



CITY OF HOUSTON

Annise D. Parker

Mayor

P.O. Box 1562
Houston, Texas 77251-1562

Telephone - Dial 311
www.houstontx.gov
<http://purchasing.houstontx.gov>

November 20, 2013

SUBJECT: Letter of Clarification No. 5
Large Submersible Pump Repair Services for the Public Works and
Engineering Department

REFERENCE: Invitation to Bid No. S30-L24754

TO: All Prospective Bidders

This Letter of Clarification is issued for the following reason(s):

- **To revise the above reference solicitation as follows:**
 1. **Bid line items have been changed. All bids submitted on or before November 20, 2013 must be submitted again.**
 2. **Answers to questions.**
 3. **Remove pages 22, 25, 27 and 34 and replace with pages 22, 25, 27 and 34 marked Revised November 20, 2013.**

When issued, Letter(s) of Clarification shall automatically become a part of the proposal documents and shall supersede any previous specification(s) and/or provision(s) in conflict with the Letter(s) of Clarification. All revisions, responses, and answers incorporated into the Letter(s) of Clarification are collaboratively from both the Strategic Purchasing Division and the applicable City Department(s). It is the responsibility of the proposers to ensure that it has obtained all such letter(s). By submitting a proposal on this project, proposers shall be deemed to have received all Letter(s) of Clarification and to have incorporated them into this proposal.

If you have any questions or if further clarification is needed regarding this Invitation for Bid, please contact me at 832-393-8736.

A handwritten signature in black ink, appearing to read "Richard Morris".

Richard Morris
Senior Procurement Specialist

Attachment: Pages 22, 25, 27 and 34 marked Revised November 20, 2013

- **The following questions and City of Houston responses are hereby incorporated and made a part of the Invitation to Bid:**

1. **Question/Request:** If the city buys an 800hp pump in the next 5 years you would expect me to repair it for the same price as a 500 hp. I will have to greatly increase my 500hp price.

Answer: Fee Schedule has been revised to reflect the largest pump on the current Wastewater (WWO) list. If new pumps larger than pumps on the list are installed at WWO, the contractor shall provide a cost to repair or replace to the department upon request.

2. **Question/Request:** I do not understand the preventive maintenance item. Is this item for one pump or all pumps in a station, some pumps take 2 hours to pull and maintain and some take 30 minutes.

- **Answer:** The submersible pump preventative maintenance checklist is defined within *Section B.12 (Preventative Maintenance)*. In addition, *Section B.12.4* outlines how mobilization and demobilization cost shall be captured, which is a separate cost from crane rental and work performed by Field Technician(s) (i.e. – Field Labor Rate).

3. **Question/Request:** Is non-repair per hour or total per pump, it takes much longer to D&I a 400 hp pump than a 125 hp.

Answer: Non-Repair Cost (Unit Measure = Each): This item is contractor's cost to complete D&I and prepare cost estimate if the pump is neither repaired or replaced, but scrapped.

4. **Question/Request:** Is the crane charge per hour or per day or per week.

Answer: Crane Rental (Unit Measure = Hourly): This item is to be used when the contractor provide their own crane. If this item is Sub-Contracted the fee is captured under Other Service."

5. **Question/Request:** Nondestructive test; this either needs to be a markup % or explain what type of test you are asking for.

Answer: This item to be used if Non-Destructive Test is performed by the contractor. If this item is Sub-Contracted, the fee is captured under "Other Service."

6. **Question/Request:** Chroming should be a markup %.

Answer: This item to be used if Chroming is performed by the contractor. If the work is Sub-Contracted the fee is captured under "Other Service."

- B.03.17 The UDR will inspect the torn-downed unit, review the Contractor's proposed work scope and cost estimate. If the cost exceeds the budget per fiscal year, the UDR shall revise the scope and have the Contractor submit another cost estimate within five (5) days.
- B.03.18 Upon written acceptance of cost estimate by the UDR, the Contractor shall proceed with repairs. The Contractor shall commence to work on the unit and complete the repair within the allocated time for delivery of such item:
- B.03.18.1 Submersible Pumps 125HP to 250HP, 10 weeks**
 - B.03.18.2 Submersible Pumps \geq 250HP to 450HP, 12 weeks**
 - B.03.18.3 Submersible Pumps \geq 450HP to Greater HP, 14 weeks**
- B.03.19 The Contractor shall notify the UDR immediately in writing if the Contractor cannot complete the job within the contractually agreed time period for the unit.
- B.03.20 The Contractor shall submit to the UDR a written detailed explanation for the delay with a new documentation to complete the job. If additional work is required, the Contractor shall submit explanation before commencing the additional work.
- B.03.21 At all times during the repair process, the Contractor shall maintain the City's equipment in a clean and weather protected storage area.
- B.03.22 The rotor assembly shall be checked for total indicated run out and recorded on the rotor information sheet. The check shall be carried out in precision "V-Blocks.
- B.03.23 Shaft seal surface, bearing journals, shall be micrometer checked and results shall be recorded on the rotor information sheet within the D&I Report.
- B.03.24 The critical dimensions of the end bells and bearing housing shall be micrometer checked and recorded on the mechanical inspection sheet within the D&I Report.
- B.03.25 The above measurements shall be submitted to the UDR, along with the electrical and mechanical data sheets, during the teardown inspection.
- B.03.26 Replacement bearings shall have an L_{10} rating life in accordance with ANSI/AFBMA of at least 40,000 hours of service life. If the existing bearings have exceeded L_{10} rating life (40,000 hours), then the Contractor shall replace the bearing with the same L_{10} rating life bearing as the existing one.
- B.03.27 The Contractor shall ensure the quality of varnish in the Dip Tank and the VPI system by sampling and testing the varnish in the DIP Tank/VPI system every three months. The Contractor shall have the varnish quality reports available for review by the City Inspection Team and the UDR.
- B.03.28 After parts have been repaired, the Contractor shall put together and balance the rotating assembly. The Contractor shall balance the rotor first, and then balance the assembled rotor and impeller.
- B.03.29 The Contractor shall reassemble the submersible pump unit seal, paint and test as required.

cause of failure, including electrical and/or mechanical failure. Stators shall be removed from the housing.

- B.04.01.03 Stator winding phase to ground insulation shall be checked with a 500 – 1,000 Volt megger and the results noted on the inspection form.
- B.04.01.04 Stator winding shall be checked for shorts using surge-comparison tests and all values recorded.
- B.04.01.05 The rotor assembly shall be inspected for wear, scoring and cracks. Checking for open rotor bars shall be done using but not limited to growler and magnetic paper; Enhanced testing of rotor bars can be done using infrared thermography per B.00.05
- B.04.01.06 All stators that are to be rewound shall be core loss tested. This test shall be done after windings are removed and before burnout. The results shall be submitted to the UDR.
- B.04.01.07 Shaft seal surface, bearing journals and coupling fit, shall be checked with a micrometer and recorded on the rotor information sheet.
- B.04.01.08 The insulating material in the rewinding of the unit shall have a Class “F” rating or better.
- B.04.01.09 Recondition, Rewind: Include all parts and labor. Rates can only be charged for tasks that are not a part of Rewinding/ and Reconditioning as described above.

B.04.02 MOTOR INSPECTION AND REPAIR-RECONDITION-REPAIR

- B.04.02.01 Motors that have been designated for winding reconditioning (and have been thoroughly cleaned free from dirt, grit, grease, oil, and properly dried) shall be inspected for winding damage and recommended repairs shall be made to damaged areas upon approval.
- B.04.02.02 Damage to the windings shall be recorded and submitted to the UDR.
- B.04.02.03 Motor insulation shall be washed with hot soapy water at 200 degrees Fahrenheit and at 30 PSI (Pounds per Square Inch) and then with fresh water. After cleaning, unit must be baked between 250 and 275 degrees Fahrenheit until an acceptable insulation level is obtained.
- B.04.02.04 Reconditioned motors shall receive a minimum of two (2) dips and baked in insulating resin. Stator shall be baked at insulation resin manufacture’s recommended temperature and time to assure full curing. Stator shall be removed from housing for this process.
- B.04.02.05 The Contractor shall provide a cost estimate in writing to the CTR to recondition any motor that is greater than 450 HP and/or considered high-voltage rated, if the scope of work differs from all the basic Recondition Repair.**

B.04.03 MOTOR INSPECTION AND REPAIR-REWIND-REPAIR

- B.04.03.01 The stator core shall be vertically set in the burnout oven. After burnout and winding removal, the core and frame shall be allowed to cool by

with a compression lug with NEMA standard bolt hole.

- B.04.03.16 The finished stator winding insulation to ground shall be checked with a 500 – 1,000 Volts megger. The minimum acceptable insulation resistance reading shall be 10 mega-ohms.
- B.04.03.17 The completed stator shall be preheated in a temperature-controlled oven to the varnish manufacturer's recommendation, not to exceed class "F" operating temperature and shall be held at this temperature for one (1) hour.
- B.04.03.18 Stator shall be allowed to cool by natural convection to the temperature required by insulation resin manufacturer prior to being dipped in insulating varnish.
- B.04.03.19 Stator shall be dipped three (3) times in insulating varnish, repeating processes of items B.04.03.17 and B.04.03.18.
- B.04.03.20 Random-Wound / Form-Wound stators shall go through dip tank process, **however, when applicable vacuum pressure impregnation (VPI) process shall be an additional cost not to be included in the standard Rewind Repair Cost.**
- B.04.03.21 Baking shall be done in a temperature controlled and force ventilated oven to allow a complete and uniform cure per pump manufacturer's specifications.
- B.04.03.22 Resin shall be completely removed from the stator frame to mechanically fit the outer paint surfaces, and the inner bore of the stator.
- B04.03.23 The Contractor shall provide a cost estimate in writing to the CTR to recondition any motor that is greater than 450HP and/or considered high-voltage rated, if the scope of work differs from all the basic Rewind Repair.**

B.05 STANDARD RESPONSE TIMES

- B.05.01 Contractor shall be accessible to the City via telephone during normal business hours. The Contractor shall be ready to start work on any unit within twenty-four (24) hours of receiving the call for the service.
- B.05.02 The Contractor shall be available and accessible to the City via telephone to work overtime and/or emergency per the request of the UDR within six (6) hours of initial contact from UDR and/or CTR.
- B.05.03 The Contractor shall start an emergency job immediately, without scheduling delays, and will not be restricted to normal working hours. The UDR shall coordinate the emergency and overtime work approved by CTR.

B.06 REPAIR TECHNICIANS

- B.06.01 The Contractor's repair technicians shall be qualified, properly trained in repair-recondition of submersible pumps of the type and sizes specified for this contract.
- B.06.02 The Contractor shall have at least one senior repair technician with a minimum of five (5) years' experience in repair and/or overhaul of submersible pumps specified in this contract.

Exhibit A

Definitions

As used in this Agreement, the following terms have the meanings set out below:

1. "Additional Services" shall mean other services to repair and/or replace systems associated with the Submersible pump, not otherwise described in this specification, to bring the equipment to the working conditions agreeable to the Director, CTR and/or COR.
2. "Agreement" means this contract between the Parties, including all exhibits, change orders, and any written amendments authorized by City Council and Contractor.
3. "Submersible Pump Groups" means the submersible pumps for the purpose of this contract are grouped such as to represent the type, manufacturer and the horsepower of the unit.
4. The existing and/or future submersible pumps at the City of Houston Wastewater facilities include: Lift/Pumping Stations, Dewatering and Disinfection Submersible. Group 1: Flygt Submersible Pumps; Group 2 KSB Submersible Pumps; and Group 3: Miscellaneous Submersible Pumps (All other submersible pumps that are not Flygt and/or KSB).

<u>Group</u>	<u>Type of Submersible Pump / Manufacturer</u>	<u>Size of Drive (Horsepower)</u>
1	Flygt	>125hp and ≤150hp
	Flygt	>150p and ≤175hp
	Flygt	>175hp and ≤200hp
	Flygt	>200hp and ≤250hp
	Flygt	>250hp and ≤300hp
	Flygt	>300hp and ≤350hp
	Flygt	>350hp and ≤400hp
	Flygt	>400hp and ≤450hp
	Flygt	>450hp and GreaterHP
2	KSB	>125hp and ≤150hp
	KSB	>150hp and ≤175hp
	KSB	>175hp and ≤200hp
	KSB	>200hp and ≤250hp
	KSB	>250hp and ≤300hp
	KSB	>300hp and ≤350hp
	KSB	>350hp and ≤400hp
	KSB	>400hp and ≤450hp
3	Miscellaneous	>125hp and ≤150hp
	Miscellaneous	>150 and ≤175hp
	Miscellaneous	>175hp and ≤200hp
	Miscellaneous	>200hp and ≤250hp
	Miscellaneous	>250hp and ≤300hp
	Miscellaneous	>300hp and ≤350hp
	Miscellaneous	>350hp and ≤400hp
	Miscellaneous	>400hp and ≤450h
	Miscellaneous	>450hp and GreaterHP

5. RESERVED.
6. "Agreement" means this contract between the Parties, including all exhibits, change orders, and any written amendments authorized by City Council and Contractor.
7. RESERVED.
8. "City" is defined in the preamble of this Agreement and includes its successors and assigns.
9. "City of Houston Normal Business Hours" shall mean 8:00 a.m. to 5:00 p.m., Monday to Friday, except on days which are considered City holidays.
10. "City Purchasing Agent" is defined as the person or duly authorized successor, authorized in writing to act for the City. The term includes, except as otherwise provided in this Contract, the