

City of Portsmouth
Portsmouth, New Hampshire
Department of Public Works

Six-inch Portable Trash Pump

INVITATION TO BID

Sealed bid proposals, **plainly marked**, Bid #30-08 “Six-inch Portable Trash Pump” on **the outside of the mailing envelope as well as the sealed bid envelope**, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until **2:00 p.m., April 7, 2008** at which time all bids will be publicly opened and read aloud.

Scope: To procure a portable trash pump to be used to pump raw sewage. The pump and accessories shall be supplied by the pump manufacturer. The diesel engine driven pump unit with skid base shall be mounted on a trailer suited for highway travel at 50 M.P.H. and wired for over the road usage per applicable D.O.T. Standards.

Specifications and bid proposal forms may be obtained from the Finance/Purchasing Department on the third floor at the above address, by calling the Purchasing Coordinator at 603-610-7227, or from our website www.cityofportsmouth.com. Questions may be directed to the Purchasing Coordinator. **Please continue below for the complete bid package.**

The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City.

INSTRUCTION TO BIDDERS

I. Preparation of Bid Proposal

- A. The Bidder shall submit its proposal upon the form furnished by the City (attached). Prices shall be given in both words and figures.
- B. Corrections made to amounts or information requested on the bid form should be made by crossing out the error and entering the new price or information above or below it. The correction must be initialed. In case of discrepancy between the prices written in words and those written in figures, the prices written in words shall govern.
- C. The bidder's proposal must be signed by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, or by an agent of the contractor legally qualified and acceptable to the owner, If the proposal is made by an individual, his name and post office address must be shown, by a partnership the name and post office address if each partnership member must be shown; as a joint venture, the name and post office address of each must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles, and business addresses of the President, Secretary, and Treasurer.
- D. All words, figures, corrections shall be in ink or typed. All signatures shall be in ink.

II. Delivery of Bid Proposals

When sent by mail, the sealed proposal shall be addressed to the owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened. Faxed bid proposals are not acceptable.

III. Withdrawal of Bid Proposals

A bidder will be permitted to withdraw his proposal unopened after it has been deposited if such request is received in writing prior to the time specified for opening the proposals.

IV. Public Opening of Bid Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

V. Irregular Proposals and Disqualification of Bidders

Bid proposals that are irregular may be rejected. Irregular bid proposals include the following:

- A. Failure to use the bid form provided or alteration of the form.
- B. Unauthorized additions, conditional or alternated bids, incomplete bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
- C. Any bid lacking sufficient technical literature to enable the City of Portsmouth to make a reasonable determination.
- D. Failure to offer a completed bid or failure to comply with each section of the bid specifications.
- E. The addition of any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

Bidders may be disqualified and the bid proposal rejected for the following reasons:

- F. More than one proposal for the same work from an individual, firm, or corporation under the same or different name;
- G. Evidence of collusion among bidders;
- H. Failure to submit all required information requested in bid specifications;
- I. Bidder is not qualified or able to provide the services or product(s) described in the bid specifications; or
- J. Disqualification is in the best interest of the City of Portsmouth.

AWARD

I. Consideration or Proposals and Award

After the proposals are opened and read, bid results will be available to the public. In case of discrepancy between the prices written in words and those written figures, the prices written in words shall govern.

Within 30 calendar days after the opening of proposals, if an award is made, it will be made to the lowest, responsible, qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by mail at the address indicated on the proposal.

The award shall not be considered official until such time that a Purchase Order, fully executed contract or an award letter has been issued by the Finance Director. No presumption of award shall be made by the bidder until such documents are in hand. Verbal notification of award is not considered official. Any action by the bidder to assume otherwise is done so at his/her own risk and the City will not be held liable for any expense incurred by a bidder that has not received an official award.

II. Reservation of Rights

The City reserves the right to cancel the award at any time before final notification of the successful bidder without any liability against the City. The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, and to accept any bid

that it may deem to be in the best interest of the City. The City of Portsmouth also reserves the right to reject the bid of a bidder who has failed to perform properly or complete on time contracts of a similar nature.

BID SPECIFICATIONS

For

One

Six –inch Portable Trash Pump

City of Portsmouth, New Hampshire

Public Works Department

SCOPE: It is the intent of this specification to describe one (1), six inch (6") portable trash pump.

The portable pump shall be delivered to the owner within 60 days of bid award.

GENERAL:

EQUIVALENT PRODUCT: Bids will be accepted for consideration on any make and model that is equal to or superior to the specified six inch (6") trailer-mounted pump or equal, as interpreted by the City of Portsmouth. A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence, but will require an explanation at each deviation or substitution.

GENERAL SPECIFICATIONS: Units described shall be new, unused and of the current year's production. The style of pump being bid must be in production for a minimum of four (4) years. (Include user's list) Unit shall be of the latest design and in current production completely serviced, ready for work and shall include all standard and optional equipment as specified herein.

Bidders must have a fully stocked parts and service facility within 150 miles of the City of Portsmouth.

At the request of the City of Portsmouth bidders must be prepared to review their specifications with the City of Portsmouth and must, if requested, also be prepared to provide a unit, for field testing and inspection to see that the unit complies with specifications set forth in this bid document. These services, if needed are considered as part of the bidder's proposal and will be provided without cost or obligation to the City of Portsmouth.

EQUIPMENT DESCRIPTION

The portable trash pump specified in this section will be used to pump raw sewage.

The pump and accessories shall be supplied by the pump manufacturer.

The pump shall be fitted with a fully-automatic priming system incorporating an air compressor, air ejector assembly, and an air/water separation tank. The priming system shall be capable of priming the pump from a completely dry pump casing. The air ejector shall operate on the discharge side of the compressor, eliminating the possibility of water being drawn into the air source. The pump must be capable of running totally dry for periods up to twenty-four hours, then re-priming and returning to normal pumping volumes with no adverse effects to the pump.

The priming system shall not use a vacuum or diaphragm pump, nor require the use of a "Foot"-type valve. It shall contain no moving parts or protective float gear. Priming systems that require manual water additions to facilitate pump priming are not acceptable. A demonstration of the pump's ability to repeatedly cycle from dry suction/pump/snore/repriming/pump shall be required. This will necessitate the draining of all residual water from the pump case to initiate a dry suction starting condition.

The diesel engine driven pump unit with skid base shall be mounted on a trailer suited for highway

travel at 50 M.P.H. and wired for over the road usage per applicable D.O.T. Standards.

Pump and priming system shall be fully automatic, needing no form of adjustment or manual addition of water for the priming system. The pump shall be capable of static suction lifts to twenty-eight vertical feet, at sea level. It shall also be capable of operation using extended suction lines.

Equipment acceptance shall be contingent upon the pump's ability to run continuously at full speed in a completely dry condition for periods up to 24 hours. This may require the draining of all residual water in the pump casing to simulate a dry suction/case condition. The owner/engineer may require a demonstration.

The pump offered shall be the manufacturer's standard production model. It shall have been in continuous use by municipal and industrial owners for a minimum of five years. A list of five user contacts including contact names and telephone numbers shall be provided with the bid submittal. Failure to supply a verifiable users list may be cause for rejection.

DESIGN REQUIREMENTS

OPERATING SPEED (MAXIMUM)	2200 RPM
MAXIMUM SOLIDS HANDLING SIZE	3 INCHES
IMPELLER DIAMETER	10.8 INCHES
SUCTION SIZE	6 INCHES
DISCHARGE SIZE	6 INCHES
MINIMUM SUCTION LIFT	20 FEET
MAXIMUM DUTY POINT	1200 GPM AT 125' TDH (INCLUDING A 15' SUCTION LIFT)
SECOND DUTY POINT	1100 GPM AT 75' TDH (INCLUDING A 25' SUCTION LIFT)

REFERENCE STANDARD:

ANSI B16.1 is the standard for the Cast Iron Pipe Flanges and Flanged Fittings.

PART TWO - PRODUCTS

EQUIPMENT:

CASING, SUCTION COVER, SEPARATION TANK: Pump castings shall be cast iron. Pump design shall incorporate a direct suction flow path that is in axial alignment with the impeller eye. There shall be no turns, chambers, or valves between the suction flange and the impeller eye.

IMPELLERS: The pump impeller shall be an open, three-bladed, non-clog type with pump out vanes on the back shroud and fabricated from hardened cast- chromium steel construction (minimum Brinell Hardness 340 HB).

WEARPLATES: Shall be fully adjustable and replaceable, fabricated of cast iron. Wear plate clearances shall have no relationship to the ability of the pump to achieve a prime.

BEARINGS AND SHAFTS: Pump shall be fitted with a bearing bracket to contain the shaft and bearings. Bearings shall be tapered roller bearings of adequate size to withstand imposed loads for sustained pumping at maximum duty points. Minimum ISO L₁₀ bearing life to be 100,000 hours. Impeller shafts shall be fabricated of 1.5% chromium alloy.

SEALS: Seals shall be high pressure, mechanical self-adjusting type with silicon carbide faces capable of withstanding suction pressures to 100 psi. The mechanical seal shall be cooled and lubricated in an oil bath reservoir, requiring no maintenance or adjustment. Pump shall be capable of running dry, with no damage, for periods up to twenty-four hours. All metal parts shall be of stainless steel. Elastomers shall be Viton.

PUMP SUCTION AND DISCHARGE FLANGES: Shall be cast iron ANSI (B16.1) Class 150, raised faced.

PUMP GASKETS: Shall be compressed fiber and/or Teflon.

PUMP O-RINGS: Shall be Viton.

PRIMING SYSTEM: Pump shall be fitted with a fully automatic priming system incorporating a twin-cylinder compressor and air ejector assembly, no vacuum pump. The compressor shall be installed on the engine auxiliary drive and shall be gear driven, lubricated and cooled from the engine. The priming system shall require no fail-safe protection float gear or any adjusting at high or low suction lifts.

CHECK VALVE: Pump shall be supplied with an integral ball-type check valve mounted on the discharge of the pump, allowing unrestricted flow from the impeller. The check valve shall prevent in-line return of flow when the pump is shut off. Non-return valve elastomers shall be Nitrile rubber and shall be field replaceable.

DRIVE UNIT: The drive unit shall be a diesel water-cooled engine. The engine shall drive the pump by use of direct-connected intermediate drive plate. Starter shall be twelve-volt electric. Safety shut down switches for low oil pressure and high temperature shall be provided. Battery shall have 180-amp hour rating. Unit shall include tachometer and an hour meter. Drive unit shall be a Caterpillar 3054NA or equal, rated at 74 H.P. (continuous) at 2200 R.P.M. A certified continuous-duty engine curve shall be supplied to the owner/engineer.

GOVERNOR: Governor shall be a mechanical type. Engine speed shall be adjustable to operate the pump between maximum and minimum design operation speeds.

FUEL SOURCE: Integral skid fuel tank capacity shall be sufficient to provide at least twenty hours of operating time at full load. The engine shall be capable of operating satisfactorily on a commercial grade of distilled No. 2 fuel oil.

EXHAUST: Exhaust system shall include muffler and silencer.

TRAILER: The pump, engine and skid base shall be trailer mounted with a 2" ball type trailer hitch. Trailer design shall be such that the entire pump unit, including skid base, may be easily removed from the trailer mount. Tires and leaf spring suspension shall be adequately sized for the required load range ratings. Trailers shall be equipped with fenders, electric brakes, front and rear support stands, lifting bar, safety chains, and side and rear reflectors. Trailer design shall be in compliance with applicable D.O.T. regulations.

FACTORY PAINTING: Pump, engine, base, and trailer shall be shop primed and finish painted at the place of manufacturer. Materials and thickness for priming shall be in accordance with manufacturer's standards.

PART THREE - EXECUTION

MANUFACTURER'S SERVICES

The manufacturer shall furnish the services of a competent factory representative to do the following:

- Inspect the system prior to delivery, supervise the start up and testing of the system, and certify the system has been properly furnished and is ready for operation.
- Instruct the owner's operating personnel in the proper operation and maintenance of the system for a period of not less than one-half day.

TOOLS AND SPARE PARTS:

The manufacturer shall furnish the following with the Portable Trash Pump System:

- A recommended list of spare parts.
- Three Operations and Maintenance manuals.

WARRANTY:

The manufacturer shall furnish the following to the owner:

- A copy of the engine manufacturer's parts and labor warranty.
- A one-year Parts and Labor Warranty issued by the manufacturer on the Portable Trash Pump. This warranty must cover all pump parts, including the mechanical seal.

Additional Accessories

The following additional accessories shall also be provided with the trash pump. The accessories shall be provided at the time of the delivery of the pump and shall be compatible with the trash pump.

- 4.1 One (1) Automatic level controller for diesel driven pump, operated via two 60' float switches.

- 4.2 Three (3) lengths of 6" x 10' of heavy Duty suction hose with quick disconnect fittings.
- 4.3 Two (2) 6" – 90 degree quick disconnect bends.
- 4.4 Three (3) 6" x 20' heavy duty suction hose with quick disconnect fittings.
- 4.5 One (1) low profile suction screen with quick disconnect fittings.
- 4.6 One (1) Female quick disconnect x 6" flange adapter on suction.
- 4.7 One (1) Male quick disconnect x 6" flange adapter on discharge.

BID PRICE PROPOSAL FORM

Bid Price:

One (1), six inch (6”) portable trash pump.

\$ _____
Price in Figures

\$ _____
Price in Words

DELIVERY:

Bidder must state approximate date from receipt of order delivery will be made:_____.

Delivery must be made no later than 60 days from receipt of order date.

The undersigned agrees that he/she on behalf of Bidder has read the bid proposal documents, the instruction to bidders specifications and agrees to the terms, conditions and specifications set forth herein. Bidder understands that bid prices shall include delivery FOB to the Department of Public Works, 680 Peverly Hill Road, Portsmouth, New Hampshire.

Bidder further agrees that this bid is not made jointly or in conjunction, cooperation or collusion with any person, firm, corporation or other legal entity. Bidder agrees no officer, agent or employee of the Owner is directly or indirectly interested in this Bid.

Submitted by Authorized Agent:

(Print Name & Title)

Signature: _____

Date: _____

Company: _____

Address: _____

City/State/Zip: _____

Telephone: _____

Fax: _____