FEMA Form 90-91, DEC 08

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET

PAPERWORK BURDEN DISCLOSURE NOTICE

DECLARATION NO.	PW REF NO.	DATE	FIPS NO.	CATEGORY	EMMIE NO.
FEMA 4097 DR MA	OBLDVM3	03/26/13	007-50390-00	D	

APPLICANT	WORK COMPLETED AS OF: DATE:	PERCENT:
Town of Oak Bluffs	03/13/13	0%

DAMAGED FACILITY	COUNTY
Seawall along Beach and Sea View Ave road extension	Bristol

LOCATION	LATITUDE	LONGITUDE
North Bluff Seawall	41.45910	-70.55660

Was this site previously damaged? ○ Yes ◉ No ○ Unsure

DAMAGE DESCRIPTION AND DIMENSIONS:

During the incident period of October 26th - 31st, 2012, Hurricane Sandy caused widespread damages within the State of Massachusetts due to high winds and flooding from high tides and surges along the coastal areas. A major disaster, DR-4097 was declared on December 19th, 2012. The concrete wall is approximately 2 ft wide by 5 ft high running approximately 720 LF along Seaview Ave as it approaches Old Woods Hole Docking on Oak Bluff Ave located at (Lat. 41.45910, Long -70.55660). Damages from wave action due to the storm are as follows:
(1) There were approximately eight sections of shore line protective seawall destroyed measuring approximately 10 LF by 5 ft in height and estimating 3 - 4 ft in depth. The total wall running 720 LF has been condemned by the DCR (See memo) due to undermining and damage as a result of wave and surge action.
(2) Eight Sections of erosion measured approximately 30 ft x 10 ft x 2 ft average depth for eroded area between the wall and the roadway = 4,800 CF/27 = 178 CY. For total length to add mounded level of fill measuring 720 LF x 40 ft x 2 ft = 57,600 CF/27 = 2,134 CY

SCOPE OF WORK:

WORK TO BE COMPLETED: **Fund at 75%**

The applicant proposes to hire contractors to repair sections of the North Bluff Seawall as follows: The State DCR has reviewed the damages at the wall and have stated that the wall has failed and needs total replacement. Wall has been undermined and is leaning. (See engineering letter of condemnation). (Note: The following estimates were determined based upon R.S. Means Heavy Construction Data 2013 and R.S. Means Facilities Cost Construction Data 2013):
(1) Wall repairs: R.S.Means #32 32 13.10 2300 for an 8 ft. cast-in-place concrete retaining wall costs $405/LF x 1.11 CCI = $449.55/LF x 720LF = $323,676.00.
(2) Erosion restoration: R.S. Means # 04 05 13.95 0300 Sand, screened and washed, includes 30 mile haul at $57.50 x 1.11 CCI = For total length to add mounded level of fill measuring 720 LF x 40 ft x 2 ft = 57,600 CF/27 = 2,134 CY x $63.825/CY = $136,202.55.

(SEE CONTINATION SHEET FOR SOW)

PROJECT COST

ITEM	CODE	NARRATIVE	QUANTITY	UNIT	UNIT PRICE	COST
1	0	Work to be Completed:				$ -
2	9930	Strategic Funds Management (SFM)	1.00	LS	$1,960,845.00	$ 1,960,845.00
		Costs were prepared using CEF (9000)				$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
		SUBTOTAL FROM COST CONTINUATION PAGE(S)				$ -
					TOTAL PROJECT COST	$ 1,960,845.00

PREPARED BY:	VINCENT J. MASUCCI	TITLE:	PROJECT SPECIALIST
FEMA PAC CREW LEADER:	JAMES RUSSELL	STATE PAC CREW LEADER:	LORRAINE EDDY
APPLICANT:	Peter Marteli	DATE: 10/12/13	PHONE: 508-693-6766

FEDERAL EMERGENCY MANAGEMENT AGENCY

DAMAGE DESCRIPTION & SCOPE OF WORK

DECLARATION NO.				PW REF NO.	DATE	FIPS NO.	CATEGORY	EMMIE NO.
FEMA	4097	DR	MA	OBLDVM3	03/26/13	007-50390-00	D	

APPLICANT	COUNTY
Town of Oak Bluffs	Bristol

DAMAGE DESCRIPTION & SCOPE OF WORK (CONTINUED):

(CONTINUATION SHEET OF SOW):

(3) Labor and equipment to install fill per R.S. Means 31 23 23.14 2000 with use of 80 HP backhoe for 2,134 CY at $1.20/CY x 1.11 CCI = $2,842.49.

(4) Installation of cofferdam mobilization per R.S. Means 31 52 16.10 0060 shore driven at $32.00/FL x 1.11 CCI = $35.52 x (720 LF + 40 LF end sections) = $26,995.20.

(5) Installation of cofferdam soldier beams & lagging H piles with 3 inch wood sheeting up to 15 ft depth per R.S. Means 31 52 16.10 0200 at $28.50/LF x 1.11 CCI = $31.64/LF x 760 LF = $24,042.60.

(6) Demolition of existing 8 ft by 2 ft x 720 LF concrete wall per R.S. Means #02 41 16.17 2500/2600 costs for a 12 inch thick wall $24.50/SF x 1.11 CCI = $27.20/SF x (2) 5,760 SF = $313,286.40. Adding 10% for reinforcing = $344,678.40.

(7) Disposal of demolition debris per R.S. Means 02 41 16.17 4250/2620 to five miles = $18.80/CY x 1.11 CCI = $20.87/CY whereas volume = 2 ft x 720 ft x 8 ft = 11,520 CF/27 = 427 CY x $20.87/CY = $8,904.54. Add 20 % for reinforcing = $10,685.44.

(8) Repairs to concrete steps (approximately 7 steps at 36 inch width) estimating concrete pour for base under first step and parging of cracks. Using C-30 crew for R.S. Means for concrete at a cost of $630.62/day for two days = $1,261.24 x 1.11 CCI = $1,399.98.

(9) Codes and Standards: Addition of Cast-in-place concrete Handicap Ramp Access 108 LF x 5.33 ft. with railings in compliance with ADA regulations: R.S. Means (03 30 53.40 4525) at $625.00/LF x 1.11 CCI = $74,925.00.

(10) Codes and Standards: Add railings to top of wall as required by International Building Code for 720 LF of wall and 100 LF along steps R.S. Means (05 52 13.50 0640) 1 1/2 inch steel galvanized pipe two rail on stairs at $87.00/LF x 1.11 CCi x 820 LF = $79,187.40.

Total cost = ($323,676.00 + $136,202.55 + $2,842.49 + $26,995.20 + $24,042.60 + $344,678.40 + $10,685.44 + $1,399.98 + $74,925.00 + $79,187.40) = $1,024,635.06.

Engineering Fees: CLE Engineering, Inc. proposed fees in the amount of $25,000.00 whereas Curve B from the FEMA 322 guide estimates fees to be 11.0% of $1,024,635.06 = $112,709.86 and is reasonable.

Since this is a large project the Cost Estimating Format (CEF) = $1,960,845.00.

DAC: The Town of Oak Bluffs has contracted the services of CLE Engineering, Inc. of 15 Creek Road, Marion, MA 02738, (508) 801-4506 to prepare documentation for this project and Direct Administrative Costs would not be applicable.

THE APPLICANT'S ENGINEER HAS SUBMITTED THE FOLLOWING ESTIMATES FOR RESTORATION: Applicant proposes to restore 720 LF of coastal bank above retaining seawall 10 to 15 ft at a cost of $1,980/LF = $1,425,600.00. Restoration of 720 LF of concrete seawall 8 ft height at $1,716/LF = $1,235,520.00.

Total Cost estimated = $2,661,120.00. (Whereas, R.S. Means Estimates CEF at $1,960,845.00)8**

20% Contingency Cost of $532,224.00 plus engineering and permitting costs of $25,000.00.*

*Contingency Cost and Engineering/Permitting Costs are not allowed since these costs are included in the CEF calculated format.

**NOTE: Applicant is using estimates from Massachusetts Coastal Infrastructure Inventory and Assessment Project for DCR dated October 2009 Appendix D to calculate costs which includes a 20% construction contingency cost and 10% engineering/permitting costs already, therefore cost factors were duplicated in the totals and must be adjusted. In addition, plans had been under preparation for a major overhaul of the site along the roadway to include a broadway and access to the beach which included ADA compliance with a ramp. Plans were being drawn up and amended in 2010 with applications for regulatory approvals from the Massachusetts Wetlands Protection Act M.G.L c. 131, Parag. 40. Parts of these plans would be considered improvements, therefore, the R.S. Means would represent compliance with in kind replacement and will be used for cost analysis. The applicant will be responsible for any costs to this project that is not within the scope of replacement or hazard mitigations allowed under this project worksheet. Since costs must be based upon reasonable sources, R.S. Means shall be used as the basis for determining the cost with CEF. Since this is a large project, adjustments that may be warranted due to final construction costs will be considered through proper submissions to MEMA and FEMA both during the progress of the restoration and at the completion of work.

(SEE CONTINUATION SHEET FOR SOW)

PREPARED BY: VINCENT J. MASUCCI	TITLE: PROJECT SPECIALIST

FEDERAL EMERGENCY MANAGEMENT AGENCY

DAMAGE DESCRIPTION & SCOPE OF WORK

DECLARATION NO.				PW REF NO.	DATE	FIPS NO.	CATEGORY	EMMIE NO.
FEMA	4097	DR	MA	OBLDVM3	03/26/13	007-50390-00	D	

APPLICANT	COUNTY
Town of Oak Bluffs	Bristol

DAMAGE DESCRIPTION & SCOPE OF WORK (CONTINUED):

(CONTINUATION SHEET OF SOW):
HAZARD MITIGATION PROPOSAL:

THE APPLICANT'S ENGINEER HAS SUBMITTED THE FOLLOWING ESTIMATES FOR MITIGATION: proposes to raise the wall by 4 ft for 720 LF at $4,500.00/LF = $3,240,000.00.
Mitigation proposes to add extra bank fill behind seawall for 720 LF at $1,980.00/LF = $1,425,600.00.
Added mitigation costs = $4,665,600.00 - $2,661,120.00 = $2,004,480.00.
Whereas, the following calculations were performed using the following for R.S. Means:
(1) R.S. Means #32 32 13.10 3100 using a Concrete reinforced cantilever wall measuring up to 12 ft high and interpolating between a 10 ft and 20 ft = 20% x $1250/LF = $250 to be added to a 10 ft wall design at a cost of $455/LF = $705/LF x 1.11 CCI = $782.55/LF x 720 LF = $563,436.00.
(2) Additional fill to be added to embankment behind extended wall: R.S. Means # 04 05 13.95 0300 Sand, screened and washed, includes 30 mile haul at $57.50 x 1.11 CCI = For total length to add mounded level of fill measuring 720 LF x 40 ft x 4 ft x 1/2 = 57,600 CF/27 = 2,134 CY x $63.825/CY = $136,160.00.
Continued Hazard Mitigation Proposal: The applicant proposes the following mitigation to extend the wall in height from 8 ft. to 12 ft. as follows:
(3) Labor and equipment to install fill per R.S. Means 31 23 23.14 2000 with use of 80 HP backhoe for 2,134 CY at $1.20/CY x 1.11 CCI = $2,842.49.
Total mitigation costs = $563,436.00 (- $323,676.00 for 8 ft wall) + $136,160.00 + $2,842.49 = $378,762.49 which is 44% of the restoration costs of $870,522.66.

GENERAL NOTES:

(1) The sub-grantee is not requesting Direct Administrative Costs (SDAC) that are directly chargeable to this specific project.
(2) The applicant is responsible for identifying, obtaining, and adhering, to all applicable Federal, State, and Local permit requirements; see attached permits for work in progress / completed. This includes all permits related to the Massachusetts Office of Coastal Zone Management (CZM), the U.S. EPA and the U.S. Fish and Wildlife Service (Department of the Interior).
(Note: a copy of all applicable permits is required.)
(3) RECORD RETENTION:
Complete records and cost documents for all approved work must be maintained for at least 3 years from the date the last project was completed or from the date final payment was received, whichever is later.
(4) Any change to the approved scope of work will require re-evaluation by the Environmental/Historic Preservation section for compliance with environmental and historic preservation considerations under the National Environmental Policy Act. Noncompliance with this requirement may jeopardize the receipt of federal funding.
(5) Hazard Mitigation proposal is for this project is to increase the height of the wall from 8 ft to 12 ft.
(6) PROCUREMENT: If applicable to this project, the applicant is required to adhere to State Government Procurement rules and regulations and maintain adequate records to support the basis for all purchasing of goods, materials and contracting services for projects approved under the Public Assistance program, as stated in 44 CFR 13.36. The applicant has advised they have/will follow their normal procurement procedures.
(7) See attachements sent by CLE Engineering for drawings December 1945 for structure prepared to protect the seawalls with riprap for Department fo Public Works of Massachusetts Division of Waterways. Original plan dated March 1940.
(8) See attached Order of Conditions DEP for WPA Form 5 dated in 2010.
(9) STRATEGIC FUNDS MANAGEMENT (SFM): Since the permanent work cost is estimated over $1 million, then the project is subject to SFM (Use Cost Code 9930) where funding will not be required within the next 180 days. In accordance with the Spend Plan, this project has been scheduled for obligation during the month of April 2014 when the work is expected to be completed. The Applicant will provide documentation for work completed to the Grantee for reimbursement of actual, incurred costs upon obligation of this PW.
(10) CHANGES TO SCOPE OF WORK: Any changes to the scope of work will require re-evaluation by the Environmental/Historic Preservation section for compliance with environmental and historic preservation considerations under the National Environmental Policy Act. Noncompliance with this requirement may jeopardize the receipt of federal funding.
(11) DEBRIS MONITORING: The applicant must document all debris collecting and removal during any operations for clearing roadways and sites as required. Failure to adequately monitor debris operations may cause the applicant's ability for reimbursement of federal funding to be jeopardized. (SEE CONTINUATION SHEET FOR SOW)

PREPARED BY: VINCENT J. MASUCCI	TITLE: PROJECT SPECIALIST

FEDERAL EMERGENCY MANAGEMENT AGENCY

DAMAGE DESCRIPTION & SCOPE OF WORK

DECLARATION NO.				PW REF NO.	DATE	FIPS NO.	CATEGORY	EMMIE NO.
FEMA	4097	DR	MA	OBLDVM3	03/26/13	007-50390-00	D	

APPLICANT	COUNTY
Town of Oak Bluffs	Bristol

DAMAGE DESCRIPTION & SCOPE OF WORK (CONTINUED):

(CONTINUATION SHEET OF SOW):

NOTE: COMMENTS FROM ENVIRONMENTAL REVIEW:

Inadvertent Discoveries Standard Comment: In the event of the discovery of archaeological deposits (e.g. Indian pottery, stone tools, old house foundations, old bottles) the applicant shall immediately stop all work in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. The applicant shall secure all archaeological discoveries and restrict access to discovery sites. The applicant shall immediately report the archaeological discovery to the Grantee and the FEMA Regional Environmental Officer (Jack Sullivan, 617-447-0479) or the FEMA Deputy Regional Environmental Officer (Lydia Kachadoorian, 857-205-2860); FEMA will determine the next steps.

In the event of the discovery of human remains, the applicant shall immediately stop all work in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. The applicant shall secure all human remains discoveries and restrict access to discovery sites. The applicant shall follow the provisions of applicable state laws and statutes. Violation of state law will jeopardize FEMA funding for this project. The applicant will inform the Office of the Chief Medical Examiner, the State Archaeologist, the Grantee and the FEMA Regional Environmental Officer (Jack Sullivan, 617-447-0479) or the FEMA Deputy Regional Environmental Officer (Lydia Kachadoorian, 857-205-2860). FEMA will consult with the SHPO and Tribes, if remains are of tribal origin. Work in sensitive areas may not resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.

This project addresses the total replacement of the 720-LF, concrete North Bluff seawall along Seaview Avenue as it approaches Old Woods Hole Docking on Oak Bluff Avenue (approximate coordinates: 41.45984 -70.55720 to 41.45809 -70.55601). This work will include work in the water and the need for a coffer dam.

After a quick review of the project and site (41.45984 -70.55720 to 41.45809 -70.55601), the following should be considered:
- FEMA Environmental and Historic Preservation (EHP) will be required to consult with the National Oceanic and Atmospheric Administration (NOAA). To do so, a detailed description of construction methods and materials for this project will be needed. This description should include details about the coffer dam. It should be noted on the PW that the coffer dam will be removed.
- The damaged seawall and its replacement are over 500-feet long, this may require an individual USACE permit, which is the applicant's responsibility and should be started as soon as possible.
- The project will need a Clean Water permit from the Massachusetts Department of Environmental Protection (MA-DEP). The applicant will need to contact the MA-DEP.
- As the project is within the coastal zone, the Massachusetts Office of Coastal Zone Management (MA-CZM) may require a consistency review. The applicant needs to contact MA-CZM.
- The project is not in a Coastal Barrier Resource Act (CBRA) zone.
- A quick review shows that this site is outside piping plover habitat, if this is not the case and plover are known to be in the area, all work must be between September 1 and April 1; and FEMA EHP would be required to consult with the USFWS.
- The site is not in a National Register of Historic Places historic district, nor is it listed individually. Based on the current scope of work, the project will meet the Programmatic Allowances of the Programmatic Agreement Among The Federal Emergency Management Agency, Massachusetts State Historic Preservation Officer and Massachusetts Emergency Management Agency.
- It appears that the new wall will be in the same location as the damaged wall. The work is expected to be in previously disturbed ground, but there is always the possibility of unexpected archaeological resources being exposed during excavation. These exposures can happen in front of and behind seawalls. In the event of the discovery of archaeological deposits (e.g. Indian pottery, stone tools, old house foundations, old bottles) the applicant shall immediately stop all work in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. I have attached FEMA's standard comment regarding Inadvertent Discoveries, which provides additional guidelines.

This project is in the floodplain VE zone (25007C0108H DUKES COUNTY ALL JURISDICTIONS 07/06/2010). Work will require approval from the local Floodplain Administrator prior to work beginning. The applicant needs to contact their administrator

PREPARED BY: VINCENT J. MASUCCI	TITLE: PROJECT SPECIALIST

FEDERAL EMERGENCY MANAGEMENT AGENCY

SCOPE NOTES

APPLICANT	PW REF NO.	CATEGORY	FIPS NO.	DISASTER	
Town of Oak Bluffs	**OBLDVM3**	**D**	**007-50390-00**	**4097**	**MA**

Check next to appropriate comment for Data Specialist to add to the Scope of Work

Topic	Comment
Record Retention	Complete records and cost documents for all approved work must be maintained for at least 3 years from the date the last project was completed or from the date final payment was received, whichever is later.
Direct Administrative Costs	☐ The subgrantee is requesting direct administrative costs that are directly chargeable to this specific project. Associated eligible work is related to administration of the PA project only and in accordance with 44 CFR 13.22. These costs are treated consistently and uniformly as direct costs in all federal awards and other subgrantee activities and are not included in any approved indirect cost rates.
Mitigation	No Mitigation Opportunities Identified because: ☐ PW is for Emergency Work - Mitigation not eligible. ☐ Work already completed and no add-on mitigation is feasible. ☐ Mitigation not technically feasible. ☐ Applicant has decided not to incorporate mitigation.
CEF	☑ This project was estimated using the Cost Estimated Format (CEF).
CEF - Not Used	This project was not estimated using the CEF because: ☐ The PW is a small project. ☐ The PW is for Emergency Work. ☐ The work is greater than 90% complete at the time of inspection.
	☐
	☐
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PREPARED BY:	VINCENT J. MASUCCI	TITLE:	PROJECT SPECIALIST

FEMA Form 90-120

FEDERAL EMERGENCY MANAGEMENT AGENCY

SPECIAL CONSIDERATIONS

DISASTER		APPLICANT NAME	PW REF NO.	FIPS NO.	DATE
4097	MA	Town of Oak Bluffs	OBLDVM3	007-50390-00	03/26/13

1. Does the damaged facility or item of work have insurance and/or is it an insurable risk? *(e.g., buildings, equipment, vehicles, etc.)*

(•) Yes ( ) No ( ) Unsure

Work is along coastline and would not be under insurance policy. See Policy #01LX054202012-00 from New Hampshire Insurance Company of 175 Water Street, 18th Floor, New York, NY 10038

2. Is the damaged facility located within a floodplain or coastal high hazard area, or does it have an impact on a floodplain or wetland?

(•) Yes ( ) No ( ) Unsure

Area along coast for Old Oak Bluffs. From Firmette 25007C0108H dated 7/2/2010 Zone VE

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?

( ) Yes (•) No ( ) Unsure

Not in a CBRSU, closest on is OPA-MAP 26 about 1.05 miles to the south.

4. Will the proposed facility repairs/reconstruction change the pre-disaster condition? *(e.g., footprint, material, location, capacity, use or function)*

( ) Yes (•) No ( ) Unsure

5. Does the applicant have a hazard mitigation proposal or would the applicant like technical assistance for a hazard proposal?

(•) Yes ( ) No ( ) Unsure

See HMP.

6. Is the damaged facility on the National Register of Historic Places or the state historic listing? Is it older than 50 years? Are there more, similar buildings near the site?

( ) Yes (•) No ( ) Unsure

Facility Constructed In:

7. Are there any pristine or undisturbed areas on, or near, the project site? Are there large tracts of forestland?

( ) Yes (•) No ( ) Unsure

8. Are there any hazardous materials at or adjacent to the damaged facility and/or item of work?

( ) Yes (•) No ( ) Unsure

9. Are there any other environmentally or controversial issues associated with the damaged facility and/or item of work?

(•) Yes ( ) No ( ) Unsure

This is along the coastline facing the Atlantic Ocean.

10. Is the damaged facility or item of work located within two-hundred feet of a body of water? (If applicable

(•) Yes ( ) No ( ) Unsure

Site is located near water.

PREPARED BY:	VINCENT J. MASUCCI

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAZARD MITIGATION PROPOSAL (HMP)

DISASTER		APPLICANT	PW REF NO.	FIPS NO.	CATEGORY
4097	MA	Town of Oak Bluffs	OBLDVM3	007-50390-00	D

SCOPE OF WORK:

HAZARD MITIGATION PROPOSAL:

THE APPLICANT'S ENGINEER HAS SUBMITTED THE FOLLOWING ESTIMATES FOR MITIGATION: proposes to raise the wall by 4 ft for 720 LF at $4,500.00/LF = $3,240,000.00.
Mitigation proposes to add extra bank fill behind seawall for 720 LF at $1,980.00/LF = $1,425,600.00.
Added mitigation costs = $4,665,600.00 - $2,661,120.00 = $2,004,480.00.

Mitigation Costs as prepared using R.S. Means:
Whereas, the following calculations were performed using the following for R.S. Means:
(1) R.S. Means #32 32 13.10 3100 using a Concrete reinforced cantilever wall measuring up to 12 ft high and interpolating between a 10 ft and 20 ft = 20% x $1250/LF = $250 to be added to a 10 ft wall design at a cost of $455/LF = $705/LF x 1.11 CCI = $782.55/LF x 720 LF = $563,436.00.
(2) Additional fill to be added to embankment behind extended wall: R.S. Means # 04 05 13.95 0300 Sand, screened and washed, includes 30 mile haul at $57.50 x 1.11 CCI = For total length to add mounded level of fill measuring 720 LF x 40 ft x 4 ft x 1/2 = 57,600 CF/27 = 2,134 CY x $63.825/CY = $136,160.00.
(3) Labor and equipment to install fill per R.S. Means 31 23 23.14 2000 with use of 80 HP backhoe for 2,134 CY at $1.20/CY x 1.11 CCI = $2,842.49.
Total mitigation costs = $563,436.00 (- $323,676.00 for 8 ft wall) + $136,160.00 + $2,842.49 = $378,762.49 which is 37% of the restoration costs of $1,024,635.06.

A CEF cost including mitigation = $2,634,214.00 less CEF in kind replacement costs of $1,960,845.00 = $673,369.00 resulting in 34.3%.

ESTIMATE OF WORK

ITEM	CODE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
1	9003	Construct 12 ft concrete wall	720.00	LF	$782.55	$563,436.00
2	9003	Cost of existing wall 8 ft in height replacement for 720 LF	720.00	LF	-$449.55	($323,676.00)
3	9003	Additional fill for 720 ft x 40 ft x 4 ft/2 = 57,600/27 = 2134 CY	2134.00	CY	$63.83	$136,202.55
4	9003	Labor and equipment 80 HP backhoe for 2,134 CY.	2134.00	CY	$1.33	$2,842.49

Total In-Kind Repair/Replacement Cost of Damaged Element(s)	$1,024,635.06	Total HMP Cost (Do Not Include in the PW)	$378,805.04
% of Total Eligible Cost	36.97%		
Eligibility	100% Rule		

TECHNICAL SPECIALIST FOR MITIGATION (SIGNATURE)		Agency	Date
RECOMMENDED BY (SIGNATURE)	TITLE	Agency	Date
CONCURRENCE BY STATE INSPECTOR		Agency	Date
CONCURRENCE BY APPLICANT		Agency EMD Oak Bluffs	Date 10/17/13

NOTE: Signature by the Federal Inspector is not an approval of this work, and signature by the state and Local Representative is not a commitment to perform the work.

FEDERAL EMERGENCY MANAGEMENT AGENCY

HAZARD MITIGATION PROPOSAL (HMP) SUMMARY

DISASTER		APPLICANT	PW REF NO.	FIPS NO.	CATEGORY
4097	MA	Town of Oak Bluffs	OBLDVM3	007-50390-00	D

☑ **Mitigation activity will be performed on sites in this project.**

☐ **If there is no mitigation activity explain why not.**

☑ **Codes and Standards**

☑ **Good Construction Practices**

☑ **Mitigation Policy**

- ☐ **15 percent**
- ☑ **100 percent list**
- ☐ **Benefit/Cost Ratio (Attach B/C analysis)**

☐ **Other:**

Enter cost of mitigation project as percent of in-kind repair or as dollar amount:

Dollar Amount: $378,805.04 **Percent:** 36.97%

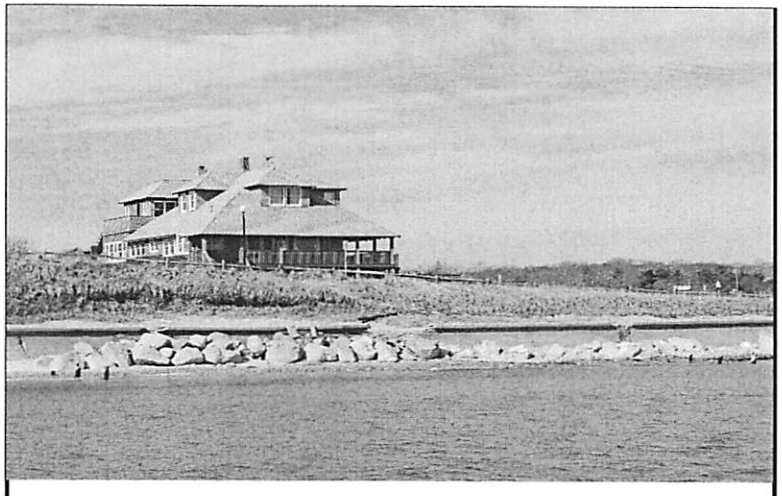
☑ **Check here if you wish to attach a Hazard-Mitigation Proposal**

Prepared By:	VINCENT J. MASUCCI	3/26/2013

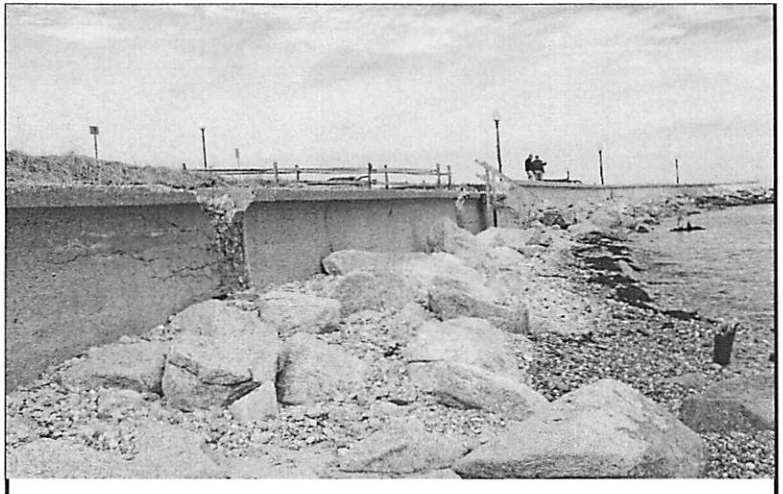
FEDERAL EMERGENCY MANAGEMENT AGENCY

PHOTO SHEET

APPLICANT:	**Town of Oak Bluffs**	CATEGORY:	**D**
FIPS NO.	**007-50390-00**	PW REF NO.	**OBDVM03**



Damage view from the water Sections of wall and erosion.



Wall is concrete about 2 ft in width and five feet from base to top and three feet below sand.

Several areas of damaged wall

Secions of damaged wall and cracking

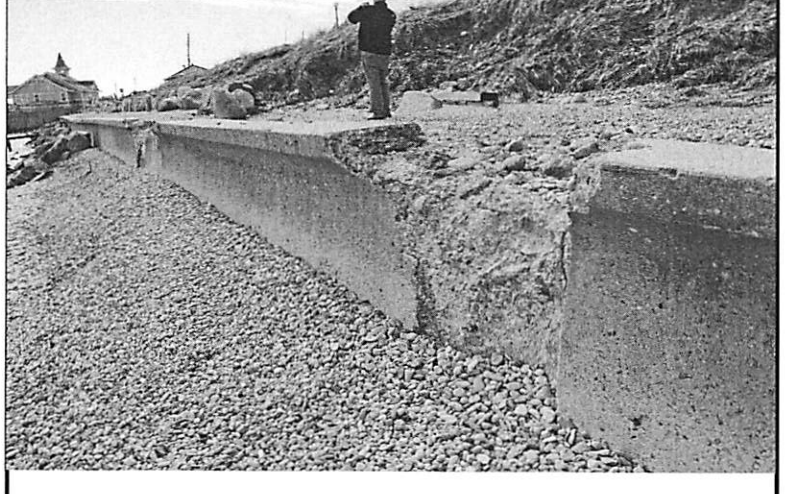
FEDERAL EMERGENCY MANAGEMENT AGENCY

PHOTO SHEET

APPLICANT:	**Town of Oak Bluffs**	DATE:	**03/26/13**
FIPS NO.	**007-50390-00**	PW REF N	**OBDVM03**

Area of damaged wall.

Area of damaged wall



Damaged section of wall

Damaged steps to beach area.

FEDERAL EMERGENCY MANAGEMENT AGENCY

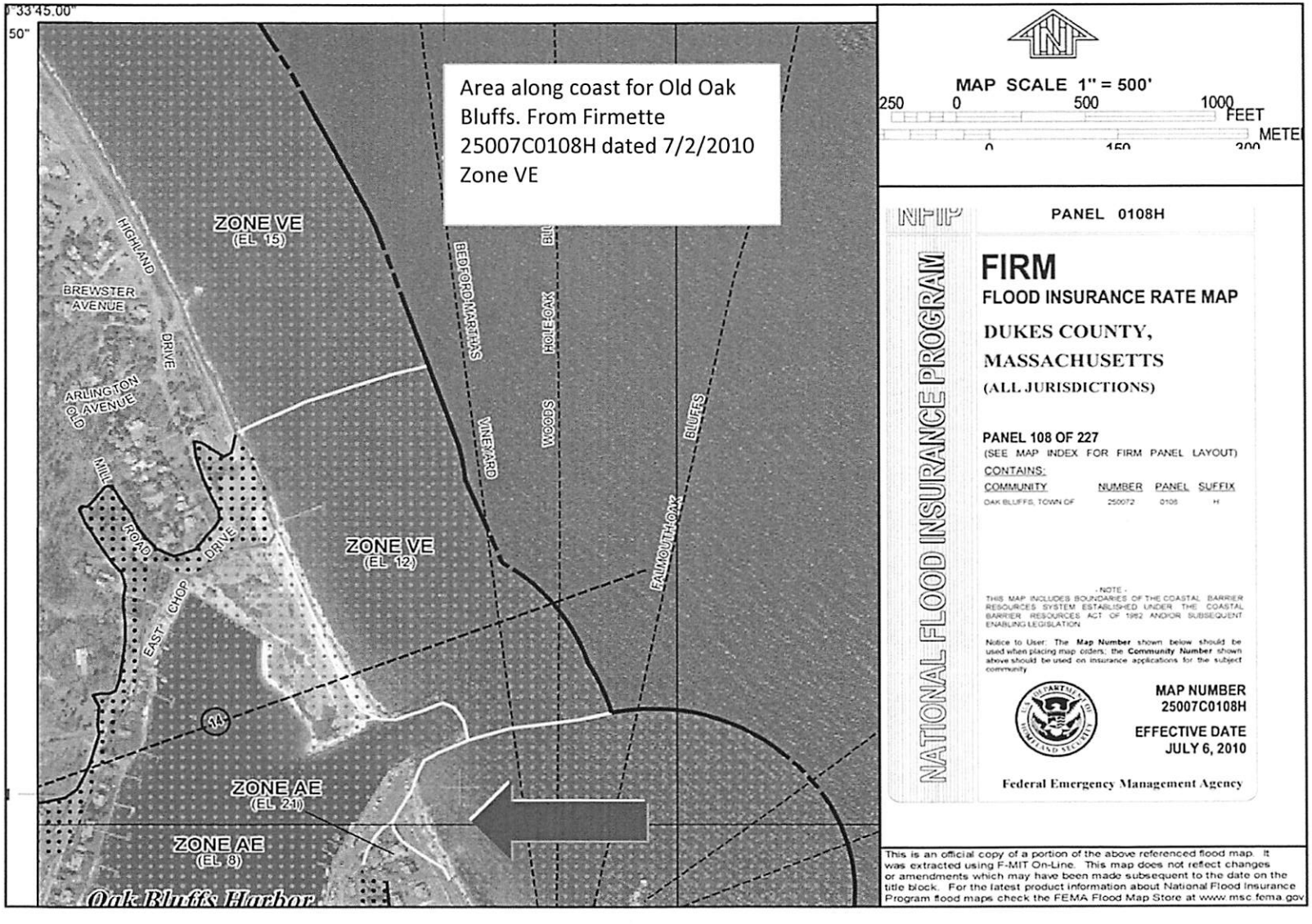
LOCATION MAP

APPLICANT:	**Town of Oak Bluffs**	CATEGORY:	**D**
FIPS NO.	**007-50390-00**	PW REF NO.	**OBLDVM3**

FEDERAL EMERGENCY MANAGEMENT AGENCY

FIRMETTE

APPLICANT:	**Town of Oak Bluffs**	CATEGORY:	**D**
FIPS NO.	**007-50390-00**	PW REF NO.	**OBLDVM3**



CEF Fact Sheet

10/16/2013

Oak Bluffs - Sections of seawall

Date of Estimate:	March 26, 2013
FEMA Region:	I
Preparer(s):	Vincent Masucci, P.S.
Applicant Name:	Oak Bluffs
Project Title:	Sections of seawall
Damaged Facility:	Sections of seawall
Declaration Number:	DR-4097-MA
Project Number:	OBLDVM3
PA ID No.:	007-50390-00
Date of Inspection:	March 13, 2013
Event Date(s)	10/26/2012 - 10/31/2012
Work Category:	D
Type of Work: *(Enter New, Repair, etc.)*	Shoreline Protective Seawall sections damaged by wave action as well as erosion of fill behind wall supporting roadway.

Preparer's Notes:

The applicant proposes to hire contractors to repair sections of the North Bluff Seawall as follows: The State DCR has reviewed the damages at the wall and have stated that the wall has failed and needs total replacement. Wall has been undermined and is leaning. (See engineering letter of condemnation). (Note: The following estimates were determined based upon R.S. Means Heavy Construction Data 2013 and R.S. Means Facilities Cost Construction Data 2013):

(1) Wall repairs: R.S.Means #32 32 13.10 2300 for an 8 ft. cast-in-place concrete retaining wall costs $405/LF x 1.11 CCI = $449.55/LF x 720LF = $323,676.00.

(2) Erosion restoration: R.S. Means # 04 05 13.95 0300 Sand, screened and washed, includes 30 mile haul at $57.50 x 1.11 CCI = For total length to add mounded level of fill measuring 720 LF x 40 ft x 2 ft = 57,600 CF/27 = 2,134 CY x $63.825/CY = $136,202.55. (3) Labor and equipment to install fill per R.S. Means 31 23 23.14 2000 with use of 80 HP backhoe for 2,134 CY at $1.20/CY x 1.11 CCI = $2,842.49.

(4) Installation of cofferdam mobilization per R.S. Means 31 52 16.10 0060 shore driven at $32.00/FL x 1.11 CCI = $35.52 x (720 LF + 40 LF end sections) = $26,995.20.

(5) Installation of cofferdam soldier beams & lagging H piles with 3 inch wood sheeting up to 15 ft depth per R.S. Means 31 52 16.10 0200 at $28.50/LF x 1.11 CCI = $31.64/LF x 760 LF = $24,042.60.

(6) Demolition of existing 8 ft by 2 ft x 720 LF concrete wall per R.S. Means #02 41 16.17 2500/2600 costs for a 12 inch thick wall $24.50/SF x 1.11 CCI = $27.20/SF x (2) 5,760 SF = $313,286.40. Adding 10% for reinforcing = $344,678.40.

(7) Disposal of demolition debris per R.S. Means 02 41 16.17 4250/2620 to five miles = $18.80/CY x 1.11 CCI = $20.87/CY whereas volume = 2 ft x 720 ft x 8 ft = 11,520 CF/27 = 427 CY x $20.87/CY = $8,904.54. Add 20 % for reinforcing = $10,685.44.

(8) Repairs to concrete steps (approximately 7 steps at 36 inch width) estimating concrete pour for base under first step and parging of cracks. Using C-30 crew for R.S. Means for concrete at a cost of $630.62/day for two days = $1,261.24 x 1.11 CCI = $1,399.98.

(9) Addition of Cast-in-place concrete Handicap Ramp Access 108 LF x 5.33 ft. with railings in compliance with ADA regulations: R.S. Means (03 30 53.40 4525) at $625.00/LF x 1.11 CCI = $74,925.00.

(10) Add railings to top of wall as required by International Building Code for 720 LF of wall and 100 LF along steps R.S. Means (05 52 13.50 0640) 1 1/2 inch steel galvanized pipe two rail on stairs at $87.00/LF x 1.11 CCi x 820 LF = $79,187.40.

CEF Notes

Oak Bluffs - Sections of seawall

Damaged Facility:		Sections of seawall
Applicant Name:		Oak Bluffs
Project Number:		OBLDVM3
Date of Estimate:		March 26, 2013
Preparer(s):		Vincent Masucci, P.S.
Part A Notes:	A.1 -	Permanent Work estimate was established based on the eligible Project SOW necessary to restore the facility to predisaster conditions that was provided by Project Specialist's for inclusion in this CEF Estimate. The CEF Estimate was prepared using the Crew daily costs included in RS Means CostWorks 2013 and the local rates for hauling and FEMA COST CODES.
	A.2 -	Non-permanent work had to deal with security of site.
Part B Notes:	B.1 -	General Requirements: The following factors will be applied for the Repairs: (1) Safety & Security will be applied at 4% for the Project work. (2) A 1% Temporary Utilities will be applied. (3) Quality Control will of 1% will be applied and (4) The Submittals Factor will be applied at 5.0% as there will be moderate submittal requirements for this site. No Factors are appropriate and will not be applied for the Non-Permanent work..
	B.2 -	General Conditions Factor will be applied for the onsite project management costs for the Prime Contractor for all Estimated Project Work.
Part C Notes:	C.1 -	Design Phase Scope Contingencies: For the Permanent Repair work only, an estimating contingency factor of 11% and 4% will be applied for this Repairs Project as no design work has been completed at the time of the Estimate was prepared.
	C.2 -	Facility or Project Constructability Factors are not appropriate and will not be applied for the Project work.
	C.3 -	The Access, Storage, and Staging Contingency Factors will be applied for the Permanent Repair for 1%, 2% and 2% for categories due to location. No Factors are appropriate and will not be applied for the Non-Permanent work. The area for work has to be within the embankment area off the roadway.
	C.4 -	Economies of Scale Factor is not appropriate and will not be applied for the Project work.
Part D Notes:	D.1 -	GC's Home Office Overhead Factor is not appropriate and will not be applied for this Project.
	D.2 -	GC's Insurance, Payment & Performance Bonds Factor is appropriate and will be applied for this Project.
	D.3 -	General Contractors Profit Factor is not appropriate since R.S. Means already includes overhead and profit.
Part E Notes:	E -	Cost Escalation Factor will be applied for the Project Work as follows : 6 months
Part F Notes:	F.1 -	At the time of the CEF preparation, no Plan Review Fees were provided by the Applicant so none have been included in this CEF.
	F.2 -	At the time of the CEF preparation, Construction Permit Fees were estimated as part of engineering costs and is reflected above in Part C of this CEF.
Part G Notes:	G.1 -	Applicant's Reserve for Change Orders has not been applied for the Permanent Repair Work. No Factors are appropriate and will not be applied for the Non-Permanent Repairs and HMP work.
Part H Notes:	H.1 -	Applicant's Project Management-Design Phase will be applied at the CEF Factor of 1.0% for all Project work during the development of Contract Documents.

CEF Notes

Oak Bluffs - Sections of seawall

H.2 -	A 14.1% Average Complexity and 3% for basic inspections will be applied to the work to account for onsite Inspection requirements etc.
H.3 -	Project Management-Construction Phase will be applied.
Miscellaneous Notes & Comments:	All work to be completed in accordance with approved instructions from the CZM Coastal Management, U.S. Fish and Wildlife and EPA. All permits are to be obtained by the Town of Oak Bluffs

CEF Part A

Oak Bluffs - Sections of seawall

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
Completed Work Items							
	Completed Permanent Items						
1		per applicant					
2		per applicant					$ -
3		per applicant					$ -
4							$ -
						Completed - Permanent Total	$ -
	Completed Non-Permanent Items						
1							
					$ -		$ -
					$ -		$ -
					$ -		$ -
						Completed - Non-Permanent Total	$ -

CEF Part A

Oak Bluffs - Sections of seawall

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
Uncompleted Work Items							
	Uncompleted Permanent Items						
11	Restoration of seawall, embankment and steps:	R.S. Means					$ -
11	Replacing eroded sand fill behind wall measuring 720 LF x 40 ft x 2 ft = 57,600 CF/27 = 2,134 CY at $57.50 x 1.11 = $63.825/CY = $136,202.55.	#04 05 13.95 0300	2,134.00	CY	$ 57.50	1.1100	$ 136,202.55
12	Backfill using equipment 80 HP	#31 23 23.14 2000	2,134.00	LCY	$ 1.20	1.1100	$ 2,842.49
13	Wall repairs: R.S.Means #32 32 13.10 2300 for an 8 ft. cast-in-place concrete retaining wall costs $405/LF x 1.11 CCI = $449.55/LF x 720LF = $323,676.00.	32 23 13.10 2300	720.00	LF	$ 405.00	1.1100	$ 323,676.00
16	Use of Cofferdam to protect installation from wave/tidal action mobilization/demobilization costs shore driven.	31 52 16.10 0060	760.00	LF	$ 32.00	1.1100	$ 26,995.20
17	Installation of cofferdam soldier beams/lagging H piles with 3 inch wood sheeting up to 15 feet.	31 52 16.10 0200	760.00	LF	$ 28.50	1.1100	$ 24,042.60
17	Removal and demo of concrete wall sections for 8 ft x 720 ft = 5,760 SF x 2 since wall is two ft thick and R.S. Means is for 12 inch wall. Therefore area is 11,520 SF	02 41 16.17 2500	11,520.00	LF	$ 24.50	1.1100	$ 313,286.40
	Additional cost of 10% when reinforced with steel rods	02 41 16.17 2600	0.10	EA	$ 313,286.40	1.1100	$ 34,774.79
18	Using Crew C-30 for concrete repairs to steps costing $620.62/day for two days. Replace railing. (R.S. Means 03 31 05.25 0125).	Use Crew C-30	2.00	Days	$ 630.62	1.1100	$ 1,399.98
	Disposal of concrete up to five miles is $18.80/CY for 2 ft x 720 ft x 8 ft wall = 11,520 CF/27 = 427 CY	02 41 16.17 4250	427.00	CY	$ 18.80	1.1100	$ 8,910.64
	Add 20% for disposal with reinforcing rods	02 41 16.17 2620	0.20	EA	$ 8,910.64	1.0000	$ 1,782.13
	(9) Addition of Cast-in-place concrete Handicap Ramp Access 108 LF x 5.33 ft. with railings in compliance with ADA regulations: R.S. Means (03 30 53.40 4525) at $625.00/LF x 1.11 CCI = $74,925.00.	03 30 53.40 4525	108.00	LF	$ 625.00	1.1100	$ 74,925.00
	(10) Add railings to top of wall as required by International Building Code for 720 LF of wall and 100 LF along steps R.S. Means (05 52 13.50 0640) 1 1/2 inch steel galvanized pipe two rail on stairs at $87.00/LF x 1.11 CCi x 820 LF = $79,187.40.	05 52 13.50 0640	820.00	LF	$ 87.00	1.1100	$ 79,187.40
					$ -		$ -
					$ -		$ -

CEF Part A

Oak Bluffs - Sections of seawall

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
					$ -		$ -
						Uncompleted - Permanent Total	$ 1,028,025.17
	Uncompleted Non-Permanent Items						
1							$ -
1							$ -
					$ -		$ -
					$ -		$ -
						Uncompleted - Non-Permanent Total	$ -
						TOTAL PART A BASE CONSTRUCTION COST	$ 1,028,025.17

CEF Summary of Uncompleted Work

Oak Bluffs - Sections of seawall

		Shoreline Protective Seawall sections					Total
		$ -	$ -	$ -	$ -		
A	**"Base Costs" for Construction Work-In Trades**						
A.1	Permanent Work (CEF Part A)	$ 1,028,025					$ 1,028,025
A.2	Non-Permanent Job Specific Work (CEF Part A)						$ -
	Part A Total	$ 1,028,025	$ -	$ -	$ -	$ -	$ 1,028,025
B	**General Requirements and General Conditions**						
B.1	General Requirements	Guide Low to High	Enter % in Appropriate Column				
	Safety & Security	4% 6.0%	6.0%				
	Temporary Services & Utilities	0% 1.0%	1.0%				
	Quality Control	0% 1.0%	1.0%				
	Submittals	0% 5.0%	5.0%				
			$ 133,643	$ -	$ -	$ -	$ -	$ 133,643
B.2	General Conditions (4.25%)		☑	☐	☐	☐	☐	
			$ 43,691	$ -	$ -	$ -	$ -	$ 43,691
	Part B Total		$ 177,334	$ -	$ -	$ -	$ -	$ 177,334
	PART A through B SUBTOTAL		$ 1,205,359	$ -	$ -	$ -	$ -	$ 1,205,359
C	**Construction Cost Contingencies**						
C.1	Design-Phase Scope Contingencies	Guide Low to High	Enter % in Appropriate Column				
	Preliminary Engineering Analysis	7.0% 20.0%	15.0%				
	Working Drawings	2.0% 10.0%					
			$ 180,804	$ -	$ -	$ -	$ -	$ 180,804
C.2	Facility or Project Constructability		Enter % in Appropriate Column				
	Facility or Project Type and Complexity	See IG for Values					
			$ -	$ -	$ -	$ -	$ -	$ -
C.3	Access, Storage & Staging	Guide Low to High	Enter % in Appropriate Column				
	Access Contingencies	0.0% 4.0%	2.0%				
	Storage Contingencies	0.0% 4.0%	3.0%				
	Staging Contingencies	0.0% 4.0%	3.0%				
			$ 96,429	$ -	$ -	$ -	$ -	$ 96,429
C.4	Economies of Scale		☑	☐	☐	☐	☐	
			-0.7%	0.0%	0.0%	0.0%	0.0%	
			$ (8,802)	$ -	$ -	$ -	$ -	$ (8,802)
	Part C Total		$ 268,431	$ -	$ -	$ -	$ -	$ 268,431
	PART A through C SUBTOTAL		$ 1,473,790	$ -	$ -	$ -	$ -	$ 1,473,790
D	**General Contractor's Overhead and Profit**						
D.1	GC's Home Office Overhead	7.7%	☐	☐	☐	☐	☐	
			$ -	$ -	$ -	$ -	$ -	$ -
D.2	GC's Insurance, Payment & Performance Bonds	3.3%	☑	☐	☐	☐	☐	
			$ 48,635	$ -	$ -	$ -	$ -	$ 48,635
D.3	General Contractor's Profit						
			6.5%	0.0%	0.0%	0.0%	0.0%	
	New Construction		☑	☐	☐	☐	☐	
	Repair/Retrofit		☐	☐	☐	☐	☐	
			$ 99,222	$ -	$ -	$ -	$ -	$ 99,222
	Part D Total		$ 147,857	$ -	$ -	$ -	$ -	$ 147,857
	PART A through D SUBTOTAL		$ 1,621,648	$ -	$ -	$ -	$ -	$ 1,621,648

CEF Summary of Uncompleted Work

Oak Bluffs - Sections of seawall

		Shoreline Protective Seawall sections	$ -	$ -	$ -	$ -	Total
E	**Cost Escalation Factors**						
	Cost Escalation Factor						
		Months	6				
		Monthly Factor	0.221%				
		Part E Total	$ 21,503	$ -	$ -	$ -	$ -	$ 21,503
		PART A through E SUBTOTAL	$ 1,643,151	$ -	$ -	$ -	$ -	$ 1,643,151
F	**Plan Review and Permit Construction Cost**						
F.1	Plan Review Fees						
	(List Individual Requirements Separately)						
			$ -	$ -	$ -	$ -	$ -	$ -
F.2	Construction Permit Fees						
	(List Individual Requirements Separately)						
			$ -	$ -	$ -	$ -	$ -	$ -
		Part F Total	$ -	$ -	$ -	$ -	$ -	$ -
		PART A through F SUBTOTAL	$ 1,643,151	$ -	$ -	$ -	$ -	$ 1,643,151
G	**Applicant's Reserve for Change Orders**						
	Applicant's Reserve for Change Orders		☑ 3.6%	☐ 7.0%	☐ 7.0%	☐ 7.0%	☐ 7.0%	
		PART G Total	$ 59,053	$ -	$ -	$ -	$ -	$ 59,053
		PART A through G SUBTOTAL	$ 1,702,203	$ -	$ -	$ -	$ -	$ 1,702,203
H	**Applicant's Project Management And Design Costs**						
H.1	Applicant's Project Management - Design Phase 1.0%		☑	☐	☐	☐	☐	
			$ 17,022	$ -	$ -	$ -	$ -	$ 17,022
H.2	A/E Design Contract Applicability						
	Above Average Complexity (Curve A)		☐ 14.9%	☐ 5.6%	☐ 5.6%	☐ 5.6%	☐ 5.6%	
	Average Complexity (Curve B)		☑ 10.7%	☐ 4.5%	☐ 4.5%	☐ 4.5%	☐ 5.6%	
	Basic Construction Inspection Services		☐ 3.0%	☐ 3.0%	☐ 3.0%	☐ 3.0%	☐ 3.0%	
	A/E Design Contract Cost						
	Above Average Complexity (Curve A)		$ -	$ -	$ -	$ -	$ -	
	Average Complexity (Curve B)		$ 182,669	$ -	$ -	$ -	$ -	
	Basic Construction Inspection Services		$ -	$ -	$ -	$ -	$ -	
			$ 182,669	$ -	$ -	$ -	$ -	$ 182,669
H.3	Project Management - Construction Phase		☑ 3.5%	☐ 6.0%	☐ 6.0%	☐ 6.0%	☐ 6.0%	
			$ 58,951	$ -	$ -	$ -	$ -	$ 58,951
		Part H Total	$ 258,642	$ -	$ -	$ -	$ -	$ 258,642
		PART A through H SUBTOTAL	$ 1,960,845	$ -	$ -	$ -	$ -	$ 1,960,845
TOTAL OF UNCOMPLETED WORK								**$ 1,960,845**

CEF Total Project Summary

Summary

Oak Bluffs - Sections of seawall

		Completed	Uncompleted	Total
	Complete Project Total for Completed and Uncompleted Work	$ -	$ 1,960,845	$ 1,960,845
PART A	**"Base Costs" for Construction Work In Trades**	$ -	$ 1,028,025	$ 1,028,025
	A.1 Permanent Work	$ -	$ 1,028,025	$ 1,028,025
	A.2 Non-Permanent Job Specific Work (CEF Part A)	$ -	$ -	$ -
PART B	**General Requirements and General Conditions**	$ -	$ 177,334	$ 177,334
	B.1 General Requirements	$ -	$ 133,643	$ 133,643
	B.2 General Conditions	$ -	$ 43,691	$ 43,691
PART C	**Construction Cost Contingencies (Design and Construction)**	$ -	$ 268,431	$ 268,431
	C.1 Standard Design-Phase Scope Contingencies	$ -	$ 180,804	$ 180,804
	C.2 Facility or Project Constructability	$ -	$ -	$ -
	C.3 Access, Storage, and Staging Contingencies	$ -	$ 96,429	$ 96,429
	C.4 Economies of Scale in New Construction	$ -	$ (8,802)	$ (8,802)
PART D	**General Contractor's Overhead and Profit**	$ -	$ 147,857	$ 147,857
	D.1 General Contractor's Home Office Overhead Costs	$ -	$ -	$ -
	D.2 General Contractor's Insurance, Payment, and Performance Bonds	$ -	$ 48,635	$ 48,635
	D.3 Contractor's Profit	$ -	$ 99,222	$ 99,222
PART E	**Cost Escalation Allowance**	$ -	$ 21,503	$ 21,503
PART F	**Plan Review and Construction Permit Costs**	$ -	$ -	$ -
	F.1 Plan Review Fees	$ -	$ -	$ -
	F.2 Construction Permit Fees	$ -	$ -	$ -
PART G	**Applicant's Reserve for Construction**	$ -	$ 59,053	$ 59,053
PART H	**Applicant's Project Management and Design Costs**	$ -	$ 258,642	$ 258,642
	H.1 Applicant's Project Management - Design Phase	$ -	$ 17,022	$ 17,022
	H.2 Architecture & Engineering Design Contract Costs	$ -	$ 182,669	$ 182,669
	H.3 Project Management - Construction Phase	$ -	$ 58,951	$ 58,951

CEF Fact Sheet

10/16/2013

Oak Bluffs - Sections of seawall

Date of Estimate:	March 26, 2013
FEMA Region:	I
Preparer(s):	Vincent Masucci, P.S.
Applicant Name:	Oak Bluffs
Project Title:	Sections of seawall
Damaged Facility:	Sections of seawall
Declaration Number:	DR-4097-MA
Project Number:	OBLDVM3 with MITIGATION
PA ID No.:	007-50390-00
Date of Inspection:	March 13, 2013
Event Date(s)	10/26/2012 - 10/31/2012
Work Category:	D
Type of Work: *(Enter New, Repair, etc.)*	Shoreline Protective Seawall sections damaged by wave action as well as erosion of fill behind wall supporting roadway.

Preparer's Notes:

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CEF Notes

10/16/2013

Oak Bluffs - Sections of seawall

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	D.2 -	GC's Insurance, Payment & Performance Bonds Factor is appropriate and will be applied for this Project.
	D.3 -	General Contractors Profit Factor is not appropriate since R.S. Means already includes overhead and profit.
Part E Notes:	E -	Cost Escalation Factor will be applied for the Project Work as follows : 6 months
Part F Notes:	F.1 -	At the time of the CEF preparation, no Plan Review Fees were provided by the Applicant so none have been included in this CEF.
	F.2 -	At the time of the CEF preparation, Construction Permit Fees were estimated as part of engineering costs and is reflected above in Part C of this CEF.
Part G Notes:	G.1 -	Applicant's Reserve for Change Orders has not been applied for the Permanent Repair Work. No Factors are appropriate and will not be applied for the Non-Permanent Repairs and HMP work.
Part H Notes:	H.1 -	Applicant's Project Management-Design Phase will be applied at the CEF Factor of 1.0% for all Project work during the development of Contract Documents.

CEF Notes

10/16/2013

Oak Bluffs - Sections of seawall

H.2 -	A 14.1% Average Complexity and 3% for basic inspections will be applied to the work to account for onsite Inspection requirements etc.
H.3 -	Project Management-Construction Phase will be applied.
Miscellaneous Notes & Comments:	All work to be completed in accordance with approved instructions from the CZM Coastal Management, U.S. Fish and Wildlife and EPA. All permits are to be obtained by the Town of Oak Bluffs

CEF Part A

10/16/2013

Oak Bluffs - Sections of seawall

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
Completed Work Items							
	Completed Permanent Items						
1		per applicant					
2		per applicant					$ -
3		per applicant					$ -
4							$ -
						Completed - Permanent Total	$ -
	Completed Non-Permanent Items						
1							
					$ -		$ -
					$ -		$ -
					$ -		$ -
						Completed - Non-Permanent Total	$ -

CEF Part A

Oak Bluffs - Sections of seawall

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
Uncompleted Work Items							
	Uncompleted Permanent Items						
11	Restoration of seawall, embankment and steps:	R.S. Means					$ -
	MITIGATION: Additional fill to be added to embankment behind extended wall: R.S. Means # 04 05 13.95 0300 Sand, screened and washed, includes 30 mile haul at $57.50 x 1.11 CCI = For total length to add mounded level of fill measuring 720 LF x 40 ft x 4 ft x 1/2 = 57,600 CF/27 = 2,134 CY x $63.825/CY = $136,160.00.	#04 05 13.95 0300	2,134.00	CY	$ 57.50	1.1100	$ 136,202.55
11	Replacing eroded sand fill behind wall measuring 720 LF x 40 ft x 2 ft = 57,600 CF/27 = 2,134 CY at $57.50 x 1.11 = $63.825/CY = $136,202.55.	#04 05 13.95 0300	2,134.00	CY	$ 57.50	1.1100	$ 136,202.55
12	Backfill using equipment 80 HP	#31 23 23.14 2000	2,134.00	LCY	$ 1.20	1.1100	$ 2,842.49
12	MITIGATION: Backfill using equipment 80 HP	#31 23 23.14 2000	2,134.00	LCY	$ 1.20	1.1100	$ 2,842.49
13	MITIGATION: R.S. Means #32 32 13.10 3100 using a Concrete reinforced cantilever wall measuring up to 12 ft high and interpolating between a 10 ft and 20 ft = 20% x $1250/LF = $250 to be added to a 10 ft wall design at a cost of $455/LF = $705/LF x 1.11 CCI = $782.55/LF x 720 LF = $563,436.00	32 32 13.10 3100	720.00	LF	$ 705.00	1.1100	$ 563,436.00
16	Use of Cofferdam to protect installation from wave/tidal action mobilization/demobilization costs shore driven.	31 52 16.10 0060	760.00	LF	$ 32.00	1.1100	$ 26,995.20
17	Installation of cofferdam soldier beams/lagging H piles with 3 inch wood sheeting up to 15 feet.	31 52 16.10 0200	760.00	LF	$ 28.50	1.1100	$ 24,042.60
17	Removal and demo of concrete wall sections for 8 ft x 720 ft = 5,760 SF x 2 since wall is two ft thick and R.S. Means is for 12 inch wall. Therefore area is 11,520 SF	02 41 16.17 2500	11,520.00	LF	$ 24.50	1.1100	$ 313,286.40
	Additional cost of 10% when reinforced with steel rods	02 41 16.17 2600	0.10	EA	$ 313,286.40	1.1100	$ 34,774.79
18	Using Crew C-30 for concrete repairs to steps costing $620.62/day for two days. Replace railing. (R.S. Means 03 31 05.25 0125).	Use Crew C-30	2.00	Days	$ 630.62	1.1100	$ 1,399.98
19	Disposal of concrete up to five miles is $18.80/CY for 2 ft x 720 ft x 8 ft wall = 11,520 CF/27 = 427 CY	02 41 16.17 4250	427.00	CY	$ 18.80	1.1100	$ 8,910.64
20	Add 20% for disposal with reinforcing rods	02 41 16.17 2620	0.20	EA	$ 8,910.64	1.0000	$ 1,782.13
21	(9) Addition of Cast-in-place concrete Handicap Ramp Access 108 LF x 5.33 ft. with railings in compliance with ADA regulations: R.S. Means (03 30 53.40 4525) at $625.00/LF x 1.11 CCI = $74,925.00.	03 30 53.40 4525	108.00	LF	$ 625.00	1.1100	$ 74,925.00
22	(10) Add railings to top of wall as required by International Building Code for 720 LF of wall and 100 LF along steps R.S. Means (05 52 13.50 0640) 1 1/2 inch steel galvanized pipe two rail on stairs at $87.00/LF x 1.11 CCi x 820 LF = $79,187.40.	05 52 13.50 0640	820.00	LF	$ 87.00	1.1100	$ 79,187.40

CEF Part A

Oak Bluffs - Sections of seawall

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
					$ -		$ -
					$ -		$ -
					$ -		$ -
						Uncompleted - Permanent Total	$ 1,406,830.21
	Uncompleted Non-Permanent Items						
1							$ -
1							$ -
					$ -		$ -
					$ -		$ -
						Uncompleted - Non-Permanent Total	$ -
						TOTAL PART A BASE CONSTRUCTION COST	$ 1,406,830.21

CEF Summary of Uncompleted Work

10/16/2013

Oak Bluffs - Sections of seawall

		Shoreline Protective Seawall sections	$ -	$ -	$ -	$ -	Total
A	**"Base Costs" for Construction Work-In Trades**						
A.1	Permanent Work (CEF Part A)	$ 1,406,830					$ 1,406,830
A.2	Non-Permanent Job Specific Work (CEF Part A)						$ -
	Part A Total	$ 1,406,830	$ -	$ -	$ -	$ -	$ 1,406,830
B	**General Requirements and General Conditions**						
B.1	General Requirements	Guide Low to High	Enter % in Appropriate Column				
	Safety & Security	4% 6.0%	6.0%				
	Temporary Services & Utilities	0% 1.0%	1.0%				
	Quality Control	0% 1.0%	1.0%				
	Submittals	0% 5.0%	5.0%				
		$ 182,888	$ -	$ -	$ -	$ -	$ 182,888
B.2	General Conditions (4.25%)	☑	☐	☐	☐	☐	
		$ 59,790	$ -	$ -	$ -	$ -	$ 59,790
	Part B Total	$ 242,678	$ -	$ -	$ -	$ -	$ 242,678
	PART A through B SUBTOTAL	$ 1,649,508	$ -	$ -	$ -	$ -	$ 1,649,508
C	**Construction Cost Contingencies**						
C.1	Design-Phase Scope Contingencies	Guide Low to High	Enter % in Appropriate Column				
	Preliminary Engineering Analysis	7.0% 20.0%	15.0%				
	Working Drawings	2.0% 10.0%					
		$ 247,426	$ -	$ -	$ -	$ -	$ 247,426
C.2	Facility or Project Constructability		Enter % in Appropriate Column				
	Facility or Project Type and Complexity	See IG for Values					
		$ -	$ -	$ -	$ -	$ -	$ -
C.3	Access, Storage & Staging	Guide Low to High	Enter % in Appropriate Column				
	Access Contingencies	0.0% 4.0%	2.0%				
	Storage Contingencies	0.0% 4.0%	3.0%				
	Staging Contingencies	0.0% 4.0%	3.0%				
		$ 131,961	$ -	$ -	$ -	$ -	$ 131,961
C.4	Economies of Scale	☑	☐	☐	☐	☐	
		-0.8%	0.0%	0.0%	0.0%	0.0%	
		$ (13,945)	$ -	$ -	$ -	$ -	$ (13,945)
	Part C Total	$ 365,442	$ -	$ -	$ -	$ -	$ 365,442
	PART A through C SUBTOTAL	$ 2,014,950	$ -	$ -	$ -	$ -	$ 2,014,950
D	**General Contractor's Overhead and Profit**						
D.1	GC's Home Office Overhead 7.7%	☐	☐	☐	☐	☐	
		$ -	$ -	$ -	$ -	$ -	$ -
D.2	GC's Insurance, Payment & Performance Bonds 3.3%	☑	☐	☐	☐	☐	
		$ 66,493	$ -	$ -	$ -	$ -	$ 66,493
D.3	General Contractor's Profit						
		5.7%	0.0%	0.0%	0.0%	0.0%	
	New Construction	☑	☐	☐	☐	☐	
	Repair/Retrofit	☐	☐	☐	☐	☐	
		$ 119,374	$ -	$ -	$ -	$ -	$ 119,374
	Part D Total	$ 185,868	$ -	$ -	$ -	$ -	$ 185,868
	PART A through D SUBTOTAL	$ 2,200,818	$ -	$ -	$ -	$ -	$ 2,200,818

CEF Summary of Uncompleted Work

Oak Bluffs - Sections of seawall

	Shoreline Protective Seawall sections	$ -	$ -	$ -	$ -		Total
E	**Cost Escalation Factors**						
Cost Escalation Factor							
	Months	6					
	Monthly Factor	0.221%					
Part E Total		$ 29,183	$ -	$ -	$ -	$ -	$ 29,183
PART A through E SUBTOTAL		$ 2,230,001	$ -	$ -	$ -	$ -	$ 2,230,001
F	**Plan Review and Permit Construction Cost**						
F.1 Plan Review Fees							
(List Individual Requirements Separately)							
		$ -	$ -	$ -	$ -	$ -	$ -
F.2 Construction Permit Fees							
(List Individual Requirements Separately)							
		$ -	$ -	$ -	$ -	$ -	$ -
Part F Total		$ -	$ -	$ -	$ -	$ -	$ -
PART A through F SUBTOTAL		$ 2,230,001	$ -	$ -	$ -	$ -	$ 2,230,001
G	**Applicant's Reserve for Change Orders**						
Applicant's Reserve for Change Orders		☑ 3.0%	☐ 7.0%	☐ 7.0%	☐ 7.0%	☐ 7.0%	
PART G Total		$ 66,900	$ -	$ -	$ -	$ -	$ 66,900
PART A through G SUBTOTAL		$ 2,296,901	$ -	$ -	$ -	$ -	$ 2,296,901
H	**Applicant's Project Management And Design Costs**						
H.1 Applicant's Project Management - Design Phase	1.0%	☑	☐	☐	☐	☐	
		$ 22,969	$ -	$ -	$ -	$ -	$ 22,969
H.2 A/E Design Contract Applicability							
Above Average Complexity (Curve A)		☐ 14.0%	☐ 5.6%	☐ 5.6%	☐ 5.6%	☐ 5.6%	
Average Complexity (Curve B)		☑ 10.4%	☐ 4.5%	☐ 4.5%	☐ 4.5%	☐ 5.6%	
Basic Construction Inspection Services		☐ 3.0%	☐ 3.0%	☐ 3.0%	☐ 3.0%	☐ 3.0%	
A/E Design Contract Cost							
Above Average Complexity (Curve A)		$ -	$ -	$ -	$ -	$ -	
Average Complexity (Curve B)		$ 239,317	$ -	$ -	$ -	$ -	
Basic Construction Inspection Services		$ -	$ -	$ -	$ -	$ -	
		$ 239,317	$ -	$ -	$ -	$ -	$ 239,317
H.3 Project Management - Construction Phase		☑ 3.3%	☐ 6.0%	☐ 6.0%	☐ 6.0%	☐ 6.0%	
		$ 75,027	$ -	$ -	$ -	$ -	$ 75,027
Part H Total		$ 337,313	$ -	$ -	$ -	$ -	$ 337,313
PART A through H SUBTOTAL		$ 2,634,214	$ -	$ -	$ -	$ -	$ 2,634,214
TOTAL OF UNCOMPLETED WORK							**$ 2,634,214**

CEF Total Project Summary

10/16/2013

Summary

Oak Bluffs - Sections of seawall

		Completed	Uncompleted	Total
	Complete Project Total for Completed and Uncompleted Work	**$ -**	**$ 2,634,214**	**$ 2,634,214**
PART A	**"Base Costs" for Construction Work In Trades**	**$ -**	**$ 1,406,830**	**$ 1,406,830**
	A.1 Permanent Work	$ -	$ 1,406,830	$ 1,406,830
	A.2 Non-Permanent Job Specific Work (CEF Part A)	$ -	$ -	$ -
PART B	**General Requirements and General Conditions**	**$ -**	**$ 242,678**	**$ 242,678**
	B.1 General Requirements	$ -	$ 182,888	$ 182,888
	B.2 General Conditions	$ -	$ 59,790	$ 59,790
PART C	**Construction Cost Contingencies (Design and Construction)**	**$ -**	**$ 365,442**	**$ 365,442**
	C.1 Standard Design-Phase Scope Contingencies	$ -	$ 247,426	$ 247,426
	C.2 Facility or Project Constructability	$ -	$ -	$ -
	C.3 Access, Storage, and Staging Contingencies	$ -	$ 131,961	$ 131,961
	C.4 Economies of Scale in New Construction	$ -	$ (13,945)	$ (13,945)
PART D	**General Contractor's Overhead and Profit**	**$ -**	**$ 185,868**	**$ 185,868**
	D.1 General Contractor's Home Office Overhead Costs	$ -	$ -	$ -
	D.2 General Contractor's Insurance, Payment, and Performance Bonds	$ -	$ 66,493	$ 66,493
	D.3 Contractor's Profit	$ -	$ 119,374	$ 119,374
PART E	**Cost Escalation Allowance**	**$ -**	**$ 29,183**	**$ 29,183**
PART F	**Plan Review and Construction Permit Costs**	**$ -**	**$ -**	**$ -**
	F.1 Plan Review Fees	$ -	$ -	$ -
	F.2 Construction Permit Fees	$ -	$ -	$ -
PART G	**Applicant's Reserve for Construction**	**$ -**	**$ 66,900**	**$ 66,900**
PART H	**Applicant's Project Management and Design Costs**	**$ -**	**$ 337,313**	**$ 337,313**
	H.1 Applicant's Project Management - Design Phase	$ -	$ 22,969	$ 22,969
	H.2 Architecture & Engineering Design Contract Costs	$ -	$ 239,317	$ 239,317
	H.3 Project Management - Construction Phase	$ -	$ 75,027	$ 75,027