

ADDENDUM NO. 2
TO THE CONTRACT DOCUMENTS FOR

City of Chehalis
Chehalis Pump Station

Project No. W0 11.1003

Project Issued: January 14, 2020

Addendum No. 2 Issued: February 3, 2020

Bid Opening Date: To remain the same (2:00 PM on February 11, 2020)

To: All Holders of Contract Documents

This addendum forms a part of the Contract Documents and modifies the original Contract Documents for which proposals are due as indicated on the date and time above.

Acknowledge receipt of this addendum on "Proposal Form" of the Bid Documents in the Contract Documents. Failure to do so might subject the bidder to disqualification.

This addendum shall modify the Contract Documents as follows:

Item: 1
Division 00 Procurement and Contracting Documents
00 11 13 Page 8
Description: Section 00 11 13 Page 8 has been corrected to include the following:

"Any technical questions regarding the contract documents should be directed to the City's Water Superintendent Dave Vasilaukas at 360-345-1226 FAX or (360) 748-0238 ext 2."

Item: 2
Division 00 Procurement and Contracting Documents
00 21 00 Page 14
Description: Section 00 21 00 Page 14 has been corrected to include the following:

"If Bidder is unable to attend the January 28, 2020 pre-bid walk-through, tours of the site may be scheduled by appointment by calling Property/Facilities Manager Dave Vasilaukas at 360-748-0238 ext 2."



Notice to Bidders-Request for Proposals
City of Chehalis
Chehalis Pump Station Project
Bid Due Date: February 11, 2020; 2:00 PM

Sealed bids for furnishing all materials, labor and equipment for the following described work will be received by the City Clerk of the City of Chehalis, 350 North Market Blvd., Rm 101, Chehalis, WA 98532, until **2:00 pm, February 11, 2020**. Proposals received after this time will not be considered. At this time the sealed bids will be publicly opened and read aloud. Bids must be sealed and clearly marked with the project title, bid opening date, and the name and address of the bidder.

The project involves building a proposed pump station to replace an existing pump station located 405 Parkhill Dr, Chehalis, WA. The proposed pump station will be located approximately 50 feet west of the existing pump station, adjacent to a dead-end, gravel-surfaced access road. Steep slopes are present above and below the project site and cut-construction and a retaining wall will be required.

Bid documents may be obtained at no cost in pdf format only at <http://www.ci.chehalis.wa.us/rfps>, or by contacting the city clerk at cfoley@ci.chehalis.wa.us or 360-345-1042. Please contact SCJ Alliance for a paper copy. A \$35 non-refundable fee will be required.

It is the sole responsibility of each Bidder to learn of Addenda, if any. Such information may be obtained from the city's website. Bidders are encouraged to "Register as Bidder" with the City Clerk to receive automatic email notification of future addenda and be placed on the "Bidders List." The City of Chehalis accepts no responsibility or liability and will provide no accommodation to Bidders who fail to check for addenda and submit inadequate or incorrect responses.

All bidders are required to use the forms furnished by the City and to bid each item in the manner shown on the bid form.

Upon award of the contract a performance and payment bond, meeting the requirements of the bid documents, will be required.

This project involves public work and as such is subject to prevailing wages. The current list of Washington State Prevailing Wages is included as part of the bid document.

Retainage of five percent (5%) will be held until releases are received from the State Departments of Employment Security, Labor & Industries, and Revenue.

Any technical questions regarding the contract documents should be directed to the City's Water Superintendent Dave Vasilauskas at 360-345-1226 FAX or (360) 748-0238 ext 2.

A pre-bid walk-through will be held for all prospective bidders on at the existing pump station located at 405 Parkhill Dr in Chehalis at **10:00 am on January 28, 2020**. Attendance is encouraged but not required in order to submit a bid.

Each bid must be accompanied by a cashier's check, postal money order, or surety bond by a bonding company licensed to do business in the State of Washington, made payable to the City of Chehalis in an amount not less than five percent (5%) of the total bid.

No bidder may withdraw their proposal after the time set for the opening thereof, or before award of contract without approval of the City of Chehalis.

The City of Chehalis hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation, and will not be discriminated against on the grounds of age, race, creed, color, sex, national origin, sexual orientation, marital status, or the presence of any physical, mental, or sensory disability in consideration for an award. The City of Chehalis encourages contracting procedures which provide MWBE's equal opportunity to participate as subcontractors on City contracts.

All contracts with a value greater than \$1,000 and lasting 60 days shall require that the awarded contractor register with the Department of Homeland Security E-Verify program. Contractors shall have 30 calendar days after the execution of the contract to register and enter into a Memorandum of Understanding (MOU) with the Department of Homeland Security (DHS) E-Verify program. After completing the MOU the contractor shall have up to 90 calendar days to begin using E-Verify and provide a written record on the authorized employment status of their employees and those of any subcontractor(s) currently assigned to the contract.

The City reserves the right to award the bid to the lowest responsible bidder, waive informalities, or reject any or all bids.

By: Caryn Foley, City Clerk

Dates of publication:

The Chronicle – Tuesday, January 14 & 21, 2020

Seattle Daily Journal of Commerce – Tuesday, January 14 & 21, 2020

Portland Daily Journal of Commerce – Wednesday, January 15 & 22, 2020

Special Conditions

SCOPE OF WORK

Bidder shall provide pump station construction for the City of Chehalis, as per the specifications listed in this document.

Bidder shall be solely responsible for scheduling and coordinating the work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of the work under a direct or indirect contract with Bidder.

Bidder shall submit a list of subcontractors and/or suppliers performing work on this project for acceptance by City.

All potential bidders are encouraged to attend a non-mandatory pre-bid walk through at the Existing Pump Station located at 405 Parkhill Dr, Chehalis, WA 98532 on at **10:00 am on January 28, 2020**.

Bidder shall start work within 10 days of the Notice to Proceed and will complete work within 155 calendar days.

The successful Bidder shall be and shall remain an independent contractor throughout the term of any contract awarded pursuant to this Bid.

The successful Bidder shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the work.

Contractor Training

Beginning July 1, 2019, businesses not listed on the WA State Department of Labor & Industries "*Public Works Training Exemption List*" are required to have training before submitting a bid and/or performing work on public works projects. Awarding agencies are required to verify all contractors submitting bids meet this new requirement before awarding the contract. Businesses that have been in business with an active Unified Business Identifier (UBI) number for three (3) or more years, AND have performed work on three (3) or more public works projects, are exempt from these training requirements. Training options are available at <https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp>.

INSURANCE

The Contractor shall, at Contractor's expense, obtain and keep in force at all times during the term of this contract, Comprehensive General Liability, Employer's Liability, Workmen's Compensation, Public Liability and Property Damage insurance with an insurance carrier acceptable to the city, including broad from general liability endorsement and contractual liability on an occurrence basis and comprehensive auto liability, including owned, non-owned and hired vehicles with the limits of not less than ONE MILLION (\$1,000,000) DOLLARS combined single limit insuring City and Contractor against any liability arising out of the use occupancy or maintenance of contract site. The limit of said insurance shall not, however, limit the liability of the Contractor hereunder. The Contractor agrees to furnish the City certificates of insurance or other evidence satisfactory to the City to the effect that such insurance has been procured and is in force.

PERFORMANCE AND PAYMENT BONDS

If awarded the contract, Bidder shall provide a performance bond and payment bond, or Letter of Credit, and each shall be issued in an amount equal to the contract amount as security for the faithful performance and/or payment of all obligations. Performance and payment bonds shall be issued by a solvent company authorized to do business in the State of Washington and shall meet any other requirements established by law or by City pursuant to applicable law.

E-VERIFICATION

All contracts with a value greater than \$1,000 and lasting 60 days shall require that the awarded contractor register with the Department of Homeland Security E-Verify program. Contractors shall have 30 calendar days after the execution of the contract to register and enter into a Memorandum of Understanding (MOU) with the Department of Homeland Security (DHS) E-Verify program. After completing the MOU the contractor shall have up to 90 calendar days to begin using E-Verify and provide a written record on the authorized employment status of their employees and those of any subcontractor(s) currently assigned to the contract.

DAMAGE PROVISION

If in performance pursuant to an awarded contract, successful Bidder, or Bidder's employee, affiliate, representative, partner, subcontractor, or agent, damages the City's real or personal property, including but not limited to tile and concrete, Bidder shall compensate the City for the cost of repair or replacement, whichever the City determines is appropriate under the circumstances. In such event, the City will provide to successful Bidder an invoice stating the actual cost of repairing or replacing the damaged property. Successful Bidder shall provide payment of the invoiced amount within thirty (30) days of its receipt of said invoice. Should successful Bidder refuse to compensate the City for the damage incurred, said invoiced amount shall be withheld from the amount payable to successful Bidder for services rendered pursuant to the awarded contract. This provision does not waive or diminish the City's right to pursue any and all legal remedies to collect for damages caused by Bidder, or Bidder's employee, affiliate, representative, partner, subcontractor, or agent.

BID TERMS

By signing and submitting this Bid, Bidder agrees:

- To furnish goods and services in strict compliance with the terms, conditions, Specifications, and performance requirements of this Bid.
- That payment(s) will only be made from an original invoice, not from any statement, and invoices for payment shall be submitted via mail, courier, or personal delivery to the Property/Facilities Manager.
- The City shall notify the successful Bidder of any contested invoice(s) in writing, and the City and successful Bidder shall mutually resolve such disputed invoice(s) within sixty (60) days of successful Bidder's receipt of said notice of dispute.

The Contractor shall be licensed to perform all services in the state of Washington, and selected Contractor shall submit, prior to contract award, project relevant certifications, licenses, and proof of insurance. The Contractor keep in force all licenses, business permits and other permits required to

perform the services of this contract in accordance with the requirements of said permits.

EXAMINATION OF THE CONTRACT DOCUMENTS AND PROJECT SITES

Each potential Contractor shall inform themselves fully of the nature of the conditions and peculiarities of the site. Failure to do so will not relieve the Contractor submitting a successful Bid from carrying out any of the provisions and obligations of any subsequent contract. It is the responsibility of the Bidder to:

- Thoroughly examine the Contract Documents.
- Visit the site and become familiar with the existing conditions and the scope of the project work; and become familiar with the surrounding conditions that may affect the cost, progress, performance or furnishing of the work. If Bidder is unable to attend the **January 28, 2020** pre-bid walk-through, tours of the site may be scheduled by appointment by calling Property/Facilities Manager Dave Vasilauskas at 360-748-0238 ext 2.
- Consider all federal, state and/or local laws and regulations that may affect the cost, progress, performance or furnishing of the work.
- Study and carefully correlate the Bidders observations with the Contract Documents.
- Notify the City of all conflicts, errors or discrepancies found in the Contract Documents.

INDEMNITY

The contractor will indemnify and save harmless the City, its officers, agents, servants, and employees from and against any and all suits, actions, legal proceedings, claims, demands, damages, costs, expenses, and attorneys' fees to the extent resulting from a willful or negligent act or omission of the Contractor, its officers, agents, servants, and employees in the performance of this Contract; provided, however, that the Contractor shall not be liable for any suits, actions, legal proceedings, claims, demands, damages, costs, expenses and attorneys' fees arising out of the award of this Contract or a willful or negligent act or omission of the City, its officers, agents, servants and employees.

INVOICES

The Contractor may submit monthly invoices.

RETAINAGE

Retainage of five percent (5%) will be held by the City of Chehalis until releases are received from the State Departments of Employment Security, Labor & Industries, and Revenue.

PREVAILING WAGES

All Bids are subject to Washington State prevailing wages. The current list of Washington State prevailing wages is included as part of these Bid Plans and Specifications.

BASIS FOR SELECTION

Bids received by the City shall be evaluated based on the following criteria:

1. Bid amount
2. Contractor's qualifications
3. Understanding and responsiveness to the City's objectives
4. Materials and method(s) for conducting the project

The decision of the City to award a contract shall not be subject to legal challenge or appeal in any form. Whenever it is deemed to be in the best interest of the City, the City Council shall waive informalities in any and all Bids. The right is reserved to reject any Bid or any part of any Bid when such action is deemed to be in the best interest of the City of Chehalis. Bids must be submitted complete in every detail and, when requested, supporting or supplemental information shall be provided. If a Bid involves any exception from stated requirements, they must be clearly noted as exceptions and listed in the Bid. The reason for any exception shall also be stated.

SIGNING OF THE AGREEMENT

When the City submits to the Successful Bidder the "Notice of Award" and Agreement for execution, it will be in the number of copies necessary, all of which shall be signed and shall constitute an original Agreement. Within five days thereafter, the Successful Bidder shall sign and deliver all copies of the Agreement to the City, accompanied by a certificate of insurance. The City, within three days thereafter, shall return to the Successful Bidder a fully executed copy of the agreement.

The City of Chehalis reserves the right to reject any and all Bids, to waive technical or legal deficiencies, to make such investigation as it deems necessary to evaluate Contractor's qualifications, to accept any Bid that may be deemed in the best interest of the City and to negotiate terms and conditions of any Bid leading to acceptance and final execution of a contract for services.

Item: 3

Division 22

Section 22 11 23

Description: Section 22 11 23 has been deleted and replaced with the following section, dated January 30, 2020:

HYDRONIX, 700 SERIES

LEVEL CONTROL BOOSTER PUMP SYSTEM SPECIFICATION

Part I – GENERAL

1.1 WORK INCLUDED

- A. Provide and Install a Packaged Pumping System
- B. Hydronix (PumpTech Engineered Systems) model 703 booster pump station as manufactured by PumpTech Inc. Bellevue WA. (425) 644-8501

1.2 REFERENCE STANDARDS

The work in this section is subject to the requirements of applicable portions of the following standards:

- A. Hydraulic Institute
- B. ANSI – American National Standards Institute
- C. ASTM – American Society for Testing and Materials
- D. IEEE – Institute of Electrical and Electronics Engineers
- E. NEMA – National Electrical Manufacturers Association
- F. NEC – National Electrical Code
- G. ISO – International Standards Organization
- H. UL – Underwriters Laboratories, Inc.

Part 2 – Pumping System

2.1 PACKAGED PUMPING SYSTEM

- A. Furnish and install a pre-fabricated and tested packaged pumping system.
- B. The packaged pump system shall be a standard product of a single pump manufacturer.
- C. The entire pump system including pumps and pump logic controller, shall be designed and built by the same manufacturer.
- D. The complete packaged water booster pump system shall be certified and listed by UL (Category QCZJ – Packaged Pumping Systems) for conformance to U.S. and Canadian Standards.
- E. The packaged water booster pump station shall be manufactured by:
PumpTech Inc, Bellevue WA. (425) 644-8501

2.2 PUMPS

- A. Qty (2) Pumps shall be 40 hp Paco brand model 20953-LC rated for 360 GPM @ 250 FT TDH
- B. All pumps shall be ANSI/NSF 61 approved for drinking water.
- C. The pumps shall be single stage close coupled design.
- D. The head-capacity curve shall have a steady rise in head from maximum to minimum flow within the preferred operating region. The shut-off head shall be a minimum of 20% higher than the head at the best efficiency point.
- E. The pumps shall have the following features:
 - 1. The pumps shall be close coupled, single stage, end suction top discharge design, cast iron stainless steel fitted construction.
 - 2. All pumps shall be of the back pull-out design so that the rotating element can be removed from the casing without disconnecting the suction or discharge piping. The casing material shall be close-grained cast iron ASTM A48 - Class 30 with a minimum tensile strength of 30,000 P.S.I. Volute shall have integrally cast suction and discharge connections, gauge ports at nozzles, and vent and drain ports. Pumps with specific

speed greater than 1600 shall have double volute casing. Pumps with discharge size 3" and larger shall have suction splitter to reduce pre-rotation and improve efficiency. Casings shall be designed for scheduled working pressure and can withstand hydrostatic test at 150% of the maximum working pressure under which the pump could operate at design speed.

3. Pumps with impeller diameter larger than 5" shall be fitted with bronze renewable case wear rings.
4. Pumps with discharge size 2.5" and larger shall have full flanged connections on both suction and discharge. Suction and discharge flanges shall be drilled to ANSI Class 125# standards and be machined flat face.
5. Pumps with discharge sizes 2" and below shall have NPT threaded connection.
6. The motor shaft shall be of cold rolled steel AISI 1024 with bronze sleeves covering the wetted area of the shaft. Motors with 56J frame shall have a motor shaft of stainless steel AISI 416.
7. The pump manufacturer shall recommend the proper mechanical seal based on the pressure, temperature and liquid outlined on the equipment schedule. Mechanical seals, at a minimum, shall have ceramic stationary seats, carbon rotating rings, buna elastomers and stainless steel hardware. Application of a mechanical seal shall be internally flushed type, without requiring external flushing lines. Seals shall be capable of being inspected and easily replaced without removing the piping or volute.
8. Impeller shall be of the enclosed francis vane type, single suction design, made of Stainless Steel 304 (UNS S30400), both hydraulically and dynamically balanced to ISO 1940-1:2003 balance grade G6.3 and keyed to the shaft. The impeller shall be trimmed to meet the specific hydraulic requirements.
9. Pump Construction. The standard material of construction for the pump shall be as below. Special material shall be available as option to suit the liquid pumped.
 - Volute: Cast Iron ASTM A48 - Class 30
 - Case Wear ring: Tin Bronze ASTM B584-90500
 - Impeller: Stainless Steel 304 (UNS S30400)
 - Shaft: Cold Roll Steel AISI 1024 or Stainless Steel AISI 416
 - Shaft Sleeve: Bronze III932 C89835
 - Mechanical Seals: Carbon – Ceramic with Buna Elastomers and Stainless Steel hardware.

2.3 SYSTEM CONSTRUCTION

- A. The suction and discharge manifolds shall be constructed of sch 40 steel pipe coated internally and externally with NSF Approved Skotchkote #134 Epoxy.
- B. Manifold connection sizes shall be as follows:
 - 3 inch and smaller: Male NPT threaded
 - 4 inch through 8 inch: ANSI Class 150 rotating flanges (Optional Class 300 rotating flanges)
 - 10 inch and larger: ANSI Class 150 flanges (Optional Class 300 Flanges)
- C. Pump Isolation valves shall be provided on the suction and discharge of each pump. Isolation valve sizes 2 inch and smaller shall be stainless steel, full port ball valves. Isolation valve sizes 3 inch and larger shall be a full lug style butterfly valve. The valve disk shall be of stainless steel. The valve seat material shall be EPDM and the body shall be cast iron, coated internally and externally with fusion-bonded epoxy.
- C. A spring-loaded non-slam type check valve shall be installed on the discharge of each pump. The valve shall be a wafer style type fitted between two flanges. The head loss through the valve shall not exceed 5 psi at the pump design capacity. Check valves 1-1/2" and smaller shall have a POM composite body and poppet, a stainless steel spring with EPDM or NBR seats. Check valves 1 1/4" and larger shall have a body material of stainless steel or epoxy coated iron (fusion bonded) with an EPDM or NBR resilient seat. Spring material shall be stainless steel. Disk shall be of stainless steel or leadless bronze.

- D. For systems that require a diaphragm tank, a minimum diaphragm tank connection size of ¾" shall be provided on the discharge manifold.
- E. A bourdon tube pressure gauge, 2.5 inch diameter, shall be placed on the suction and discharge manifolds. The gauge shall be liquid filled and have copper alloy internal parts in a stainless steel case. Gauge accuracy shall be 2/1/2 %. The gauge shall be capable of a pressure of 30% above it's maximum span without requiring recalibration.
- F. Systems with a flooded suction inlet or suction lift configuration shall have a factory installed water shortage protection device on the suction manifold.
- G. Skid Base: Pump skid base shall be constructed of ASTM A36 structural steel. Frame shall provide adequate structural supports for pumps, motors, and piping. The frame shall extend to lift points and assure adequate strength to resist deformation of structure during shipping, lifting, handling, and operation. Skid frame shall be a minimum of 6" I beam weighing no less than 12.5 lbs per foot. The station base shall incorporate a flange designed to secure the pump station to the concrete floor in accordance with the pump station manufacturer's structural design. The skid shall be constructed with a 3/8" minimum-thickness floor plate covering the entire base and welded to the frame.
Skid Coatings: All surfaces of the exposed steel structure, interior and exterior, shall be grit blasted equal to commercial base cleaning (SSPC-SP6). The protective coating shall take place immediately after surface preparation. The protective coating shall be Gray industrial powder coating to a minimum total dry film thickness (DFT) of 8.0 mils.
- H. Skid configuration:
 - 1. The skid shall be configured for Qty (3) pumps with two pumps initially installed and a third slot for a future pump. All branch manifold piping and isolation valves shall be provided for all three pumps with one pump slot capped off for future 3rd pump installation.

Part 3 - CONTROL PANEL

- 3.01 Tri-plex pump control panel shall be provided as per specification drawings and shall have as a minimum, main disconnect. The control panel should be configured for operation of three pumps with one pump deactivated initially until such time a third pump is installed
- 3.02 COMPONENTS: Components shall be provided as listed below.
 - A. Enclosure shall be UL Type 4X stainless steel, minimum _____ dimensions with pad-lockable 3 point latch. A swing out inner door shall be provided.
 - B. A GFCI convenience receptacle shall be provided. Receptacle shall be industrial grade, 120V 20A.
 - C. Control panel shall have a thermostatically controlled heater with fan. Heater package shall be Hoffman DAH1002A or approved equal.
 - D. Main disconnect switch shall be UL98 listed and sized to handle full load amps of the panel, with pad-lockable door interlocking handle.
 - E. Control power transformer with primary fuse protection.
 - F. An HOA selector switch, RUN indicator, and OUT-OF-SERVICE indicator shall be provided for each pump. All pilot devices shall be UL Type 4X rated, 22mm type manufactured by Square D or equal. The indicators shall be long life LED type.
 - G. An alarm horn shall be provided and mounted on the side of the panel. Horn shall be Federal Signal model 350 or equal with a minimum sound level of 100 db. A silence pushbutton shall be located on the inner door.
 - H. An alarm light shall be mounted on the top of the panel, and shall be red polycarbonate and UL Type 4X rated.
 - I. Control relays shall be provided as shown on plan drawings and shall be blade type, with indicator lights. Relays shall be IDEC or approved equal.
 - J. Analog 4-20mA loops shall be provided with fuse protection.

- 3.03 WIRE ENDS: All wire ends shall be finished with crimped ferrules to prevent strands from splaying.
- 3.04 UL LISTING: The panel shall be manufactured in by a UL508A registered shop and provided with a UL 508A label. A plastic laminated copy of the wiring diagram shall be attached to the inside of the panel door with waterproof adhesive.
- 3.05 PUMP CONTROLLER: The pressure booster control system shall include a digital pressure controller (DPC). The DPC shall, as a minimum, consist of a microprocessor with I/O and a color touch screen operator interface panel. The DPC shall be an integrated system and factory programmed to start, stop and sequence the pumps based on the relationship between the user accessible set points on the interface panel and the analog input from the pressure transducer.

The DPC shall be an industrial type controller designed for harsh environments and a standard catalog item of a manufacturer with at least five years experience in manufacturing micrologic pressure controllers. The DPC shall be rated for a minimum of 0-50 C operating temperature.

1. The digital pump controller shall be mounted on the control panel door and shall include:
 - a. 5.7" 320 x 240 pixel TFT resistive touch screen
 - b. 4.5M application memory
 - c. 312K data table memory
 - d. 8GB micro SD card
 - e. (2) RS232/RS485 serial ports supporting Modbus protocol
 - f. Ethernet port
 - g. (2) 4-20ma pressure sensor inputs
 - h. (18) 24VDC digital inputs
 - i. (15) 5A relay contact outputs rated for up to 230VAC
 2. The DPC shall have pull-apart terminals so that the controller can be easily replaced without disconnecting or disturbing any wiring from the unit.
 3. The DPC shall be an industrial type controller designed for harsh environments and shall be rated for a minimum of 0-50 C operating temperature.
 4. The DPC shall be a standard catalog item of a manufacturer with at least five years of experience in manufacturing digital pressure controllers. The product must be capable of providing all of the specified functions with simple menu drive option selection all from one standard program. This feature is required so that one DPC is capable of being configured to be used in any of the district's other pumps stations with a simple restore function. PLC/HMI systems with customized programming are not acceptable, nor will systems that are separate PLC and HMI components.
 5. The DPC screen color schemes shall be optimized for the best contrast to aid in viewing the DPC in the outdoor sunlight.
 6. The DPC shall have pull-apart terminals so that the controller can be easily replaced without disconnecting or disturbing any wiring from the unit.
- 3.06 DIGITAL INPUT AND OUTPUTS: Inputs shall be provided for each pump to include pump starter auxiliary contact to confirm pump operation when called and HOA Auto position to confirm the pump is available. Outputs shall be provided for each pump run command, out-of-service indicator for each pump, alarm horn and general fault contact.
- 3.07 PROGRAM FEATURES
- 3.08 CONFIGURATION: The DPC shall have the following minimum configuration capabilities, all accessible by simply enabling them by touching a button in a user friendly setup wizard:
1. Simplex, duplex, triplex or quadraplex operation – system shall automatically adjust all screens and functions for the number of pumps in the system.
 2. Constant speed (FVNR) or variable speed pumps (VFD)
 3. 0-10V or 4-20ma pressure sensor input

4. User scalable pressure sensor range and units
 5. Network connection to VFD(s)
 6. Network connection to SCADA system
- 3.09 MONITORING AND SET POINTS: The pressure controller shall be designed with easy to navigate screens that will allow user access to the following functions and data:
1. Pressure display – in PSI
 2. Number of pumps called
 3. Pump status (Running, Stopped, Called, Failed, Out-of-service) for each pump
 4. HOA selector (in controller to allow remote control of the pumps) for each pump
 5. Run hour meter for each pump – minimum 100,000.00 hours (hundredths Resolution)
 6. Number of starts counter for each pump
 7. Alternation status
 8. Alternation mode selector (Automatic, time clock, or manual)
 9. Low suction pressure alarm set point
 10. Lead pump start and stop set point
 11. Lag pump start and stop set point
 12. High and low discharge pressure alarm set point
 13. High and low suction pressure alarm set point
 14. Lead pump start delay and minimum run timer
 15. Lag pump(s) start and stop delay timer
 16. Pump current, each phase, average and imbalance
 17. Pump voltage, each phase, average and imbalance
 18. Ground fault
 19. Motor monitor trip reason
 20. VFD speed command - %
 21. VFD output frequency – Hz (actual)
 22. VFD output watts
- 3.10 ALARM CONFIGURATION: The DPC shall have alarm configuration screens for each of the following alarm conditions:
1. High suction pressure
 2. Low suction pressure
 3. High discharge pressure
 4. Low discharge pressure
 5. Pump failure
 6. MotorSaver fault
 7. VFD Fault
 8. Transducer failure

Each alarm condition shall have touch buttons that enable or disable each of the above alarm conditions individually to:

1. Enable/disable alarm condition
2. Shutdown pumps
3. Manual or Auto reset
4. Turn on the horn output
5. Turn on the alarm light output
6. Flash the alarm light
7. Turn on the general fault contact
8. Send email and/or text message
9. Adjust time delay

All enabled alarms shall be recorded in the DPC alarm history log and in an alarm handler that provide data regarding time of alarm, active or not, and number of same faults since last time cleared.

User Interface

1. The user interface shall be designed with a color scheme optimized for contrast and simplified for intuitive use. The system shall have a simple menu drive system to provide easy user access to the following functions that the DPC shall provide:
 - a. System configuration as listed above
 - b. Main Dashboard – complete system overview
 - c. Pump Dashboard – one for each pump, overview of pump status
 - d. Alternation and pump sequencing
 - e. Set point configuration
 - f. Alarm configuration
 - g. Alarm log – past 1000 events
 - h. Alarm status – notification, acknowledgment
 - i. Run event log – start time, stop time, and duration for each pump run event
 - j. Trend graph – number of pumps running, VFD speed
 - k. Flow – metered or “calculated” rate, total
 - l. Flow log – Day, Week, and Month – past 100 periods each
 - m. Flow trend graph
 - n. Email and Text Message configuration
 - o. Diagnostic – system configuration backup/restore function
 - p. Screen saver
 - q. Exercise timer configuration – periodic cycling of pump(s)
 - r. Maximum run timer configuration – force pump stop
 - s. Flush timer configuration – end of VFD pumping cycle
 - t. Pump down timer configuration – clean the sump
 - u. Start delay timer configuration – “stagger start” the pumps
2. Main Dashboard
 - a. The DPC shall be designed with a “Main Dashboard” (one screen) for the system that displays (in a clear, intuitive format), at a minimum:
 - i. 1” text Pressure display – in tenths of a foot
 - ii. Pressure display – graphical
 - iii. All Pressure set points with the (password protected) ability to change directly from the Main Dashboard
 - iv. Number of pumps called
 - v. Number of pumps running
 - vi. Pump status (Running, Stopped, Called, Failed, Out-of-service) for each pump
 - vii. Flow rate and total (either metered or calculated)
 - viii. List of all active alarms – Touching the alarm text shall scroll through the list of active alarms.
 - ix. Number of active alarms – This button shall provide access to the alarm handler
 - x. VFD speed reference
 - xi. Horn Silence button
 - xii. Alarm Reset button
 - xiii. Battery Status
 - xiv. Time clock
 - xv. Access to all trend and data logs, pump dashboards and system configuration
3. Pump Dashboard
 - a. The DPC shall be designed with “Pump Dashboard(s)” (one for each pump) that displays (in a clear, intuitive format), at a minimum:
 - i. “Soft” HOA selector (in controller to allow remote control of the pumps) for each pump

- ii. Pump status (Running, Stopped, Called, Failed, Out-of-service) for each pump
 - iii. Run hour meter for each pump – minimum 100,000.00 hours (hundredths resolution)
 - iv. Number of starts counter for each pump – minimum 32,000 starts
 - v. VFD speed reference %
 - vi. VFD speed feedback Hz
 - vii. Motor Amps
 - viii. Kilowatt hours total
 - ix. VFD manual speed control
 - x. VFD fault log
4. Alternation: The DPC shall include a screen to control the pump sequencing (alternation) and it shall include:
- a. Alternation status
 - b. Alternation mode selection buttons (Automatic, time clock, or manual)
 - c. Manual alternation step button to manually advance the duty pump.

3.11 PASSWORD PROTECTION: Password Protection: The setup and configuration of the DPC shall be password protected to prevent unauthorized adjustment to the controls.

1. Three levels of password protection shall be provided with the setup and configuration functions being separated into a hierarchy of user access.

3.12 FAULT DATA LOGGING: Fault logging shall be provided with a screen that gives access to the past 1000 fault conditions, complete with date and time stamp. The system data log shall log any alarm condition that is enabled. A separate fault log shall be provided for each VFD that will log the last 250 VFD fault conditions. All logs operate on a “first-in, first-out” basis.

3.13 TREND GRAPH AND HISTORY: The DPC shall have a trend graph that automatically saves suction pressure, system pressure, motor speed and number of pumps running data at one second interval to a file on an SD card. A new file shall be automatically created at the beginning of each month. A minimum of 64 months of data shall be stored and can be retrieved by the DPC for on screen display in real time, or history mode. The trend graph shall be accessible by touching the display on the Main Dashboard.

1. The data shall also be accessible to the user through the Ethernet connection to a LAN. A Windows based software utility shall be available, at no additional charge, which can copy the file to a PC and display the data on the PC screen in graphical format (trend chart). This trend data shall serve the purpose of providing data regarding peak flow periods, system efficiency, and pump run times and duration.

3.14 PUMP RUN DATA LOGGING

The DPC shall log every pump run event. The log shall record the start time, stop time and run duration, complete with date stamp, every time the pump runs. The log shall record a minimum of 10 years of data based on a frequency of 30 seconds between events to the SD Card.

3.15 MANUFACTURER: The digital level controller shall be PUMP Vision as manufactured by California Motor Controls, Inc. or pre-approved equal.

PART 4 - COMMUNICATION

4.1 SERIAL PORT: The DPC shall have a serial port that can be configured, with simple on the screen touch, for the following configurations:

- A. Port 1
 1. RS232 programming mode
 2. RS232 Modbus slave

3. RS485 Modbus slave
- B. Port 2 is reserved for use as a RS485 Modbus master (for connection to MOTOR Vision OL)
- C. The serial ports shall be configurable for
 1. 9600 baud
 2. 19,200 baud
 3. 8 data, even parity, 1 stop bit
 4. 8 data, none parity, 1 stop bit

4.2 ETHERNET PORT:

- A. Ethernet Port: The DPC shall have an Ethernet port that simultaneously provides TCP/IP socket, Modbus IP slave socket, and HTTP socket.
 1. Touch screens shall be provided for setting
 - a. IP address
 - b. Gateway address
 - c. Password,
 - d. Modbus network ID
 - e. Email SMTP server configuration

4.3 EMAIL AND TEXT MESSAGING:

- A. The DPC shall be easily configured, using touch screens, to send email and/or text messages to a minimum of six email addresses, for each enabled alarm condition.
- B. The DPC shall send the email using either the owner's SMTP server and user account information or the DPC manufacturers provided server.
- C. There shall be an email function test button.
- D. The email (or text message) shall include the lift station name, nature of the alarm condition and present system pressure.

- 4.4 DDE SERVER: A DDE .dll shall be available, at no additional charge that allows the owner to configure a customized Excel spreadsheet that displays data from any register within the DPC.

PART 4 - SEQUENCE OF OPERATION

The tri-plex packaged pump station control panel will be configured for remote I/O operation as follows:

The existing main PLC is located in the filter plant. The existing main PLC currently receives level signals from the upper storage tank. The existing main PLC will communicate remotely with the new packaged booster pump tri-plex control panel to send pump on and off commands based on the level signals it receives from the upper storage tank. Only a single pump will be allowed to run at any given time, at no time will the pumps on the packaged booster skid be asked to operate simultaneously, however the packaged booster pump tri-plex control panel shall be equipped with an automatic pump alternation function to maintain equal running time on all active pumps. The tri-plex control panel on the packaged booster station shall be capable of sending alarms outputs

5.0 TESTING

- A. Each pump shall be factory performance tested as a unit prior to shipment. The performance test shall consist of five (5) points over the operating range of the pump. One point will be the specified primary design point of the pump. The performance tests will meet the acceptance criteria of the Hydraulic Institute. Verified test data will include head vs. capacity, motor output (HP), RPM and pump efficiency.
- B. Job-site programming shall be entered into the controller prior to shipment (details of installation requirements shall be communicated to the pump system manufacturer). A verified Controller performance test report shall be made available from the system manufacturer.

- C. The system shall undergo a hydrostatic test of 250 psig for a minimum of 15 minutes prior to shipment.

6.0 WARRANTY

- A. The warranty period shall be a non-prorated period of 24 months from date of installation, not to exceed 30 months from date of manufacture.

Item: 4
Construction Plan Sheets
Sheet E-3

Description: Construction Plan Sheet E-3 has been deleted and replaced with the following plan sheet revised January 22, 2020:

LIGHTING FIXTURE SCHEDULE					
TYPE	DESCRIPTION	LAMPS	WATTS /FIXTURE	MANUFACTURER INFO	MOUNTING
H1	HI BAY 15.25" X 44" SUSPENSION LED FIXTURE WITH AIRCRAFT CABLE SUSPENSION AND INTEGRAL OCCUPANCY SENSOR	LED	146	LITHONIA IBHST LED BAY LIGHT, 18,000LM, 120V, 40K OR EQUAL	SUSPENSION CEILING
F1	WALLPACK, LED WITH INTEGRAL PHOTOELECTRIC CELL AND TAMPER PROOF SCREWS	LED	58	LITHONIA TWH LED P2, 40K T3M 120 PE TP DBLXD OR EQUAL	SURFACE WALL
EM1	EMERGENCY LIGHT, NICKLE-CADMIUM BATTERY OPERATED TWO 12V, 1.5W LED LAMPS, FUSED 120 VOLT INPUT WITH TEST SWITCH	(2) 1.8W LED	1.5	LITHONIA EU2C HO ERE BT WP 120V OR EQUAL	SURFACE WALL

- NOTES:**
- DISCONNECT EXISTING CHEMICAL ANALYZERS AND ABANDON IN PLACE. PROVIDE NEW CHEMICAL ANALYZER UTILIZING THE SAME ANALYSIS SYSTEMS AS THE EXISTING SYSTEM AT LOCATION SHOWN ON DRAWINGS.
 - ONLY ONE PUMP RUNS AT A TIME, NONCOINCIDENT LOAD.
 - CONDUIT FOR LIGHTING AND RECEPTACLES NOT SHOWN FOR DRAWING CLARITY.
 - MATCH EXISTING PLANT FIBER OPTIC CABLE TYPE.

CONDUIT AND WIRE SCHEDULE							
NUMBER	FROM	TO	CONDUIT SIZE (")	CABLE SIZE & QUANTITY			COMMENTS
				POWER	CONTROL	SIGNAL	
240/120V POWER							
P-101	EXISTING DISTRIBUTION PANEL	NEW BUILDING DP-1 PANEL	2-1/2"	(3)#3/0, (1)#6G			
P-102	DP-1	PSP-1	2"	(3)#1, (1)#6G			
P-103	PSP-1	P-1 (PUMP 1)	1-1/4"	(3)#3, (1)#8G			
P-104	PSP-1	P-2 (PUMP 2)	1-1/4"	(3)#3, (1)#8G			
P-105	DP-1	RECEPTACLES (OUTLETS)	3/4"	(2)#12, (1)#12G			
P-106	DP-1	LIGHTS	3/4"	(2)#12, (1)#12G			
P-107	DP-1	UNIT HEATER	1"	(3)#8, (1)#10G			
SIGNAL							
C-100	(E) PUMP HOUSE OR GENERATOR	PSP-1 CONTROL PANEL	2"		PULL WIRE		CONDUIT ONLY
SIGNAL							
S-100	EXISTING CONTROL PANEL	PSP-1 CONTROL PANEL	3/4"			FIBER	8 STRAND
S-101	PSP-1	LIT-100	3/4"			(1)#16TSP	

PANELBOARD SCHEDULE											
NAME: DP-1											
VOLTAGE RATING: 120/240 VOLTS, 3 PHASE, 4 WIRE						LOCATION: NEW PUMP BLDG					
BUS RATING: 200 AMPS						FED FROM: OLD PUMP BLDG					
MAIN BREAKER: 200 AMPS						NOTES:					
FEED: BOTTOM											
MOUNTING: SURFACE											
SPECIAL FEATURES: 65,000 AIC BRACING											
LOAD TYPE	CIRCUIT DESCRIPTION	VA	CKT	BRKR	L1	L2	BRKR	CKT	VA	CIRCUIT DESCRIPTION	LOAD TYPE
L	ELECTRICAL ROOM LIGHTING	352	1	15 / 1	-A-			2	7,460		
M		7,460	3		-B-		100 / 3	4	7,460	PUMP 2 (P-2)	
M	PUMP 1 (P-1)	7,460	5	100 / 3	-A-			6	7,460		
M		7,460	7		-B-		20 / 1	8	250	RECEPTACLES	R
X	LCP-1	1,200	9	20 / 1	-A-			10	3,750		H
	SPACE		11	/	-B-		40 / 2	12	3,750	UH-1	H
	SPACE		13	/	-A-		/	14		SPACE	
	SPACE		15	/	-B-		/	16		SPACE	
	SPACE		17	/	-A-		/	18		SPACE	
LINE LOADS:		27,682 VA(L1)						26,380 VA(L2)			
TOTAL LOAD:		54.06 KVA						225.3 AMPS			

DP-1 LOAD CALCULATION:

	CONNECTED VA	METHOD	NEC DEMAND	CALC. VA
TOTAL LIGHTING (L) LOAD:	L 352	ALL @	125%	439
TOTAL RECEPTACLE (R) LOAD:	R 250	FIRST 10KVA @	125%	313
		REMAINDER OVER 10KVA	50%	0
TOTAL MOTOR (M) LOAD:	M 22380	ALL @	100%	22380
	LM 0	125% OF LARGEST	125%	0
TOTAL HVAC (H) LOAD:	H 7500	ALL @	125%	9375
TOTAL MISCELLANEOUS (X) LOAD:	X 1200	ALL @	125%	1500
TOTAL VA:	31682 VA			34007 VA
AVERAGE AMPS @	132 AMPS			142 AMPS
VOLTAGE PHASE TO PHASE=	240			

* NOTE: ONLY ONE PUMP TO RUN AT A TIME.



**ANALYZER COMPONENTS
DETAIL**
SCALE: NONE

REVISIONS	DATE	BY
1	01/22/2020	AGS

SCJ ALLIANCE
CONSULTING SERVICES
8730 TALLON LANE NE, SUITE 200, LACEY, WA 98516
P: 360.352.1465 F: 360.352.1509
SCJALLIANCE.COM

ELECTRICAL SCHEDULES
CITY OF CHEHALIS
WATER PLANT PUMP STATION
ELECTRICAL DESIGN AND SCADA / TELEMETRY PROGRAMMING



DESIGNER:	J. VONDERAHE
DRAWN BY:	D. PETERSON
APPROVED BY:	A. STOKES
DATE:	NOVEMBER 2019
JOB NO:	216-5491-021
DRAWING FILE NO:	PS5491021-E3
DRAWING NO:	E3
SHEET NO:	3 OF 6

1/17/2020 2:07:17pm User: jvonderahe
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Item: 5

Chehalis Pump Station Pre-Bid Walkthrough Sign-In Sheet

Description: Pre-bid Walkthrough Sign-In Sheet dated January 28, 2020 has been included for reference as follows:

CHEHALIS PUMP STATION

Project No. WO 11.1003

January 28, 2020 10:00 AM

Pe-Bid Site Walk-Through

Bid Date February 11, 2019

Sign-In Sheet

<u>Name</u>	<u>Firm</u>	<u>E-mail</u>	<u>Phone</u>
Dave Vasilauskas	City of Chehalis	dvasilauskas@ci.chehalis.wa.us	360.748.0238 ext 2 FAX 360.345.1224
Charlie Severs	SCJ Alliance	charlie.severs@scjalliance.com	360.669.0700
Bob Connolly	SCJ Alliance	Bob.Connoilly@scjalliance.com	360.352.1465
David Aleksandrowicz	united ventures	David.sandf@un.com	253-304-4850
Larry Sicles	french AET	Larry.S@AET-PNECO.com	360-751-6730
<p>Bob Houde 4010 8th Ave SE., Lacey, WA 98503 BobH@SouthSoundContractors.com Ph. 360-688-5101</p>			
Knut Moyer	Pacific Tech Const.	kmoyer@pactechgroup.com	360-419-8084
Richard Gueppert	Nova		360-688-0217
Aldo Schroeder	Clackamas Construction	verng@dshkamas construction.com	503-941-9916
Doug Collin	BETSCHART ELECTRIC	doug@betschartelectric.com	360-943-4545
CRAIG ESPEDAL	ROGNLIN'S INC	BIDSE@ROGNLINS.COM	360-532-5220
Garrett Duxward	Bramfield Const.	Bids@Bramfieldinc.com	360 268 9231

CHEHALIS PUMP STATION

Project No. WO 11.1003

January 28, 2020 10:00 AM

Pe-Bid Site Walk-Through

Bid Date February 11, 2019

Sign-In Sheet

Name	Firm	E-mail	Phone
Dave Vasilauskas	City of Chehalis	dvasilauskas@ci.chehalis.wa.us	360.748.0238 ext 2 FAX 360.345.1226
Charlie Severs	SCJ Alliance	charlie.severs@scjalliance.com	360.669.0700
Bob Connolly	SCJ Alliance	Bob.Connoilly@scjalliance.com	360.352.1465

Rian TASSART Black Hills riant@blackhillsexcavating.com 367-789-5588

Cameron Hensley Black Hills cameron@blackhillsexcavating.com 360.561.5525

Paul Kenney Magna Const. Serv. Inc. Magna.cs.inc@magnacorp.com (360) 977-9004

Rusty Swelson Sterling Breen Crushing rusty@sterlingbreencrushing.com 360-520-3027

Adam McKenzie JH Kelly Amckenzie@JHKelly.com 360-703-8328

Joseph Cahoon Tapani Inc. anotes@tapani.com 360-687-1148

Neill Koskimi Midway Neill@midwayundergroundllc.com 360-624-1304

DAN OILOVHLIN MCLURE AND SONS BIDS AT MCLURE AND SONS 425 316 6999
100

Item: 6
Engineer's Construction Cost Estimate
Description: Engineers Construction Cost Estimate: \$600,000 to \$650,000

Item: 7

Division 40

Section 40 75 00 Process Liquid Analytical Measurements Products

Description: 40 75 00 Process Liquid Analytical Measurements Products Page 513 section 2.01 A.3a
has been corrected as follows:

"CL2 Probe – pH measuring range: 0-14"

SECTION 40 75 00
PROCESS LIQUID ANALYTICAL MEASUREMENTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Work Included: This Section specifies analytical instruments for process instrumentation, auxiliary equipment, and supplies directly related to the installation of and operation of these analytical instruments, to perform the required functions in conjunction with the drawings.

B. Equipment specified herein is within the scope of the contractor.

1.02 SUBMITTALS

Submit material or equipment data in accordance with the requirements of 01 33 00.

Shop Drawings: In addition to the requirements of 01 33 00, shop drawings shall include for each type of instrument: supply voltage and frequency, electrical load, accuracy, description of operation, operating instructions, and calibration procedure.

Installation Method: Provide proposed method and manufacturer recommendations for mounting sensors or probes and instruments with submittal.

Parts List: Submit a Parts List with current net prices and a list of recommended spares.

Manuals: Furnish manufacturer's installation, operation and maintenance manuals, bulletins, and spare parts lists.

Submit the completed calibration and commissioning test data forms.

1.03 QUALITY ASSURANCE

Manufacturer: Analytical instruments furnished shall be manufactured by firms regularly and currently engaged in the design and manufacture of similar equipment. All equipment furnished shall be new and of current design.

Maintainability: All equipment shall be designed for ease of maintenance and repair, and access to critical parts shall not require a major disassembly. Internal field adjustments where permitted or required herein shall be easily accessible upon removal of a panel or cover.

Materials and Installation: Materials and installation shall comply with the requirements of the current editions of referenced electrical codes and standards, and the codes and standards referred to shall be used for establishing the minimum quality of the materials and equipment supplied and installed. All equipment of the same type shall be products of the same manufacturer. Capacities of all equipment shall not be less than that indicated on the Drawings or specified.

PRODUCTS

2.01 CHLORINE/PH PROBES AND ANALYZER

A. Chlorine analyzer with total/free chlorine and pH probe:

- 1) CL2 Range 0 – 10 mg/l
- 2) Manufactured by Chemtrac, Model HydroACT 2 with Free Chlorine, PN: HA2-FCI
- 3) Probe(s):
 - a) CL2 Probe – pH measuring range: 0 to 14
Corresponding part number: 17605
 - b) Dual Open Flow Cell
Corresponding part number: 17210

B. Turbidity analyzer:

- 1) Universal Smart Controller (accepts up to two inputs).
 - 2) TU90 Turbiditymeter.
 - 3) Turbidity Sensor Unit – Includes flow cell sensor electronics and electric flush valve.
 - 4) Cable Length: Contractor to field verify manufacturer cable prior to submittal review.
- 2) Manufactured by AQUASummit, Model UCX/TU90

C. Spare Parts: Provide the following spare parts:

- One CL2 probe.
- One Dual Open Flow Cell
- One turbidity bulb.
- One set of manufacturer recommended spare parts for the analyzer/transmitters.

EXECUTION

3.01 INSTALLATION

Installation, testing, calibration, validation, startup, and instruction shall be in accordance with the manufacturers installation and startup manuals.

Factory-trained personnel shall assist in the installation and calibration of the equipment.

Complete the applicable calibration and commissioning test data forms and submit to the Engineer. All testing forms and affidavits shall be submitted.

END OF SECTION

Item: 8

Question from Contractor:

Description: Can additional trees in project area be removed?

Trees and stumps in clearing area are to be removed. Additional trees that the contractor would like to remove for construction convenience or that he feels are in danger of falling down may be removed after owner's approval; stump removal for these additional trees will be decided on a case by case basis. No additional payment will be made to contractor for removing additional trees.

Item: 9

Question from Contractor:

Description: The following are answers to "Bid items" questions:

Bid Item #10 – "Design" refers to any additional detailing/design required by the contractor to document how the system will be integrated as a complete system. This includes electrical spec requirements that may call out for loop drawings, equipment detailed lists, manufacturer detailed drawings, substituted items and items that are far beyond the scope of the "Engineer's Design" that are required for the contractor to submit for approval. Refer to the specifications for the submittal requirements.

Bid Item #13 – "Hardware" refers to the hardware requirements of the Electrical specifications which are required to attach, couple, complete an electrical circuit but are not specifically called out by brand or model to complete the electrical installation. The use of Unistrut or other support materials to meet NEC requirements is an example of hardware required for the electrical installation.

Bid Item #14 - "Telemetry" is a general term which refers to "remote" devices or signals required for integration required to make a completed system. For this project, this is the fiber optic installation and its associated components to attach this station to the Owner's network. Only configuration of the network devices, to get them on the network (IP address, etc.), is required under this contract to minimize the adverse effects of connecting a new device to the network. "Programming" of any devices (if any) is not included in this contract and shall be performed by another entity outside of this contract. Scheduled coordination of this effort is required under this contract.

Item: 10

Question from Contractor:

Description: Electrical questions and answers (responses in bold):

Are the pumps on a skid as shown on C-13 or mounted as the electrical detail 5 on E4 shows?

On skid as shown on C-13 – Agree - AGS

The electrical panel schedule shows 100a feed to each pump but everything else shows a (1) 125a feed to the controller and then going to each pump, since only 1 pump at a time is to run. Which one is correct?

Use 100A – AGS

What is the brand/model of the distribution panel that the 200a breaker needs to be added to for the new sub panel?

Refer to the specification 26 24 16 – AGS

What brand of fiber is required for the control panels communication? It says that the existing is to be matched.

The brand should be a reputable nationally recognized fiber optic manufacturer/supplier (Amphenol, 3M, Optical Cable Corp) – AGS

*****END OF ADDENDUM NO. 2*****