

Department of Homeland Security Federal Emergency Management Agency

General Info

Project #	173653	PW #	497	Project Type	Standard
Project Category	G - Parks, Recreational Facilities, and Other Items			Applicant	Bay St. Louis, City of (045-03980-00)
Project Title	Bay St Louis Municipal Harbor and Piers			Event	4576DR-MS (4576DR)
Project Size	Large			Declaration Date	12/31/2020
Activity Completion Date	12/30/2024			Incident Start Date	10/28/2020
				Incident End Date	10/29/2020
Process Step	Pending Recipient Final Review				

Damage Description and Dimensions

The Disaster # 4576DR, which occurred between **10/28/2020** and **10/29/2020**, caused:

Damage #441198; BSL Municipal Harbor

General Facility Information:

- **Facility Type:** Other
- **Facility:** The Bay St. Louis Harbor and Pier are utilized as an easy access to many of the Louisiana marshes and barrier islands.
- **Facility Description:** located in Old Town Bay St. Louis, just 30 miles from Slidell, LA. It serves as a fishing pier and tourists attraction. Contains 160 boat slips and full-boat service restrooms and showers, fuel dock and sewer pump out stations, and a 155 feet x 60 feet events deck. The harbor has the capacity to accommodate vessels upwards of 100 feet.
- **Approx. Year Built:** 2013
- **Location Description:** 100 Jody Compretta Dr., Bay St Louis, Mississippi 39520
- **GPS Latitude/Longitude:** 30.31064, -89.32528

General Damage Information:

- **Date Damaged:** 10/28/2020
- **Cause of Damage:** storm surge, rising waters, strong winds, fast driven rain as of results of Hurricane Zeta

Facility Damage:

Harbor:

Comfort Station - Green Space:

- Mulch, 80 CY of brown hardwood organic matter , [Applicant 's provided estimate], washed away due to storm surge from Hurricane Zeta, 0% work completed.
- landscape, 2 each of zone system Irrigation, [Applicant 's provided estimate], storm surge, rising waters broke from Hurricane Zeta, 0% work completed.

Event Deck:

- Railing, 2 each of aluminum posts, 42 IN long x 2 IN wide x 2 IN thick, damaged due to hurricane force winds, 0% work completed.

Fuel Dock:

- Electrical , 2 each of 30 Amp receptacles, destroyed due to heavy storm surge, 0% work completed.
- Electrical, 2 each of GFI type receptacles, destroyed due to heavy storm surge, 0% work completed.

Main Electrical:

- locking, 2 each of metal locking mechanism , 3 inches apx, broke off by storm surge and strong winds during Hurricane Zeta, 0% work completed.
- storage, 1 each of wood door, 4 FT long x 8 FT high, twisted by storm surge and strong winds during Hurricane Zeta, 0% work completed.

Office - Storage:

- Commercial Flooring , 80 SF of linoleum 1/4 inch thickness, 10 FT long x 8 FT wide, was damaged during the storm surge caused by the Hurricane Zeta , 0% work completed.
- Subfloor, 3 each of Plywood 3/4 inch thickness, 8 FT long x 4 FT wide, is rotten due to storm water surge caused by Hurricane Zeta, 0% work completed.

Office / Trailer Exterior:

- Roofing, commercial, aluminum gutter, 82 LF long, broke off due to high winds caused by Hurricane Zeta, 0% work completed.
- Lattice, 4 each of PVC panels, 8 FT long x 4 FT wide, were broken due to high winds caused by Hurricane Zeta., 0% work completed.
- Lattice, PVC frame (2ftx2ft) , 240 LF long, were blown away during high winds caused by Hurricane Zeta, 0% work completed.
- Door, 1 each of metal exterior door, 36 IN long x 80 IN wide, damaged due to hurricane force winds, 0% work completed.
- Molding, metal door molding, 5 LF long, damaged due to hurricane force winds, 0% work completed.
- Plank, hardy board siding, 10 SF, damaged due to hurricane force winds, 0% work completed.

Office Interior:

- Commercial, 165 SF of Vinyl Tiles (1 feet x 1 feet) each tile, 11 FT long x 15 FT wide, discolored and separated due to surface water caused by Hurricane Zeta, 0% work completed.

Oil containment Area:

- Fence, 1 each of wood dog ear fence panel (5/8 IN x 6 FT HT) 1 piece, 6 IN wide x 6 FT high, was broken due to high winds caused by Hurricane Zeta, 0% work completed.

Parking Lot 1:

- Industrial, 8 each of Inground lights, 12 inch , inoperable, as of results of the high surge, from Hurricane Zeta damaged, 0% work completed.
- Signs, 5 each of galvanized metal poles, 4 IN wide x 10 FT high, twisted and some junked out by storm surge and strong winds during Hurricane Zeta, 0% work completed.
- Drainage, inlet piping, 3000 LF/estimated, clogged by sand, mud and other unknown sediments due to storm surge and strong winds during Hurricane Zeta, 0% work completed.
- Pedestrian ramps , 6 each of LED lights, [Applicant 's provided estimate], inoperable due to storm surge and strong winds during Hurricane Zeta, 0% work completed.
- side walk -by flag pole, 20.5 CY of concrete slab and waterline damage (See/read comments) , 27 FT long x 41 FT wide x 6 IN thick, separated and sunken due to storm surge cause by Hurricane Zeta, 0% work completed.
- Traffic Control, 5 each of aluminum Signs , 12 IN long x 18 IN high, missing due to storm surge during Hurricane Zeta, 0% work completed.

Pedestrian Entrance:

- Sign, 1 each of frame composite aluminum, 14 FT long x 4 FT high, broke off and missing due to storm surge and strong winds during Hurricane Zeta, 0% work completed.
- Fencing, 890 each of wooden spindles, 42 IN long x 2 IN wide x 2 IN thick, damaged due to hurricane force winds, 0% work completed.

South Beach Access Ramp:

- concrete, 28.8889 CY of concrete slab backfill and reset, (see/read comments) , 40 FT long x 13 FT wide x 18 IN deep, sunken due to storm surge from Hurricane Zeta, 0% work completed.
- erosion control, 5.1852 CY of commercial grade riprap slab (replace what's missing), 5 FT long x 14 FT wide x 2 FT deep, washed away due to storm surge from Hurricane Zeta, 0% work completed.

South Parking Lot:

- sidewalk, slab settlement concrete , (See/read comments) , 126 FT long, not broke, rather 4 inches sunken due to storm surge caused by Hurricane Zeta, 0% work completed.
- sidewalk, 0.9877 CY of slab settlement concrete slab (by south tower) , 10 FT long x 8 FT wide x 4 IN thick, sunken and broke due to storm surge caused by Hurricane Zeta, 0% work completed.
- Railing , 10 each of aluminum matte guardrail system components, 10 panels (64 IN Lx 46 IN HT) , broke -off and missing due to storm surge from Hurricane Zeta, 0% work completed.
- Bulkhead, 92.5926 CY of concrete wall and sidewalk, 125 FT long x 10 FT high x 2 FT thick, settled and separated due to erosion from the storm surge, 0% work completed.

South Tower:

- metal, 10 each of stainless steel woven wire mesh - 4.5 mm aperture, 2 FT long x 15 FT high, ripped due to strong winds generated by Hurricane Zeta, 0% work completed.
- mesh, 10 each of stainless steel wire cloth mesh 0.9 mm apx., 2 FT long x 15 FT high, ripped due to storm surge from Hurricane Zeta, 0% work completed.
- door, 1 each of metal latch, 10 IN long x 2.5 IN wide x 0.25 IN thick, broke off due to strong winds from Hurricane Zeta, 0% work completed.
- door, 1 each of metal door, 3 FT wide x 15 FT high, warped, loosened due to storm surge from Hurricane Zeta, 0% work completed.

Trash area:

- Fence, 102 SF of wood board panels (4 sides, each measuring), 17 FT long x 6 FT high, broke away due to storm surge caused by Hurricane Zeta, 0% work completed.
- Poles, 3 each of galvanized support posts for wood fence, 6 FT long x 4 IN in diameter, missing due to storm surge, rising water, strong wind blown as of results of Hurricane Zeta, 0% work completed.

Weather Station:

- Weather Station, 1 each of Model#TE-827-W Meade Instruments, damaged due to high winds, 0% work completed.

Damage #441199; BSL Municipal Harbor

General Facility Information:

- **Facility Type:** Parks, Cemeteries, and Recreational Facilities
- **Facility:** Fishing Pier
- **Facility Description:** The Rutherford Pier it's part of the Bay St. Louis Municipal Harbor, serves as the northern boundary of the harbor basin. The pier length is approximately 1,100 linear feet which includes 4 covered platforms and a 30 feet x 50 feet fishing platform with a 10 feet x 20 feet portion that is covered and is considered as part of the main tourist attraction.
- **Approx. Year Built:** 2013

- **Location Description:** 100 Jody Compretta Drive, Bay of Saint Louis, Mississippi 39520
- **Start GPS Latitude/Longitude:** 30.31157, -89.32419
- **End GPS Latitude/Longitude:** 30.31153, -89.32348

General Damage Information:

- **Date Damaged:** 10/28/2020
- **Cause of Damage:** storm surge, rising water, wins driven rain cause damaged on various locations of the harbor, pier and slips as of results of Hurricane Zeta.

Facility Damage:

Rutherford Fishing Pier:

Site 1:

- Piers, 22 each of marine treated wood timber cap, 10 FT long x 1 FT wide x 14 IN thick, broke off and washed away during the storm surge and fast moving water as of results of Hurricane Zeta, 0% work completed.

Site 2:

- Piers, 60 each of steel fire suppression joint restrain, 10 inches, storm surge and rising water formed rust on pipe clamp as of results of Hurricane Zeta, 0% work completed.

Site 3:

- Piers, 6 each of galvanized standpipe unit, 18 IN long x 10 IN deep, got rusted as a result of the storm surge and rising waters from Hurricane Zeta, 0% work completed.

Site 4:

- Piers, 11 each of solar powered navigational lights, 6 in , broke off by storm surge and strong winds during Hurricane Zeta, 0% work completed.

Site 5:

- Piers, 2 each of metal fire storage cabinet , 4 FT H x 3 FT W x 4 IN D, broke off and washed away by the storm surge due to Hurricane Zeta, 0% work completed.

Site 6:

- Piers, 11 each of Model #SL-C310R green navigation lights, located at the end of Rutherford Pier and the harbor entrance channel, broke off by storm surge and strong winds during Hurricane Zeta, 0% work completed.

Rutherford Fishing Platform:

Site 1:

- Piers, 1 each of vinyl sheet bulkhead system, Approximately 100 LF of 10 ft. (L) x 18 IN. (W) x 1 IN. (T), damaged due to storm surge and strong winds during Hurricane Zeta, 0% work completed.
- Piers, 150 each of galvanized rod fastener system and hardware (washers and bolts), 36 IN. (L) x 1 IN. Diameter, damaged due to storm surge and strong winds during Hurricane Zeta, 0% work completed.
- Piers, 2 each of 248 - LED, Hydrel 8200, 108 - LED, WHT 41K Myolt WFL YM PMSA, 700 MA LP DNA overhead flood lights, damaged due to storm surge and strong winds during Hurricane Zeta , 0% work completed.

Damage #441200; BSL Municipal Harbor

General Facility Information:

- **Facility Type:** Other
- **Facility:** Harbor
- **Facility Description:** Bay St. Louis Municipal Harbor is surrounded by protective walls on the north, east, south and west walls. The harbor contains 4 piers which are supported by concrete piling with timber

structure and decking. The piers vary in width from 10 inches to 12 inches wide and provide access to wet boat slips.

- **Approx. Year Built:** 2013
- **Location Description:** 100 Jody Compretta Drive, Bay of Saint Louis, Mississippi 39520
- **GPS Latitude/Longitude:** 30.31154, -89.32417

General Damage Information:

- **Date Damaged:** 10/28/2020 to 10/29/2020
- **Cause of Damage:** Hurricane force winds and rain along with storm surge

Facility Damage:

Harbor:

- Fire suppression system valves, 150 each of 4 inch ebaa with 316 stainless steel bolts fire suppression system joint restraints, broken - missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Breakwater Wall:

- Lights, 8 each of (Streetlights) Overhead, inoperable due to storm surge caused by Hurricane Zeta, 0% work completed.
- Lights, 3 each of (for light Poles) Dome-Heads, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Signs, 1 each of Aluminum Sign, 24 IN long x 10 IN high, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Expansion joints, rubber pre-molded expansion joints, 12 joints at 12 ft. long = 144 Linear Feet, wash away due to heavy storm surge, 0% work completed.
- Signs, 1 each of aluminum sign, 24 IN long x 10 IN high, missing due to storm surge, 0% work completed.

Pier-1:

- Dock Box, 1 each of Standard 700 - Jumbo (72 IN W x 26.5 IN D x 27.5 IN HT), missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 3 each of Key Fire Treated Hose (1.75IN D X 50FT L), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of Key Fire Treated Hose (50 FT L x 2.5 IN D), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2681 Brass Akron gated wye, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2325 Industrial/Marine-125PSI Akron foam eductors, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of FS95BC TFT Nozzle, 1.5IN, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 432RD High Rise Hose Pack, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Chemguard , 1 each of Class A - 5-Gallon Pail Class A Chemguard Foam, 5-Gallon Pail, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of K-01 Kochek Universal Spanner Wrenches, missing due to storm surge caused by Hurricane Zeta, 0% work completed.

South Side:

- Rails, Commercial Aluminum Matte Handrail - (by stairs), 6.5 FT long, broken - missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Rails, Commercial Aluminum Matte Handrail - (on two sides by sidewalk-on concrete, 26LF x side), 52 FT long, broken - missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Rails, Commercial Aluminum Matte Guard Rail (next to

stairs), 63 LF long, broken - missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Pier-2:

- Dock Box, 1 each of Standard 700 - Jumbo (72 IN W x 26.5 IN D x 27.S IN HT), missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 3 each of Key Fire Treated Hose (1.75IN D X 50FT L), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of Key Fire Treated Hose (50 FT L x 2.5 IN D), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2681 Brass Akron gated wye, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2325 Industrial/Marine-125PSI Akron foam eductors, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of FS95BC TFT Nozzle, 1.5IN, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 432RD High Rise Hose Pack, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Chemguard , 1 each of Class A - 5-Gallon Pail Class A Chemguard Foam, 5-Gallon Pail, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of K-01 Kochek Universal Spanner Wrenches, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Covers, 1 each of Plastic (6 IN D) Water Valve Lid Cover, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Lights, 32 each of (Mounted to concrete Pylons) LED Fixtures (6 IN x 8 IN) and replace wiring, inoperable, due to storm surge caused by Hurricane Zeta, 0% work completed.

Platform:

- Sitting, 1 each of Wheelchair Accessible Round Picnic Table, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Receptacles, 1 each of Steel (34 gallons) Trash Receptacle, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Sitting, 1 each of Aluminum Bench, 8 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Slip-2:

- Hardware, 1 each of Aluminum Dock Cleat (2-2), missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Pier-3:

- Dock Box, 1 each of Standard 700 - Jumbo (72 IN W x 26.5 IN D x 27.S IN HT), missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 3 each of Key Fire Treated Hose (1.75IN D X 50FT L), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of Key Fire Treated Hose (50 FT L x 2.5 IN D), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2681 Brass Akron gated wye, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2325 Industrial/Marine-125PSI Akron foam eductors, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of FS95BC TFT Nozzle, 1.5IN, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 432RD High Rise Hose Pack, missing due to storm surge caused by Hurricane Zeta, 0% work completed.

- Chemguard , 1 each of Class A - 5-Gallon Pail Class A Chemguard Foam, 5-Gallon Pail, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of K-01 Kochek Universal Spanner Wrenches, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Lights, 32 each of (Mounted to concrete Pylons) LED Fixtures (6 IN x 8 IN) and replace wiring, inoperable, due to storm surge caused by Hurricane Zeta, 0% work completed.

Platform:

- Tables, 1 each of Wheelchair Accessible Round Picnic Table, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Receptacles, 1 each of Steel (34 gallons) Trash Receptacle, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Sitting, 1 each of Aluminum Bench, 8 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Slip-3:

- Docks, 5 each of Aluminum Dock Cleat (3-8, 3-25, 3-35, 3-39, 3-49], missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Pier-4:

- Dock Box, 1 each of Standard 700 - Jumbo (72 IN W x 26.5 IN D x 27.5 IN HT), missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 3 each of Key Fire Treated Hose (1.75IN D X 50FT L), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 3 each of Key Fire Treated Hose (50 FT L x 2.5 IN D), 50 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2681 Brass Akron gated wye, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 2325 Industrial/Marine-125PSI Akron foam eductors, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of FS95BC TFT Nozzle, 1.5IN, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 1 each of 432RD High Rise Hose Pack, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Chemguard, 1 each of Class A - 5-Gallon Pail Class A Chemguard Foam, 5-Gallon Pail, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Tools, 2 each of K-01 Kochek Universal Spanner Wrenches, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Lights, 32 each of (Mounted to concrete Pylons) LED Fixtures (6 IN x 8 IN) and replace wiring, inoperable, due to storm surge caused by Hurricane Zeta, 0% work completed.
- Docks, 2 each of Conduit Wire Pedestal Hypower Power Electrical Exposer], destroyed due to storm surge caused by Hurricane Zeta, 0% work completed.
- Wood, 14 each of Wooden, (2 IN TH) Deck board, 10 FT long x 2 IN wide, broken by a boat thrown by storm surge from Hurricane Zeta, 0% work completed.

Platform:

- Sitting, 1 each of Wheelchair Accessible Round Picnic Table, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Receptacles, 1 each of Steel (34 gallons) Trash Receptacle, missing due to storm surge caused by

Hurricane Zeta, 0% work completed.

- Sitting, 1 each of Aluminum Bench, 8 FT long, missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Slip-4:

- Hardware, 2 each of Aluminum Dock Cleat (slips: 4-6, 4-40], missing due to storm surge caused by Hurricane Zeta, 0% work completed.

Piers 2-3-4:

- Wood, 22 each of Wooden 12IN DIA Pilings, 35 FT high, missing due to storm surge caused by Hurricane Zeta, 0% work completed.
- Lights, electrical tower pass through ceiling lights, type only, no demensions or quantity mention, damaged due to storm surge caused by Hurricane Zeta, 0% work completed.

Throughout Facility:

- Electrical, 6 each of Snap base Assemblies Hypower Power, destroyed due to storm surge caused by Hurricane Zeta, 0% work completed.

Tower-2:

- Mesh, 300 SF of S.Steel Woven (Apx. 4.5 MM Hole) Wire Mesh (10 Panels x Tower), 2 FT wide x 15 FT high, ripped due to storm surge caused by Hurricane Zeta, 0% work completed.
- Mesh, 300 SF of S.Steel Woven (Apx. 0.9 MM Hole) Wire Mesh (10 Panels x Tower), 2 FT wide x 15 FT high, ripped due to storm surge caused by Hurricane Zeta, 0% work completed.

Tower-3:

- Mesh, 300 SF of S.Steel Woven (Apx. 4.5 MM Hole) Wire Mesh (10 Panels x Tower), 2 FT wide x 15 FT high, ripped due to storm surge caused by Hurricane Zeta, 0% work completed.
- Mesh, 300 SF of S.Steel Woven (Apx. 0.9 MM Hole) Wire Mesh (10 Panels x Tower), 2 FT wide x 15 FT high, ripped due to storm surge caused by Hurricane Zeta, 0% work completed.

Breakwater:

- Electrical, 1 each of Electrical Box, Concrete Fiberglass JB Cover, 3 FT long x 3 FT wide, ripped out during storm surge caused by Hurricane Zeta, 0% work completed.

Tower-4:

- Doors, 1 each of Metal (10IN L X 2.5IN W) Door -Latch, broken due to storm surge caused by Hurricane Zeta, 0% work completed.
- Mesh, 300 SF of S.Steel Woven (Apx. 4.5 MM Hole) Wire Mesh (10 Panels x Tower), 2 FT wide x 15 FT high, ripped due to storm surge caused by Hurricane Zeta, 0% work completed.
- Mesh, 300 SF of S.Steel Woven (Apx. 0.9 MM Hole) Wire Mesh (10 Panels x Tower), 2 FT wide x 15 FT high, ripped due to storm surge caused by Hurricane Zeta, 0% work completed.
- Doors, 1 each of Metal (6FTHT X 3FT W) Door, 3 FT wide x 6 FT high, twisted due to storm surge caused by Hurricane Zeta, 0% work completed.
- Electrical, 2 each of double, with cover lid GFCI, inoperable due to storm surge caused by Hurricane Zeta, 0% work completed.
- Pilins, Rubber Concrete-rubbered pilins (See comments), Applicant to provide size measurements, ripped out during storm surge caused by Hurricane Zeta, 0% work completed.
- Concrete, 2.5 SF of Join Rubber Material Concrete expansion, 10 FT long x 3 IN wide, ripped out during storm surge caused by Hurricane Zeta, 0% work completed.

Pier # 1 - Slip 13:

- Pier Components, 120 SF of 2 IN.x 8 IN.x 4 FT. wood decking, 30 FT long x 4 FT wide, was

broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta. , 0% work completed.

- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta. , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, timber deck piling which was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line , 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. damaged area is approximately 5 ft. from the top of the 12 ft. timber piling. The damaged area has exposed non-treated portions of the piling, 0% work completed.

Pier # 2 - Slip 02:

- Pier Components, 1 each of broken 15 IN. aluminum cleat, cleat which was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, timber piling which was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.

Pier # 2 - Slip 04:

- Pier Components, 140 SF of 2 IN.x 8 IN. x 4 FT. wood decking, 35 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 140 SF of 3 IN. x 8 IN. wood timber sub-structure, 35 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. damaged area is approximately 5 ft. from the top of the 12 ft. timber piling. The damaged area has exposed non-treated portions of the piling, 0% work completed.

Pier # 2 - Slip 21:

- Pier Components, 120 SF of 2 IN. x 8 IN.x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind /wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind /wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.

Pier # 3 - Slip 07:

- Pier Components, 120 SF of 2 IN. x 8 IN.x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.

Pier # 3 - Slip 08:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work

completed.

- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line , 0% work completed.
- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.

Pier # 3 - Slip 10:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line , 0% work completed.
- Pier Components, 1 each of 3 IN. x 8 IN. aluminum slip marker, was damaged from wave wind forces associated with Hurricane Zeta, 0% work completed.

Pier # 3 - Slip 12:

- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was broken due to boat and wind /wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of Model# 5866 Potter Roemer Fire Pro Connection, wheels damaged due to boat and wind/ wave forces associated with Hurricane Zeta, 0% work completed.

Pier # 3 - Slip 25:

- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 5 FT long, was broken due to boat and wind/ wave forces associated with Hurricane Zeta , 0% work completed.

Pier # 3 - Slip 26:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line , 0% work completed.
- Pier Components, 3 each of 12 IN. diameter wood piling, 35 FT long, were broken/missing and destroyed due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.

Pier # 3 - Slip 28:

- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.

Pier # 3 - Slip 35:

- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling , 0% work completed.

Pier # 3 - Slip 39:

- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, 35 FT long, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling , 0% work completed.

Pier # 3 - Slip 49:

- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.

Pier # 3 - Slip 51:

- Pier Components, 2 each of treated timber rub rails , 3 FT long x 8 IN wide, were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling , 0% work completed.

Pier # 4 - Slip 04:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.
- Pier Components, 1 each of Hypower Pedestal 3/4 IN. plumbing and electrical connections, was damaged from boat/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, 35 FT long, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling , 0% work completed.

Pier # 4 - Slip 06:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta caused the piling to break below the water line., 0% work completed.
- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling. , 0% work completed.

Pier # 4 - Slip 17:

- Pier Components, 2 each of 12 IN. diameter wood piling, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling. , 0% work completed.

Pier # 4 - Slip 18:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was

broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.

- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line., 0% work completed.
- Pier Components, 1 each of 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.

Pier # 4 - Slip 23:

- Pier Components, 120 SF of 2 IN. x 8 IN.x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, 35 FT long, were damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.

Pier # 4 - Slip 26:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 3 each of 12 IN. diameter wood piling, 35 FT long, were damaged from boat/wave forces associated with Hurricane Zeta . The forces caused the piling to break below the water line, 0% work completed.
- Pier Components, 240 SF of main deck boards, 20 FT long x 12 FT wide, were damaged due to boat and wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, Finger Pier Piling were rubbed and splintered due to boat forces as a result of Hurricane Zeta. The damaged area is approximately 5 ft. from the top of the 12 IN. timber piling. The damaged area has exposed non-treated portions of the piling. , 0% work completed.

Pier # 4 - Slip 28:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 2 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.
- Pier Components, 1 each of Hypower Pedestal 3/4 IN. plumbing and electrical connections, was damage due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.

Pier # 4 - Slip 30:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta , 0% work completed.

Pier # 4 - Slip 40:

- Pier Components, 120 SF of 2 IN. x 8 IN. x 4 FT. wood decking, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 120 SF of 3 IN. x 8 IN. wood timber sub-structure, 30 FT long x 4 FT wide, was broken and twisted due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 12 IN. diameter wood piling, 35 FT long, was damaged from boat/wave forces associated with Hurricane Zeta. The forces caused the piling to break below the water line, 0% work completed.
- Pier Components, 1 each of broken 15 IN. aluminum cleat, was broken due to boat and wind/wave forces associated with Hurricane Zeta, 0% work completed.
- Pier Components, 1 each of 3 IN. x 8 IN. aluminum slip marker, damaged due to wave wind forces of Hurricane Zeta, 0% work completed.

Final Scope

441198 BSL Municipal Harbor

Version 1 is being written to align the project costs with the results of the Applicant's procurement.

Work to be Completed Total (V0): **\$771,312.96**

Difference Version 0 to Version 1: \$871,861.56

Total Damage Inventory (V1): \$1,643,174.52

Project Notes:

1. Please reference *173653 - 4576 MS - CRC Costing Spreadsheet - V1.xlsx* for a cost breakdown.
2. For the procurement checklist, please reference: *173653 - CRC Procurement Checklist.xlsx*.
3. Version 1 costs are based off the Applicant procured bid, but \$633,650.00 has been removed due to the Applicant stating a portion of the costs are related to Hazard Mitigation. The \$2,500.00 for backfill was accounted for in the pre-disaster conditions costs. See documents:
 - a. *173653_Response 1.pdf*
 - b. *172653 - CRC Evaluation of Bid Tabulation.pdf*

406 HMP Scope

Hazard Mitigation Proposal (HMP):

GM Project # 173653

DR 4576-MS

GM Damage Inventory # 441198

Site Name & Address: BSL Municipal Harbor – 100 Jody Compretta Dr., Bay St. Louis, Mississippi 39520

GPS Lat / Lon: 30.31064, -89.32528

HMP writer Name and Title: Roshan Karna, HPA Crew Leader & John Miller, EASP

Work Completed and/or Work to be Completed

(I) Damage Description & Dimensions (DDD):

On 10/28/2020 storm surge, rising waters and fast-driven rains caused extensive damage to the Bay St. Louis Municipal Harbor and Piers. Among the damages to the harbor were.

- **South Beach Access Ramp:**

- concrete, 28.8889 CY of concrete slab backfill and reset, (see/read comments), 40 FT long x 13 FT wide x 18 IN deep, sunken due to storm surge from Hurricane Zeta, 0% work completed.
- erosion control, 5.1852 CY of commercial grade riprap slab (replace what's missing), 5 FT long x 14 FT wide x 2 FT deep, washed away due to storm surge from Hurricane Zeta, 0% work completed.

- **South Parking Lot:**

- sidewalk, slab settlement concrete, (See/read comments), 126 FT long, not broke, rather 4 inches sunken due to storm surge caused by Hurricane Zeta, 0% work completed.
- sidewalk, 0.9877 CY of slab settlement concrete slab (by south tower), 10 FT long x 8 FT wide x 4 IN thick, sunken, and broke due to storm surge caused by Hurricane Zeta, 0% work completed.
- Railing, 10 each of aluminum matte guardrail system components, 10 panels (64 IN Lx 46 IN HT), broke -off and missing due to storm surge from Hurricane Zeta, 0% work completed.
- Bulkhead, 92.5926 CY of concrete wall and sidewalk, 125 FT long x 10 FT high x 2 FT thick, settled and separated due to erosion from the storm surge, 0% work completed.

The total in-kind repair cost of damaged elements being protected by the HMP at this site was determined by adding items #03300-1, 03300-9, 03300-2, 03300-3, 05721-2, 03400-1 from the applicant procured bid which is equal to \$2,056,160.94. See the document labeled "172653 - CRC Evaluation of Bid Tabulation". The proposed mitigation measures may prevent damages to the South Tower and pedestrian entrance in future storm surge events and hence, those damages could also be incorporated into the total damage costs to be protected. However, the total damage cost for DI #441198 is \$1,643,174.52 as per the CRC in-kind repair scope and cost. Hence, the total damage cost to be protected by the proposed mitigation measures was capped at the total cost of this DI.

Therefore,

the total in-kind repair cost of damaged elements being protected by this HMP = \$1,643,174.52

(II) Hazard Mitigation Proposal (HMP) Scope of Work:

The applicant has requested PA Mitigation funding to protect the facility in future storm surges. The Bulkhead wall will be strengthened by installing a 5' concrete Deadman wall with reinforcement, a 16" X 16" concrete waler, steel tieback rods, and steel tie rods. This will prevent the shifting and movement of the bulkhead wall during future storm surges. Other mitigation measures consist of a backfill of sand & 610 stone compacted to stabilize the replaced concrete wall in this project (over Tie Rods and under the Sidewalks of the South Parking Lot) to control erosion.

(III) Hazard Mitigation Proposal (HMP) Cost:

The mitigation scope and cost were revised using the applicant-procured bid and the applicant's response to the RFI. See documents labeled "*173653_Response 1.pdf*" and "*172653 - CRC Evaluation of Bid Tabulation*". Installation of concrete Deadman, waler, steel tieback rods, and steel tie rods as mitigation measures to strengthen the concrete sheet pile wall requires the removal and replacement of the South Side asphalt parking lot and associated components. See below for details.

Saw cut	= 250.00 LF @ \$20.00/LF	= \$5,000.00
Removal of asphalt	= 600.00 SY @ \$20.00/SY	= \$12,000.00
Excavation	= 1,500.00 CY @ \$20.00/CY	= \$30,000.00
Select Backfill	= 2000.00 CY @ \$35.00/CY	= \$70,000.00
610 Stone	= 125.00 CY @ \$180.00/CY	= \$22,500.00
9.5 mm, MT Asphalt Leveling Course (1.5" max)	= 60.00 Ton @ \$185.00/Ton	= \$11,100.00
12.5 mm, MT Asphalt Surface Course (2.5" max)	= 100.00 Ton @ \$185.00/Ton	= \$18,500.00
Thermoplastic Traffic Stripe, White	= 180.00 LF @ \$50.00/LF	= \$9,000.00
Thermoplastic Traffic Stripe, Blue	= 90.00 LF @ \$50.00/LF	= \$4,500.00
Thermoplastic Legend, Blue	= 2 EA @ \$1,500.00 EA	= \$3,000.00
Remove and Replace ADA Parking Signs	= 2 EA @ \$1,500.00 EA	= \$3,000.00
Remove/Replace Parking Stops	= 13 EA @ \$350.00 EA	= \$4,550.00
5' Concrete Deadman Wall with reinforcement	= 42.00 LF @ \$1,500.00/LF	= \$63,000.00
Pre-cast/prestressed 16"X16" concrete waler	= 70.00 LF @ \$750.00/LF	= \$52,500.00
2 ¼" Steel Tieback Rods including all— fasteners, brackets, bolts, and incidentals	= 320.00 LF @ \$500.00/LF	= \$160,000.00
2 ¼" Steel Tie Rod (2) including all base— plates bolts and incidentals	= 17.00 LF @ \$3,000.00/LF	= <u>\$51,000.00</u>
Total Hazard Mitigation Cost		= \$519,650.00

Net Hazard Mitigation cost = \$519,650.00

(IV) Cost Effectiveness Calculation:

HMP Cost/Benefit % = (Net Hazard Mitigation Cost / Total Repair Cost of Damaged Elements being protected by the HMP) X 100%

HMP C/B % = (\$519,650.00 / \$1,643,174.52) X 100% = 31.62 % ≤ 100%.

(V) HMP Cost-Effectiveness:

This hazard mitigation cost for D#441198 is \$519,650.00 and is 31.62% of the repair and restoration costs being protected. In

accordance with FEMA Public Assistance Program and Policy Guide (PAPPG) V4.0 June 2020, Chapter 8. IV. Section A and Appendix J, section I. B. (erosion control) & II. C. Roadways (stabilize embankments and use geotextile fabric and revetments), this mitigation measure does not exceed 100 percent of the eligible repair cost and is cost-effective.

(VI) Compliances and Assurances:

This HMP is for estimating purposes only. If the site's final placement and configuration are different than the preliminary estimate, the Applicant should submit a change in scope request. This HMP is subject to further review prior to award.

The Applicant is responsible for final design, placement, configuration, choice of contractors or vendors, permits and compliance with all regulatory codes and standards of the State of Mississippi. FEMA will pay only the incremental difference in cost between repairs and mitigation and will not duplicate funding for repair or replacement of eligible work.

Eligibility and funding for the mitigation at this site on this project will be subject to the compliance of all environmental laws, regulations, and executive orders applicable to the sites.

HMP Notes:

1. The mitigation scope and cost were revised based on the applicant-procured bid. See documents labeled “173653_Response 1.pdf” and “172653 - CRC Evaluation of Bid Tabulation”.
2. Originally, all mitigation items were incorporated in the in-kind repair scope and cost. The project was sent back to remove those items. See CRC project note #3.

441199 BSL Municipal Harbor

Version 1 is being written to align the project costs with the results of the Applicant's procurement.

Work to be Completed Total (V0): **\$124,669.25**

Difference Version 0 to Version 1: +\$140,921.17

Total Damage Inventory (V1): \$265,590.42

441200 BSL Municipal Harbor

Version 1 is being written to align the project costs with the results of the Applicant's procurement.

Work to be Completed Total (V0): **\$448,983.20**

Difference Version 0 to Version 1: +\$507,512.79

Total Damage Inventory (V1): \$956,495.99

Cost

Code	Quantity	Unit	Total Cost	Section
9000 (CEF Cost Estimate)	1.00	Lump Sum	\$771,312.96	Uncompleted
9001 (Contract (V1))	1.00	Lump Sum	\$871,861.56	Uncompleted
9000 (CEF Cost Estimate)	1.00	Lump Sum	\$124,669.25	Uncompleted
9001 (Contract (V1))	1.00	Lump Sum	\$140,921.17	Uncompleted
9000 (CEF Cost Estimate)	1.00	Lump Sum	\$448,983.20	Uncompleted
9001 (Contract (V1))	1.00	Lump Sum	\$507,512.79	Uncompleted

CRC Gross Cost \$2,865,260.93

Total 406 HMP Cost \$519,650.00

Total Insurance Reductions (\$2,390.71)

CRC Net Cost \$3,382,520.22

Federal Share (90.00%) \$3,044,268.20

Non-Federal Share (10.00%) \$338,252.02

Award Information

Version Information

Version #	Eligibility Status	Current Location	Bundle Number	Project Amount	Cost Share	Federal Share Obligated	Date Obligated
0	Eligible	Awarded	PA-04-MS-4576-PW-00497(903)	\$1,539,324.70	90%	\$1,385,392.23	12/27/2022
1	Eligible	In Review		\$1,520,295.52	90%	\$0.00	

Drawdown History

EMMIE Drawdown Status As of Date	IFMIS Obligation #	Expenditure Number	Expended Date	Expended Amount
No Records				

Obligation History

Version #	Date Obligated	Obligated Cost	Cost Share	IFMIS Status	IFMIS Obligation #
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Subgrant Conditions

- As described in Title 2 Code of Federal Regulations (C.F.R.) § 200.333, financial records, supporting documents, statistical records and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three (3) years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a subrecipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. Exceptions are stated in 2 C.F.R. §200.333(a) – (f)(1) and (2). All records relative to this project 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.
- In the seeking of proposals and letting of contracts for eligible work, the Applicant/Subrecipient must comply with its Local, State (provided that the procurements conform to applicable Federal law) and Federal procurement laws, regulations, and procedures as required by FEMA Policy 2 CFR Part 200, Procurement Standards, §§ 317-326.
- The Recipient must submit its certification of the subrecipient's completion of this project, the final claim for payment, and supporting documentation within 180 days from the date that the applicant completes the scope of work, or the project deadline, whichever occurs first. FEMA reimburses Large Projects (those with costs above the large project threshold) based on the actual eligible final project costs. Therefore, during the final project reconciliation (closeout), the project may be amended to reflect the reconciliation of actual eligible costs.
- When any individual item of equipment purchased with PA funding is no longer needed, or a residual inventory of unused supplies exceeding \$5,000 remains, the subrecipient must follow the disposition requirements in Title 2 Code of Federal Regulations (C.F.R.) § 200.313-314.
- The terms of the FEMA-State Agreement are incorporated by reference into this project under the Public Assistance award and the applicant must comply with all applicable laws, regulations, policy, and guidance. This includes, among others, the Robert T. Stafford Disaster Relief and Emergency Assistance Act; Title 44 of the Code of Federal Regulations; FEMA Policy No. 104-009-2, Public Assistance Program and Policy Guide; and other applicable FEMA policy and guidance.
- The DHS Standard Terms and Conditions in effect as of the declaration date of this emergency declarations or major disaster, as applicable, are incorporated by reference into this project under the Public Assistance grant, which flow down from the Recipient to subrecipients unless a particular term or condition indicates otherwise.
- The Uniform Administrative Requirements, Cost Principles, and Audit Requirements set forth at Title 2 Code of Federal Regulations (C.F.R.) Part 200 apply to this project award under the Public Assistance grant, which flow down from the Recipient to all subrecipients unless a particular section of 2 C.F.R. Part 200, the FEMA-State Agreement, or the terms and conditions of this project award indicate otherwise. See 2 C.F.R. §§ 200.101 and 110.
- The subrecipient must submit a written request through the Recipient to FEMA before it makes a change to the approved scope of work in this project. If the subrecipient commences work associated with a change before FEMA approves the change, it will jeopardize financial assistance for this project. See FEMA Policy No. 104-009-2, Public Assistance Program and Policy Guide.
- Pursuant to section 312 of the Stafford Act, 42 U.S.C. 5155, FEMA is prohibited from providing financial assistance to any entity that receives assistance from another program, insurance, or any other source for the same work. The subrecipient agrees to repay all duplicated assistance to FEMA if they receive assistance for the same work from another Federal agency, insurance, or any other source. If an subrecipient receives funding from another federal program for the same purpose, it must notify FEMA through the Recipient and return any duplicated funding.

Insurance

Additional Information

6/25/2024

Project Versioned with the following changes:

D# 441198 mitigation scope and cost modification.

A revised insurance narrative was prepared and uploaded into the project.

Tarah Phelps, Insurance Specialist FEMA PA CRC East

12/27/2021

FACTS

During the declared incident period heavy rains and high winds caused outages, mudslides, flooding, and accumulation of vegetative debris throughout the state Florida.

REPETITIVE DAMAGES

No previous disaster requirements were found for the location(s) identified in this project.

FINDINGS

Applicant provided a commercial property policy with Genesee Specialty Property Insurance. The policy # is AMR-38479-06. The policy period is from 02/26/2020 to 02/26/2021. The Applicant has a blanket property policy with a building and contents limit of \$20,321,073.00 With a basic policy deductible of \$5,000.00 per occurrence and a Named Storm deductible of 1% of Total Insured Value (TIV) at each location with a Minimum \$100,000.00 Per Occurrence. The policy excludes coverage from the peril of Flood.

Damage #441198; BSL Municipal Harbor – Pier Facilities \$766,458.68 + Hazard Mitigation Proposal (HMP) \$196,750.00 + Harbor Office \$4,854.28 = \$968,062.96

Harbor Office Building-\$4,854.28

The building was damaged by flood. No prior Obtain and Maintain (O&M) insurance requirement was found for this facility. The facility is in a Special Flood Hazard Area (SFHA), Zone VE. Applicant does not have a National Flood Insurance Program (NFIP) policy. A Mandatory NFIP Reduction will be made in the amount of \$2,390.71. (Repairs \$4,854.28 – Deductible \$1,250.00 – Depreciation \$1,213.57 = Reduction \$2,390.71) (See attachment: ST173653-DR4576MS-Bay St. Louis, City of-Mandatory NFIP Insurance Reduction Worksheet) Coverage is not anticipated. A reduction will not be made. The policy does not provide coverage for the peril of Flood. An obtain and maintain insurance requirement will not be mandated for this damage. The eligible costs for an insurable facility do not exceed \$5,000.00.

§ 206.252 Insurance requirements for facilities damaged by flood.

(a) Where an insurable building damaged by flooding is located in a special flood hazard area identified for more than one year by the Administrator, assistance pursuant to section 406 of the Stafford Act shall be reduced. The amount of the reduction shall be the maximum amount of the insurance proceeds which would have been received had the building and its contents been fully covered by a standard flood insurance policy.

Pier Facilities \$766,458.68 + Hazard Mitigation Proposal (HMP) \$196,750.00= \$963,208.68

The facility was damaged by flood. No prior Obtain and Maintain (O&M) insurance requirement was found for this facility. The facility is in a Special Flood Hazard Area (SFHA), Zone VE. Applicant does not have a National Flood Insurance Program (NFIP) policy. A Mandatory NFIP Reduction will be not made. Insurance coverage for this type of exposure is not available with the NFIP. Coverage is not anticipated. A reduction will not be made. The policy does not provide coverage for the peril of Flood. An obtain and maintain insurance requirement will not be mandated for this damage. Insurance coverage for this type of exposure is not available with the NFIP.

Damage #441199; BSL Municipal Harbor Rutherford Pier- \$124,669.25

The facility was damaged by flood. No prior Obtain and Maintain (O&M) insurance requirement was found for this facility. The facility is in a Special Flood Hazard Area (SFHA), Zone VE. Applicant does not have a National Flood Insurance Program (NFIP) policy. A Mandatory NFIP Reduction will be not made. Insurance coverage for this type of exposure is not available with the NFIP. Coverage is not anticipated. A reduction will not be made. The policy does not provide coverage for the peril of Flood. An obtain and maintain insurance requirement will not be mandated for this damage. Insurance coverage for this type of exposure is not available with the NFIP.

Damage #441200; BSL Municipal Harbor Breakwater Wall, Piers, Slips - \$448,983.20

The facility was damaged by flood. No prior Obtain and Maintain (O&M) insurance requirement was found for this facility. The facility is in a Special Flood Hazard Area (SFHA), Zone VE. Applicant does not have a National Flood Insurance Program (NFIP) policy. A Mandatory NFIP Reduction will be not made. Insurance coverage for this type of exposure is not available with the NFIP. Coverage is not anticipated. A reduction will not be made. The policy does not provide coverage for the peril of Flood. An obtain and maintain insurance requirement will not be mandated for this damage. Insurance coverage for this type of exposure is not available with the NFIP.

FEMA Policy 206-086-1

PART 2: Other Insurance-Related Provisions. (Sections 312 and 406(d) of the Stafford Act)

A. Duplication of Benefits. FEMA cannot provide assistance for disaster-related losses that duplicate benefits available to an applicant from another source, including insurance.

1. Before FEMA approves assistance for a property, an applicant must provide FEMA with information about any actual or anticipated insurance settlement or recovery it is entitled to for that property.
2. FEMA will reduce assistance to an applicant by the amount of its actual or anticipated insurance proceeds.
3. Applicants must take reasonable efforts to recover insurance proceeds that they are entitled to receive from their insurer(s).

REQUIREMENTS

The requirements of section 311 of the Stafford Act are waived when the eligible scope of work cost do not exceed \$5,000.00.

A Standard Flood Insurance Policy issued by the National Flood Insurance Program is the basis used to determine if a building or its contents can be insured for the peril of flood. As a result, the requirement to obtain and maintain insurance is not being mandated for the facilities described in this project as these facilities are not insurable by a Standard Flood Insurance Policy.

Insurance coverage for this type of exposure is generally not available. The requirement to obtain and maintain insurance is not being mandated for the damages. Therefore, compliance with Section 311 of the Stafford Act and its implementing regulations, Title 44 CFR 206.250-253 does not apply to the damages included in this project.

Kenneth Johnson, Insurance Specialist, CRC East

O&M Requirements

There are no Obtain and Maintain Requirements on **Bay St Louis Municipal Harbor and Piers.**

406 Mitigation

06/21/2024 R. Karna -- The project was reworked for in-kind repair and mitigation scope and cost modification which has affected the previous HMP. This hazard mitigation cost for DI#441198 is \$519,650.00 and is 31.62% of the repair and restoration costs being protected. In accordance with FEMA Public Assistance Program and Policy Guide (PAPPG) V4.0 June 2020, Chapter 8. IV. Section A and Appendix J, section I. B. (erosion control) & II. C. Roadways (stabilize embankments and use geotextile fabric and revetments), this mitigation measure does not exceed 100 percent of the eligible repair cost and is cost-effective.

06/05/2024 R. Karna -- Per PA, this project is being sent back to the CRC for scope and cost modifications to separate the mitigation items outlined by the applicant in the document with the filename "173653_Response 1.pdf" (page 1 & 35). See document labeled "172653 - CRC Evaluation of Bid Tabulation" for the CRC evaluation of the bid.

04/02/2024 R. Karna -- After reviewing this project, it appears that the applicant requested mitigation measures have been incorporated in the in-kind repair scope and costs. See document with filename "PW 497 Request Amend Cost Estimate to Bid" for the mitigation line items (bottom of page 3 and plans on page 328 & 330) proposed by the applicant. Sent an email to the CRC specialist requesting to review the new bid document and provide clarification on the potential duplication of benefits.

Environmental Historical Preservation

Is this project compliant with EHP laws, regulations, and executive orders?

Yes

EHP Conditions

- Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
- 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 funding.
- If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archaeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.
- NHPA Condition: Subrecipient must identify the source and location of fill material and provide this information to MEMA and FEMA. If the borrow pit is privately owned, or is located on previously undisturbed land, or if the fill is obtained by the horizontal expansion of a pre-existing borrow pit, FEMA consultation with the State Historic Preservation Officer will be required. Failure to comply with this condition may jeopardize FEMA funding; verification of compliance will be required at project closeout.
- ESA Condition: All on-site personnel will be responsible for observing water-related activities for the presence of manatees.
- ESA Condition: If a manatee is spotted within a 50-foot radius (buffer zone) of the active work area, all work, equipment, and vessel operation must cease. Manatees must not be herded or harassed into leaving the active work area. Once the manatee has left the buffer zone on its own accord, and after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in water work can resume under careful observation for manatee(s).
- ESA Condition: If a manatee(s) is sighted outside of, but near to the project area, all vessels associated with the project should operate at "no wake/idle" speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels should follow routes of deep water whenever possible.
- ESA Condition: If used, siltation or turbidity barriers should be properly secured and be monitored to avoid manatee entrapment or obstruction to their movement.
- ESA Condition: Temporary signs concerning manatees must be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities must display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½" x 11" reading language

similar to the following: "CAUTION: MANATEE AREA. IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA. WHEN A MANATEE IS WITHIN 50 FEET OF IN-WATER WORK, ALL IN-WATER ACTIVITIES/EQUIPMENT MUST SHUT DOWN. A second temporary sign measuring 8½" x 11" must be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: "CAUTION: MANATEE AREA. IN-WATER EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF IN-WATER ACTIVITIES".

- ESA Condition: Collisions with, injury to, or sightings of manatees must be immediately reported to the Service's Mississippi's Ecological Services Office (601-965-4900) and the Mississippi's Department of Wildlife and Fisheries, Natural Heritage Program (601-576-6046). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.
- ESA Condition: All activities must be completed during daylight hours. Use of existing hard-top surfaces for staging of debris and equipment is required. Any fill (sand, limestone, etc.) to be replaced will need to be free of any hazardous materials and will be consistent with the existing geological and soil materials at the sites. NMFS SERO's Protected Species Construction Conditions (NMFS 2021) will be implemented, including measures for vessel strike avoidance and the following: All on-site project personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant marine mammal and ESA listed species at "Find A Species" (<https://www.fisheries.noaa.gov/find-a-species>) and the consultation documents that have been completed for the project. For construction work that is generally stationary (e.g., barge-mounted equipment dredging a berth or section of a river, or shore-based equipment extending into the water: Operations of moving equipment shall cease if a protected species is observed within 150 ft of operation Activities shall not resume until the protected species has departed the project area of its own volition (e.g., the species was observed departing or 20 minutes have passed since the animal was last seen in the area) The following measures should be taken when they are consistent with safe navigation to avoid causing injury or death of a protected species: Operate at the minimum safe speed when transiting and maintain a vigilant watch for protected species to avoid striking them. Even with a vigilant watch most marine protected species are extremely difficult to see from a boat or ship, and you cannot rely on detecting them visually and then taking evasive action. The most efficient way to avoid vessel strikes is to travel at a slow, safe speed. Whenever possible, assign a designated individual to observe for protected species and limit vessel operation to only daylight hours. Follow deep-water routes (e.g., marked channels) whenever possible. Operate at "Idle/No Wake" speeds in the following circumstances: While in any project construction areas, or, while in water depths where the draft of the vessel provides less than four feet of clearance from the bottom, or, in all depths after a protected species has been observed in and has recently departed the area. When protected species is sighted, attempt to maintain a distance of 150 ft or greater between the animal and the vessel. Reduce speed and avoid abrupt changes in direction until the animal(s) has left the area.
- ESA Condition: Any interaction with a protected species shall be reported immediately to NOAA Fisheries SERO PRD and the local authorized stranding/rescue organization. The applicant shall report to NMFS SERO PRD via the NMFS SERO Endangered Species Take Report Form (<https://forms.gle/85fP2da4Ds9jEL829>). This form shall be completed for each individual known reported capture, entanglement, stranding, or other take incident. Information provided via this form shall include the title, the issuance date, and NMFS SERO ECO tracking number from this Opinion (SERO-2022-00863 Jimmy Rutherford Fishing Pier and Marina ; the species name; the date and time of the incident; the general location and activity resulting in capture; condition of the species (i.e., alive, dead, sent to rehabilitation); size of the individual, behavior, identifying features (i.e., presence of tags, scars, or distinguishing marks), and any photos that may have been taken.
- ESA Condition: To report the interaction to the local stranding/rescue organization, please see the following website for the most up to date information for reporting sick, injured, or dead protected species: <https://www.fisheries.noaa.gov/report>
- ESA Best Management Practices Conditions: The applicant will coordinate an agreement with the appropriate State Sea Turtle Stranding Coordinator to assist, as needed, with handling and rehabilitation of any sea turtle strandings due to incidental bycatch and other in-water activities in the area. The State Sea Turtle Stranding Coordinators are provided at the following website: <https://www.fisheries.noaa.gov/state-coordinators-sea-turtle-stranding-and-salvage-network>. The applicant will place trash receptacles with lids along the fishing structure. Trash receptacles will be clearly marked and will be emptied regularly to ensure they do not overfill and that fish carcasses are disposed of properly, Fishing line-recycling bins will be placed along the fishing structure in order to prevent fishing line and debris from being disposed of in the water or on the shore. receptacles will be clearly marked and will be emptied regularly to ensure they do not overfill and that fishing lines are disposed of properly. The applicant will conduct out-of-water structure clean up on a regular basis. In addition, volunteer groups will hold a minimum of two in-water cleanups annually any derelict tackle or fishing line attached to the structure. If any the replacement pier will be lit in the future, the applicant will use sea turtle friendly structure lighting (i.e., long wavelength amber, orange, or red light-emitting diode [LED] lighting). Upon completion of the pier, NMFS-approved educational signs must be posted in a visible location at least at the entrance to and terminal end of the fishing structure, alerting users of listed species in the area. The applicant will post at the pier the following signs, which are available for download at the following website: <https://www.fisheries.noaa.gov/southeast/consultations/protected-species-educational-signs>. It is suggested that both English and Spanish versions of the sign are posted. "Save Dolphins, Sea Turtles, and

Manta Rays" "Do Not Catch or Harass Sea Turtles" "Report A Sturgeon"

- ESA Condition: The applicant and sub-applicant will be required to obtain all applicable Federal, state, and local permits and will comply with conditions set forth in each. These requirements include all State of Mississippi and USACE Nationwide Permit #3 (Maintenance). Failure to obtain permits or comply with these conditions may jeopardize the applicant's receipt of FEMA funding.
- CWA CONDITION: The applicant is responsible for coordinating with and obtaining any required Section 404 permit(s) from the United States Army Corps of Engineers (USACE) and 401 permit(s) from the responsible state or tribal agency prior to initiating work. The applicant shall comply with all conditions and pre-construction notification requirements of the required permit(s), including any applicable regional conditions. All coordination pertaining to these activities or compliance with applicable permits must be documented and maintained in the applicant's permanent files. Copies must be forwarded to the Recipient (state or tribal EMA) and FEMA as part of the permanent project file. Failure to comply with this requirement may jeopardize receipt of federal funds.
- CZMA Condition: The subgrantee is responsible for obtaining any required Mississippi Department of Marine Resources (MDMR) permits/waivers. Compliance with MDMR requirements constitutes compliance with Mississippi CZM. Failure to comply with these conditions may jeopardize FEMA funding; verification of compliance will be required at project closeout.
- SHM&SW Condition: Subgrantee shall ensure that all debris is separated and disposed of in a manner consistent with the Mississippi Department of Environmental Quality (MDEQ) Division of Solid Waste Management (SWM), disposal at permitted facilities guidelines or at a disposal site or landfill authorized by MDEQ. Subgrantee is responsible for ensuring contracted removal of debris also follows these guidelines. Documentation of compliance will be required at project closeout.
- EO 11988 Condition: Per 44 CFR Part 9.12(f), FEMA cannot obligate this project until on or after 04/15/2022.
- EO 11988 Condition: The subgrantee must coordinate with the local floodplain administrator and obtain required permits, if applicable, from the appropriate agencies prior to initiating work. All coordination pertaining to these activities and subgrantee compliance with any conditions should be documented and copies forwarded to the state and FEMA for inclusion in the permanent project files.
- EO 11990 Condition: Construction activities and equipment storage and staging activities are not to be located in or impact any adjacent wetlands.

EHP Additional Info

There is no additional environmental historical preservation on **Bay St Louis Municipal Harbor and Piers**.

Final Reviews

Final Review

Reviewed By SULLENS, ANDREW D.

Reviewed On 08/08/2024 9:29 AM CDT

Review Comments

please review

Recipient Review

Reviewed By Sager, Diane

Reviewed On 11/21/2022 9:03 AM CDT

Review Comments

State review completed. Cat G project includes 406 HMP funding. This project also has numerous Specialized EHP conditions that the City must comply with and provide verification of compliance at closeout. Failure to comply may jeopardize funding.

Project Signatures

Signed By Feuerstein, Dana

Signed On 12/12/2022