8-in, 38-cy). The road surface will be finished with bituminous concrete pavement (24-ft x 65-ft) and a 4-in yellow line will be applied. As mitigation, concrete Class B steel reinforced head walls and wing-walls will be constructed at both the inlet and outlet of the culvert. Temporary construction measures include: assembling a sandbag check dam, installation of a 130-gpm water pump to serve as a by-pass for stream flow across the site, and highway barricades to close the road during culvert work.</p> <p>This project has been determined to be Categorically Excluded from the need to prepare either an Environmental Impact Statement or Environmental Assessment in accordance with 44 CFR Part 10.8(d)(2)(xvi). Particular attention should be given to the project conditions before and during project implementation. Failure to comply with these conditions may jeopardize federal assistance including funding. - north - 08/20/2012 13:10:10 GMT +++++Version 1 is for a scope of work change. Culvert sizing reevaluated at request of VT State representatives that original PW culvert evaluation neglected to take into account the Q100 conditions for headwater depths established by VAOT. Upon conducting this further evaluation it was concluded to increase the size of the PW replacement structure from a 98" x 69" CMPA to a 112" x 75" CMPA and corresponding road height changes to provide adequate cover over the larger size pipe. Based on this, the applicamnt has decided to install a 14' x 6' concrete box culvert. In order to accomodate this design the following will be performed; Excavate to remove existing structure and prepare for box culvert 800 CY, place Crushed Stone under culvert (12") 35 CY, install Precast concrete box 14' x 6' x 55' including headwalls, wing walls &amp; cut-off walls, place Granular Backfill over box culvert 400 CY, install Roadway Sand Cushion (6") 35 CY, install Roadway Gravel Subbase (18") 100 CY, install Roadway Pavement (3") 30 TONS, install Guardrail 150 LF, install Type II Rip-Rap 30 CY, install Type III Rip-Rap 100 CY. Desptie this change in scope of work to a larger structure, the review performed on 8/20/12 remains valid and all comments and conditions still apply.</p> <p>- mtate1 - 02/24/2014 17:01:54 GMT CWA: Project involves culvert replacement and upgrade, and requires coordination with the U. S. Army Corps of Engineers (USACE) and the Vermont Agency of Natural Resources (ANR). See Conditions. - north - 08/20/2012 13:13:26 GMT EO11990: The 8 step process is required. See condition. - north - 08/20/2012 13:25:04 GMT</p>

				<p>ESA: No Listed Species or Habitat based on a review using VT Agency of Natural Resources' Natural Resource Atlas, accessed 8/20/2012. - north - 08/20/2012 13:11:59 GMT</p> <p>The culvert is located just to the northeast of the Vermont Asbestos Group (VAG) mine site and is within an area of concern for asbestos contamination, determined by Vermont's Agency of Natural Resources (ANR), Department of Environmental Conservation (DEC), Waste Management Division. In consideration that mine tailings containing asbestos may be in the sediment of the Burgess Branch at the location of the damaged culvert and that asbestos dusts and fibers can be found on surface waters, FEMA – EHP has sought guidance from the ANR-DEC on the</p>
13	<a href="#">Mitigation Review</a>	DOWNER RICHARD	02-12-2014 08:29 PM GMT	<p>8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST</p> <p>8/14/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. . J.LANGEN</p> <p>2/12/14 Per the Townsend Decision ,FEMA can reimburse for a destroyed culvert with a larger structure as a hazard mitigation measure ,if the cost do not exceed 100% of the project cost. Final Hazard mitigation equals \$59,516.00 / \$ 141,488 = 42%. Project is cost effective per the "Townsend Decision". Richard N. Downer</p>
12	<a href="#">Mitigation Review</a>	DOWNER RICHARD	02-12-2014 08:16 PM GMT	<p>8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST</p> <p>8/14/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. . J.LANGEN</p>
11	<a href="#">Initial Review</a>	PINKHAM KENNETH	02-11-2014 07:47 PM GMT	<p>02/11/2014 - Initial review has been conducted on 30 January 2014 Robert Melillo, PS Scope Change/HM Amendment and the same has been forwarded to the Mitigation and Environmental Queues for further action in the amount of \$195,022.00, \$112,091.50 more than previous awards. Ken Pinkham, PATFL</p>
10	<a href="#">Amendment Review</a>	REICH DAWN	10-11-2013 01:33 PM GMT	<p>Change request created for time extension to 6/22/16 granted by VEM</p>
9	Award Review	SYSTEM	10-16-2012 07:01 PM GMT	ACCEPTED
8	<a href="#">Final Review</a>	DEVINE MICHAEL	08-29-2012 01:51 PM GMT	<p>8/29/12-This PW appears to be complete, and eligible within the FEMA PA Program of the Stafford Act. Michael DeVine, PAC</p>
7	<a href="#">Grantee Review</a>	ROSE BENNETT	08-21-2012 12:57 PM GMT	<p>Good to see mitigation included. Please ensure that applicant and AOT District Tech have opportunity to review final PW. Ben Rose 08/21/12</p>
				<p>SCOPE OF WORK: Mine's Road, Lowell, Orleans County, N44.77016 W-72.51835. This project worksheet covers the permanent repairs on a stream crossing for Burgess Branch and Mines Road (TH-2). The crossing consisted of a corrugated metal pipe (CMP) culvert (72-in dia. x 65-ft) damaged beyond repair. The scope of work includes removing and disposing of the existing culvert then replacing it with a corrugated metal multi-plate arch culvert (69-in x 98-in x 65-ft). Excavation will be required (24-ft x 65-ft x 8-ft, approx. 462 cubic yards). The new culvert will be re-covered with gravel and soil. A new roadway</p>

6	EHP Review	THOMAS PETER	08-20-2012 04:13 PM GMT	<p>approach consisting of sub-base gravel will be installed over the excavation (24-ft x 65-ft x 8-in, 38-cy). The road surface will be finished with bituminous concrete pavement (24-ft x 65-ft) and a 4-in yellow line will be applied. As mitigation, concrete Class B steel reinforced head walls and wing-walls will be constructed at both the inlet and outlet of the culvert. Temporary construction measures include: assembling a sandbag check dam, installation of a 130-gpm water pump to serve as a by-pass for stream flow across the site, and highway barricades to close the road during culvert work.</p> <p>This project has been determined to be Categorically Excluded from the need to prepare either an Environmental Impact Statement or Environmental Assessment in accordance with 44 CFR Part 10.8(d)(2)(xvi). Particular attention should be given to the project conditions before and during project implementation. Failure to comply with these conditions may jeopardize federal assistance including funding. - north - 08/20/2012 13:10:10 GMT CWA: Project involves culvert replacement and upgrade, and requires coordination with the U. S. Army Corps of Engineers (USACE) and the Vermont Agency of Natural Resources (ANR). See Conditions. - north - 08/20/2012 13:13:26 GMT EO11990: The 8 step process is required. See condition. - north - 08/20/2012 13:25:04 GMT ESA: No Listed Species or Habitat based on a review using VT Agency of Natural Resources' Natural Resource Atlas, accessed 8/20/2012. - north - 08/20/2012 13:11:59 GMT RCRA: The culvert is located just to the northeast of the Vermont Asbestos Group (VAG) mine site and is within an area of concern for asbestos contamination, determined by Vermont's Agency of Natural Resources (ANR), Department of Environmental Conservation (DEC), Waste Management Division. In consideration that mine tailings containing asbestos may be in the sediment of the Burgess Branch at the location of the damaged culvert and that asbestos dusts and fibers can be found on surface waters, FEMA – EHP has sought guidance from the ANR-DEC on the culvert replacement and work within the water. See conditions: - north - 08/20/2012 13:16:55 GMT EO11988: The 8-step process is required. See condition. - north - 08/20/2012 13:19:20 GMT NHPA: A determination of No Historic Properties Affected is made under the terms of the Vermont Programmatic Agreement (2011) Appendix C, Section III. A. B. C. &amp; E. road, culvert and slope repair. No consultation with SHPO is required. - north - 08/20/2012 13:11:11 GMT</p>
5	<a href="#">Mitigation Review</a>	LANGEN JOHN	08-14-2012 05:14 PM GMT	<p>8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST 8/14/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. . J.LANGEN</p>
4	<a href="#">Mitigation Review</a>	SHOFFNER MARTIN	08-14-2012 01:51 PM GMT	<p>8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST</p>
3	<a href="#">Mitigation Review</a>	SHOFFNER MARTIN	08-08-2012 06:45 PM GMT	<p>8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS,</p>

				HPA HAZARD MITIGATION SPECIALIST
2	<a href="#">Initial Review (EHP Rework)</a>	HARWOOD JULIAN	08-08-2012 06:38 PM GMT	REwork Complete
1	<a href="#">Mitigation Review</a>	HARRIS MICHAEL	08-07-2012 09:57 PM GMT	8/7/2012 THE PROPOSED MITIGATION IS CONSIDERED COST EFFECTIVE UNDER PRE-APPROVED LIST, RR POLICY 9526.1/APPENDIX A/100% RULE. M. C. HARRIS, HPA HAZARD MITIGATION SPECIALIST