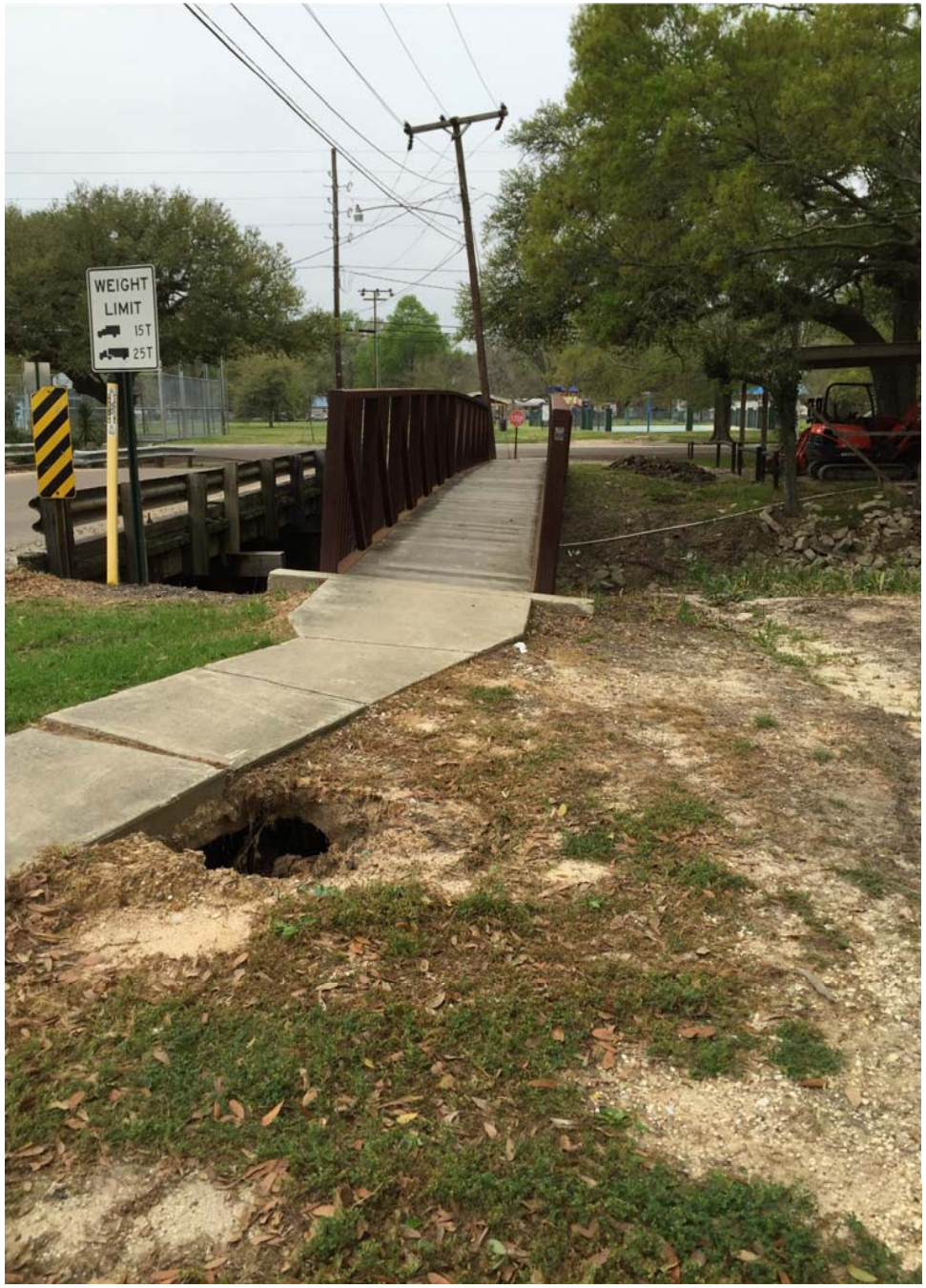
Phoenix Square Pedestrian Bridge Repair

Summary Description: High water in Arnolds Creek (W2-L2) apparently saturated the east abutment of the pedestrian bridge. (See sink hole in photo). When the water subsided, a cave in occurred causing the east abutment of the bridge to settle about 8". The bridge seems intact; however, to remain ADA compliant, the following work is recommended:

Concrete Removal	$	716.80
Excavation of Storm Drain	$	2,360.21
Culvert, Coil, Compaction, Catch Basin	$	5,270.00
Bridge Removal/Replacement	$	20,000.00
Concrete Sidewalk	$	2,000.00
Abutment Forming, Concrete	$	3,270.00
Miscellaneous	$	1,849.00
Contingency	$	1,064.00
Contractor's O&P	$	8,073.00
TOTAL	**$**	**44,603.01**


WEIGHT
LIMIT
15T
25T

PA-06-LA-4263-PW-00194(0) P	
Applicant Name:	Application Title:
HAMMOND	HMD001C Pedestrian Walkway Bridge
Period of Performance Start:	Period of Performance End:
03-13-2016	09-13-2017

Bundle Reference # (Amendment #)	Date Awarded

Subgrant Application - FEMA Form 90-91

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

FEDERAL EMERGENCY MANAGEMENT AGENCY
PROJECT WORKSHEET

DISASTER					PROJECT NO.	PA ID NO.	DATE	CATEGORY
FEMA	4263	-	DR	-LA	HMD001C	105-32755-00	06-06-2016	C

APPLICANT: HAMMOND

WORK COMPLETE AS OF:
07-06-2016 : 0 %

Site 1 of 1

DAMAGED FACILITY:

Pedestrian Walkway Bridge

COUNTY: St. Tammany Tangipahoa

LOCATION:

Current Version:
GPS coordinates: 30.494176, -90.473720

Intersection of Phoenix Square and Mooney Avenue, Hammond, LA

LATITUDE: 30.494176

LONGITUDE: -90.47372

DAMAGE DESCRIPTION AND DIMENSIONS:

Current Version:
During the event period March 8th through April 8th, 2016, the city of Hammond (Applicant) experienced tremendous flooding as a result of torrential rain. High water saturated the earthen base under the sidewalk and bridge abutment causing the sidewalk to crack in several places. The bridge abutment with bearing bench shifted 8 inches leaving voids in the earth (visible in attached photos). Lack of base support, shifting and settling, was the cause of sidewalk and abutment failure and rupture of drain. Pedestrian Walkway Bridge was damaged as follows:

1. Pedestrian Bridge 67-Ft long x 5-Ft Wide clear span bridge with 54-inch tall structural railing sits on concrete abutments at each end as shown in the attached drawing. The east end abutment is 5-feet above a 24-in CMP and slightly on the north side of the abutment. Due to excessive rains saturating the earth, washed out causing the abutment to drop 8 inches, tilting the bridge.

2. Abutment damaged (east end) as follows:
a. Concrete base 9-Ft L x 4-Ft W x 0.5-Ft D
b. Abutment w bearing bench = 7-Ft L x 3-Ft W x 3-Ft H + 7-Ft L x 1-Ft W x 1-Ft D
3. Sidewalk 30-ft long x 5-ft width x 4-in thick damaged
4. CMP Culvert (Storm Drain) 24-in x 50-LF damaged

SCOPE OF WORK:

Current Version:
WORK TO BE COMPLETED:

Applicant will use contract labor to complete repairs. The following costs were estimated using historical costs provided by city engineer; FEMA cost codes and RS Means (attached) provided by FEMA Engineer Richard Graham, NEA/BVI. Notes are provided with each cost to clarify estimates:

1. Pedestrian Bridge 67-Ft long x 5-Ft Wide with 54-inch tall structural railing repaired as follows:
a. The applicant will employ a contractor to move in a crane, detach the bolts holding the bridge to the abutments and lift the bridge to the side so the east side abutment can be replaced. The city's engineer estimated four 8-hour days for use of the crane considering mobilization and demob 2-times. CDH Crane Rental provided local crane rental costs. The company owner said this job would require an 80-Ton crane due to the angle of reach and distance to the middle of the 67-ft long bridge being at least a 40 to 45-ft horizontal distance. The cost is $180.00/hr with 2.5-hrs for mobilization and setup and 2.5-hrs to demobilize leaving 3-hours use in an 8-hr day. It is estimated that the crane would be needed for 12-hrs to remove the bridge (including mob and demob time) x $180/hr = $2,160 x 2 (use same hrs for resetting the bridge) = $4,320. This cost is only for the crane and operator and additional personnel and equipment would be required to prepare a pad to sit the bridge, for detaching the bridge from the abutments and rigging of the bridge for lifting by the crane. The $10,000 for both the bridge removal and another $10,000 for replacing the bridge would cover this cost and is considered reasonable.
Cost for Removal = $10,000 + Bridge Replacement = $10,000)
Total Cost = $20,000

2. Abutment repaired by the following process:
a. Abutment Base: break up and haul concrete base 9-Ft L x 4-Ft W x 0.5-Ft D/27 = 0.67 CY

b. Abutment bearing bench: break up and haul 7-Ft L x 3-Ft W x 3-Ft H = 2.33 CY + 7-Ft L x 1-Ft W x 1-Ft D /27 = 0.26 CY; Total = 2.6 CY
a and b: Cost of Abutment Removal: (CC4050 for CONCRETE REMOVAL, REINFORCED includes breakup and hauling) 0.67 CY + 2.6 CY x $140.00 CY = $457.80

c. Abutment replaced: The cost to pour the new abutment will be 3.27 CY (see attached drawing) x $1,000/CY (local bid costs) = $3,270. (Note, TVA's cost code 3215 at $607.50/CY includes high-strength concrete, building forms and form removal. The engineer used $6,000.00. Since the Local Bid Cost already includes forming, casting and form removal, it seems the $3,270 would cover the necessary cost since material cost for concrete is only about $100/CY).
Abutment Concrete and construction - $3,270.00

Total Repair/replace Abutment Cost: ($457.80 + $3,270.00) = $3,727.80

3. Side Walk replaced:
a. Break up and haul concrete sidewalk 30-ft long x 5-ft width x 0.333 Ft D / 27 = 1.85 CY x $140.00/CY = $259.00

b. Replace Side Walk: Pour concrete for the sidewalk = 30-Ft L x 5-Ft W x 0.333 Ft D / 27 = 1.85-CY of concrete x $1,000/CY = $1,850.00 for 4-in or $2,324.81 for 5-in thickness. The engineer estimated concrete cost to be $1,000/CY (Local Average Bid price for concrete from 4-bids in June 2014 averaging $828/CY 2-years ago so the $1,000/CY appears reasonable). The city engineer estimated $2,000.00 which is the cost used.
Repair/replace Concrete Sidewalk Cost = ($259.00 + $2,000) = $2, 259.00

4. CMP Culvert (Storm Drain) 24-in x 50-LF repaired as follows:
a. The storm drain 24-in CMP culvert will be excavated 75-CY estimated by the city engineer with dimensions averaging 50-ft long x 5.8-ft wide x 7-ft deep / 27 = 75 CY of earth material to be excavated, removed and hauled to the city/county stockpile. The excavation cost is estimated using CC 4021 at $16.63 for removal only x 75-CY = $1,247.25. An 18 CY dump truck would be needed for 8-hrs (75-CY / 18-CY = 4.2 loads) to haul the excavated material to the city/county stockpile using cost code 8723 (18-CY dump) at $77.25/hr x 8-hrs = $618.00. Dump Truck operator using RS Means General Labor Cost is $61.87/hr (includes O&P) x 8-hrs = $494.96.
Cost for Excavation of storm drain = ($1,247.25 + $618.00 + $494.96 = $2,360.21

b. The new 24-in x 50-ft CMP using cost code 3354 at $60.00/LF x 50-ft = $3,000 which includes the culvert, bedding and backfill up to 5-ft deep. Additional fill of 2-ft deep x 50-ft long x 5-ft wide / 27 = 18.5 CY of compactable fill x $20.00/CY = $370.00 (local in place cost of $20.00/CY per the engineer). A storm drain catch basin will be required which will be a 4-ft x 4-ft x 4-ft concrete box with a steel grate at the surface for drainage. This catch basin, which the engineer estimated to be $1,900.00, is for connecting the undamaged 28-in CMP to the new culvert.

Cost for culvert replacement: $3,000.00 (CMP) + $370.00 (Additional Fill) + $1,900.00 (Catch Basin) = $5,270.00

Total Cost Estimate = $457.80 + 259.00 (Concrete removal) + $2,360.21 (Excavation of storm drain) + $5,270.00 (Culvert, coil, compaction, catch basin) + $20,000 (bridge removal and replacement) + $2,000 (Concrete Sidewalk) + $3,270.00 (Abutment forming and concrete) = $33,617.01

In addition, the Cost Estimating Format was used to add onsite and general contractor costs:
1. General Requirements and General Conditions: $1,849.00
2. Construction Cost Contingencies: $1,064.00
3. General Contractors O&P: $8,073.00

Total Estimated Cost = $44,603.00 (CEF attached)

Direct Administrative Cost = $81.22

NOTES:

Pedestrian bridges are not programmed for periodic bridge inspections. Personal visits are done roughly on an annual basis. Procurement policy requires 3 bids. This estimate is a collaboration of FEMA Engineer and Applicant's Engineer providing historical costs.

-- DIRECT ADMINISTRATIVE COSTS: The subgrantee requested Direct Administrative Costs (DAC) that are directly chargeable to this project. Associated eligible work is related administration of the PA project only and in accordance with 2 CFR 200.413. 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.

-- HAZARD MITIGATION PROPOSAL: Hazard Mitigation under section 406 has been considered for this project and due to the type of work or project, effective mitigation is not feasible within the requirements of 44 CFR 206.226(c).

-- PROCUREMENT: The Applicant was advised by FEMA PAC and/or Project Specialist that in the seeking of proposals and letting of contracts for eligible work, the Applicant must comply with its Local, State and/or Federal procurement laws, regulations, and procedures as required by 2 CFR 200.317-326.

-- RECORD RETENTION: As described in 2 CFR 200.33 Subgrantee must maintain all work-related records for a period of three (3) years from Subgrantee closure (final payment), all records relative this project worksheet are subject to examination and audit by the State, FEMA and the Comptroller General of the United States and must reflect work related to disaster specific costs.

-- PERMITS: Federal Funding is contingent upon acquiring all necessary Federal, State and Local permits. Noncompliance with this requirement may jeopardize the receipt of federal funds. The applicant is responsible for obtaining all required permits prior to the commencement of work.

-- AUDIT STATEMENT: All documentation related to this project worksheet is subject to audit and must reflect disaster – related work and project – specific cost. The applicant has been advised of responsibility to maintain supporting documentation (records). The type of records to be maintained is specified in FEMA policy 2 CFR Subpart F, Audit Requirements. Records must be maintained for three 3 years from the date the last project was completed or from the date final payment was received, whichever is later.

-- 75% FEDERAL FUNDING: In accordance with the Stafford Act and current disaster declaration determinations, this project worksheet will be funded at no less than Federal Cost share at 75% of all eligible costs.

-- By accepting this grant the Applicant to the best of their ability acknowledges that all damages described within this Sub-grant Application and all associated costs being claimed were a direct result of the declared event, and in connection with the incident period of 03/08/2016 through 04/08/2016 with the exception of requests for alternate or improved projects.

-- WORK TO BE COMPLETED: Upon completion, this site will be returned to its original design, function, and capacity within the original footprint. Acquiring all necessary Federal, State, and local permits is required for Federal Funding. Noncompliance with this requirement may jeopardize the receipt of Federal funds.

-- SMALL PROJECTS, ANY CATEGORY: For small projects FEMA pays based on the actual or estimated cost in order to expedite the funds (PAPPG pg. 137-139.) FEMA does not perform final inspections on small projects; however, the state must certify compliance. The applicant does have the ability to request a small project netting (appeal) if/when significant net small over-runs occur. This process will involve a review of all documentation for all small projects and an adjustment will be made for the total actual eligible dollars spent (over-run/under-run). A final Project Worksheet will then be required in EMMIE to capture all the eligible PA costs for the small projects.

-- SMALL PROJECT CHANGE REQUEST: Change requests to small project worksheets will not be approved unless there is a change in the approved scope of work. This change must be approved prior to the construction. If after completion of all small projects the applicant incurs a significant net small project overrun, the applicant must file an appeal within 60 day of completion of the applicant's last small project. All requests must be submitted through the grantee.

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
		*** Version 0 ***			
		Work To Be Completed			
1	9003	Contract Costs	1/LS	$ 44,603.00	$ 44,603.00
		Direct Subgrantee Admin Cost			
2	9901	Direct Administrative Costs (Subgrantee)	1/LS	$ 81.22	$ 81.22
				TOTAL COST	$ 44,684.22

PREPARED BY SANDRA CASH	TITLE FEMA Project Specialist	SIGNATURE
APPLICANT REP. Lacy Landrum	TITLE Director of Administration	SIGNATURE Lacy Landrum