

# CEF Fact Sheet

5/30/2014

## Lowell, Town of - CMP

<b>Date of Estimate:</b>	December 27, 2013
<b>FEMA Region:</b>	R-1
<b>Preparer(s):</b>	Bob Melillo
<b>Applicant Name:</b>	Lowell, Town of
<b>Project Title:</b>	Mines Road Culvert 26
<b>Damaged Facility:</b>	CMP
<b>Declaration Number:</b>	DR-4066-VT
<b>Project Number:</b>	JCLOC10
<b>PA ID No.:</b>	
<b>Date of Inspection:</b>	
<b>Event Date(s)</b>	
<b>Work Category:</b>	C
<b>Type of Work:</b> <i>(Enter New, Repair, etc.)</i>	Replacement
	Mitigation
<b>Preparer's Notes:</b>	
<p>This CEF is prepared for the replacement of damaged 72" CMP with a 112" x 75" CMPA with increased cover (24" minimum) to accommodate the higher pipe.</p> <p>The applicant will use their normal procurement procedures to bid and award this replacement project. The estimate is established using VT AOT 5 year historic cost and FEMA Cost Codes.</p> <p>CEF unit quantities based on Dan Peterson email of Dec 23, 2013 with attached conceptual sketch and estimate.</p> <p>There is no permanent work completed at this time.</p> <p>Project includes guard rail and concrete head and wing walls per local adopted codes and standards. Mitigation includes Type II and III stone rip rap for slope side protection.</p>	

# CEF Notes

5/30/2014

## Lowell, Town of - CMP

<b>Damaged Facility:</b>	CMP
<b>Applicant Name:</b>	Lowell, Town of
<b>Project Number:</b>	JCLOC10
<b>Date of Estimate:</b>	December 27, 2013
<b>Preparer(s):</b>	Bob Melillo
<b>Part A Notes:</b>	A.1 - The estimate is established using VTAOT 5 year historic cost A.2 -
<b>Part B Notes:</b>	B.1 - This is a specialty construction project. No GC will be used. B.2 - This is a specialty construction project. No GC will be used.
<b>Part C Notes:</b>	C.1 - Applied 5% for working drawings. C.2 - This item is addressed in the unit costs of historical work so no forward cost will be applied C.3 - This item is addressed in the unit costs of historical work so no forward cost will be applied C.4 - This item is addressed in the unit costs of historical work so no forward cost will be applied
<b>Part D Notes:</b>	D.1 - This is a specialty construction project. No GC will be used. D.2 - This is a specialty construction project. No GC will be used. D.3 - This is a specialty construction project. No GC will be used.
<b>Part E Notes:</b>	E - Project is of short duration- No CEF Factor Applied
<b>Part F Notes:</b>	F.1 - Applicant will self administer this project F.2 - Applicant will self administer this project
<b>Part G Notes:</b>	G.1 - Applied CEF factor for applicant's reserve for change orders
<b>Part H Notes:</b>	H.1 - Applied CEF factor for applicant's design phase project management H.2 - Applied FEMA factor for basic construction services. H.3 - Applied CEF factor for applicant's construction phase project management
<b>Miscellaneous Notes &amp; Comments:</b>	

CEF Part A

5/30/2014

Item No.	Item Description Title / Component Description	VAOT 5yr Average & FEMA Cost Codes	Qty	Units	Unit Price	City Adj Factor	Total Cost
<b>Completed Work Items</b>							
<b>Add Row</b>	<b>Completed Permanent Items</b>						
					\$ -		\$ -
					\$ -		\$ -
<b>Completed - Permanent Total</b>							\$ -
<b>Add Row</b>	<b>Completed Non-Permanent Items</b>						
					\$ -		\$ -
<b>Completed - Non-Permanent Total</b>							\$ -
<b>Uncompleted Work Items</b>							
<b>Add Row</b>							
<b>Uncompleted Repair Items</b>							
1	Structure Excavation 15.3' w x 8' d = 122.4 SF less existing CMP (28.3 SF) x 65' l = 227 CY	204.25	227.00	CY	\$ 19.11	1	\$ 4,337.97
2	CMPA 75" rise x 112" with 46SF waterway area	334216153360 RSMears	16588.00	LB	\$ 2.29	1	\$ 37,986.52
3	Granular Backfill for Structures 15.3' w x 8' less new CMPA (50.3 SF) = 72.1 SF x 65' l = 174 CY	204.30	174.00	CY	\$ 34.66	1	\$ 6,030.84
4	Subbase Of Gravel 15.3' w x 24' l x 1.25' d = 17 CY	301.15	17.00	CY	\$ 27.06	1	\$ 460.02
5	Excavation Of Pavement 125' l x 22' w x 0.25' t x 2 (approach & departure) = 51CY	203.28	51.00	CY	\$ 21.20	1	\$ 1,081.20
6	Common Excavation (taper area) 125' l x 24' w x 1.25' d x 2 = 139 CY	203.15	139.00	CY	\$ 7.51	1	\$ 1,043.89
7	Subbase Of Gravel (for taper area) 125' l x 24' w x 1.25' deep x 2 (approach & departure) = 278 CY	301.15	278.00	CY	\$ 27.06	1	\$ 7,522.68
8	Bituminous Concrete Pavement 3" thick	406.25	117.00	TON	\$ 89.93	1	\$ 10,521.81
9	Durable 4 Inch Yellow Line 125' l x 2 + 15.3' l = 531 LF	646.412	530.00	LF	\$ 0.56	1	\$ 296.80
10	Steel Beam Guardrail, Galvanized per C&S	621.20	50.00	LF	\$ 15.93	1	\$ 796.50
11	HD Steel Beam Guardrail, Galvanized per c&S	621.21	174.00	LF	\$ 21.70	1	\$ 3,775.80
12	Concrete, High Performance Class B for head & wing walls	501.34	19.00	CY	\$ 517.15	1	\$ 9,825.85
13	Reinforcing Steel (Rebar)	507.15	320.00	LB	\$ 1.14	1	\$ 364.80
						1	\$ -
<b>Uncompleted - Replacement Total</b>							\$ 84,044.68

<b>Uncompleted - non Permanent</b>							
14	Mobilization/Demobilization (10%)	635.11	1.0	LS	\$ 8,404.47	1.00	\$ 8,404.47
15	Traffic Control	641.1	1.0	LS	\$ 2,000.00	1.0	\$ 2,000.00
16	Erosion&Sediment Control Plan (ESCP)	652.10	1.0	LS	\$ 4,658.00	1.0	\$ 4,658.00
17	Sand bag check dam	208.40	1.0	LS	\$ 174.87	1.0	\$ 174.87
18	Water Pump, 10HP	FEMA 8472	80.0	HR	\$ 4.10	1.0	\$ 328.00
19	Discharge Hose, 6" dia - 25' length with couplings	FEMA 8352	80.0	HR	\$ 0.50	1.0	\$ 40.00
<b>Uncompleted - Non-Permanent Total</b>							\$ 15,605.34
<b>Hazard Mitigation</b>							
20	Stone Fill Type II, 30cy	613.11	30	CY	\$ 34.97	1	\$ 1,049.10
21	Stone Fill Type III, 100cy	613.12	100	SY	\$ 40.53	1	\$ 4,053.00
							\$ -
							\$ -
							\$ -
<b>Add Row</b>					\$ -		\$ -
<b>HMP Total</b>							\$ 5,102.10
<b>TOTAL PART A BASE CONSTRUCTION COST</b>							\$ 104,752.12

CEF Summary of Uncompleted Work

5/30/2014

Lowell, Town of - CMP										
		Replacement	Mitigation	\$	-	\$	-	\$	-	Total
<b>A "Base Costs" for Construction Work-In Trades</b>										
A.1	Permanent Work (CEF Part A)	\$ 84,045	\$ 5,102							\$ 89,147
A.2	Non-Permanent Job Specific Work (CEF Part A)	\$ 15,605								\$ 15,605
Part A Total		\$ 99,650	\$ 5,102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 104,752
<b>B General Requirements and General Conditions</b>										
B.1	<b>General Requirements</b>	Range Low to High	Enter % in Appropriate Column							
	Safety & Security	4.0% 6.0%								
	Temporary Services & Utilities	0% 1.0%								
	Quality Control	0% 1.0%								
	Submittals	0% 5.0%								
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B.2	<b>General Conditions (4.25%)</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Part B Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PART A through B SUBTOTAL</b>		\$ 99,650	\$ 5,102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 104,752
<b>C Construction Cost Contingencies</b>										
C.1	<b>Design-Phase Scope Contingencies</b>	Range Low to High	Enter % in Appropriate Column							
	Preliminary Engineering Analysis	7.0% 20.0%								
	Working Drawings	2.0% 10.0%	5.0%							
		\$ 4,983	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,983
C.2	<b>Facility or Project Constructability</b>		Enter % in Appropriate Column							
	Facility or Project Type and Complexity	See IG for Values								
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C.3	<b>Access, Storage &amp; Staging</b>	Range Low to High	Enter % in Appropriate Column							
	Access Contingencies	0% 4.0%								
	Storage Contingencies	0% 4.0%								
	Staging Contingencies	0% 4.0%								
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C.4	<b>Economies of Scale</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Part C Total		\$ 4,983	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,983
<b>PART A through C SUBTOTAL</b>		\$ 104,633	\$ 5,102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 109,735
<b>D General Contractor's Overhead and Profit</b>										
D.1	<b>GC's Home Office Overhead</b>	7.7%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
D.2	<b>GC's Insurance, Payment &amp; Performance Bonds</b>	3.3%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
D.3	<b>General Contractor's Profit</b>									
	New Construction		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Repair/Retrofit		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Part D Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PART A through D SUBTOTAL</b>		\$ 104,633	\$ 5,102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 109,735

CEF Summary of Uncompleted Work

5/30/2014

Lowell, Town of - CMP							
	Replacement	Mitigation	\$ -	\$ -	\$ -		<b>Total</b>
<b>E Cost Escalation Factors</b>							
<b>E Cost Escalation Factor</b>	Months						
	Monthly Factor	0.220%					
Part E Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PART A through E SUBTOTAL</b>		\$ 104,633	\$ 5,102	\$ -	\$ -	\$ -	\$ 109,735
<b>F Plan Review and Permit Construction Cost</b>							
<b>F.1 Plan Review Fees</b>							
(List Individual Requirements Separately)			\$ 0				
		\$ -	\$ 0	\$ -	\$ -	\$ -	\$ 0
<b>F.2 Construction Permit Fees</b>							
(List Individual Requirements Separately)							
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Part F Total		\$ -	\$ 0	\$ -	\$ -	\$ -	\$ 0
<b>PART A through F SUBTOTAL</b>		\$ 104,633	\$ 5,102	\$ -	\$ -	\$ -	\$ 109,735
<b>G Applicant's Reserve for Change Orders</b>							
<b>G Applicant's Reserve for Change Orders</b>							
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		7.0%	7.0%	7.0%	7.0%	7.0%	
Part G Total		\$ 7,324	\$ -	\$ -	\$ -	\$ -	\$ 7,324
<b>PART A through G SUBTOTAL</b>		\$ 111,957	\$ 5,102	\$ -	\$ -	\$ -	\$ 117,059
<b>H Applicant's Project Management And Design Costs</b>							
<b>H.1 Applicant's Project Management - Design Phase</b>							
1.0%		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		\$ 1,120	\$ -	\$ -	\$ -	\$ -	\$ 1,120
<b>H.2 A/E Design Contract Applicability</b>							
Above Average Complexity (Curve A)		<input type="checkbox"/>	25.2%	<input type="checkbox"/>	34.7%	<input type="checkbox"/>	5.6%
Average Complexity (Curve B)		<input checked="" type="checkbox"/>	14.0%	<input checked="" type="checkbox"/>	17.2%	<input type="checkbox"/>	4.5%
Basic Construction Inspection Services		<input type="checkbox"/>	3.0%	<input type="checkbox"/>	3.0%	<input type="checkbox"/>	3.0%
<b>A/E Design Contract Cost</b>							
Above Average Complexity (Curve A)		\$ -	\$ -	\$ -	\$ -	\$ -	
Average Complexity (Curve B)		\$ 15,712	\$ 880	\$ -	\$ -	\$ -	
Basic Construction Inspection Services		\$ -	\$ -	\$ -	\$ -	\$ -	
		\$ 15,712	\$ 880	\$ -	\$ -	\$ -	\$ 16,592
<b>H.3 Project Management - Construction Phase</b>							
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		6.0%	6.0%	6.0%	6.0%	6.0%	
		\$ 6,717	\$ -	\$ -	\$ -	\$ -	\$ 6,717
Part H Total		\$ 23,549	\$ 880	\$ -	\$ -	\$ -	\$ 24,429
<b>PART A through H SUBTOTAL</b>		\$ 135,506	\$ 5,982	\$ -	\$ -	\$ -	\$ 141,488
<b>TOTAL OF UNCOMPLETED WORK</b>							<b>\$141,488</b>

# CEF Total Project Summary

5/30/2014

## Summary

### Lowell, Town of - CMP

	Completed	Uncompleted	Total
<b>PART A "Base Costs" for Construction Work In Trades</b>	\$ -	\$ 104,752	\$ 104,752
A.1 Permanent Work	\$ -	\$ 89,147	\$ 89,147
A.2 Non-Permanent Work (CEF Part A)	\$ -	\$ 15,605	\$ 15,605
<b>PART B General Requirements and General Conditions</b>	\$ -	\$ -	\$ -
B.1 General Requirements	\$ -	\$ -	\$ -
B.2 General Conditions	\$ -	\$ -	\$ -
<b>PART C Construction Cost Contingencies (Design and Construction)</b>	\$ -	\$ 4,983	\$ 4,983
C.1 Standard Design-Phase Scope Contingencies	\$ -	\$ 4,983	\$ 4,983
C.2 Facility or Project Constructability	\$ -	\$ -	\$ -
C.3 Access, Storage, and Staging Contingencies	\$ -	\$ -	\$ -
C.4 Economies of Scale in New Construction	\$ -	\$ -	\$ -
<b>PART D General Contractor's Overhead and Profit</b>	\$ -	\$ -	\$ -
D.1 General Contractor's Home Office Overhead Costs	\$ -	\$ -	\$ -
D.2 General Contractor's Insurance, Payment, and Performance Bonds	\$ -	\$ -	\$ -
D.3 Contractor's Profit	\$ -	\$ -	\$ -
<b>PART E Cost Escalation Allowance</b>	\$ -	\$ -	\$ -
<b>PART F Plan Review and Construction Permit Costs</b>	\$ -	\$ 0	\$ 0
F.1 Plan Review Fees	\$ -	\$ 0	\$ 0
F.2 Construction Permit Fees	\$ -	\$ -	\$ -
<b>PART G Applicant's Reserve for Construction</b>	\$ -	\$ 7,324	\$ 7,324
<b>PART H Applicant's Project Management and Design Costs</b>	\$ -	\$ 24,429	\$ 24,429
H.1 Applicant's Project Management - Design Phase	\$ -	\$ 1,120	\$ 1,120
H.2 Architecture & Engineering Design Contract Costs	\$ -	\$ 16,592	\$ 16,592
H.3 Project Management - Construction Phase	\$ -	\$ 6,717	\$ 6,717
<b>Complete Project Total for Completed and Uncompleted Work</b>	\$ -	\$ 141,488	\$ 141,488