



## INVITATION FOR BIDS

Riley Drive Wastewater Lift Station

PW 20-058

### **Addendum No. 2**

Date: July. 9, 2020

From: Jill Lin, Senior Buyer

Subject: Addendum No. 2 to Solicitation No. PW 20-058

Bid Deadline: July 16, 2020 5:00 p.m. (local time, Phoenix, Arizona)

### **PURPOSE**

This Addendum forms a part of the Contract and clarifies, corrects, or modifies the original Invitation for Bids document prepared by the City of Avondale. Acknowledge receipt of this Addendum in the space provided on the attached “Acknowledgment of Addenda Received” form; this acknowledgement must accompany the submitted bid. Failure to do so may subject the bidder to disqualification.

This Addendum No. 2 consists of Approval of Substitutions (“Approved Equal”), IFB Modifications, Questions & Clarifications and Electrical Q&A as of 07/09/2020:

**Approved Equal** Per subsection 2.4.3 Approval of substitutions, page 44 of IFB PW 20-058 Sheet G3 of Plans. CORROSION PROTECTIVE COATING SYSTEM, APPROVED COATING SYSTEMS FOR THE WET WELL AND COVER COATING, Note 1.

The following protective coating systems are added as approved equals:

1. Sauereisen
2. Raven

The Sauerieisen and Raven coatings shall be applied per manufacture’s specifications to provide the same or higher corrosion protection as specified on the plans for the Sewer Shield application.

## IFB MODIFICATIONS

### **Modification 1.**

Section 3.54. Public Information and Notification is hereby replaced with *The Contractor shall submit a public information and notification plan for this Project (the “Notification Plan”) to the City Representative at the first pre-construction meeting held prior to start of construction. The Notification Plan shall include, at a minimum, the items set forth in this Section 3.54; provided, however, that the Engineer may waive any portion of the requirements of this Section upon a written determination that the Project scope does not warrant such notification. Contractor shall provide Project information to affected residents and homeowners’ associations prior to and throughout the Project’s duration. The Contractor shall use the Notification Plan to inform the local citizens, businesses and City officials, not less than five business days in advance, of subsections (1) necessary operations that create high noise levels, (2) street closures, (3) detour locations, (4) haul routes and material delivery routes and (5) disruption of bus routes, mail routes and other delivery/pick-up routes. Contractor shall include fees for all work necessary for public notification per Sections 3.54, 3.55, and 3.56. No separate payment will be made for public notification services outside of the items on the Price Sheet. Compensation for all public notification services, items, and materials shall be included in the prices listed in the Price Sheet.*

### **Modification 2.**

Section 3.55. Project Signs is hereby replaced with *Unless otherwise directed by the Engineer, the Contractor shall furnish and install at least “Riley Drive Wastewater Lift Station” Project signs, not less than five business days before beginning construction, at locations determined by the Engineer, to inform the public of the forthcoming Project, construction dates and 24-Hour Hotline number. The Contractor shall submit the proposed layout of the Project signs to the Engineer for approval prior to fabrication of the signs. The Contractor shall maintain the signs as necessary and update the information as directed by the Engineer. At the Final Completion of the Project, the Contractor shall remove and dispose of the signs. The Project signs shall be fabricated as follows: (1) the vinyl sheeting for the background, legend, and border shall be applied by heat bonding, except that the decal and legend for the project title, cost, and Contractor’s name shall be pressure sensitive application; (2) the four foot by eight foot (4’ x 8’) signs shall be mounted four feet above the ground level and anchored three feet into the ground with concrete backfill around the posts; and (3) sign colors shall be black letters on white background, over a ghost image of the City of Avondale logo. The information on the Project signs shall be in the format and fonts proportions as depicted on the sample sign below. The image template may be obtained from the City of Avondale Engineering Department as a computer image file. (See Attachment 2. Image Template)*

## IFB MODIFICATIONS

**Modification 3.** Section 3.57. Public Meetings is hereby replaced with *The Contractor shall attend such public meetings as deemed necessary by the Engineer. “Engineer has determined that public meetings are not necessary at this time. Should they prove necessary, Contractor shall be compensated through Force Account funds after approval of the Engineer.”*

**Modification 4.** Section 3.58. Press Releases is hereby replaced with *The Contractor shall, at the request of the Engineer, prepare press releases regarding the Project. “Engineer has determined that press releases are not necessary at this time. Should they prove necessary, Contractor shall be compensated through Force Account funds after approval of the Engineer.”*

**Modification 5.** Revised Exhibit C Price Sheet Line Item 50 (Allowance) - New APS Electrical Service, the amount is hereby replaced with “\$25,000”. Bidders shall use the revised Exhibit C date 07/09/2020 to submit your price, please see Attachment 1, Revised Exhibit C Price Sheet.

## QUESTIONS & CLARIFICATIONS

- Question 1. Per page 10, 2.1.5 Bidder Qualifications, the bidders are required to furnish three (3) references of similar projects that have at least 75% of the value of the Bid. We did not ask the budget for the project, but to calculate the value of 75% could you furnish a range of \$ that our references must be of value to list?
- Answer To Clarify Section 2.1.5, one recently completed project must have a dollar value equal to or exceeding \$600,000.
- Question 2. Pursuant to 3.3 Contract Time the 115 days is very short for Substantial completion. We suggest 180 days for S/C, 210 days for F/C.
- Answer City of Avondale will require substantial completion within 115 calendar days from NTP.
- Question 3. Pursuant to 3.13.2.3 Professional Liability, the bidders were asking why this was required, since GHD is the Designer of the project, and our only Design is the Canopy gets a Stamp and Seal for the shop drawing at the lift station.
- Answer Section 3.13.2.3 states the Contractor is to provide professional liability insurance if they provide professional design services. With this project, the City does not require the contractor to provide professional design services. Therefore, professional liability insurance is not required. Shop drawings for the shade canopy must be sealed by a professional structural engineer with AZ Professional Engineer registration.
- Question 4. Please give the bidders specifics on the 3.54 Public Information Notification, it seems that the expectations need to be captured so we know what is required. Perhaps an allowance item?
- Answer Per Modifications 2, 3, 4 & 5 in Addendum No. 2 (see above) , clarification has been added pertaining to Sections 3.54, 3.55, 3.57, and 3.58.
- Question 5. Sheet 44, G3 Corrosion Protective Coating System is a Subcontractor Sole Source. Sewer Shield is only allowed to be applied by a single Contractor-JPCI in Arizona. No other Coating Applicator or Contractor is allowed to provide this “brand” of system. It is proprietary to JPCI. Suggest adding 2 other brands?
- Answer Sauerreisen and Raven coatings have been added as acceptable coating systems when applied in accordance with manufacturer’s recommendations to provide the same or higher corrosion protection as specified on the plans for the Sewer Shield application.

## QUESTIONS & CLARIFICATIONS

Question 6. Sheet 50, M1 Chopper Pumps are over \$50,000 and are sole sourced on this project.

Answer For the Vaughan Chopper pump specified on Page 50 of the IFB, Sheet M1, the City of Avondale will accept an “approved-equal” pump to match the mechanical and performance specifications of the 5 HP Vaughan Submersible Chopper Pump – Model No. SE3F-060, rated for 200 gpm at 26ft TDH. The performance pump curve of “approved-equal” pump must match the attached performance curve of the specified Vaughan pump for total dynamic head and efficiency for the flow rates along the curve at 50gpm, 200 gpm, and 400 gpm. (See attachment 3 Pump Performance Curve)

Question 7. Sheet 53/E2, Sheet 54/E3, Sheet 55/E4, Sheet 56/E5, and specifically Sheet 57/E6 note 1. Pump Control Panel by RDC. This is a local Manufacturer, is this Owner supplied? Does this mean that RDC is the only local Manufacturer that the pump manufacturer or Electricians can utilize? Please clarify the intent of the City.

Answer The City will require the RDC Pump Control Panel.

Question 8. Please define the spare parts for the following: a) Chopper Pumps, b) Generator and c) Electrical apparatus

Answer Spare parts for the Chopper pump will be 1 of each of the following:

- Impeller
- Cutter bar plate
- Seal
- Suction plate
- Cutter nut
- O-rings
- Motor flange gasket
- Cutter
- Shims

There will be no spare parts required for the generator nor the electrical apparatus.

Question 9. Please define the Start up of the New Plant? Is it a 3 day test, 7 day test? Do we pump artificially in a circle with Clean Water and temporary piping? Can we use raw Waste Water and test with the Station Live, and go back to the existing lift station for Riley if we need to make adjustments?

Answer The startup/testing of the new lift station will be a 7-day test, where the new lift station performs properly (without incident) for the duration of the test. The test will be performed using the live wastewater stream. As indicated

## QUESTIONS & CLARIFICATIONS

in General Note 1 on Sheet C1 of the construction plans, the existing lift station will remain operational until the new lift station has successfully completed testing and been connected to the existing discharge manhole. The existing lift station can be used as a backup during testing until the new lift station is operational.

Question 10. If we do the tie in in Dysart Road, can we have a shutdown of the entire intersection from 10pm-5am on a Tues-Wed-Thursday Night?

Answer The new lift station forcemain terminates in an existing manhole in Riley Drive located approximately 240 feet east of the sewer manhole in the Riley Drive/Dysart Rd intersection. Closure of Dysart Road will not be necessary for this construction.

## ELECTRICAL QUESTIONS

Question 1. No project electrical or instrumentation specifications were issued with the bid documents. Are Project specific electrical and Instrumentation specifications available? If so, please issue specifications.

Answer A separate specification book is not provided with the project. See additional Electrical Notes below to be included with the project:

***The following Electrical notes shall be added to the project:***

- A. *Furnish all instruments and qualified personnel to properly perform all tests identified below.*
- a. *Conduct megohmmeter tests of the insulation resistance of all motor and power distribution feeders down to panelboard feeders. The results will be accepted when the megger shows the insulation resistance to be not less than 50 megohms. Lighting and receptacle panelboard branch circuits are not megohmmeter tested.*
  - b. *Check all single and three phase motor amperage while the unit is running at as close to operating load as possible. Record voltage on each line and the amp draw for each leg. Provide results in a typed report format and submit as part of the Contractor's closeout package.*
  - c. *Check the load current in each phase of each distribution, lighting and receptacle panelboard feeder and make modifications to the circuit loading to correct load unbalance to within 1 kVA phase to phase for each panelboard.*
  - d. *Test the grounding system to verify a resistance to ground of 5 ohms or less. If the resistance is greater than 5 ohms, modifications shall be made to the system by adding additional ground rods or plates to bring the resistance test value to 5 ohms or less. Perform test a minimum of 90 days after the installation of the ground rods. Submit a record/report to the Owner.*
  - e. *Test all grounding conductors and grounding systems for continuity. Where continuity does not exist, conditions will be corrected by an approved method and the system retested.*
  - f. *Adjust overload elements in motor starters and check for coordination with the actual installed motor characteristics. Replace any overload element that is inadequate.*
  - g. *Perform thermograph inspections on all service terminations, subfeeder terminations, major power splices, transformer terminations, and motor control panel feeder terminations. Testing on major power distribution equipment will be performed with the system running at a minimum of 70 percent capacity or the highest load that can be operated. Testing on individual pieces of equipment will be performed while the unit is operational at rated load and has operated for at least 30 minutes for continuously operated equipment or near the end of a cycle for equipment that operates on/off. Loads shall be minimum of 40 percent of full load. Readings at overcurrent devices and starters will be for line and load; and for transformers, primary and secondary terminations. Provide a report of test results to the Owner including indication of any actions taken to resolve abnormal readings.*
  - h. *Perform protective device coordination and arc flash studies for electrical equipment provided. Provide protective device time-current curves for distribution system, graphically displayed on conventional log-log curve sheets. Each curve sheet to have titled one-line diagram that applies to the specific portion of system associated with time-current curves on that sheet. Identify device associated with each curve by manufacturer, type, function, and if applicable, tap, time delay, and instantaneous settings recommended. Arc flash hazard*

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*analysis shall be performed according to the IEEE 1584 equations that are presented in NFPA 70E. The flash protection boundary and the incident energy shall be calculated at all significant locations in the electrical distribution system where work could be performed on energized parts.*

- i. Provide arc flash labels for new equipment with the following information:
    - 1. Flash hazard boundary.*
    - 2. Flash hazard energy (cal/cm<sup>2</sup>).*
    - 3. PPE category.*
    - 4. Limited approach distance.*
    - 5. Restricted approach distance.*
    - 6. Prohibited approach distance.*
    - 7. Equipment/bus name*
    - 8. Date prepared**
- B. Conductors shall be single conductor copper cable rated for 600V conforming to ASTM B3 and B8 with flame-retardant, moisture and heat resistant cross-linked polyethylene or thermoplastic insulation rated 90 degrees C in dry locations and 75 degrees C in wet locations and listed by UL as Type XHHW-2.*
- a. Wire Sizes: Not smaller than No. 12 AWG for power and lighting and No. 14 AWG for 120 volt control circuits.*
  - b. Stranding: All 600 volt cable shall be stranded.*
  - c. Three phase, 208 volt systems shall be color coded as follows:
    - i. Phase A - Black.*
    - ii. Phase B - Red.*
    - iii. Phase C - Blue.*
    - iv. Neutral - White.*
    - v. Ground – Green.*
    - vi. No. 6 AWG and Smaller: Provide colored conductors.*
    - vii. No. 4 AWG and Larger: Apply general purpose, flame retardant tape at each end, wrapped in overlapping turns to cover an area of at least 2-inches.*
    - viii. All field wiring color shall be black unless otherwise noted.**
  - d. Manufacturers:
    - i. The Southwire Company.*
    - ii. Encore Wire Corporation.*
    - iii. Okonite Company.*
    - iv. Service Wire Company.*
    - v. General Cable.*
    - vi. Or approved equal.**
  - e. Cable Connectors, Solderless Type:
    - i. For wire sizes up to and including No. 6 AWG, use compression type. Alarm and control wire shall be terminated using forked type connectors at terminals. If terminal block is crimp type, then the wire shall be terminated with a crimped ferrule or solder dipped.*
    - ii. For wire sizes No. 4 AWG and above, use either compression type or bolted type with tinned-plated contact faces.**



## ELECTRICAL QUESTIONS

- iii. *For wire sizes No. 250 kcmil and larger, use connectors with at least two cable clamping elements or compression indents and provision for at least two bolts for joining to apparatus terminal.*
- iv. *Properly size connectors to fit fastening device and wire size.*
- f. *Cable/Wire Markers:*
  - i. *Provide only heat shrinkage type cable/wire identification, which shall be type-written.*
  - ii. *Wire number shall include the conduit number and be a consecutive number based on the number of wires in a conduit, starting with number 1; example K100 – 1, where K100 is the conduit number and 1 is the first wire.*
- C. *Bare Ground Cable*
  - a. *Annealed, bare, stranded copper*
  - b. *Manufacturers:*
    - i. *Southwire Corporation*
    - ii. *Service Wire Corporation*
    - iii. *Encore Wire*
    - iv. *Or approved equal.*
- D. *Ground Rods*
  - a. *Copperclad rigid steel rods, 10 foot length and ¾ inch diameter*
  - b. *Manufacturers:*
    - i. *ERICO.*
    - ii. *A.B. Chance Company.*
    - iii. *South Atlantic, L.L.C.*
    - iv. *Harger.*
    - v. *Or approved equal.*
- E. *Grounding Connectors*
  - a. *Connectors shall be designed specifically for the items to be connected. Pressure connectors shall be copper alloy. Welded connections shall be by exothermic process.*
  - b. *Pressure Connector Manufacturers*
    - i. *O.Z./Gedney.*
    - ii. *Burndy Corporation.*
    - iii. *Or approved equal.*
  - c. *Welded Connector Manufacturers*
    - i. *Cadweld by Erico Products*
    - ii. *Therm-O-Weld by Burndy Corporation*
    - iii. *Or approved equal.*
- F. *Control Cables*
  - a. *Single conductor control cables shall follow requirements for power conductors.*
  - b. *Shielded pair cables shall be tinned copper, minimum 16 AWG with 600V rated PVC insulation.*
    - i. *Manufacturers*
      - 1. *Belden Company.*
      - 2. *Dekoron Wire and Cable Company.*
      - 3. *Okonite Company.*
      - 4. *Or approved equal.*
  - c. *Cable terminals shall be fork type copper compression terminals with nylon insulation.*

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- i. Manufacturers*
  - 1. Thomas & Betts Sta-Kon.*
  - 2. Burndy Insulug.*
  - 3. Or approved equal.*

*d. Wire markers shall follow the requirements for power conductors.*

### **G. Conduit**

*a. All underground conduit installation shall include the installation of a warning ribbon approximately 12 inches below finished grade and centered over the conduit or duct bank. Ribbon shall be 6 inches wide, 4 mil minimum thickness and metallic-lined.*

- i. Manufacturers*
  - 1. Brady Identoline*
  - 2. Thomas & Betts Protect-A-Line*
  - 3. Or approved equal.*

*b. The maximum total amount of bends between pull points shall be based on conduit run length.*

- i. 100 feet or less, 360 degrees total.*
- ii. 101 to 300 feet, 270 degrees total.*
- iii. Greater than 300 feet, 180 degrees total.*

*c. Seal all conduit openings within control, instrumentation, and distribution equipment to provide a water tight seal.*

- i. Manufacturers*
  - 1. O-Z/Gedney Type DUX Duct Sealing Compound*
  - 2. American Polywater Corp Type FST Foam Sealant*

*d. PVC Coated Galvanized Rigid Steel Conduit shall be used for all corrosive and/or class 1 div 1 or 2 locations.*

- i. Manufacturers*
  - 1. OCAL Inc.*
  - 2. Robroy Industries Perma-Cote or Plasti-Bond.*
  - 3. Or approved equal.*

*e. Galvanized Rigid Steel Conduit shall be used for all exposed outdoor conduit that is not located in a corrosive and/or classified location.*

- i. Manufacturers*
  - 1. Allied.*
  - 2. Republic.*
  - 3. Wheatland.*
  - 4. Or approved equal.*

*f. Non-metallic PVC shall be used for all general purpose buried conduit locations.*

- i. All elbows shall be metallic conduit appropriate for the location. Transition from metallic conduit to non-metallic conduit shall occur below grade.*
- ii. Schedule 40 PVC, 90 degrees C rated*
- iii. Manufacturers*
  - 1. PW Eagle.*
  - 2. Prime Electrical Products.*
  - 3. Cantex.*
  - 4. Carlon.*
  - 5. Or approved equal.*

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- g. Flexible conduit in non-hazardous areas shall be made from a galvanized steel core with a smooth abrasion resistant liquid-tight PVC outer layer. A continuous copper ground shall be built into sizes 3/4 inch through 1-1/4 inch.*
  - i. Manufacturers*
    - 1. Anaconda Metal Hose Division Type Sealtite.*
    - 2. Electric-Flex Company Type Liguatite.*
    - 3. Or approved equal.*
- h. Flexible conduit in hazardous (Class 1, Group D, Division 1 and 2) area shall be made from a flexible brass inner core with bronze outer braid.*
  - i. Manufacturers*
    - 1. Crouse Hinds Type ECGJH or ECLK.*
    - 2. Appleton Type EXGJH or EXLK.*
    - 3. Or approved equal.*
- H. All receptacles shall be duplex ground fault receptacles with two pole, three wire, 125VAC 20 amp rating.*
  - a. All outdoor receptacles shall be rated weather resistant and marked WR on the device. All weather resistant receptacles shall include weather proof in-use covers.*
  - b. Manufacturers*
    - i. Harvey Hubbell GFR5362SGI.*
    - ii. Cooper Wiring Devices TWRVGF20x.*
    - iii. Or approved equal.*
- I. Switches shall be quiet type single pole AC toggle 120/277 volt AC, 20 amp rated.*
  - a. Manufacturers*
    - i. Harvey Hubble 1221-I*
    - ii. Arrow-Hart 1991-I*
  - b. All outdoor switches shall include type 304 stainless steel weatherproof and corrosion resistant covers.*
- J. Panelboards*
  - a. Voltage rating, current rating, number of phases, number of wires and number of poles shall match the contract drawings.*
  - b. Circuit breakers shall be molded case, bolt in thermal magnetic type.*
  - c. Main and branch circuit breakers shall be fully rated with 22,000 amp interrupting capacity.*
  - d. Bus bars shall be 98 percent copper, tin plated. All 4 wire panelboards shall have a solid neutral bar. All panels shall have a ground bus.*
  - e. All panelboards shall have a main circuit breaker.*
  - f. Panelboard shall have direct bus bar mounted transient voltage surge suppression, size as indicated on contract drawings.*
  - g. Manufacturer*
    - i. Square D.*
    - ii. General Electric.*
    - iii. Allen Bradley.*
    - iv. Or approved equal.*
- K. Generator shall be 120/208V 3 phase, 4 wire 60Hz rated for 30KW capable of 100A max load. The engine type shall be diesel powered with integral fuel system and base mounted fuel tank capable of 24 hour storage. The generator shall include integrated lubrication and cooling system with high temperature and low oil level shutdown. The generator shall include integrated starting system with*

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*engine mounted batteries and automatic float charger. The generator enclosure shall limit noise while operating to 79 dB(A) when measured at 7m. A control panel shall be provided mounted in the interior of generator enclosure to include the following:*

- a. *"RUN/OFF/AUTO" selector switch with terminals for two-wire remote start-stop signal from one or more automatic transfer switches.*
  - b. *AC Volts, two percent accuracy, in percent of rated.*
  - c. *AC amps, two percent accuracy, in percent of rated.*
  - d. *DC voltage readout.*
  - e. *Engine coolant temperature readout.*
  - f. *Engine oil pressure readout.*
  - g. *Running time readout.*
  - h. *A readout shall be provided to indicate the following conditions:*
    - i. *Overcrank (Shut Down).*
    - ii. *High coolant temperature (Warning Alarm).*
    - iii. *High high coolant temperature (Shut Down).*
    - iv. *Low coolant temperature (Warning Alarm).*
    - v. *Low oil pressure (Warning Alarm).*
    - vi. *Low low oil pressure (Shut Down).*
    - vii. *High generator temperature (Warning Alarm).*
    - viii. *Battery voltage low (Warning Alarm).*
    - ix. *Battery voltage high (Warning Alarm).*
    - x. *Generator running.*
    - xi. *Overspeed (Shut Down).*
    - xii. *Anticipatory low oil pressure (Warning Alarm).*
    - xiii. *Anticipatory high water temperature (Warning Alarm).*
    - xiv. *Manual emergency stop (Shut Down).*
    - xv. *Not in automatic (Warning Alarm).*
    - xvi. *System ready.*
    - xvii. *Battery charger fault (Warning Alarm).*
    - xviii. *High high generator temperature (Shut Down).*
    - xix. *Battery weak at time of cranking (Warning Alarm).*
    - xx. *Overcurrent (Warning Alarm).*
    - xxi. *Overcurrent (Shut Down).*
    - xxii. *High AC voltage (Shut Down).*
    - xxiii. *Low AC voltage (Shut Down).*
    - xxiv. *Under frequency (Shut Down).*
    - xxv. *Ground fault (Shut Down).*
  - i. *Manufacturers*
    - i. *Kohler.*
    - ii. *CAT.*
    - iii. *Cummins.*
    - iv. *Or approved equal.*
- L. *An automatic transfer switch shall be provided to start and transfer load to the backup generator in the event of utility power failure. The transfer switch shall be double throw and operated by one, non-fused, momentarily energized operating mechanism with a minimum transfer time of 400 milliseconds. Normal and standby contacts shall be mechanically interlocked to prevent*

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*simultaneous closing. Mechanical locking of main contacts in each direction shall be accomplished without the aid of latching solenoids, toggle mechanisms, or gear arrangements. An overload or short-circuit shall not cause the switch to go to a neutral position. The transfer switch shall include an integrally mounted control panel with adjustable solid-state or programmable microprocessor and shall provide the following operational characteristics:*

- a. Time delay on momentary dips in normal source (0.5 to 6.0 seconds), factory set at one second.*
- b. Time delay on transfer to emergency for controlled loading of generator (0 to 1 minute), factory set at 0 minutes.*
- c. Time delay on retransfer to normal (0 to 30 minutes), factory set at 30 minutes.*
- d. Time delay on engine shutdown after retransfer to normal (0 to 5 minutes), factory set at five minutes.*
- e. Close differential voltage sensing of all normal source phases (pickup adjustable from 85 to 100 percent of nominal and dropout adjustable from 75 to 98 percent of pickup), factory set to pickup at 90 percent and dropout at 85 percent of nominal.*
- f. Independent voltage (85 to 100 percent pickup) and frequency (90 to 100 percent pickup), sensing of the emergency source to prevent premature transfer, factory set to pickup at 90 percent of nominal voltage and 95 percent of nominal frequency.*
- g. Test switch (momentary type) to simulate failure of normal source.*
- h. Pilot lights to indicate switch position.*
- i. Auxiliary contacts (two closed on "NORMAL" and two closed on "EMER-GENCY") rated ten amps, 120 VAC.*
- j. All time delay and sensing functions shall be field adjustable over the ranges indicated and shall operate with minimum drift (not to exceed  $\pm$  one percent of set frequency,  $\pm$  two percent of set voltage, and  $\pm$  ten percent of set time delay) over the temperature range of -20°C to +70°C. The control panel shall be provided with a protective cover and an isolation plug in the wiring harness to disconnect all the control wires between the control panel and the main transfer panel.*
- k. Manufacturers*
  - i. Automatic Switch Co.*
  - ii. Russelectric.*
  - iii. Zenith Controls, Inc.*
  - iv. Or approved equal.*

Question 2.                    There is limited information shown on the plan drawings for the Standby Generator. Is this a diesel or natural gas generator? What is the sound enclosure level? What is the correct fuel tank size to be provided for this generator?

Answer                        The generator is diesel, enclosure level 79dBA at 7 meters, 80 gallons/(24hrs) fuel tank. See attached additional Electrical Notes (Item K) for additional generator information.

## ELECTRICAL QUESTIONS

- Question 3. Drawing E2 Electrical Equipment Blowup Scale is incorrect.
- Answer The blow up on Sheet E2 is not-to-scale. The site plan on Sheet E2 can be used for scaling.
- Question 4. Drawing E9 Detail E-7 and Drawing E10 Detail E-9 show GRC conduit and Myers hubs for exposed conduits, while Drawing E10 Detail E-6 shows exposed PVC Coated GRC Conduits at the NEMA7 Junction Boxes. Is PVC Coated GRC only to be provided for exposed conduits at these NEMA7 Junction Boxes? If not, should all exposed conduits be PVC Coated GRC?
- Answer PVC Coated GRC shall be provided for the exposed conduits at the NEMA7 junction boxes and the wet well connections. GRC shall be provided for all other exposed conduits. Schedule 40 PVC shall be provided for buried conduits.
- Question 5. What is the location of the Telephone Utility Riser which conduit K119 is to be routed to? The location for the telephone utility riser has not been determined.
- Answer Contractor shall stub up and cap the conduit 5-ft outside of the site wall.
- Question 6. Should the reference to “Junction Box” on Civil Drawing C4 be changed to Avondale Standard Detail A1719-2 Fiber Optic No. 9 Vault? If not, what is to be provided for the junction box?
- Answer The junction box shall be per Avondale Standard Detail A1719-2.

**ATTACHMENT 1  
TO ADDENDUM NO. 2  
REVISED EXHIBIT C PRICE SHEET**

REVISED PRICE SHEET 07/09/2020

**NOTE: Pricing shall be all-inclusive such as permits, overhead, profit, design, taxes, equipment, labor and material., All pricing blanks must be filled in. Incomplete or unfilled spaces in the Bid Price Sheet shall result in a determination that a Bid is non-responsive.**

Item #	Description	Unit	Quantity	Unit Price	Total
1	Mobilization/demobilization	LS	1	\$	\$
2	Utility locating (vacuum excavation)	LS	1	\$	\$
3	Materials testing (concrete & compaction testing)	LS	1	\$	\$
4	Traffic control	LS	1	\$	\$
5	Construction staking	LS	1	\$	\$
6	As-builts	LS	1	\$	\$
7	Cap and grout fill ex. sewer lines	LS	1	\$	\$
8	Remove existing curb and gutter	LF	52	\$	\$
9	Remove and replace existing sidewalk	SF	104	\$	\$
10	Remove and replace existing AC pavement	SY	132	\$	\$
11	Remove existing fence	LF	42	\$	\$
12	Mountable Curb	LF	26	\$	\$
13	Vertical curb and gutter	LF	26	\$	\$
14	Safety bollard	EA	2	\$	\$
15	Clearing and grubbing	LS	1	\$	\$
16	Site grading	LS	1	\$	\$
17	Excavation, shoring, backfill, & hauling	LS	1	\$	\$
18	ABC driveway and site ground cover (4")	CY	21	\$	\$
19	Steel reinforced, cast-in-place concrete pad, electrical equipment	CY	3	\$	\$
20	Steel reinforced, cast-in-place concrete pad, generator	CY	2	\$	\$
21	Precast 5-ft diameter wet well and cover	EA	1	\$	\$
22	Precast 5-ft diameter sewer manhole	EA	1	\$	\$
23	Connect to existing manhole	EA	1	\$	\$
24	8' CMU wall	LF	125	\$	\$



Item #	Description	Unit	Quantity	Unit Price	Total
25	Double swing gate	EA	1	\$	\$
26	Wet well hatch	EA	1	\$	\$
27	Pipe & equipment coating	LS	1	\$	\$
28	Wet well & manhole coating	LS	1	\$	\$
29	Electrical shade canopy	LS	1	\$	\$
30	Chopper pump assembly	EA	2	\$	\$
31	4" DIP force main	LF	256	\$	\$
32	10" PVC gravity sewer	LF	91	\$	\$
33	6" PVC wet well stubout	LF	5	\$	\$
34	1" Copper service, meter, BFP & hose bib	LS	1	\$	\$
35	4" DIP Wye	EA	2	\$	\$
36	4" DIP 90 Bend	EA	2	\$	\$
37	4" DIP 45 Bend	EA	7	\$	\$
38	4" Plug Valve	EA	5	\$	\$
39	4" Restrained flexible coupling	EA	4	\$	\$
40	4" Check valve	EA	2	\$	\$
41	4"x3" Reducer	EA	2	\$	\$
42	Install City furnished 4" flow meter	EA	1	\$	\$
43	4" Wet well vent	EA	1	\$	\$
44	1-1/2" PVC drain lines from ARV's to wet well	LS	1	\$	\$
45	Pipe support	EA	7	\$	\$
46	Combination air release valve	EA	3	\$	\$
47	2" PVC conduit for future fiber optic	LF	120	\$	\$
48	Electrical Improvements (all electrical improvements per Plan Sheets E1-E10)	LS	1	\$	\$
49	Instrumentation Improvements (all instrumentation improvements per Plan Sheets E1-E10 and M1-M2)	LS	1	\$	\$
50	(Allowance) - New APS Electrical Service	LS	1	\$ 25,000	\$ 25,000
51	(Allowance) Force Account	LS	1	\$ 50,000	\$ 50,000
<b>BASE BID TOTAL (Items 1 - 51)</b>					<b>\$</b>

Item #	Description	Unit	Quantity	Unit Price	Total
<b>DEDUCTIVE BID ALTERNATES</b>					
52	The Contractor shall provide a deductive bid alternate for removing the standby generator and generator pad from the project, and for replacing the automatic transfer switch with a manual transfer switch and quick connects.	LS	1	\$	\$
53	The Contractor shall provide a deductive bid alternate for changing the material of the below ground portion of the force main to 4" HDPE DR17, PE4710 (DIPS Sizing). Joining shall be per butt fusion and Contractor shall include all required fittings, adapters, thrust restraints. Contractor to provide fusion machine data logger quality control reports daily.	LF	172	\$	\$

**\* ALL BIDS ARE PRESUMED TO INCLUDE ALL APPLICABLE TAXES. PLEASE BE ADVISED THAT ARIZ. REV. STAT. § 42-5075(P) APPLIES TO THE PROJECT CONTEMPLATED WITHIN THIS CONTRACT. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK CONTEMPLATED BY THE PLANS FOR THE PROJECT IS BID ON THE PRICE SHEET.**

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_

ACCEPTANCE OF OPTIONAL ITEMS

ALT. No. 51 Yes \_\_\_\_\_ No \_\_\_\_\_ Authorized By: \_\_\_\_\_

ALT. No. 52 Yes \_\_\_\_\_ No \_\_\_\_\_ Authorized By: \_\_\_\_\_ 2

**.L BIDS ARE PRESUMED TO INCLUDE ALL APPLICABLE TAXES. PLEASE BE ADVISED THAT Z. REV. STAT. § 42-5075(P) APPLIES TO THE PROJECT CONTEMPLATED WITHIN THIS TRACT. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK TEMPLATED BY THE PLANS FOR THE PROJECT IS BID ON THE PRICE SHEET.**

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_

**ATTACHMENT 2  
TO ADDENDUM NO. 2  
IMAGE TEMPLATE**

# PROJECT NAME

YOUR TAX DOLLARS AT WORK

**Project No.**

**Project Cost:**

**Contractor:**

**Engineer:**

**City Engineering Department**

**24-Hour Project Hotline**

**Begin Construction:**

**Telephone:**

**Telephone:**

**Telephone: (623) 333-4200**

**Telephone:**

**End Construction:**



**PROGRESS AS PROMISED**

**ATTACHMENT 3  
TO ADDENDUM NO. 2  
PUMP PERFORMANCE CURVE**



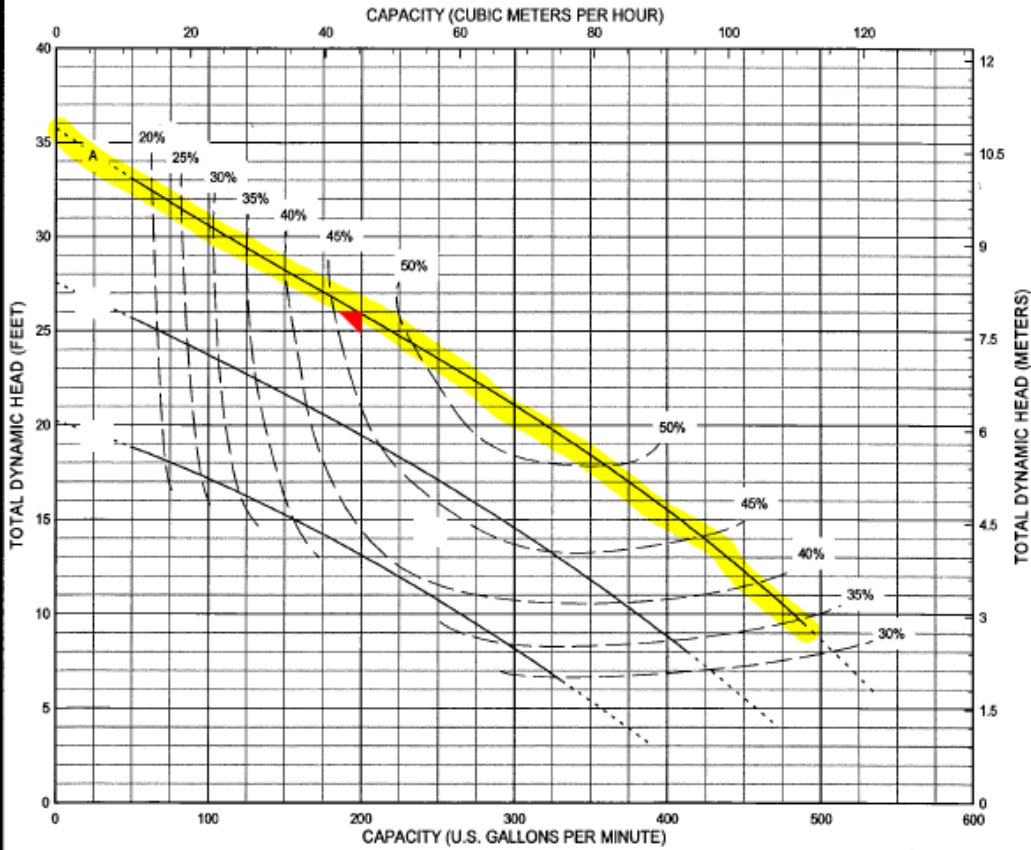
# PERFORMANCE CURVE

**Models:**  
SE3F - 060

CURVE	POWER (HP/KW)	SPEED (RPM)	IMPELLER DIAMETER
A	5 / 4	1725	6.50" (165 mm)
B	5 / 4	1725	6.00" (152 mm)
C	5 / 4	1725	5.50" (140 mm)

**Back-Pull-Out Casing**  
**2-Blade Impeller**  
**3" Discharge**  
**6" Suction**

DO NOT OPERATE PUMP IN DOTTED PORTION OF CURVES. PUMPS MAY EXCEED HP SHOWN IF OPERATED IN DOTTED PORTION OF CURVE. CURVES ARE SUBJECT TO CHANGE WITHOUT NOTICE. EFFICIENCIES SHOWN ARE NOMINAL BOWL. GUARANTEED MINIMUM EFFICIENCIES PER H.I. LEVEL A.



Form V370-SE3F<sup>2</sup>-1750 2/14

**CITY OF AVONDALE  
ACKNOWLEDGMENT OF ADDENDA RECEIVED  
INVITATION FOR BIDS**

**Riley Drive Wastewater Lift Station**

PW 20-058

**Addendum No. 2**

\_\_\_\_\_, affirms that ADDENDUM No. 2 has been  
(Name of Vendor/Designee)  
received and that the information contained in ADDENDUM No. 2 has been incorporated in  
formulating the Vendor's Offer.

\_\_\_\_\_, \_\_\_\_\_ 2020  
Signed Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

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

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip Code

END OF ADDENDUM No. 2