

**CONTRACT FOR PUBLIC WORKS CONSTRUCTION
SETTLERS PARK PUMP STATION
PROJECT # 11652**

THIS CONTRACT FOR PUBLIC WORKS CONSTRUCTION is made this 6th of January, 2026, and entered into by and between the City of Meridian, a municipal corporation organized under the laws of the State of Idaho, hereinafter referred to as "City", 33 East Broadway Avenue, Meridian, Idaho 83642, Precision Pumping Systems, hereinafter referred to as "Contractor", whose business address is 6515 Business Way, Boise, ID 83716 and whose Public Works Contractor License # is PWC-C-14387.

INTRODUCTION

WHEREAS, the City has a need for equipment and construction services involving Settlers Park Pump station; and

WHEREAS, the Contractor is specially trained, experienced and competent to perform and has agreed to provide such services;

NOW, THEREFORE, in consideration of the mutual promises, covenants, terms and conditions hereinafter contained, the parties agree as follows:

TERMS AND CONDITIONS

1. Scope of Work:

1.1 Contractor shall perform and furnish to the City upon execution of this Contract and receipt of the City's written notice to proceed, all services and work, and comply in all respects, as specified in the document titled "Scope of Work" a copy of which is attached hereto as Exhibit "A" and incorporated herein by this reference, together with any amendments that may be agreed to in writing by the parties.

1.2 All documents, drawings and written work product prepared or produced by the Contractor under this Agreement, including without limitation electronic data files, are the property of the Contractor; provided, however, the City shall have the right to reproduce, publish and use all such work, or any part thereof, in any manner and for any purposes whatsoever and to authorize others to do so. If any such work is copyrightable, the Contractor may copyright the same, except that, as to any work which is copyrighted by the Contractor, the City reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish and use such work, or any part thereof, and to authorize others to do so.

1.3 The Contractor shall provide services and work under this Agreement consistent with the requirements and standards established by applicable federal, state and City laws, ordinances, regulations and resolutions. The Contractor

represents and warrants that it will perform its work in accordance with generally accepted industry standards and practices for the profession or professions that are used in performance of this Agreement and that are in effect at the time of performance of this Agreement. Except for that representation and any representations made or contained in any proposal submitted by the Contractor and any reports or opinions prepared or issued as part of the work performed by the Contractor under this Agreement, Contractor makes no other warranties, either express or implied, as part of this Agreement.

1.4 Services and work provided by the Contractor at the City's request under this Agreement will be performed in a timely manner in accordance with a Schedule of Work, which the parties hereto shall agree to. The Schedule of Work may be revised from time to time upon mutual written consent of the parties.

2. Consideration

2.1 The Contractor shall be compensated on a Not-To-Exceed basis as provided in Exhibit B "Payment Schedule" attached hereto and by reference made a part hereof for the Not-To-Exceed amount of **\$185,183.00**.

2.2 The Contractor shall provide the City with a monthly statement and supporting invoices, as the work warrants, of fees earned and costs incurred for services provided during the billing period, which the City will pay within 30 days of receipt of a correct invoice and approval by the City. The City will not withhold any Federal or State income taxes or Social Security Tax from any payment made by City to Contractor under the terms and conditions of this Agreement. Payment of all taxes and other assessments on such sums is the sole responsibility of Contractor.

2.3 Except as expressly provided in this Agreement, Contractor shall not be entitled to receive from the City any additional consideration, compensation, salary, wages, or other type of remuneration for services rendered under this Agreement including, but not limited to, meals, lodging, transportation, drawings, renderings or mockups or material escalations. Specifically, Contractor shall not be entitled by virtue of this Agreement to consideration in the form of overtime, health insurance benefits, retirement benefits, paid holidays or other paid leaves of absence of any type or kind whatsoever.

3. Term:

3.1 This agreement shall become effective upon execution by both parties, and shall expire upon (a) completion of the agreed upon work, (b) or unless sooner terminated as provided in Sections 3.2, 3.3, and Section 4 below or unless some other method or time of termination is listed in Exhibits A or B.

3.2 Should Contractor default in the performance of this Agreement or materially breach any of its provisions, City, at City's option, may terminate this Agreement by giving written notification to Contractor.

3.3 Should City fail to timely remit payment to Contractor as provided in Section 28, Contractor, at the Contractor's option, may terminate this Agreement if the failure is not remedied by the City within thirty (30) days from the date payment is due.

4. Termination:

4.1 If, through any cause, Contractor, its officers, employees, or agents fail to fulfill in a timely and proper manner its obligations under this Agreement, violates any of the covenants, agreements, or stipulations of this Agreement, falsifies any record or document required to be prepared under this agreement, engages in fraud, dishonesty, or any other act of misconduct in the performance of this contract, or if City determines that termination of this Agreement is in the best interest of City, the City shall thereupon have the right to terminate this Agreement by giving written notice to Contractor of such termination and specifying the effective date thereof at least fifteen (15) days before the effective date of such termination. Contractor may terminate this agreement at any time by giving at least sixty (60) days' notice to City.

In the event of any termination of this Agreement, all finished or unfinished documents, data, and reports prepared by Contractor under this Agreement shall, at the option of the City, become its property, and Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily complete hereunder.

4.2 Notwithstanding the above, Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of this Agreement by Contractor, and the City may withhold any payments to Contractor for the purposes of set-off until such time as the exact amount of damages due the City from Contractor is determined. This provision shall survive the termination of this agreement and shall not relieve Contractor of liability to the City for damages.

5. Independent Contractor:

6.1 In all matters pertaining to this agreement, Contractor shall be acting as an independent Contractor, and neither Contractor nor any officer, employee or agent of Contractor will be deemed an employee of City. Except as expressly provided in Exhibit A, Contractor has no authority or responsibility to exercise any rights or power vested in the City and therefore has no authority to bind or incur any obligation on behalf of the City. The selection and designation of the personnel of the City in the performance of this agreement shall be made by the City.

5.1 Contractor, its agents, officers, and employees are and at all times during the term of this Agreement shall represent and conduct themselves as independent Contractors and not as employees of the City.

5.2 Contractor shall determine the method, details and means of performing the work and services to be provided by Contractor under this Agreement. Contractor shall be responsible to City only for the requirements and results specified in this Agreement and, except as expressly provided in this Agreement, shall not be subjected to City's control with respect to the physical action or activities of Contractor in fulfillment of this Agreement. If in the performance of this Agreement any third persons are employed by Contractor, such persons shall be entirely and exclusively under the direction and supervision and control of the Contractor.

6. Sub-Contractors:

Contractor shall require that all of its sub-Contractors be licensed per State of Idaho Statute # 54-1901 & 54-1902.

7. Removal of Unsatisfactory Employees:

The Contractor shall only furnish employees who are competent and skilled for work under this contract. If, in the opinion of the City, an employee of the Contractor is incompetent or disorderly, refuses to perform in accordance with the terms and conditions of the contract, threatens or uses abusive language while on City property, or is otherwise unsatisfactory, that employee shall be removed from all work under this contract.

8. Indemnification and Insurance:

8.1 Contractor shall indemnify and save and hold harmless City and its selected officials, officers, employees, agents, and volunteers from and for any and all losses, claims, actions, judgments for damages, or injury to persons or property and losses and expenses and other costs including litigation costs and attorney's fees, arising out of, resulting from, or in connection with the performance of this Agreement by the Contractor, its servants, agents, officers, employees, guests, and business invitees, and not caused by or arising out of the tortious conduct of City or its employees. Contractor shall maintain, and specifically agrees that it will maintain, throughout the term of this Agreement, liability insurance, in which the City shall be named an additional insured in the minimum amounts as follows: General Liability One Million Dollars (\$1,000,000) per incident or occurrence, Automobile Liability Insurance One Million Dollars (\$1,000,000) per incident or occurrence and Workers' Compensation Insurance, in the statutory limits as required by law. The limits of insurance shall not be deemed a limitation of the covenants to indemnify and save and hold harmless City; and if City becomes liable for an amount in excess of the insurance limits, herein provided, Contractor covenants and agrees to indemnify and save and hold harmless City from and for all such losses, claims, actions, or judgments for damages or injury to persons or property and other costs, including litigation costs and attorneys' fees, arising out of, resulting from, or in connection with the performance of this Agreement by the Contractor or Contractor's officers, employees, agents, representatives or sub-Contractors and resulting in or attributable to personal injury, death, or damage or destruction to tangible or intangible property, including use of. Contractor shall provide City with a Certificate of Insurance, or

other proof of insurance evidencing Contractor's compliance with the requirements of this paragraph and file such proof of insurance with the City at least ten (10) days prior to the date Contractor begins performance of its obligations under this Agreement. In the event the insurance minimums are changed, Contractor shall immediately submit proof of compliance with the changed limits. Evidence of all insurance shall be submitted to the City Purchasing Agent with a copy to Meridian City Accounting, 33 East Broadway Avenue, Meridian, Idaho 83642.

8.2 Insurance is to be placed with an Idaho admitted insurer with a Best's rating of no less than A-.

8.3 Any deductibles, self-insured retention, or named insureds must be declared in writing and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles, self-insured retentions or named insureds; or the Contractor shall provide a bond, cash or letter of credit guaranteeing payment of losses and related investigations, claim administration and defense expenses.

8.4 To the extent of the indemnity in this contract, Contractor's Insurance coverage shall be primary insurance regarding the City's elected officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the City or the City's elected officers, officials, employees and volunteers shall be excess of the Contractor's insurance and shall not contribute with Contractor's insurance except as to the extent of City's negligence.

8.5 The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

8.6 All insurance coverages for subContractors shall be subject to all of the insurance and indemnity requirements stated herein.

8.7 The limits of insurance described herein shall not limit the liability of the Contractor and Contractor's agents, representatives, employees or subContractors.

9. Time is of the Essence:

The parties hereto acknowledge and agree that time is strictly of the essence with respect to each and every term, condition and provision hereof, and that the failure to timely perform any of the obligations hereunder shall constitute a breach of, and a default under, this Agreement by the party so failing to perform.

10. Bonds:

Payment and Performance Bonds are required on all Public Works Improvement Projects per the ISPWC and the City of Meridian Supplemental Specifications & Drawings to the ISPWC, which by this reference are made a part hereof. Contractor is required to furnish faithful performance and payment bonds in the

amount of 100% of the contract price issued by surety licensed to do business in the State of Idaho with a Best's rating of no less than A-. In the event that the contract is subsequently terminated for failure to perform, the Contractor and/or surety will be liable and assessed for any and all costs for the re-procurement of the contract services.

11. Warranty:

All construction and equipment provided under this agreement shall be warranted for 2 years from the date of the City of Meridian acceptance per the ISPWC and the Meridian Supplemental Specifications & Drawings to the ISPWC and any modifications, which by this reference are made a part hereof.

All items found to be defective during a warranty inspection and subsequently corrected will require an additional two (2) year warranty from the date of City's acceptance of the corrected work.

12. Changes:

The City may, from time to time, request changes in the Scope of Work to be performed hereunder. Such changes, including any increase or decrease in the amount of Contractor's compensation, which are mutually agreed upon by and between the City and Contractor, shall be incorporated in written amendments which shall be executed with the same formalities as this Agreement.

13. Taxes:

The City of Meridian is exempt from Federal and State taxes and will execute the required exemption certificates for items purchased and used by the City. Items purchased by the City and used by a Contractor are subject to Use Tax. All other taxes are the responsibility of the Contractor and are to be included in the Contractor's Bid pricing.

14. Meridian Stormwater Specifications:

All construction projects require either a Storm Water Pollution Prevention Plan (SWPPP) or an erosion sediment control plan (ESCP) as specified in the City of Meridian Construction Stormwater Management Program (CSWMP) manual. The CSWMP manual containing the procedures and guidelines can be found at this address: <http://www.meridianCity.org/environmental.aspx?id=13618>.

Contractor shall retain all stormwater and erosion control documentation generated on site during construction including the SWPPP manual, field inspections and amendments. Prior to final acceptance of the job by the City the Contractor shall return the field SWPPP manual and field inspection documents to the City for review. A completed Contractor Request to File Project N.O.T. with the EPA form

shall be provided to the City with the documents. These documents shall be

retained, reviewed and approved by the City prior to final acceptance of the project.

15. ACHD:

Contractor shall be responsible for coordinating with the City to obtain appropriate ACHD permit(s) and will reimburse the City for fees, fines, or penalties City incurs due to Contractor's violation of any ACHD policy. City shall certify to ACHD that Contractor is authorized to obtain a Temporary Highway and Right-of-Way Use Permit from ACHD on City's behalf. The parties acknowledge and agree that the scope of the agency granted by such certification is limited to, and conterminous with, the term and scope of this Agreement.

16. Reports and Information:

16.1 At such times and in such forms as the City may require, there shall be furnished to the City such statements, records, reports, data and information as the City may request pertaining to matters covered by this Agreement.

16.2 Contractor shall maintain all writings, documents and records prepared or compiled in connection with the performance of this Agreement for a minimum of four (4) years from the termination or completion of this Agreement. This includes any handwriting, typewriting, printing, photo static, photographic and every other means of recording upon any tangible thing, any form of communication or representation including letters, words, pictures, sounds or symbols or any combination thereof.

17. Audits and Inspections:

At any time during normal business hours and as often as the City may deem necessary, there shall be made available to the City for examination all of Contractor's records with respect to all matters covered by this Agreement. Contractor shall permit the City to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement.

18. Publication, Reproduction and Use of Material:

No material produced in whole or in part under this Agreement shall be subject to copyright in the United States or in any other country. The City shall have unrestricted authority to publish, disclose and otherwise use, in whole or in part, any reports, data or other materials prepared under this Agreement.

19. Equal Employment Opportunity:

In performing the work herein, Contractor agrees to comply with the provisions of Title VI and VII of the Civil Rights Act, Revenue Sharing Act Title 31, U.S. Code Section 2176. Specifically, the Contractor agrees not to discriminate against any

employee or applicant for employment because of race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap. Contractor will take affirmative action during employment or training to ensure that employees are treated without regard to race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap. In performing the Work required herein, CONTRACTOR shall not unlawfully discriminate in violation of any federal, state or local law, rule or regulation against any person on the basis of race, color, religion, sex, national origin or ancestry, age or disability.

20. Employment of Bona Fide Idaho Residents:

Contractor must comply with Idaho State Statute 44-1002 which states that the Contractor employ ninety-five percent (95%) bona fide Idaho residents as employees on any job under any such contract except where under such contracts fifty (50) or less persons are employed, the Contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work.

21. Advice of Attorney:

Each party warrants and represents that in executing this Agreement. It has received independent legal advice from its attorney's or the opportunity to seek such advice.

22. Attorney Fees:

Should any litigation be commenced between the parties hereto concerning this Agreement, the prevailing party shall be entitled, in addition to any other relief as may be granted, to court costs and reasonable attorneys' fees as determined by a Court of competent jurisdiction. This provision shall be deemed to be a separate contract between the parties and shall survive any default, termination or forfeiture of this Agreement.

23. Construction and Severability:

If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.

24. Waiver of Default:

Waiver of default by either party to this Agreement shall not be deemed to be waiver of any subsequent default. Waiver or breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach, and shall not be construed to be a modification of the terms of this Agreement unless this Agreement is modified as provided above.

25. Entire Agreement:

This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

26. Assignment:

It is expressly agreed and understood by the parties hereto, that Contractor shall not have the right to assign, transfer, hypothecate or sell any of its rights underthis Agreement except upon the prior express written consent of City.

27. Payment Request:

Payment requests shall be submitted to City of Meridian through the City's project management software. The Project Manager will compare the invoice against the Payment Schedule in the Agreement for compliance. Upon approval that the work has been done and is in compliance with the Agreement, the Project Manager will approve the pay request for processing. City of Meridian payment terms are Net 30 from the date City receives a correct invoice. Final payment will not be released until the City has received a tax release from the Tax Commission. Retainage of five percent (5%) of the current contract value will be withheld from the final pay application(s) until final completion has been met and releases from both the Idaho Tax Commission and Surety have been received by the City.

28. Cleanup:

Contractor shall keep the worksite clean and free from debris. At completion of work and prior to requesting final inspection, the Contractor shall remove all traces of waste materials and debris resulting from the work. Final payment will not be made if cleanup has not been performed.

29. Order of Precedence:

The order or precedence shall be the contract agreement, the Invitation for Bid document, then the winning bidders submitted bid document.

30. Compliance with Laws:

In performing the scope of work required hereunder, Contractor shall comply with applicable laws, ordinances, and codes of Federal, State, and local governments.

This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Idaho, and the ordinances of the City of Meridian.

Certifications.

Pursuant to Idaho Code §§ 67-2359 and 67-2346, Contractor hereby certifies:

- A. That Contractor is not currently owned or operated by the government of China and will not, for the duration of this Contract, be owned or operated by the government of China.
- B. That Contractor is not currently engaged in, and will not for the duration of the Contract engage in, a boycott of goods or services from Israel or territories under its control.
- C. Contractor certifies that: (i) as of the Effective Date, it is not engaged in a "Boycott," as defined in Idaho Code §67-2347A, of any individual or company because that individual or company engages in or supports (a) the exploration, production, utilization, transportation, sale, or manufacture of fossil fuel-based energy, timber, minerals, hydroelectric power, nuclear energy, or agriculture, or (b) the manufacture, distribution, sale, or use of any "Firearm," as defined in Idaho Code §18-3302(2)(d); and (ii) it will not engage in any such boycott during the Term.

31. Notices:

Any and all notices required to be given by either of the parties hereto, unless otherwise stated in this agreement, shall be in writing and be deemed communicated when mailed in the United States mail, certified, return receipt requested, addressed as follows:

CITY:
City of Meridian
Procurement Manager
33 E Broadway Ave.
Meridian, ID 83642
208-489-0417

CONTRACTOR:
Precision Pumping Systems
Attn: Arlan Roest
6515 Business Way
Boise, ID 83687
Phone: 208-890-1139 Email:
arlan@gopps.us Public Works
Contractor License#: PWC-
C-14387

Either party may change their address for the purpose of this paragraph by giving written notice of such change to the other in the manner herein provided.

32. Approval Required:

This Agreement shall not become effective or binding until approved by the City of Meridian.

CITY OF MERIDIAN:

BY: _____
KEITH WATTS, Procurement Manager

DATED: _____

Approved by Council Date: (if needed)

PRECISION PUMPING SYSTEMS:

BY: Pat Purdy
Pat Purdy, CEO

DATED: January 5, 2026

Project Manager:

Jeremy Aldrich

EXHIBIT A

SCOPE OF WORK

REFER TO INVITATION TO BID (PKS-2602-11652) ALL ADDENDUMS, ATTACHMENTS, AND EXHIBITS included in the Invitation to Bid Package # (PKS-2602-11652), are by this reference made a part hereof.

SPECIFICATIONS / SCOPE OF WORK

All construction work shall be done in accordance with the current version of the Idaho Standards for Public Works Construction (ISPWC), the current version of the City of Meridian Supplemental Specifications to the ISPWC (and any Addendums).

See the following separate attached documents:

- Document 5 - Technical Specification For Settlers Park Pump Station (7 Pgs.)
- Document 6 - Map Location of Settlers Park Pump Station (1 Pg.)

EXHIBIT B

MILESTONE / PAYMENT SCHEDULE

A. Total and complete compensation for this Contract shall not exceed \$185,183.00.

MILESTONE DATES/SCHEDULE										
Milestone 1	Substantial Completion		TBD Days From Date of NTP							
Milestone 2	Final Completion		TBD Days From Date of NTP							
PRICING SCHEDULE										
Contract includes furnishing all labor, materials, equipment and incidentals as required for Settlers Park Pump Station per ITB BID# PKS-2602-11652.										
NOT-TO-EXCEED AMOUNT.....\$185,183.00										
Contract is a not to exceed amount. Line item pricing below will be used for invoice verification and any additional increases or decreases in work requested by City. The City will pay the Contractor based on actual quantities of each item of work in accordance with the contract documents.										
CONTRACT PRICING SCHEDULE										
Item No.	Description	Quantity Required	Unit	Unit Price	Total Cost					
1	Complete UL QCZJ listed Pump Station 1650GPM 90 PSI Includes New 3 Phase, 480-Volt 60 HP VFD UL 508A Control Panel with New Pump Skid, 60 HP Vertical Turbine Pumps and Motors, Manifold and All Piping, Amiad Filtomat MG110 Filter With 300-M Micron Filter, 10-Inch Badger Mag Meter. (The Entire Pump Station and the Control Panel Shall Be Designed, Assembled, Programmed, and Tested By a Single Manufacturer)	1	EA	\$163,100	\$163,100					
2	Deliver Pump Station and Set Station and Pumps With Crane. Connect to Irrigation Mainline. Suction And Site Piping Are Not Included.	1	EA	\$4,800	\$4,800					
3	City to Stub Mainline Vertically. Contractor Tie in.	1	EA	\$1,500	\$1,500					
4	Remove Old Irrigation Pump Components and Dispose of Old Parts Not Kept By City.	1	EA	\$1,500	\$1,500					

5	Electric Upgrade: Remove Existing 200A Disconnect, Tap Conductors and Feeder to Existing Pump Controller. Install New 400A Fusible Disconnect with (3) 225 A Fuses, 2" In. EMT to NEW Pump Controller with 4/0cu Conductors and Make Terminations. Provide 4/0 Tap Conductors to Gutter and Terminate. Provide Permit and Inspection.	1	EA	\$10,983	\$10,983
6	The UL QCZJ & ISO 9001;2015 Certified Pump Station Manufacturer Shall Conduct and Document a Complete Factory Dynamic Test of the Pump Station at Factory Prior to Shipment. Pump Station Shall Be Tested Throughout the Entire Operating Range at the Net Discharge Pressure Called for in The Technical Specifications. Individual Pump Pressure, Flow, RPMs, Volts, Amps, KW, and Power Factor Shall Be Documented for Verification by the Owners' Representative Prior to Delivery Upon Request.	1	EA	\$3,300	\$3,300

ACQ580 Drives ONLY
ALL VFDs in Single Cabinet
IEEE Harmonics Integrated Into Cabinet
Factory Testing of the Pumps (only) Prior to Shipment

Pump System CONTROLLER

General Requirements:

1. Non-Proprietary, Open-Source Programming:

To better facilitate owner access to system servicing, the control system shall be non-proprietary and open source. Proprietary control systems shall not be accepted.

2. Dual Language HMI Interface:

To ensure that the control system warnings and parameters can be safely understood by a wide range of operators, the interface shall have a user-selectable English or Spanish Interface.

3. Controller User Guide.

Programmable Logic Controller (PLC):

PLC shall consist of a central processor with built-in dual port Ethernet and USB connection. Processor shall be capable of expanding up to 4 I/O expansion modules and include the following features:

1. High-speed counter with 100 kHz maximum input frequency
2. Pulse output with 100 kHz maximum output frequency
3. Supply Power shall be 24V DC with maximum 35A maximum inrush current.

Environmental Ratings:

1. Class 1, Division 2 Hazardous Location
2. Operating Temperature: -25 to 65 degrees Celsius
3. 10 - 95% Relative Humidity

Program Storage:

1. Serial Flash Memory using embedded SD Card Slot
2. RAM Backup via lithium battery capable with up to 4 years battery life.

Communications Interface:

1. One-USB Mini-B USB Standard 2.0
2. Two Ethernet Ports with RJ45 Connector

Protocols:

1. Modbus TCP
2. Modbus RTU
3. Ethernet/IP
4. Bacnet

Manufacturer/Series:

1. IDEC MicroSmart FC6A Plus

Operator Interface General Requirements:

1. The touchscreen shall allow operator access to all system settings and monitoring data.
2. The operator interface shall be a Color TFT LCD touchscreen
3. The touchscreen shall be mounted to the motor control panel door.
4. A VFD control keypad is not an acceptable substitution for the digital operator interface.
5. The operator interface shall allow the user to adjust the system parameters & settings to the PLC program locally without requiring any additional equipment such as a laptop computer.
6. System must be capable of programming VFD's via touchscreen
(for 3-phase systems only)

Hardware Features:

1. High Resolution Display with 640 x 480 pixels, with a minimum screen diagonal length of 5.7" In.
2. Backlight with 100,000 hours
3. Supply Power shall be 24V DC with maximum 30A maximum inrush current.

Environmental Ratings:

1. NEMA 4X
2. Class 1, Division 2 Hazardous Location
3. Operating Temperature: -20 to 60 degrees Celsius
4. 10 to 90% Relative Humidity, non-condensing

Communications Interface:

1. One Mini-B USB Standard 2.0
2. One Ethernet Port with RJ-45 Connector
3. RS232C or RS485

Program Memory Storage:

1. 2GB SD Memory Card
2. Manufacturer/Series: IDEC High Performance Series or Pre-Approved Equal.

Monitoring Functions System Dashboard:

1. Pressure, flow, and level status.
2. Pump status, including lead pump designation, VFD frequency, torque, kw and current draw.
3. Alarm conditions, with the ability to manually reset alarms.
4. Current values of all system sensors, including pressure and flow.
5. User selectable language icon.

Fault Log:

The controller shall have a system fault log that displays the precise times of fault occurrences and recoveries, as well as message indicating the fault type. The fault log shall include a fault diagnosis utility that provides possible causes of and solutions to all system faults and warnings.

Trend Log:

Trend graphing screen capable of detailing pressure, flow, and current data. Graphing function shall give the option to graph and plot a point at user adjustable intervals. All data shall be capable of being downloaded to a USB drive and accessible over Ethernet through FTP server. Trend log shall be .csv format.

1. Advance I/O Diagnostics
2. HMI display must include utility screen that displays the current status of all digital and analog inputs/outputs, including device tag name (i.e. pump #1 auto). This function must be accomplished without opening the control panel.

Control Functions:

1. The LCD color touchscreen must be capable of alternating between English and Spanish during operation by an end-user accessible button located within an operator screen. The system diagnostic utility must be capable of being displayed in both English and Spanish.
2. Control system must be capable of adding industry standard components without program modifications. Including but not limited to:
 - a. Additional Main Pumps up to Four
 - b. Fill Devices (Valve/Pump)
 - c. High Level Float
 - d. Master Valve
 - e. Additional Filters
 - f. Rain Sensor

Pressure Settings:

Pressure transmitter calibration, discharge pressure setpoint, and high/low pressure alarm/fault conditions.

Flow Settings:

Low and high flow alarm conditions, flow meter sensor calibration settings, and total gallons pumped with user reset button and time/date stamp of last reset. In addition, a non-resettable flow totalizer.

Level Settings:

Low- and high-level alarm conditions, level transmitter calibration settings, and level-based pressure setpoint manipulation.

Pump Settings:

Pump detail screens showing total run hours of each pump since last reset and any modes, options, or functions specific to that pump. Must include troubleshooting utility as a visual display of pump permissive.

Automatic Filter Controls:

System shall include a manual flush capability and two user selectable automatic flush modes as follows: 1) Pressure Differential and 2) Timed Interval.

Remote Start/Stop Signal Relay:

The PLC shall be able to start and stop the system based on a remote signal relay.

Pre-programmed Start-Up Routines:

1. The PLC shall be programmed with various start-up routines that limit and/or delay the starting and acceleration of the pump—ensuring that excessive velocity and pressure do not damage the distribution system.
2. The program shall include individual routines for initial start-up, mainline fill, re-start after a power outage, and re-start after a system fault.
3. The operator shall be able to adjust the timing of the routines via the operator interface.

Password Protection:

1. Unique user selectable password.

Loading and Saving System Default Settings:

The system shall allow the operator to Load Factory Default PLC settings, Save New Operator settings, and Load previously saved Operator PLC settings.

1. The PLC shall allow the operator to change the system date and time.
2. Scheduler

Seven Day Per Week Scheduler:

1. Multiple run times per day and speed/flow rate.
2. User assignable device scheduler consisting of 3 unique daily schedules for each applicable device.
3. Devices Included but not limited to:
 - a. Main Pumps
 - b. Jockey/PM Pump
 - c. Fill Pump
 - d. Master Valve
 - e. Fill Valve

System Protections:

1. Controls shall shut down the pump station in the event of the alarm conditions described in this section, as well as otherwise indicated. The system controls shall attempt to restart the system after alarm shutdown or loss of power. After a user-adjustable number of attempts to re-pressurize the system, the controls shall go into hard shut down and remain so until manually reset.
2. Low Flow Shutdown. The PLC shall automatically shut down the system if there is no, or too little flow, based on signals received from a flow switch. The low flow shutdown shall have a user adjustable time delay.
3. Low Level Shutdown. The controller shall automatically shut-down the system based on low level signals from a level transmitter.
4. High Pressure Shutdown. In addition to the pressure data received from the pressure transmitter, the PLC shall automatically shut-down the system based on signals from a high-pressure switch.
5. Electrical Fault Shutdowns. Incoming power high, low, and imbalance limits. Shut-down and restart time delays shall be user-adjustable.
6. Analog Transmitter Failure. Input levels of all connected transmitters and meters shall be monitored for failures.
7. Motor starter failure. Circuit breaker and/or motor overload contacts shall be monitored to indicate a motor failure.

Communications - Web-Based Remote Monitoring and Control:

1. The pump station control panel shall include a web-based remote control and monitoring system.
2. Remote Monitoring must be capable of alternating between English and Spanish during operation by an end-user.
3. Remote monitoring and control system shall be non-proprietary and not require a 3rd Party Application.
4. The pump station shall be capable of being remotely monitored from any device with a web browser, such as a PC, tablet, or smart phone.
5. Monitoring of pump station shall be seamless to the user via a web browser that shall be started by simply clicking on a hyperlink. Software shall not be required to be installed or configured on the user's computer.
6. The web page shall include full graphical representation of the pump station and its features and shall be capable of remotely changing all operating parameters of the pump station.

7. The pump station shall automatically send email or text alerts regarding warnings and faults and specify the station and specific fault/alarm.
8. The pump station manufacturer shall supply all required communication hardware except computer and computer accessories, including all necessary direct burial cable and antennas.
9. A cellular modem shall be mounted and wired inside control panel enclosure.
10. The connection shall be capable of communicating to the pump station over cellular modem, high speed Ethernet, or fiber optic cable.

Flow Signal Sharing:

1. The control panel shall include an optical isolator to share the flow meter signal with a separate controller.

SCADA INTEGRATION:

1. Control system must be provided with separate isolated network with user adjustable network settings from HMI. Future/optional equipment or updates must not be required for integration.
2. Must support communication protocols simultaneously.

Ethernet/IP and Modbus TCP:

1. Must have instructions for communication map on HMI including device name, scaling units, format, and associated address (i.e., discharge pressure, xxx.x PSI, UINT - Modbus address xxxxx).

OPTIONAL

WATER MANAGEMENT SOFTWARE:

1. Pump system must be equipped with a water management software that is cloud based and capable of being remotely activated without requiring future/optional equipment. The function of water management is to conserve energy and water by adapting the pump station to the current climate. Must be accessible on any device without download of third-party app or software. The following features must be included with the water management utility:
 - a. Home Page Current System Status
 - b. Pressure.
 - c. Flow.
 - d. Level.
 - e. Pumps.
 - f. Master Valve.

Total Gallons Used:

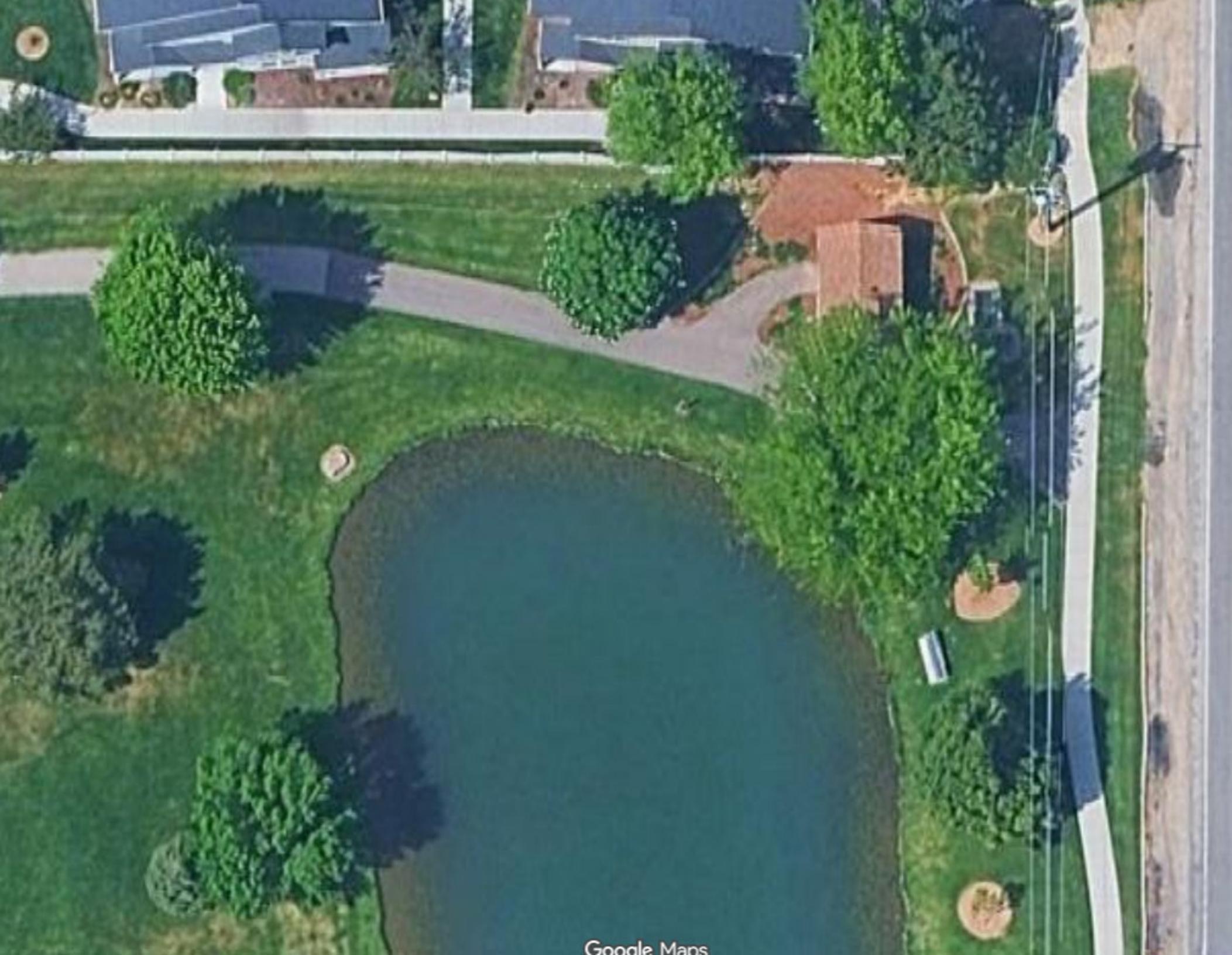
1. 7-day Water Schedule for user adjustable scheduling of pump station operation, programmable for Master Valve control or pump station lockout.
2. Rain Lockout via Rain Gauge to automatically pause pump station operation for an adjustable time based on an adjustable amount of rain fall.

Trend Data Utility with Graphic Display:

1. Must be capable of displaying 10 years of historical system data at a minimum resolution of 30 seconds and up to 30 days. System data (including but not limited to):
 - a. Pressure.
 - b. Flow.
 - c. Level.
 - d. Pump Speeds.

Reporting Utility:

1. Must be capable of automatically generating and storing 10 years of printable reports that include:
 - a. Daily Rainfall.
 - b. Monthly Rainfall.
 - c. Daily System Flow Usage.
 - d. Monthly System Flow Usage.
 - e. Yearly Report of Average Gallons Per Day.



Google Maps