CITY OF PENDLETON

Invitation to Bid

River Intake Pump
2023

September 2023

Public Works Department
500 SW Dorion Avenue
Pendleton, OR 97801
Office: (541) 966-0202
Fax: (541) 966-0251
www.pendleton.or.us

CONTRACT DOCUMENT

INVITATION TO BID

Sealed bids for pulling one of four river intake booster pumps at the River Intake Station and installing a new pump will be received by the City of Pendleton c/o Bob Patterson, Public Works Director, 500 SW Dorion Avenue, Pendleton, OR 97801 until 11:00 am local time on the **26th day of September 2023,** plainly marked **"River Intake Pump - 2023". Bids will also be accepted via email to: tim.smith@ci.pendleton.or.us.**

A copy of the bid document may be obtained from the Public Works Director's office located at the same address as above or by calling (541) 966-0202. The document is also available online at https://pendleton.or.us/rfps or on the OregonBuys website at https://oregonbuys.gov/bso/view/login/login.xhtml. **All work must be completed by December 1, 2023.**

The estimated cost for materials and labor is $15,000 - $25,000. If a bid exceeds $50,000, bidders must comply with ORS Chapter 279C and pay applicable prevailing wage rates **(see www.oregon.gov/boli)** as set forth in the General Wage Decision No. OR 86-1 for all work on-site and must provide certified payroll reports for payment.

The Contractor and any sub-contractors must have a valid contractor's license with the Oregon Construction Contractors Board and must obtain a City of Pendleton Business License. The Contractor, its sub-contractors, if any, and all employers working under this Contract are subject employers under the Oregon Workers' Compensation law and shall comply with ORS Chapter 656, which requires them to provide workers' compensation coverage for all their subject workers.

Damage of existing structure - when the existing structure or facility, which is intended to remain, is damaged by the Contractor during repairs or construction, the Contractor shall promptly repair and replace the damaged portion of the facility at no cost to the City.

Liability and Indemnity:

a. Indemnification. Contractor shall indemnify and defend City from, and reimburse City for, any cost, claim, loss, or liability suffered directly or from a third-party claim arising out of or related to any negligent activity of Contractor in the execution of this contract. City shall have no liability to Contractor for any injury, loss, or damage caused by Contractor or third parties.
b. Public Liability and Property Damage Insurance. Before beginning execution of the Contract, Contractor shall maintain public liability insurance against death or injury to person, or damage to property, during the life of this Contract at Contractor's cost; said insurance shall be in such form so as to protect both Contractor and City from all claims expressed or implied as above provided, and in the following amounts:
    1) Public Liability Insurance not less than $1,000,000 for injuries to any one person, including accidental death and not less than $1,000,000 for any one accident.
    2) Property Damage Insurance not less than $1,000,000 for any one accident.

The Contractor's Public Liability and Property Damage Insurance shall adequately provide the primary coverage on all claims arising out of the performance of the Contract. Such insurance shall cover all risks arising directly or indirectly out of Contractor's activities. Such insurance shall protect Contractor against the claims on account of the obligations assumed by Contractor under this Contract and shall name City and its officers, agents and employees as additional insured. The above-mentioned proof shall be in the form of a copy of the policy and all appropriate riders with the City being named as a co-insured on all policies and provide for thirty (30) days written notice of any change or cancellation to City before Contractor begins execution of the Contract.

City reserves the right to accept that proposal which is in the best interest of the City of Pendleton, Oregon, to reject any and/or all proposals not in compliance with all prescribed public bidding procedures and requirements, to waive any and/or all informalities upon a finding of the City it is in the public interest to do so and to postpone award of the Contract for a period not to exceed thirty (30) days.

For additional project information, contact Tim Smith, Project Manager, tim.smith@ci.pendleton.or.us or 541 379-1195.

Dated this 7th day of September, 2023.

Bob Patterson, Public Works Director

CONTRACT DOCUMENT

INFORMATION FOR PROPOSERS

The City of Pendleton, herein referred to as City, currently has four pumps at their River Intake Station. All of the pumps have been in operation since 2003 with various hours on them. The City is requesting proposals to pull one of the 250 hp pumps at the River Intake Building located at 73400 Mytinger Lane that has previously been refurbished and to install a new pump. All of the pumps at the River Intake Station pump gritty, muddy water during the winter months. Motor will be unwired and pump base will be unbolted from system prior to Contractor arriving. Contractor will be responsible for removal of the existing motor, pump base and pump and installation of the new pump along with all new spider bushings and shafts, reconnecting to existing piping set and recoupling the motor to the pump. The City will wire the motor. The shaft that goes through the stuffing box needs to have a ceramic coating 2" above the box through the box to 2" below to help with shaft wear due to gritty water.

Contractor will be onsite for startup and provide a one (1) year warranty on workmanship and repairs from the date of each startup.

There will be one startup date at the time of installation.

All work must be completed, the pump reinstalled and started by December 1, 2023.

CONTRACT DOCUMENT

SPECIAL SPECIFICATIONS

The Contractor agrees to indemnify and save harmless the City of Pendleton, herein referred to as City, from any and all defects appearing or developing in the workmanship or materials performed or furnished under this Contract for a period of one (1) year from the date of each startup and final acceptance by the City.

The City of Pendleton is requesting Proposals to increase the flow from the River Intake Pump Station to the Water Filtration Plant. Currently there are four (4) vertical turbine pumps; three (3) 250hp pumps and one (1) 125hp pump. This Proposal is to replace one (1) of the 250hp pumps with new bowls, shafting, if needed, and a new motor.

This pump currently pumps high turbidity water during the spring runoff. Shafting and bushings seals needs to take this into account.

- 3750 gpm @ 300'
- Water temperature: 32^0-85^0 F
- Water turbidity: 1-100+ ntu

1. PUMP:

a) Existing discharge head is a 12" flange fitting. The well column is 12" flanged pipe. (See attached drawing) New pump will use existing discharge and column with modifications for the motor, if needed. The overall length from the bottom of the discharge head to the bottom of the strainer is 290" max; 280" minimum.

b) The suction bowl or suction bell shall be provided with non-soluble grease packed bronze bearing. Bowl bearings will be constructed of steel back rubber. A bronze sand collar shall be provided to protect this bearing from abrasives in the pumping fluids. The bearing housing shall have sufficient opening at the bottom for easy removal of the bearing. A galvanized strainer will be provided. It shall have a net inlet area equal to at least three times the impeller inlet area. The maximum opening shall not be more than 75 percent of the maximum opening of the water passage through the bowl or impeller.

c) The line shaft shall be 416SS steel ground and polished. They shall be furnished in interchangeable sections not over 10 feet in length and shall be coupled with 304 stainless steel threaded couplings designed with a safety factor of one and a half times the shaft safety factor. Shafting through the stuffing box will be ceramic to reduce wear due to the high turbidity water

d) Pump 300 gpm at 300' of head. The impellers shall be constructed from ASTM B584 Silicon Bronze and shall be the enclosed type. They shall be free from defects and must be accurately cast, machined, and filed for optimum performance and minimum vibration. Impellers shall be statically and dynamically balanced at the factory to grade G6.3 of ISO 1940 as minimum. They shall be securely fastened to the bowl shaft with taper locks 416 or 316 SS (or key and split thrust ring of SS). They shall be adjustable vertically by means of a nut in the driver.

e) Motor shall be a heavy-duty Premium Efficient, Inverter Duty, 1800 RPM vertical hollow shaft motor, with a non-reverse ratchet to prevent reverse rotation of the rotating elements. The brake horsepower required by the pump curve shall not exceed the rated nameplate horsepower of the motor. A thrust bearing of ample capacity to carry the weight of all rotating parts plus the maximum hydraulic thrust load under all conditions of operation calculated L10 life shall be no less than 8800 hours. Provision shall be made for momentary up thrust equal to 30 percent of the rated down thrust, 1.15 service factor, and suitable for use on 480-Volt, 3-phase, 60-Hertz electric service. A solid coupling shall be provided at the discharge head for setting the impeller to bowl running clearance.

CONTRACT DOCUMENT

SPECIAL SPECIFICATIONS

City desires the Contractor to perform the work by the end of November 2023. All work must be completed, the pump reinstalled and started by December 1, 2023.

2. START-UP AND FINAL ACCEPTANCE:

a) There will be one start-up date at the time of installation.
b) Contractor must be on-site for initial start-up by City.
c) Final acceptance will not occur until after start-up of the new pump is completed to the satisfaction of the City. Contractor will be onsite for start-up. This will be the basis for Final Payment.
d) Contractor to provide a one (1) year warranty on workmanship from the date of start-up and Final Acceptance by the City.

3. BASIS FOR MEASUREMENT AND PAYMENT:

a) The basis for measurement and payment for all work performed under this Contract shall be lump sum under City issued Purchase Order. Payment to Contractor shall be made as follows:
   1. Receipt of invoices for approved materials for designated work; plus 15% mark-up for OHP; and
   2. Lump sum remainder when all the work has been completed, tested to the satisfaction of the City and warranty provided. This includes any change order considerations.

b) Change order consideration will require additional Purchase Order to be issued based on agreed cost estimate. Payment to Contractor shall be made as follows: receipt of invoices for approved materials and actual labor summary, plus 15% mark-up for OHP.

THIS DRAWING IS CERTIFIED

☐ FOR APPROVAL
NO PRODUCTION WILL START UNTIL APPROVED IN WRITING.

☒ FOR CONSTRUCTION
PRODUCTION HAS STARTED. ANY CHANGES MAY AFFECT PRICE AND DELIVERY.

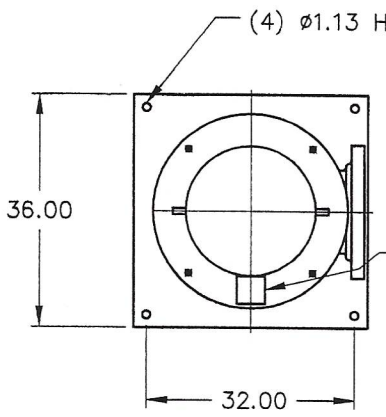
OUR ORDER No.: 47904–7

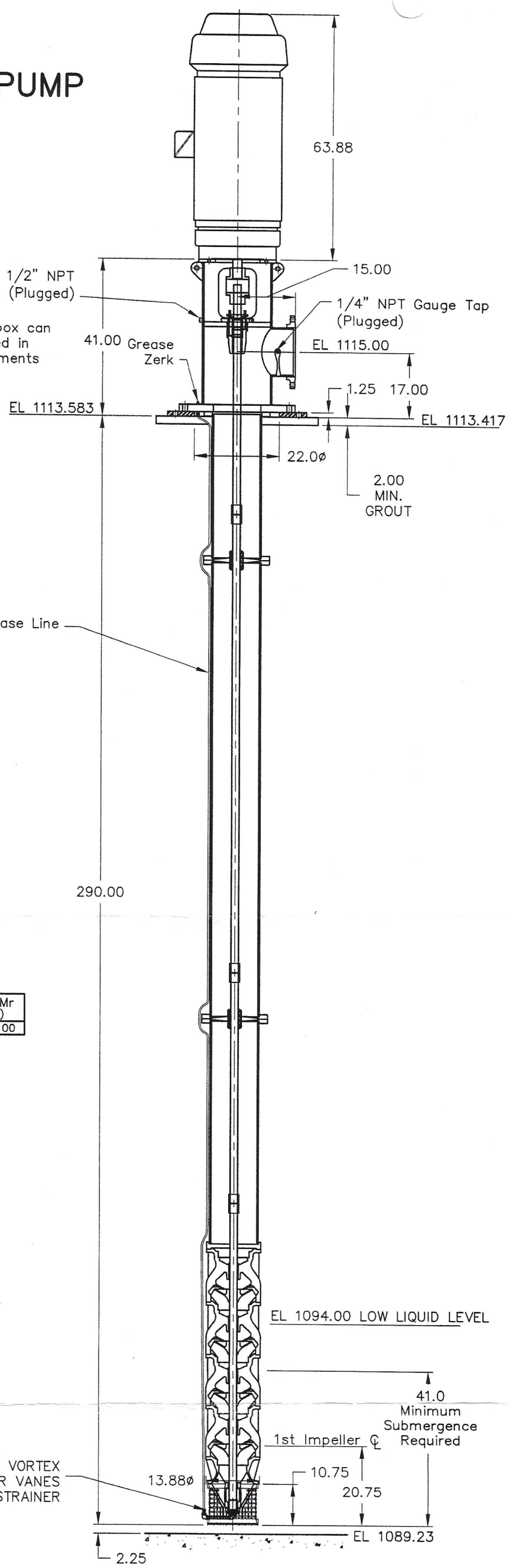
CUST. ORDER No.: A170–0008

BY: RKB DATE: 1/7/03

FLOWAY PUMPS
FRESNO, CALIFORNIA

VERTICAL TURBINE PUMP
TYPE "F"





SPECIAL FEATURES:

1. 316 SS Impeller Collets
2. Dynamically Balanced Impellers
3. Stainless Steel Grease Line to Bell Bearing
4. Stainless Steel Nameplates
5. Stilling Tube
6. Suitable for VFD Operation
7. Spare Parts (one set per unit unless indicated)
   - All pump bearings
   - 4 impellers
   - 4 bowl wear rings
   - packing
   - gaskets and o–rings

COATING:

Discharge head waterways, column pipe ID and OD, and the bowl assembly exterior, are to be shot blasted and cleaned per SSPC–SP–5. Carboline 888 Epoxy will be applied in one 3 mil (DFT) coat. Carboline Carboguard 890 will be applied in one 6 mil DFT coat for a total thickness of 9 mils DFT. Color = White. △1

The head exterior will be wire brushed and solvent cleaned. Carboline Carbocrylic 3358 will be applied in 1 coat to 1 mil DFT followed by 1 finish coat of Carboline Carbocrylic 3359 (Weir Blue).

Please refer to the coating data sheets in this submittal package.

TESTING:

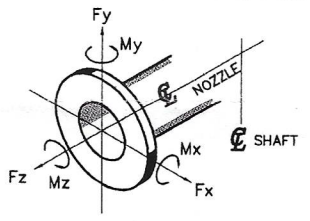
Hydrostatic testing: (non–witnessed)
The bowls and discharge head will be hydrostatically tested in accordance with Hydraulic Institute standards.

Performance testing: (non–witnessed)
The pump will be tested as a unit with the job driver in accordance with the Hydraulic Institute Standards. △1

Holiday testing: (non–witnessed)
Holiday testing on all epoxy coated surfaces.

APPROX. WEIGHT #	
MOTOR	3400
DISCH. HD.	900
COL. ASSY.	1600
BOWL ASSY.	935
TOTAL WT.	6835

MAXIMUM ALLOWABLE FLANGE FORCES AND MOMENTS FOR VERTICAL TURBINE PUMPS



	FLANGE SIZE	Fx and Fy (LBF)		Fz and Fr (LBF)		Mx and My (FT–LBF)		Mz and Mr (FT–LBF)	
DISCH.	12	1500	1800	1200	2600	4500	2200	3400	6100

REFER TO FACTORY WHEN FLANGE REQUIREMENT IS GREATER

NOTES:
1. Fr IS RESULTANT FORCES (CALCULATED PER API–610, 7 TH. ED. APPENDIX F).
2. Mr IS RESULTANT MOMENTS (CALCULATED PER API–610, 7 TH. ED. APPENDIX F).

DISCH. FLANGE

12 150# –R.F.ANSI. FLG.
(12) ø 1.0 DIA. HOLES *
17.0 DIA. BOLT CIRCLE
19.0 DIA. FLANGE
* BOLT HOLES STRADDLE VERTICAL ℄

PUMPAGE

FLUID RAW RIVER WATER
SPEC. GRAVITY 1.0
VISCOSITY 1.0 cSt
TEMPERATURE 33–85° F
PH ----

PUMP

12 X 20 "F" DISCH HEAD.
1.938 LINE SHAFT 12 COL
n/a SHAFT TUBE
PROD.LUBE YES
TYPE 14FKH STAGES 4
2400 GPM 289 BOWL HD
IMPELLER ENCLOSED
STRAINER YES

MOTOR

MAKE USEM
ENCLOSURE TEFC
TYPE VSS NRR YES
HP 250 RPM 1150 – 1785
PHASE 3 HERTZ 60
VOLTAGE 460
FRAME NO. 449VPH
TYPE COUPLING 2125 FAC

MATERIALS

COL PIPE A53–GR B STEEL (SCH.40)
LINE SHAFT A582–416 SS
DISCH. HEAD FAB. STL.
BOWL SHAFT A582–416 SS
SHAFT PACKING JC 100M
SOLE PLATE A516–70 STEEL
BRG.RETAINER B584–838 BRZ
PUMP BOWL A48–CL 30 CIE
IMPELLER B584–838 BRZ
BEARINGS (BOWL) RUBBER W/ BRONZE SHELL
BEARINGS (LINESHAFT) NEOPRENE
STRAINER 316 SS
BOWL W/R B505–954 BRZ

LOCATION: RIVER INTAKE / PUMP STATION
CITY OF PENDLETON, OR

CUSTOMER: CITY OF PENDLETON, OR

SUPPLIER: APOLLO, INC.

FLOWAY CO: 47904–7
SERIAL #: 47904–7–1

TAG NUMBER: VT RAW WATER PUMP #P–1
SPEC NUMBER: 11103

NOTES:
1. ALL DIMENSIONS IN INCHES
2. DRAWING SCALE = 1:30
3. DO NOT SCALE UNKNOWN DIMENSIONS
4. NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED

REV	BY	DATE	DESCRIPTION
1	RKB	1/7/03	DEL. REQ. FOR CUSTOMER WITNESS
			REVISED ANCHOR BOLT HOLE DIA.

OUTLINE DRAWING

DRAWN BY: RKB

DATE: 11/01/02

DRAWING NUMBER
4790407COD