



City Hall • 333 West Ellsworth Street • Midland, Michigan 48640-5132 • 989.837.3300 • 989.835.2717 Fax • www.midland-mi.org

INVITATION TO BID
BID NO. 3229
VALLEY PUMP STATION

Sealed bids will be accepted at the City Clerk's Office, City Hall, 333 West Ellsworth Street, Midland, Michigan 48640-5132, until 2:00 PM, Tuesday, **December 1, 2009** for the supply and installation of a Horizontal Submersible Sewage Pump per the attached specifications. Technical questions about this bid shall be directed to Steve Smith, Wastewater Supervisor, at (989) 837-3504.

Invitation to Bid and all its pages, documents and attachments, including those added subsequently by written notice, submitted and properly executed, shall constitute the contract between the City of Midland and the successful vendor when approved and accepted by the City.

The City reserves the right to accept or reject all or any parts of any and all bids, to waive irregularities and to award in the best interests of the City of Midland.

Mike Meyer, CPPB, C.P.M.

Purchasing Agent

Midland, Michigan

CITY OF MIDLAND VALLEY PUMP STATION

SCOPE

This bid consists of providing a Flygt explosion proof horizontal submersible dry pit sewage pump with the patented "N" impeller technology. Flygt Model NZ-3202-458, 70 HP, 480 volt, three phase, 10" x 6" pump with inlet stand, inlet flange adapter and 50' motor and sensor cable. Pump equipped with seal failure and high temp cable and Mini CAS monitoring device. The pump shall be a single speed unit capable of pumping 1800 GPM at 90 TDH. The motor shall be rated for inverter duty. Price shall include start up by manufacture representative.

PUMP DESIGN CONFIGURATION (Dry pit installation)

Pump shall be capable of operating in a continuous non submerged condition in horizontal (NZ) position in a dry pit installation and permanently connected to inlet and outlet pipes. Pump shall be of submersible construction and will continue to operate satisfactorily should the dry pit be subjected to flooding.

COOLING SYSTEM

Each unit shall be provided with an integral motor cooling system. A motor cooling jacket shall encircle the stator housing, providing for dissipation of motor heat regardless of the type of pump installation. An impeller, integral to the cooling system and driven by the pump shaft, shall provide the necessary circulation of the cooling liquid through the jacket. The cooling liquid shall pass about the stator housing in the closed loop system in turbulent flow providing for superior heat transfer. The cooling system shall have one fill port and one drain port integral to the cooling jacket. The cooling system shall provide for continuous pump operation in liquid or ambient temperatures of up to 104°F. (40°C.). Fans, blowers or auxiliary cooling systems that are mounted external to the pump motor are not acceptable.

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 withstanding at least 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 protection and shall be connected to the motor control panel. 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. Motor horsepower shall be sufficient so that the pump is non-overloading throughout its entire performance curve, from shut-off to run-out.

MECHANICAL SEALS

Each pump shall be provided with a positively driven dual, tandem tungsten-carbide/tungsten carbide mechanical shaft seal system consisting of two seal sets, each having an independent spring.

IMPELLER

The impeller shall be the **N STYLE** constructed of gray cast iron, ASTM A-48 Class 35B, dynamically balanced, semi-open, multi-vane, back swept, screw-shaped, non-clog 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 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 impeller shall be locked to the shaft and held by an impeller bolt.

VOLUTE/SUCTION COVER

The pump volute shall be a single piece gray cast iron, ASTM A-48, Class 35B, non-concentric design with smooth passages of sufficient size to pass any solids that may enter the impeller. Minimum inlet and discharge size shall be as specified. The volute shall have integral spiral-shaped, sharp-edged groove(s) that is cast into the suction cover. The spiral groove(s) shall provide the sharp edge(s) across which each impeller vane leading edge shall cross during rotation so to remain unobstructed. The internal volute bottom shall provide effective sealing between the multi-vane semi-open impeller and the volute.

**CITY OF MIDLAND, MICHIGAN
STANDARD INSTRUCTIONS TO BIDDERS**

1. Receipt and Opening of Bids: Sealed bids will be accepted and date/time stamped upon receipt in the office of the City Clerk, City Hall, 333 West Ellsworth, Midland, MI 48640-5132, until the time indicated on the attached Invitation to Bid for goods or services listed in the specifications and will be publicly opened and read aloud.
2. Form of Bid: Bids shall be submitted on the enclosed form with any exceptions, deviations or modifications to the published requirements clearly noted and explained.
3. Submission of Bids:
 - A) Envelopes containing bids shall be sealed and clearly marked on the outside of the envelope with the name and address of the bidder, the title and bid number of the project, and the date and time of the scheduled bid opening.
 - B) Any bid received after the scheduled opening time will not be accepted and will be returned unopened.
 - C) Any bidder may withdraw their bid response by written request at any time prior to the scheduled bid opening.
 - D) Telephonic or faxed bids will not be accepted and telephonic, telegraphic, or faxed amendments to bids or withdrawals will not be accepted under any circumstances.
 - E) Unless otherwise specified, no bid may be withdrawn, changed, or modified in any way for a period of sixty (60) calendar days from the date of the bid opening.
 - F) Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after opening.
 - G) Bids received prior to the time of bid opening will be securely kept unopened. No responsibility will attach to any officer or employee of the City for the premature opening of a bid not properly addressed or identified.
 - H) In case of a discrepancy between unit prices and their extensions, the unit price bid shall govern.
4. Brand Names: Wherever in the specifications or proposal form brand names, trade names, manufacturer, or catalog numbers are called, it is for establishing a grade or quality level only and the phrase "or equal" is deemed to follow unless a prequalified list or the term "only", "no exceptions", or similar phrase is included.
5. Taxes: The City of Midland is exempt from State and Federal taxes. However, property purchased by a contractor to be used in the construction, alteration, repair, or improvement of property owned by the City is taxable to the contractor. Therefore, the price bid for contracts other than construction contracts must be exclusive of taxes and will be so construed. Construction contracts will be construed to include all applicable taxes unless the contract specifies otherwise.
6. Acceptance of Bids: The City will award to the lowest, responsive, responsible vendor that meets the functional requirements and needs expressed by the specifications. Tie bids will be awarded based on the most favorable terms for payment and/or delivery schedule or other costs associated with the award process. Receipt of a purchase order or properly executed contract covering the materials or services as described in the bid will indicate the award of bid and contract of purchase.
7. City's Rights: The City reserves the right to accept or reject any or all bids, to waive irregularities or defects, to award on a split-order or lump-sum basis, and accept other than the low bid when deemed to be in the City's best interests.
8. Delivery: Bids shall include all delivery charges with terms of Freight Prepay - FOB Midland, MI.
9. Laws: The laws of the State of Michigan shall govern the rights, obligations, and remedies of the Parties under this bid and any agreement reached through this process. The City of Midland is a Michigan municipal corporation.
10. Disclosure: All of the information included in your bid response is subject to the "Freedom of Information Act" and may be disclosed in its entirety after the formal, public bid opening has been completed. Bid tabulations will be available at our website, www.midland-mi.org in the Purchasing section of the Fiscal Services Department under the City Government tab.
11. Independent Price Determination: By submission of this proposal, the bidder certifies that the pricing structure offered has been arrived at independently without consultation, communication, or agreement of such prices for the purpose of restricting competition with any other bidder or competitor.
12. Acceptance of Materials: All components used in the manufacture or construction of materials, supplies, and equipment, and all finished goods, shall be new, the latest make/model, of the best quality, and highest grade workmanship. In the event the delivered material is found to be defective or does not conform to specifications, the City reserves the right to cancel the order upon written notice to the bidder and return the materials to the bidder at the bidder's expense.