

**ADVERTISEMENT TO BIDDERS**  
**for**  
**TWO (2) SUBMERSIBLE PUMPS**  
**for**  
**GRAND ISLAND WASTE WATER TREATMENT PLANT**  
**CITY OF GRAND ISLAND, NEBRASKA**

Sealed bids will be received at the office of the City Clerk, 100 E. First St., Grand Island, NE 68801 or P.O. Box 1968, Grand Island, Nebraska 68802 until 2:00p.m., (Local Time), Tuesday, June 21, 2011 for Two (2) Submersible Pumps, FOB the City of Grand Island. Bids will be publicly opened at this time in Conference Room #1 located on 1<sup>st</sup> floor of City Hall. Bids received after specified time will be returned unopened to the sender.

Bids shall be submitted on forms, which will be furnished by the City. **Please return one original and one copy of each bid sheet.**

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S. 73-102 and comply with Nebraska R.R.S 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska.

Successful bidder shall maintain a Drug Free Workplace Policy.

Bids will be evaluated by the Purchaser based on conformity to specifications, price, quality, experience, reputation of bidder and warranty.

The Purchaser reserves the right to reject any or all bids and to waive irregularities therein and to accept whichever bid or part of bid that may be in the best interest of the City, at its sole discretion.

No bidder may withdraw their bid for a period of forty-five (45) days after date of opening bids.

Bid Packages for use in preparing bids may be obtained from the office of the City Engineer, Second Floor, City Hall, 100 East First Street, Grand Island, NE.

RaNae Edwards  
City Clerk

Bid Package includes

1. Advertisement to Bidders
2. General Specifications for Two (2) Submersible Sewage Pumps
3. Minimum Bid Specifications for Two (2) Submersible Sewage Pumps
4. Bid Sheet
5. Bid Letter
6. Bidder Checklist

**BIDDER CHECKLIST FOR  
2011-WWTP-1  
TWO (2) SUBMERSIBLE SEWAGE PUMPS  
WASTEWATER TREATMENT PLANT  
For  
CITY OF GRAND ISLAND, NEBRASKA**

**Bids must be received by the City Clerk before 2:00 p.m., Tuesday, June 21, 2011.**

The following items must be completed for your bid to be considered.

- A completed bidder checklist form.
- A signed original and one copy of the bidding documents (Bid sheet and bid letter)
- A complete factory printed Warranty
- A complete factory printed literature set including pump specs, parts breakdown and Operation and Maintenance Manual.
- Acknowledgment of Addenda Number(s)\_\_\_\_\_

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

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print-Name of Person Completing Bid

\_\_\_\_\_  
Signature

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

**BID REQUEST INSTRUCTION**  
**For**  
**TWO (2) SUBMERSIBLE SEWAGE PUMPS**  
**For**  
**CITY OF GRAND ISLAND**

The City of Grand Island, Nebraska, Public Works Department, Waste Water Treatment Plant Division, respectively requests sealed bids for the following:

**Two (2) Submersible Sewage Pumps**

As part of the Bid Request, the following items are attached:

Advertisement to Bidders  
Bidders Instructions and Check List  
General Specifications  
Minimum Bid Specifications  
Bid Sheet  
Bid Letter

Sealed bids must be received by **2:00 p.m., (Local Time), Tuesday, June 21, 2011**, and be addressed to:

City Clerk  
City of Grand Island  
RE: **Bids for Two (2) Submersible Sewage Pumps**  
100 East First Street  
P.O. Box 1968  
Grand Island, NE 68802-1968

Bids must include the following:

**One (1) Complete Bid Sheet, Bidders Check List and Bid Letter and one extra copy of the Bid Sheet and Bid Letter.**

All information required in specifications must be included with the bid. Supplementary material that the bidder wishes to include will be appreciated, but is not required.

Please direct bid questions to John Rundle, Maintenance Supervisor at Waste Water Treatment Plant, at (308) 385-5430 or Fax (308) 385-5443.

**NOTE:** The City of Grand Island does not pay Federal, State or City tax on this contract; do not include tax in your pricing.

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**GENERAL SPECIFICATIONS**  
**For**  
**TWO (2) SUBMERSIBLE SEWAGE PUMPS**  
**For**  
**WASTEWATER TREATMENT PLANT DIVISION**  
**CITY OF GRAND ISLAND**

Sealed bids will be received at the office of the City Clerk, 100 East First Street, P.O. Box 1968, Grand Island, Nebraska until **2:00 p.m., (Local Time), Tuesday, June 21, 2011**, for **Two (2) Submersible Sewage Pumps** as specified in these bidding documents, FOB Grand Island, NE.

**Exceptions to Specifications**

Any bidder who has exceptions to any specifications and requirements listed in the bidding documents must so state in the space provided below. It is the bidder's responsibility to clearly outline any exceptions. Failure by bidder to outline exceptions will require the successful bidder to comply with the specifications.

**Exceptions to Specifications - Two (2) Submersible Sewage Pumps**

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Attached are detailed minimum specifications. The following general specifications also apply to this bid.

|                                     |   |
|-------------------------------------|---|
| <b>Bid Bond</b>                     | None Required.  |
| <b>Manuals</b>                      | Two (2) Complete parts and repair manuals.  |
| <b>Warranty</b>                     | Manufacturers Standard, include complete details with bid.  |
| <b>Description Literature</b>       | Factory printed fully describing the equipment to be furnished.   |
| <b>Optional Equipment</b>           | N/A   |
| <b>OSHA &amp; ANSI Requirements</b> | In addition to other specified requirements, the equipment shall meet all Current Occupational Safety and Health Administration and American National Standards Institute requirement specifications. |
| <b>Delivery</b>                     | FOB City of Grand Island Waste Water Treatment Plant  |
| <b>Delivery Date</b>                | 90 days after issuance of Purchase Order  |

|   |   |
|---|---|
| <b>Payment</b>                                  | Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect and test the equipment to confirm compliance with specifications. Any equipment, which does not meet the City's requirements, will be returned at vendor's expense for correction. Any specified data, diagrams, and manuals must be received prior to approval of invoice. The invoice will be paid at the next regularly scheduled Council meeting occurring after the approval of invoice; the City Council typically meets the second and fourth Tuesday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time. The furnished equipment must be new, the latest make or model, unless otherwise specified. |
| <b>Trade-In</b>                                 | N/A   |
| <b>Fair Employment Practices</b>                | Each bidder agrees that he/she will not discriminate against any employee or applicant for employment because of age, race, color, religious creed, ancestry, handicap, sex or political affiliation.   |
| <b>Data Privacy</b>                             | Bidder agrees to abide by all applicable Local, State, and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, patents, and patent rights. The bidder agrees to hold the City harmless from any claims resulting from the bidder's unlawful disclosure or use of private or confidential information.   |
| <b>Independent Price Determination</b>          | By signing and submitting bid, the bidder certifies that: the prices in the bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.  |
| <b>Clarification of Specification Documents</b> | Vendors shall promptly notify the Purchasing Agent of any ambiguity, inconsistency, or error, which they may discover upon examination of the specifications. Interpretations, corrections and changes made to the specifications will be made by written addenda. Oral interpretations or changes to the specifications made in any other manner will not be binding on the City; and bidders shall not rely upon such interpretations or changes.   |
| <b>Demonstrations/Samples</b>                   | N/A   |

**Bid Evaluation and Award** No bid shall be withdrawn for a period of forty-five (45) days after bid due date. The City reserves the right to reject any and all bids, to waive technicalities and to accept the bid considered by the Purchaser to be in the City's best interest. The bid will be evaluated based on the following.

- Conform to specification
- Price
- Quality
- Experience and Reputation of Manufacturer and Supplier. The City may ask for references from manufacturer for other purchasers of like equipment for evaluation.
- Warranty of equipment

**Gratuities and Kickbacks** City Code states that it is unethical for any person to offer, give or agree to give any City employee or former employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on the behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontractor order.

**Budget Year** The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

**MINIMUM BID SPECIFICATIONS  
For  
TWO (2) SUBMERSIBLE SEWAGE PUMPS**

The following specifications describe a contract for **Two (2) Submersible Sewage Pumps**. The City will consider any bid that meets or exceeds required minimum specifications as stated herein. The City of Grand Island reserves the right to reject any or all bids and waive any technicalities.

The intent of this bid is to purchase **Two (2) Submersible Sewage Pumps** for the Grand Island Waste Water Treatment Plant.

The following minimum specifications shall apply to the **Two (2) Submersible Sewage Pumps**:

**PUMP DESIGN CONFIGURATION (Wet Pit Installation)**

The pump shall be supplied with a mating cast iron discharge connection, discharge elbow with 150 PSI ANSI discharge flange and be capable of delivering 3,500 GPM at 50 FT. TDH. The pump(s) shall be automatically and firmly connected to the discharge connection, guided by no less than two stainless steel guide bars extending 30 foot from the top of the wet-well to the discharge connection. There shall be no need for personnel to enter the wet-well to remove pump. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal to metal watertight contact. **Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be acceptable.** No portion of the pump shall bear directly on the wet-well floor. The pump shall be fitted with 40 feet of stainless steel cable. The working load of the lifting system shall be 50% greater than the pump unit weight. The Pump shall be fitted with 50 feet of cord for connection to a control panel or junction box.

**PUMP CONSTRUCTION**

Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. All exposed nuts or bolts shall be of stainless steel construction. All metal surfaces coming into contact with the pumpage, other than stainless steel, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.

Sealing design shall incorporate metal-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber a-rings. Fittings will be the result of controlled compression of rubber a-rings in two planes and a-ring contact of four sides without the requirement of a specific torque limit.

**Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical a-rings, grease or other devices shall be used.**

**COOLING SYSTEM**

Each pump motor shall be sufficiently cooled by the surrounding environment or by submergence in the pumped media for proper operation of pump



## CABLE ENTRY SEAL

The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of dual cylindrical elastomer grommets, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter. The grommets shall be compressed by the cable entry unit, thus providing a strain relief function. The assembly shall provide ease of changing the cable when necessary using the same entry seal. The cable entry junction chamber and motor shall be sealed from each other, which shall isolate the stator housing from foreign material gaining access through the pump top. **Epoxies, silicones, or other secondary sealing systems shall not be considered equal.**

## MOTOR

The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. **The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of pins, bolts, screws or other fastening devices used to locate or hold the stator and that penetrate the stator housing are not acceptable.** The motor shall be designed for continuous duty while handling pumped media of up to 104°F. The motor shall be capable of no less than 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of aluminum. Three thermal switches shall be embedded in the stator end coils, one per phase winding, to monitor the stator temperature. These thermal switches shall be used in conjunction with and supplemental to external motor overload. The junction chamber shall be sealed off from the stator housing and shall contain a terminal board for connection of power and pilot sensor cables using threaded compression type terminals. **The use of wire nuts or crimp-type connectors is not acceptable.** The motor and the pump shall be produced by the same manufacturer.

The motor service factor (combined effect of voltage, frequency and specific gravity) shall be 1.15. The motor shall have a voltage tolerance of +/- 10%. The motor shall be designed for continuous operation in up to a 40°C. ambient and shall have a NEMA Class B maximum operating temperature rise of 80° C. A motor performance chart shall be provided exhibiting curves for motor torque, current, power factor, input/output kW and efficiency. The chart shall also include data on motor starting and no-load characteristics. Motor shall be 480 volt 3 phase.

Motor horsepower shall be sufficient so that the pump is non-overloading throughout its entire performance curve, from shut-off to run-out. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.

## BEARINGS

The integral pump/motor shaft shall rotate on two bearings. The motor bearings shall be sealed and permanently grease lubricated with high temperature grease. The upper motor bearing shall be a two row angular contact ball bearing. The lower bearing shall be a two row angular contact ball bearing to handle the thrust and radial forces. The minimum L10 bearing life shall be 50,000 hours at any usable portion of the pump curve.

## MECHANICAL SEALS

Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seal sets, each having an independent spring. The lower primary seal, located between the pump and seal chamber, shall contain one stationary and one positively driven rotating corrosion resistant tungsten-carbide ring. The upper secondary seal, located between the seal chamber and the seal inspection chamber, shall contain one stationary and one positively driven rotating corrosion resistant tungsten-carbide seal ring. All seal rings shall be individual solid sintered rings. Each seal interface shall be held in place by its own spring system. The seals shall not depend upon direction of rotation for sealing. Mounting of the lower seal on the impeller hub is not acceptable. **Shaft seals without positively driven rotating members or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces are not acceptable.** The seal springs shall be isolated from the pumped media to prevent materials from packing around them, limiting their performance.

Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and shall provide capacity for lubricant expansion. The seal lubricant chamber shall have one drain and one inspection plug that are accessible from the exterior of the motor unit. The seal system shall not rely upon the pumped media for lubrication.

The area about the exterior of the lower mechanical seal in the cast iron housing shall have cast in an integral concentric spiral groove. This groove shall protect the seals by causing abrasive particulate entering the seal cavity to be forced out away from the seal due to centrifugal action.

A separate seal leakage chamber shall be provided so that any leakage that may occur past the upper, secondary mechanical seal will be captured prior to entry into the motor stator housing. Such seal leakage shall not contaminate the motor lower bearing. The leakage chamber shall be equipped with a float type switch that will signal if the chamber should reach 50% capacity.

## PUMP SHAFT

The pump and motor shaft shall be a single piece unit. The pump shaft is an extension of the motor shaft. **Shafts using mechanical couplings shall not be acceptable.** The shaft shall be stainless steel- ASTM A479 S43100-T. **Shaft sleeves will not be acceptable.**

## IMPELLER

The impeller shall be of ASTM A-532 (Alloy III A) 25% chrome cast iron dynamically balanced, semi-open, multi-vane, back swept, screw-shaped, nonclog design. The impeller leading edges shall be mechanically self-cleaned automatically upon each rotation as they pass across a spiral groove located on the volute suction. The screw shaped leading edges of the gray iron impeller shall be hardened to Rc 45 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter normally found in wastewater. The screw shape of the impeller inlet shall provide an inducing effect for the handling of up to 5% sludge and rag-laden wastewater. The impeller to volute clearance shall be readily adjustable by the means of a single trim screw. The impellers shall be locked to the shaft, held by an impeller bolt and shall be coated with alkyd resin primer.

## **VOLUTE / SUCTION COVER**

The pump volute shall be a single piece gray cast iron, ASTM A-48, Class 358, non-concentric design with smooth passages of sufficient size to pass any solids that may enter the impeller. The volute shall have a replaceable suction cover insert ring in which are cast spiral-shaped, sharp-edged groove(s). The spiral groove(s) shall provide trash release pathways and sharp edge(s) across which each impeller vane leading edge shall cross during rotation so to remain unobstructed. The insert ring shall be cast of ASTM A-532 (Alloy III A) 25% chrome cast iron and provide effective sealing between the multi-vane semi-open impeller and the volute housing.

## **PROTECTION**

A float switch shall be installed in the seal leakage chamber and will activate if leakage into the chamber reaches 50% chamber capacity.

## **STARTUP SERVICES**

Supplier shall provide two (2) days, sixteen (16) hours of services on site, excluding travel time. Authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of respective equipment, subsystem, or system, with full authority by the equipment manufacturer to issue the certifications required of the manufacturer and owner. Furnish manufacturers' representatives for detailed classroom and hands-on training to owner's personnel on operation and maintenance of specified product (system, subsystem, component). Furnish complete training materials, to include operation and maintenance data, to be retained by each trainee.

**THE CITY OF GRAND ISLAND RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS.**



**BID LETTER**  
**For**  
**TWO (2) SUBMERSIBLE SEWAGE PUMPS**  
**For**  
**WASTEWATER TREATMENT PLANT DIVISION**  
**CITY OF GRAND ISLAND**

Supplier of \_\_\_\_\_, hereinafter  
Called "Bidder", organized and existing under the laws of the State of \_\_\_\_\_,  
to the City of Grand Island, Nebraska, hereinafter called "City" to provide:

**Submersible Sewage Pumping Equipment**

In compliance with the City's Advertisement for Bids bidder hereby proposes to provide the previously mentioned services, materials, and/or equipment, at the price quoted on the bid sheet in compliance with all requirements and specifications contained in the Bid Request, and further agrees that the language of this document shall govern in the event of a conflict with bid.

The City reserves the right to accept or reject any or all bids completely or in part, and to waive any informality and to enter such contract as it shall deem to be in the City's best interest.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2011.

Respectfully submitted,

\_\_\_\_\_  
Company

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Name (Print or Type)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Fax Number