

## Addendum No. 2

Date of Addendum: Jan. 7, 2013

CWA Contract: LPS-311

Project: Lynchburg Pump Station VFD Replacement for P-208 & P-209

From: Rahim Tazeh, PE  
Infrastructure Associates  
6117 Richmond, Suite 200  
Houston, Texas 77057

TO: Prospective Bidders

This addendum forms a part of Bidding Documents and will be incorporated into Contract Documents, as applicable. Insofar as original Project Manual and Drawings are inconsistent, this addendum governs. Your proposal shall indicate acknowledgment of this Addendum in the spaces provided on the bid forms. **Failure to do so may subject bidder to disqualification.**

Changes to Bidding Requirements:

1. "Summary of Work" Section 011000:
  - a) Note changes in the attached Section 011000, 1.3-F.14, and 1.5-A.1.
  - b) Replace "Manufacturer" with "Contractor" in both sentences in Section 1.4-B.
2. "Variable Frequency Drives" Section 262923 – 1.6 – A, revise per following:

"The VFD manufacturer shall be responsible for all work required for complete manufacturing of two new VFDs in Lynchburg Pump Station. Contractor is the sole responsible entity to perform installation of the two VFDs and any incidental work including but not limited to the following:"
3. Note changes in the attached Official Bid Form.
4. Sheet E-010-0
  - a) Keyed note #1 - Add the following "Clean conduit per specifications and camera the line prior to pulling any new feeders".
  - b) Keyed note #10 – Change to read "Contractor shall locate and utilize existing spare conduits. Install new 480V ductbank if required for the new A/C feeder. Refer to related notes #3 and #13.
  - c) Add Keyed note #15 for new manhole – "New manhole shall be 6'-4" x 6'-4" x 5'-1" precast concrete manhole. "Old Castle" Model #776-LA-5, with round access cover, and designed for H-20 loading."
  - d) Add keyed note #16 where conduits penetrate the existing pump room wall. "Intercept existing conduits as they penetrate the pump room wall and utilize this penetration if possible. Provide new conduit penetrations utilizing link-seal as necessary."
  - e) Provide the following note at the conduit penetrations from pump room to VFD house. "Seal conduit inside and out after pulling feeders and control cables to prevent condensation mitigation."
  - f) Provide notes at conduit penetration thru outside wall into pump room J-box. "Existing core and J-box to be utilized. Seal conduit inside to prevent condensation." "Intercept existing conduit at this location".

5. Sheet E-060-3

Incoming service feeder from switchgear building to MV drives shall be provided with #1/0 AWG ground to match conduit schedules.

END OF ADDENDUM NO. 2

## COASTAL WATER AUTHORITY

## OFFICIAL BID FORM

## FORMAL ONE-TIME BID

**Lynchburg Pump Station VFD Replacement for Pumps P-208 & P-209**

TO: Coastal Water Authorities  
 Attention: Greg Olinger, P.E., PMP, Chief Engineer  
 Coastal Water Authority  
 1801 Main, Suite 800  
 Houston, TX 77002-8119

CONTRACT PERIOD: \_\_\_\_\_

The following bid items comprise the bid for all materials, labor, tools, equipment, supervision, and other work for performing replacement of the existing two (2) Toshiba Variable Frequency Drives (VFD) per the Bid Documents, including CWA's Technical Specifications:

Item No.	Item Description	Unit	Qty	Unit Price	Total
1	260513 – Electrical cable, 500 kcmil, 5 kV, 1/C, with 1/0 ground conductor complete installed in conduit and terminated.	LF	9500 + 3200 G		
2	260543 – Electrical ductbank for medium voltage cable including new manhole,	LF	700		
3	260536 – Cable tray	LF	400		
4	262923 – VFD	Each	2		
5	262921 – Instrumentation and controls	Sum			
6	012300 – Investigative work related to Alternate 1 and 480 Volt, 100 Amp new electrical feed from Control Room to the VFD House.	Sum			
7	262924 – Control Integration	Sum			
8	Division 23 – HVAC work	Sum			
9	Division 26 – Electrical work	Sum			
10	Mobilization	Sum			
	<b>Total Base Bid Unit Price</b>				

Bidder Company Name: \_\_\_\_\_

Item No.	Item Description	Unit	Qty.	Unit Price	Total
E-1	260513 Extra electrical cable, 500 kcmil, 5 kV, 1/C, 1/0 G, complete installed and terminated.	LF	1000		
E-2	260513 Extra electrical cable, 500 kcmil, 5 kV, 1/C, complete installed in cable tray terminated.	LF	300		
E-3	260513 Extra electrical Ground #1/0, 5KV, 1/C, complete installed and terminated.	LF	100		
E-4	260513 Extra electrical Ground #1/0, 5 KV, 1/C, complete installed in cable tray and terminated.	LF	100		
E-5	260519 Extra electrical cable, #12, 600 V, up to 9 conductors, installed in conduit and terminated.	LF	1000		
E-6	260519 Extra electrical cable, #10, 600 V, up to 9 conductors, installed in conduit and terminated.	LF	1000		
E-7	260543 – Electrical ductbank for 480 volt	LF	200		
	<b>Total Extra Unit Price</b>				

Summary – Schedule of Unit Price Work

- A. Total Base Unit Price Work .....\$ -----
- C. Structural Modification Allowance .....\$ 25,000
- D. Total Bid Price .....\$ -----
- B. Total Extra Unit Price Work .....\$ -----

Total Bid Amount Including Unit Prices is: \$ \_\_\_\_\_

Maintenance Service (As described in Project Specification Section 262923-1.14):

- A. First Year .....Included in Base Bid
- B. Second Year .....\$ \_\_\_\_\_
- C. Third Year .....\$ \_\_\_\_\_
- D. Forth Year .....\$ \_\_\_\_\_
- E. Fifth Year .....\$ \_\_\_\_\_

The undersigned (“Bidder”) hereby offers to furnish and deliver the goods and/or services as specified for the Total Bid Amount and upon the terms herein stated and in accordance with the Invitation to Bid, Instructions to Bidders, Technical Specifications and General Terms & Conditions, all of which are incorporated by reference and made a part of this offer.

Bidder certifies that it has submitted to CWA either (a) a certified or cashier’s check drawn on a responsible bank in Texas equal to at least two percent (2%) of the Total Bid amount, or (b) a bid bond of at least two percent (2%) of the Total Bid Amount and issued by a surety that is legally authorized to do

Bidder Company Name: \_\_\_\_\_

business in Texas and to issue such bond. Such bid security is a good faith deposit to ensure the execution of the contract.

Bidder understands that CWA may accept the bid offer by issuance of a Notice of Award and/or Purchase Order signed by CWA to the successful Bidder at any time on or before the ninetieth (90th) day after the day of the Bid Opening. Bidder's offer shall be irrevocable by Bidder for ninety (90) days after the Bid Opening, but this period may be extended by written agreement of CWA and Bidder. Bidder further understands that if CWA accepts the bid, upon issuance of Notice of Award by CWA, the Contract will be binding upon Bidder without any further action on the part of Bidder.

Bidder certifies that the only person or parties interested in this proposal as principals are those named herein. Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action to restrain the competitiveness of the bidding for the award of the Contract.

**NOTE: BID MUST BE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE BIDDER, WHICH MUST BE THE ACTUAL LEGAL ENTITY THAT WILL PERFORM THE CONTRACT IF AWARDED. BID SECURITY DESCRIBED ABOVE MUST BE ATTACHED TO THE BID.**

Bidder Company Name: \_\_\_\_\_  
Respectfully Submitted:

Bidder: \_\_\_\_\_  
(Print or type name of Bidder-Full Company Name)

Employer Identification Number: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of Authorized Officer or Agent)

Name: \_\_\_\_\_

Telephone: ( ) \_\_\_\_\_

Title: \_\_\_\_\_

Fax: ( ) \_\_\_\_\_

Date: \_\_\_\_\_

E-Mail: \_\_\_\_\_

\_\_\_\_\_  
Address (Street or P.O. Box)

\_\_\_\_\_  
(City – State – Zip Code)

\_\_\_\_\_  
City & State of principal place of business if different from above.

Bidder Company Name: \_\_\_\_\_

## SECTION 011000 – SUMMARY OF WORK

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Type of the Contract.
3. Work phases.
4. Work under other contracts.
5. Products ordered in advance.
6. Owner-furnished products.
7. Use of premises.
8. Owner's occupancy requirements.
9. Work restrictions.
10. Specification formats and conventions.

- B. Related Sections include the following:

1. Division 01 Section "Multiple Contract Summary" for division of responsibilities for the Work.
2. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

#### 1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Lynchburg Pump Station VFD Replacement for P-208 & P-209.

1. Project Location: Lynchburg Pump Station, Baytown, Texas

- B. Owner: Coastal Water Authority (CWA)

Owner's Representative:  
Infrastructure Associates Inc.,  
6117 Richmond, Suite 200  
Houston, Texas 77057

- C. Engineer:  
Infrastructure Associates Inc.,  
6117 Richmond, Suite 200  
Houston, Texas 77057
- D. Contractor: TBD
- E. Construction Manager:  
Infrastructure Associates Inc.,  
6117 Richmond, Suite 200  
Houston, Texas 77057
1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.
- F. The Lynchburg Pump Station VFD replacement for P-208 & P-209 work includes the followings:
1. Removal and disposal of the two existing Toshiba drives that are currently serving Pumps P-208 and P-209. Drives are located in the existing VFD house.
  2. Removal and disposal of VFD's associated transformers and interconnecting cables. Both transformers are located outdoor and north of the VFD house.
  3. Removal of the two (2) existing medium voltage feeders serving these drives. Feeders originate at the existing air break contactors in the medium voltage switchgear assembly located in the Pump Station main electrical room. Existing feeders are installed in underground ductbanks, and in overhead cable trays in the pump room.
  4. Testing and cleaning of existing 5 kV GE air break contactors by certified third party. Calibration and operation of corresponding feeder protective devices shall be tested before and after cable installation by manufacturer's authorized representative to ensure device operation.
  5. Installation of two new medium voltage feeders from existing air breaker contactors in the main switchgear building to the new drives location.
  6. Verification of availability of spare ductbanks and cable trays for VFDs new feeder installation, originating in the Pump Station main electrical room and ending in the VFD house where existing VFDs are located.
  7. Installation of two (2) new Variable Frequency Drives for Pumps P-208 and P-209 and all corresponding and associated power and control cabling.
  8. Integration of control signals for existing motors and new VFD's controls into existing pump station "System C" controls.

9. Installation of two medium voltage feeders originating at new VFDs and terminating in the existing pumps P-208 and P-209 corresponding electric motors located outdoor and north of VFD house.
10. Facilitate VFD installation by cutting north wall of the existing VFD house and reconstructing after drives installation is completed. North wall opening shall be repaired similar to existing south wall.
11. Structural reinforcement of the floor of the VFD house to support additional weight of the new equipment as required.
12. Modification of existing air distribution system within the VFD house to enhance HVAC system operation and performance as detailed on the construction documents.
13. Supply of temporary electrical power to the existing roof top air conditioning systems during construction. Temporary power feeder shall originate from the existing Control Building located south of the VFD house.
14. Existing drive (VFD) for Pump P-207 is located within the same VFD house. Installer shall implement measures to air-seal VFD house during construction in order to maintain VFD house pressurization and air conditioning requirement for proper operation of pump P-207 drive [and the exiting drive during phase 1 then the replaced drive during phase 2.](#)

#### 1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.
- B. The Contractor shall be responsible for all work required for purchase and installation of the two new VFDs in Lynchburg Pump Station. Contractor is the sole responsible entity to perform installation and any incidental work including but not limited to the following:
  1. Structural upgrade of the VFD housing floor.
  2. Medium voltage feeder cable installation
  3. All HVAC related work.
  4. Control integration.
  5. Complete start-up and testing.
  6. Owner personnel training.
  7. As-Built documents development.
  8. Warranty services.

#### 1.5 WORK PHASES

- A. The Work shall be conducted in two phases to minimize the impact of pump outages and Lynchburg Pump Station's water production as described below:
  1. Phase One – Complete removal of the existing VFD for Pump P-209 including associated transformers, wiring, equipment etc. before complete installation of the new VFD for this



pump including control system integration. Pump P-208 shall remain operational during this phase of the project.

2. Phase Two of the work shall begin after completion of Phase one, including startup and commissioning of Pump P-209 to the owner's satisfaction. Phase two shall include complete removal of the existing VFD for Pump P-208 including associated transformers, wiring, equipment etc. and complete installation of the new VFD for this pump including control system integration.

- B. Before commencing work, submit a schedule showing the sequence, commencement and completion dates for each proposed phases, and completion of project.
- C. Alternative construction sequence may be proposed by successful contractor for Owner consideration.

#### 1.6 OWNER-FURNISHED PRODUCTS

- A. Owner will not furnish any products required for this work.

#### 1.7 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated by extend of work on Drawings. Any additional requirements or deviation shall be approved by owner in advance of commencement of work.
- B. Use of Site: Use of premises to areas within the Contract limits is indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  1. Owner Occupancy: Owner will occupy Project site during construction.
  2. Driveways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Use of Existing Building: Maintain existing VFD house in a weather-tight condition throughout construction period. VFD house temperature and humidity levels shall be maintained during construction. Contractor shall seal required cut opening in the exterior wall to maintain temperature and humidity control within the VFD house at all times. Repair damage caused by construction operations. Protect building and equipment within during construction period. Secure all openings during non-working hours.

## 1.8 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be performed inside the existing facility during hours of 6 AM to 4 PM, Monday through Friday. Permit for additional working hours maybe granted upon contractor's request and Construction Manager Agreement.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner.

## 1.9 WORK SEQUENCE

- A. Construct Work to accommodate owner's operational and water production requirements. The contractor shall provide a sequence of construction that allows for continuous water production per CWA requirements. The sequence presented below is intended to permit construction without unnecessarily disruptions in the pump station operation. The contractor shall review and revise this sequence as required, and submit the revised work sequence for approval. Submission of the work sequence shall be made at the same time as project schedule.
  - 1. Assess usability of existing spare ductbanks and cable trays for new VFD feeder from switchgear in the main electrical room to VFD house.
  - 2. Submit routing plans for medium voltage feeders if existing ductbank/cable tray use is not possible.
  - 3. Install new ductbanks and cable trays (if required) for primary feeders for both drives.
  - 4. Reuse existing VFD house floor/slab penetrations to route new cable to the extent possible. Repair and fill penetration not used.
  - 5. Install new feeder cables from main switchgear to VFD house.
  - 6. Perform VFD house floor reinforcement (if required) as applicable.
  - 7. Install new temporary electrical power for AC equipment to the VFD house.
  - 8. Cut required opening in the north wall of the VFD house. Install temporary provision for sealing of this opening to maintain indoor temperature.
  - 9. Disconnect and remove VFD and associated transformer for pump P-209. Owner will remove two (2) three phase power cells from this drive before contractor is allowed to dispose of this drive.
  - 10. Install, test, program, and start VFD for pump P-209. Verify control integration.
  - 11. Disconnect and remove VFD and associated transformer for pump P-208.
  - 12. Install, test, program, and start VFD for pump P-208. Verify control integration.
  - 13. Perform HVAC and air distribution improvement and associated work for the VFD house per construction documents and as required.
  - 14. Patch all floor and slab openings not used.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000