Gregory L. Geist
Director

Board of County Commissioners
Clackamas County

Members of the Board:

Approval of a Personal/Professional Services Contract
between Water Environment Services
and Portland Engineering, Inc. for Telemetry System Integrator of Record (SCADA) Support

Purpose/Outcomes	Execution of the contract between Water Environment Services and Portland Engineering, Inc. for Telemetry System Integrator of Record (SCADA) Support.
Dollar Amount and Fiscal Impact	Funding has been budgeted in the FY2018-19 budget and will carry over through FY2023-24 budget years. The agreement is for an amount not to exceed $300,000 per year over a 5 year period. The total five year contract is for an amount not to exceed $1,500,000.
Funding Source	631-01-25185-431340-W630432
Duration	Through June 30, 2023
Previous Board Action/Review	In 2012 the board approved a similar contract for SCADA Support Services.
Strategic Plan Alignment	1. This project supports the Water Environment Services Strategic Plan to provide partner communities with reliable wastewater infrastructure to serve existing customers and support future growth. 2. This project supports Clackamas County's Strategic Plan of building a strong infrastructure that delivers services to customers.
Contact Person	Randy Rosane 503-742-4573

BACKGROUND:
Water Environment Services ("WES") is in need of a qualified consultant to serve as the Districts Telemetry System Integrator of Record to support the remote monitoring and control systems that operate process systems with coded signals over communication channels. The system is a Supervisory Control And Data Acquisition system referred to as ("SCADA").

Portland Engineering, Inc. ("PEI") will be identified as the Districts Integrator of Record and will provide the Districts with control system on-call services and project-specific services related to the design, installation and operation, and maintenance, of the Districts' instrumentation and SCADA systems. PEI will be required to negotiate individual scopes of work and budgets during the duration of the contract for either operational support as need for the SCADA system or for services pertaining to a specific project.

The System Integrator of Record shall be available as an on-call service provider and work with future capital project designers and contractors for design, design assistance, programming, installation, implementation and startup of Instrumentation, SCADA and Telemetry control systems.

PROCUREMENT PROCESS:
Proposals were requested to complete specific work. This project was advertised in accordance with ORS and LCRB Rules on April 3, 2018. On May 8, 2018, three (3) proposals were received: Jacobs, OCD Automation, and Portland Engineering, Inc. An Evaluation committee was assembled and after evaluation of the proposals, Portland Engineering, Inc. was determined to be the highest ranking qualified proposer that can meet the needs of the District. Contract value will be $300,000.00 annually. The total contract amount for the five year contract is not to exceed $1,500,000.00.

This contract was reviewed and approved by County Counsel.

RECOMMENDATION:
Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve and execute the Contract between Water Environment Services and Portland Engineering, Inc. for Telemetry System Integrator of Record and SCADA Support for a total contract amount not to exceed $1,500,000.00.

Respectfully submitted,

Greg Geist, Director
Water Environment Services

Placed on the _____ agenda by Procurement.

Gregory L. Geist
Director

Board of County Commissioners
Clackamas County

Members of the Board:

Approval of a Personal/Professional Services Contract
between Clackamas County Service District No. 1
and Portland Engineering, Inc. for Telemetry System Integrator of Record (SCADA) Support

Purpose/Outcomes	Execution of the contract between Clackamas County Service District No. 1 and Portland Engineering, Inc. for Telemetry System Integrator of Record (SCADA) Support.
Dollar Amount and Fiscal Impact	Funding has been budgeted in the FY2018-19 budget and will carry over through FY2023-24 budget years. The agreement is for an amount not to exceed $300,000 per year over a 5 year period. The total five year contract is for an amount not to exceed $1,500,000.
Funding Source	631-01-25185-431340-W630432
Duration	Through June 30, 2023
Previous Board Action/Review	In 2012 the board approved a similar contract for SCADA Support Services.
Strategic Plan Alignment	1. This project supports the Water Environment Services Strategic Plan to provide partner communities with reliable wastewater infrastructure to serve existing customers and support future growth. 2. This project supports Clackamas County's Strategic Plan of building a strong infrastructure that delivers services to customers.
Contact Person	Randy Rosane 503-742-4573

BACKGROUND:
Clackamas County Service District No. 1 ("CCSD1") is in need of a qualified consultant to serve as the Districts Telemetry System Integrator of Record to support the remote monitoring and control systems that operate process systems with coded signals over communication channels. The system is a Supervisory Control And Data Acquisition system referred to as ("SCADA").

Portland Engineering, Inc. ("PEI") will be identified as the Districts Integrator of Record and will provide the Districts with control system on-call services and project-specific services related to the design, installation and operation, and maintenance, of the Districts' instrumentation and SCADA systems. PEI will be required to negotiate individual scopes of work and budgets during the duration of the contract for either operational support as need for the SCADA system or for services pertaining to a specific project.

The System Integrator of Record shall be available as an on-call service provider and work with future capital project designers and contractors for design, design assistance, programming, installation, implementation and startup of Instrumentation, SCADA and Telemetry control systems.

PROCUREMENT PROCESS:
Proposals were requested to complete specific work. This project was advertised in accordance with ORS and LCRB Rules on April 3, 2018. On May 8, 2018, three (3) proposals were received: Jacobs, OCD Automation, and Portland Engineering, Inc. An Evaluation committee was assembled and after evaluation of the proposals, Portland Engineering, Inc. was determined to be the highest ranking qualified proposer that can meet the needs of the District. Contract value will be $300,000.00 annually. The total contract amount for the five year contract is not to exceed $1,500,000.00.

This contract was reviewed and approved by County Counsel.

RECOMMENDATION:
Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Clackamas County Service District No. 1, approve and execute the Contract between Water Environment Services and Portland Engineering, Inc. for Telemetry System Integrator of Record and SCADA Support for a total contract amount not to exceed $1,500,000.00.

Respectfully submitted,

Greg Geist, Director
Water Environment Services

Placed on the _____ agenda by Procurement.

PERSONAL/PROFESSIONAL SERVICES CONTRACT

This Personal/Professional Services Contract (this "Contract") is entered into between **Portland Engineering, Inc**. ("Contractor"), and Clackamas County Service District No. 1 ("CCSD#1") and Water Environment Services ("WES"), both political subdivisions of the State of Oregon ("Districts").

ARTICLE I.

1. Effective Date and Duration. This Contract shall become effective upon signature of both parties. Unless earlier terminated or extended, this Contract shall expire on **June 30, 2023**. However, such expiration shall not extinguish or prejudice the District's right to enforce this Contract with respect to: (a) any breach of a Contractor warranty; or (b) any default or defect in Contractor performance that has not been cured.

2. Scope of Work. Contractor will provide the following personal/professional services: **Telemetry System Integrator of Record (SCADA) Support,** ("Work"), further described in **Article A.**

3. Consideration. The District agrees to pay Contractor, from available and authorized funds, a sum not to exceed three hundred thousand dollars ($300,000.00) per County fiscal year (July 1-June 30) for a Contract total not to exceed one million five hundred dollars ($1,500,000.00), for accomplishing the Work required by this Contract. If any interim payments to Contractor are made, such payments shall be made only in accordance with the schedule and requirements in Article A.

4. Travel and Other Expense. Authorized: ☐ Yes ☒ No
If travel expense reimbursement is authorized in this Contract, such expense shall only be reimbursed at the rates in the Clackamas County Contractor Travel Reimbursement Policy, hereby incorporated by reference and found at: http://www.clackamas.us/bids/terms.html. Travel expense reimbursement is not in excess of the not to exceed consideration.

5. Contract Documents. This Contract consists of the following documents which are listed in descending order of precedence and are attached and incorporated by reference, this Contract, Articles A, B, C, D E, and F.

6. Contractor Data.
Portland Engineering, Inc.
Address: 2020 SE 7th Ave, Suite 200
Portland, Oregon 97214
Contractor Contract Administrator: Carl Serpa, PE
Phone No.: 503-256-7718
Email: cserpa@portlandengineers.com
MWESB Certification: ☐ DBE # ☐ MBE # ☐ WBE # ☐ ESB #

Payment information will be reported to the Internal Revenue Service ("IRS") under the name and taxpayer ID number submitted. (See I.R.S. 1099 for additional instructions regarding taxpayer ID numbers.) Information not matching IRS records could subject Contractor to backup withholding.

ARTICLE II.

1. **ACCESS TO RECORDS.** Contractor shall maintain books, records, documents, and other evidence and accounting procedures and practices sufficient to reflect properly all costs of whatever nature claimed to have been incurred and anticipated to be incurred in the performance of this Contract. District and their duly authorized representatives shall have access to the books, documents, papers, and records of Contractor which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Such books and records shall be maintained by Contractor for a minimum of three (3) years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later.

2. **AVAILABILITY OF FUNDS.** District certifies that sufficient funds are available and authorized for expenditure to finance costs of this Contract within its current annual appropriation or expenditure limitation, provided, however, that continuation of this Contract, or any extension, after the end of the fiscal period in which it is written, is contingent on a new appropriation or limitation for each succeeding fiscal period sufficient in amount, in the exercise of the District's reasonable administrative discretion, to continue to make payments under this Contract.

3. **CAPTIONS.** The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.

4. **COMPLIANCE WITH APPLICABLE LAW.** Contractor shall comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the Work to be done under this Contract. Contractor specifically agrees to comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules, and regulations. Contractor shall also comply with the Americans with Disabilities Act of 1990 (Pub. L. No. 101-336), Title VI of the Civil Rights Act of 1964, Section V of the Rehabilitation Act of 1973, ORS 659A.142, and all regulations and administrative rules established pursuant to those laws. Contractor further agrees to make payments promptly when due, to all persons supplying to such Contractor, labor or materials for the prosecution of the Work provided in this Contract; pay all contributions or amounts due the Industrial Accident Funds from such Contractor responsibilities incurred in the performance of this Contract; not permit any lien or claim to be filed or prosecuted against the District on account of any labor or material furnished; pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. If Contractor fails or refuses to make any such payments required herein, the appropriate District official may pay such claim. Any payment of a claim in the manner authorized in this section shall not relieve the Contractor or Contractor's surety from obligation with respect to unpaid claims. Contractor shall promptly pay any person or entity that furnishes medical care to Contractor's employees those sums which Contractor agreed to pay for such services and all money Contractor collected or deducted from employee's wages to provide such services.

5. **EXECUTION AND COUNTERPARTS.** This Contract may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

6. **GOVERNING LAW.** This Contract shall be governed and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, or suit between District and Contractor that arises out of or relates to the performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Clackamas County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.

7. **HAZARD COMMUNICATION.** Contractor shall notify District prior to using products containing hazardous chemicals to which District employees may be exposed. Products containing hazardous chemicals are those products defined by Oregon Administrative Rules, Chapter 437. Upon District's request, Contractor shall immediately provide Material Safety Data Sheets for the products subject to this provision.

8. **INDEMNITY, RESPONSIBILITY FOR DAMAGES.** Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay which may be caused by, or result from, the conduct of Work, or from any act, omission, or neglect of Contractor, its subcontractors, agents, or employees. The Contractor agrees to indemnify, hold harmless and defend the District and Clackamas County, and their officers, elected officials, agents and employees from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, arising out of or based upon damage or injuries to persons or property caused by the errors, omissions, fault or negligence of the Contractor or the Contractor's employees, subcontractors, or agents.

9. **INDEPENDENT CONTRACTOR STATUS.** The service(s) to be rendered under this Contract are those of an independent contractor. Although the District reserves the right to determine (and modify) the delivery schedule for the Work to be performed and to evaluate the quality of the completed performance, District cannot and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the Work. Contractor is not to be considered an agent or employee of District for any purpose, including, but not limited to: (A) The Contractor will be solely responsible for payment of any Federal or State taxes required as a result of this Contract; (B) This Contract is not intended to entitle the Contractor to any benefits generally granted to District employees, including, but not limited to, vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers' Compensation, unemployment compensation, or retirement benefits (except insofar as benefits are otherwise required by law if the Contractor is presently a member of the Oregon Public Employees Retirement System); and (C) If the Contractor has the assistance of other persons in the performance of this Contract, and the Contractor is a subject employer, the Contractor shall qualify and remain qualified for the term of this Contract as an insured employer under ORS Chapter 656. (Also see Article C)

   At present, the Contractor certifies that he or she, if an individual is not a program, District or Federal employee. The Contractor, if an individual, certifies that he or she is not a member of the Oregon Public Employees Retirement System.

10. **INSURANCE.** Contractor shall provide insurance as indicated on **Article B**, attached hereto and by this reference made a part hereof. Insurance policies, which cannot be excess to a self-insurance program, are to be issued by an insurance company authorized to do business in the State of Oregon.

11. **LIMITATION OF LIABILITIES.** Except for liability arising under or related to Section 14 or 21(B), neither party shall be liable for (i) any indirect, incidental, consequential or special damages under this Contract or (ii) any damages of any sort arising solely from the termination of this Contact in accordance with its terms. This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.

12. **NOTICES.** Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder shall be given in writing by personal

delivery, email, or mailing the same, postage prepaid, to the District at: Clackamas County Procurement, 2051 Kaen Road, Oregon City, OR 97045, or procurement@clackamas.us, or to Contractor at the address or number set forth in Section 1 of this Contract, or to such other addresses or numbers as either party may hereafter indicate. Any communication or notice so addressed and mailed shall be deemed to be given five (5) days after mailing. Any communication or notice by personal delivery shall be deemed to be given when actually delivered.

13. **OWNERSHIP OF WORK PRODUCT.** All work product of Contractor that results from this Contract (the "Work Product") is the exclusive property of District. District and Contractor intend that such Work Product be deemed "work made for hire" of which District shall be deemed the author. If for any reason the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to District all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark or trade secret, or any other state or federal intellectual property law or doctrine. Contractor shall execute such further documents and instruments as District may reasonably request in order to fully vest such rights in District. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.

14. **REPRESENTATIONS AND WARRANTIES.** Contractor represents and warrants to District that (A) Contractor has the power and authority to enter into and perform this Contract; (B) this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; (C) the Work under this Contract shall be performed in a good and workmanlike manner and in accordance with the highest professional standards; and (D) Contractor shall at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided.

15. **SURVIVAL.** All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Article II, Paragraphs 1, 6, 8, 11, 13, 14, 15, and 21.

16. **SEVERABILITY.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

17. **SUBCONTRACTS AND ASSIGNMENTS.** Contractor shall not enter into any subcontracts for any of the Work required by this Contract, or assign or transfer any of its interest in this Contract by operation of law or otherwise, without obtaining prior written approval from the District. In addition to any provisions the District may require, Contractor shall include in any permitted subcontract under this Contract a requirement that the subcontractor be bound by this Article II, Paragraphs 1, 8, 13, 15, and 27 as if the subcontractor were the Contractor. District's consent to any subcontract shall not relieve Contractor of any of its duties or obligations under this Contract.

18. **SUCCESSORS IN INTEREST.** The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.

19. **TAX COMPLIANCE CERTIFICATION.** Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of

this Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle District to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to District's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. District shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance. These remedies are cumulative to the extent the remedies are not inconsistent, and District may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, Contractor has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS Chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any Work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

20. TERMINATIONS. This Contract may be terminated for the following reasons: (A) This Contract may be terminated at any time by mutual consent of the parties, or by the District for convenience upon thirty (30) days' written notice to the Contractor; (B) District may terminate this Contract effective upon delivery of notice to Contractor, or at such later date as may be established by the District, if (i) federal or state laws, rules, regulations, or guidelines are modified, changed, or interpreted in such a way that either the Work under this Contract is prohibited or the District is prohibited from paying for such Work from the planned funding source; or (ii) any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, or not renewed; (C) This Contract may also be immediately terminated by the District for default (including breach of Contract) if (i) Contractor fails to provide services or materials called for by this Contract within the time specified herein or any extension thereof; or (ii) Contractor fails to perform any of the other provisions of this Contract or so fails to pursue the Work as to endanger performance of this Contract in accordance with its terms, and after receipt of notice from the District, fails to correct such failure within ten (10) business days; or (D) If sufficient funds are not provided in future approved budgets of the District (or from applicable federal, state, or other sources) to permit the District in the exercise of its reasonable administrative discretion to continue this Contract, or if the program for which this Contract was executed is abolished, District may terminate this Contract without further liability by giving Contractor not less than thirty (30) days' notice.

21. REMEDIES. (A) In the event of termination pursuant to Article II Section 20(A), (B)(i), or (D), Contractor's sole remedy shall be a claim for the sum designated for accomplishing the Work multiplied by the percentage of Work completed and accepted by the District, less previous amounts paid and any claim(s) which the District has against Contractor. If previous amounts paid to Contractor exceed the amount due to Contractor under Section 21(A), Contractor shall pay any excess to District on demand. (B) In the event of termination pursuant to Sections

20(B)(ii) or 20(C), the District shall have any remedy available to it in law or equity. If it is determined for any reason that Contractor was not in default under Sections 20(B)(ii) or 20(C), the rights and obligations of the parties shall be the same as if the Contract was terminated pursuant to Section 20(A). (C) Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this Contract, unless District expressly directs otherwise in such notice of termination. Upon termination of this Contract, Contractor shall deliver to District all documents, information, works-in-progress and other property that are or would be deliverables had the Contract Work been completed. Upon District's request, Contractor shall surrender to anyone District designates, all documents, research, objects or other tangible things needed to complete the Work.

22. **NO THIRD PARTY BENEFICIARIES.** District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

23. **TIME IS OF THE ESSENCE.** Contractor agrees that time is of the essence in the performance this Contract.

24. **FOREIGN CONTRACTOR.** If the Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporate Division, all information required by those agencies relative to this Contract. The Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.

25. **FORCE MAJEURE.** Neither District nor Contractor shall be held responsible for delay or default caused by fire, terrorism, riot, acts of God, or war where such cause was beyond, respectively, District's or Contractor's reasonable control. Contractor shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.

26. **WAIVER.** The failure of District to enforce any provision of this Contract shall not constitute a waiver by District of that or any other provision.

27. **COMPLIANCE.** Pursuant to the requirements of ORS 279B.020 and 279B.220 through 279B.235 and Article XI, Section 10, of the Oregon Constitution, the following terms and conditions are made a part of this Contract:
(A) Contractor shall: (i) Make payments promptly, as due, to all persons supplying to the Contractor labor or materials for the prosecution of the Work provided for in this Contract; (ii) Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of this Contract; (iii) Not permit any lien or claim to be filed or prosecuted against the District on account of any labor or material furnished.
(B) If the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a subcontractor by any person in connection with this Contract as such claim becomes due, the proper officer representing the District may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due to the Contractor by reason of this Contract.
(C) The Contractor shall pay employees for Work in accordance with ORS 279B.020 and ORS 279B.235, which is incorporated herein by this reference. All subject employers working under the contract are either employers that will comply with ORS 656.017 or employers that are exempt under ORS 656.126.

(D) The Contractor shall promptly, as due, make payment to any person or co-partnership, association or corporation furnishing medical, surgical and hospital care, or other needed care and attention incident to sickness and injury to the employees of the Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of the Contractor's employees pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

28. **MERGER. THIS CONTRACT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE SUBJECT MATTER REFERENCED THEREIN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. CONTRACTOR, BY THE SIGNATURE HERETO OF ITS AUTHORIZED REPRESENTATIVE, IS AN INDEPENDENT CONTRACTOR, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THIS CONTRACT, AND CONTRACTOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.**

By their signatures below, the parties to this Contract agree to the terms, conditions, and content expressed herein.

Portland Engineering, Inc.

_____
Authorized Signature Date

_____
Name / Title (Printed)

_____
Oregon Business Registry #

_____
Entity Type / State of Formation

Clackamas County Service District No. 1

_____
Chair Date

Water Environment Services

_____
Chair Date

_____
Recording Secretary

Approved as to Form:

_____
County Counsel Date

ARTICLE A
PERSONAL/PROFESSIONAL SERVICES CONTRACT

SCOPE OF WORK

Contractor shall provide Telemetry System Integrator of Record (SCADA) support. Work is further described in the Request for Proposal #2018-30 issued April 25, 2018 and inclusive of Addenda 1 and 2, hereby attached and incorporated by reference as **Article D**, and the vendors response hereby attached and incorporated by reference as **Article E**.

The District Contract administrator for this Contract is: Randy Rosane.

CONSIDERATION

a. Consideration Rates –Time & Material $55.00/hour for administrative services; $130.00/hour for all other services further described in **Article F**.

b. Payment for all Work performed under this Contract shall be subject to the provisions of ORS 293.462 and shall not exceed the total maximum sum of **$1,500,000.00** Invoices shall be submitted to: Water Environment Services, Attn: Randy Rosane, 150 Beavercreek Road, Oregon City, Oregon 97045 or via email at randyros@clackamas.us.

c. Unless otherwise specified, Contractor shall submit monthly invoices for Work performed. If Contractor fails to present invoices in proper form within sixty (60) calendar days after the end of the month in which the services were rendered, Contractor waives any rights to present such invoice thereafter and to receive payment therefor. Payments shall be made to Contractor following the District's review and approval of invoices submitted by Contractor. Contractor shall not submit invoices for, and the District will not pay, any amount in excess of the maximum compensation amount set forth above. If this maximum compensation amount is increased by amendment of this Contract, the amendment must be fully effective before Contractor performs Work subject to the amendment. The billings shall also include the total amount billed to date by Contractor prior to the current invoice.

d. Invoices shall describe all Work performed with particularity, by whom it was performed, and shall itemize and explain all expenses for which reimbursement is claimed. The billings shall also include the total amount billed to date by Contractor prior to the current invoice.

ARTICLE B
INSURANCE

During the term of this Contract, Contractor shall maintain in full force at its own expense, each insurance noted below:

1. **Required by District of Contractor with one or more workers, as defined by ORS 656.027.**

   Contractor, its subcontractors, if any, and all employers providing work, labor, or materials under this Contract are subject employers under the Oregon Workers' Compensation Law, and shall either comply with ORS 656.017, which requires said employers to provide workers' compensation coverage that satisfies Oregon law for all their subject workers, or shall comply with the exemption set out in ORS 656.126.

2. ☒ **Required by District** ☐ **Not required by District**

   Professional Liability insurance with a combined single limit, or the equivalent, of not less than $1,000,000 for each claim, incident, or occurrence, with an annual aggregate limit of $2,000,000. This is to cover damages caused by error, omission or negligent acts related to the professional services to be provided under this Contract. The policy must provide extending reporting period coverage for claims made within two years after the contract is completed.

3. ☒ **Required by District** ☐ **Not required by District**

   General Liability insurance with a combined single limit, or the equivalent, of not less than $1,000,000 for each claim, incident, or occurrence, with an annual aggregate limit of $2,000,000 for Bodily Injury and Property Damage. It shall include contractual liability coverage for the indemnity provided under this Contract.

4. ☒ **Required by District** ☐ **Not required by District**

   Automobile Liability insurance with a combined single limit, or the equivalent, of not less than $1,000,000 for each accident for Bodily Injury and Property Damage, including coverage for owned, hired, or non-owned vehicles, as applicable.

5. **Certificates of Insurance**. Contractor shall furnish evidence of the insurance required in this Contract. The insurance for general liability and automobile liability must include an endorsement naming the District and Clackamas County, its officers, elected officials, agents, and employees as additional insureds with respect to the Work under this Contract. Insuring companies or entities are subject to District acceptance. If requested, complete copies of insurance policies, trust agreements, etc. shall be provided to the District. The Contractor shall be financially responsible for all pertinent deductibles, self-insured retentions and/or self-insurance.

6. **Notice of cancellation or change**. There shall be no cancellation, material change, reduction of limits or intent not to renew the insurance coverage(s) without thirty (30) days written notice from the Contractor or its insurer(s) to the District at the following address: Clackamas County Procurement Division, 2051 Kaen Road, Oregon City, OR 97045 or procurement@clackamas.us.

ARTICLE C
CERTIFICATION STATEMENT FOR INDEPENDENT CONTRACTOR

(Contractor completes if Contractor is not a corporation or is a Professional Corporation)

Contractor certifies he/she is independent as defined in Oregon Revised Statutes 670.600 and meets the following standards that the Contractor is:

1. Free from direction and control, beyond the right of the District to specify the desired result; **AND**
2. Are licensed if licensure is required for the services; **AND**
3. Are responsible for other licenses or certificates necessary to provide the services **AND**
4. Are customarily engaged in an "independently established business."

To qualify under the law, an "independently established business" must meet three (3) out of the following five (5) criteria. C**heck as applicable**:

_____ A. Maintains a business location that is: (a) Separate from the business or work of the District; or (b) that is in a portion of their own residence that is used primarily for business.

_____ B. Bears the risk of loss, shown by factors such as: (a) Entering into fixed price contracts; (b) Being required to correct defective work; (c) Warranting the services provided; or (d) Negotiating indemnification agreements or purchasing liability insurance, performance bonds, or errors and omissions insurance.

_____ C. Provides contracted services for two or more different persons within a 12-month period, or routinely engages in business advertising, solicitation or other marketing efforts reasonably calculated to obtain new contracts to provide similar services.

_____ D. Makes significant investment in the business through means such as: (a) Purchasing tools or equipment necessary to provide the services; (b) Paying for the premises or facilities where the services are provided; or (c) Paying for licenses, certificates or specialized training required to provide the services.

_____ E. Has the authority to hire and fire other persons to provide assistance in performing the services.

Additional provisions:

1. A person who files tax returns with a Schedule F and also performs agricultural services reportable on a Schedule C is not required to meet the independently established business requirements.
2. Establishing a business entity such as a corporation or limited liability company, does not, by itself, establish that the individual providing services will be considered an independent contractor.

Contractor Signature_____ Date_____

ARTICLE D
RFP #2018-30
Telemetry System Integrator of Record (SCADA) Support
Issued April 25, 2018

REQUEST FOR PROPOSALS #2018-30

FOR

Telemetry System Integrator of Record (SCADA) Support

BOARD OF COUNTY COMMISSIONERS
JIM BERNARD, Chair
SONYA FISCHER, Commissioner
KEN HUMBERSTON, Commissioner
PAUL SAVAS, Commissioner
MARTHA SCHRADER, Commissioner

Donald Krupp
County Administrator

George Marlton
Procurement Division Director

Brian Woodall
Analyst

PROPOSAL CLOSING DATE, TIME AND LOCATION

DATE: **April 25, 2018**

TIME: **2:00 PM, Pacific Time**

PLACE: **Clackamas County Procurement Division**
Clackamas County Public Services Building
2051 Kaen Road, Oregon City, OR 97045

SCHEDULE

Request for Proposals Issued…….....	April 3, 2018
Deadline to Submit Clarifying Questions.....	April 13 2018, 5:00 PM, Pacific Time
Request for Proposals Closing Date and Time…….....	April, 12, 2018, 2:00 PM, Pacific Time
Deadline to Submit Protest of Award.....	Seven (7) days from the Intent to Award
Anticipated Contract Start Date…….....	July 1, 2018

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SECTION 1
NOTICE OF REQUEST FOR PROPOSALS

Notice is hereby given that Water Environment Services ("WES"), and Clackamas County Service District No. 1 ("CCSD #1") through their Board of County Commissioners, will receive sealed Proposals per specifications until **2:00 PM, April 24, 2018** ("Closing"), to qualify as telemetry system integrators for the Districts. The District will enter into a five (5) year on-call contract with the most qualified proposer to serve as the Districts Telemetry System Integrator of Record ("SCADA") Support**.** No Proposals will be received or considered after that time.

The resulting contract from this RFP require the consultant to begin work in July, 2018.

Proposal packets are available from 7:00 AM to 6:00 PM Monday through Thursday at Clackamas County Procurement Division, Clackamas County Public Services Building, 2051 Kaen Road, Oregon City, OR 97045, telephone (503) 742-5444 or may be obtained at http://www.clackamas.us/bids/. Sealed Proposals are to be sent to Clackamas County Procurement Services – Attention George Marlton, Director at the above Kaen Road address.

Sealed Proposals may be emailed to procurement@clackamas.us or sent to Clackamas County at the above Kaen Road address

Contact Information

Procurement Process and Technical Questions: Brian Woodall
503-742-5453
bwoodall@co.clackamas.or.us

The Board of County Commissioners reserves the right to reject any and all Proposals not in compliance with all prescribed public bidding procedures and requirements, and may reject for good cause any and all Proposals upon the finding that it is in the public interest to do so and to waive any and all informalities in the public interest. In the award of the contract, the Board of County Commissioners will consider the element of time, will accept the Proposal or Proposals which in their estimation will best serve the interests of Clackamas County and will reserve the right to award the contract to the contractor whose Proposal shall be best for the public good.

Clackamas County encourages bids from Minority, Women, and Emerging Small Businesses.

SECTION 2
INSTRUCTIONS TO PROPOSERS

Clackamas County ("County") reserves the right to reject any and all Proposals received as a result of this RFP. County Local Contract Review Board Rules ("LCRB") govern the procurement process for the County.

2.1 Modification or Withdrawal of Proposal: Any Proposal may be modified or withdrawn at any time prior to the Closing deadline, provided that a written request is received by the County Procurement Division Director, prior to the Closing. The withdrawal of a Proposal will not prejudice the right of a Proposer to submit a new Proposal.

2.2 Requests for Clarification and Requests for Change: Proposers may submit questions regarding the specifications of the RFP. Questions must be received in writing on or before 5:00 p.m. (Pacific Time), on the date indicated in the Schedule, at the Procurement Division address as listed in Section 1 of this RFP. Requests for changes must include the reason for the change and any proposed changes to the requirements. The purpose of this requirement is to permit County to correct, prior to the opening of Proposals, RFP terms or technical requirements that may be unlawful, improvident or which unjustifiably restrict competition. County will consider all requested changes and, if appropriate, amend the RFP. County will provide reasonable notice of its decision to all Proposers that have provided an address to the Procurement Division for this procurement. No oral or written instructions or information concerning this RFP from County managers, employees or agents to prospective Proposers shall bind County unless included in an Addendum to the RFP.

2.3 Protests of the RFP/Specifications: Protests must be in accordance with LCRB C-047-0730. Protests of Specifications must be received in writing on or before 5:00 p.m. (Pacific Time), on the date indicated in the Schedule, or within three (3) business days of issuance of any addendum, at the Procurement Division address listed in Section 1 of this RFP. Protests may not be faxed. Protests of the RFP specifications must include the reason for the protest and any proposed changes to the requirements.

2.4 Addenda: If any part of this RFP is changed, an addendum will be provided to Proposers that have provided an address to the Procurement Division for this procurement. It shall be Proposers responsibility to regularly check the Bids and Contract Information page at http://www.clackamas.us/bids/ for any published Addenda or response to clarifying questions.

2.5 Submission of Proposals: All Proposals must be submitted in a sealed envelope bearing on the outside, the name and address of the Proposer, the project title, and Closing date/time. Proposals must be submitted in accordance with Section 5.

All Proposals shall be legibly written in ink or typed and comply in all regards with the requirements of this RFP. Proposals that include orders or qualifications may be rejected as irregular. All Proposals must include a signature that affirms the Proposer's intent to be bound by the Proposal (may be on cover letter, on the Proposal, or the Proposal Certification Form) shall be signed. If a Proposal is submitted by a firm or partnership, the name and address of the firm or partnership shall be shown, together with the names and addresses of the members. If the Proposal is submitted by a corporation, it shall be signed in the name of such corporation by an official who is authorized to bind the contractor. The Proposals will be considered by the County to be submitted in confidence and are not subject to public disclosure until the notice of intent to award has been issued.

No late Proposals will be accepted. Proposals submitted after the Closing will be considered late and will be returned unopened. Proposals may not be submitted by telephone or fax.

2.6 Post-Selection Review and Protest of Award: County will name the apparent successful Proposer in a "Notice of Intent to Award" letter. Identification of the apparent successful Proposer is procedural only and creates no right of the named Proposer to award of the contract. Competing Proposers will be notified in writing of the selection of the apparent successful Proposer(s) and shall be given seven (7) calendar days from the date on the "Notice of Intent to Award" letter to review the file at the Procurement Division office and file a written protest of award, pursuant to LCRB C-047-0740. Any award protest must be in writing and must be delivered by hand-delivery or mail to the address for the Procurement Division as listed in Section 1 of this RFP.

Only actual Proposers may protest if they believe they have been adversely affected because the Proposer would be eligible to be awarded the contract in the event the protest is successful. The basis of the written protest must be in accordance with ORS 279B.410 and shall specify the grounds upon which the protest is based. In order to be an adversely affected Proposer with a right to submit a written protest, a Proposer must be next in line for award, i.e. the protester must claim that all higher rated Proposers are ineligible for award because they are non-responsive or non-responsible.

County will consider any protests received and:

a. reject all protests and proceed with final evaluation of, and any allowed contract language negotiation with, the apparent successful Proposer and, pending the satisfactory outcome of this final evaluation and negotiation, enter into a contract with the named Proposer; OR
b. sustain a meritorious protest(s) and reject the apparent successful Proposer as nonresponsive, if such Proposer is unable to demonstrate that its Proposal complied with all material requirements of the solicitation and Oregon public procurement law; thereafter, County may name a new apparent successful Proposer; OR
c. reject all Proposals and cancel the procurement.

2.7 Acceptance of Contractual Requirements: Failure of the selected Proposer to execute a contract and deliver required insurance certificates within ten (10) calendar days after notification of an award may result in cancellation of the award. This time period may be extended at the option of County.

2.8 Public Records: Proposals are deemed confidential until the "Notice of Intent to Award" letter is issued. This RFP and one copy of each original Proposal received in response to it, together with copies of all documents pertaining to the award of a contract, will be kept and made a part of a file or record which will be open to public inspection. If a Proposal contains any information that is considered a **TRADE SECRET** under ORS 192.501(2), **SUCH INFORMATION MUST BE LISTED ON A SEPARATE SHEET CAPABLE OF SEPARATION FROM THE REMAINING PROPOSAL AND MUST BE CLEARLY MARKED WITH THE FOLLOWING LEGEND:**

"This information constitutes a trade secret under ORS 192.501(2), and shall not be disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192."

The Oregon Public Records Law exempts from disclosure only bona fide trade secrets, and the exemption from disclosure applies only "unless the public interest requires disclosure in the particular instance" ORS 192.500(1). Therefore, non-disclosure of documents, or any portion of a document submitted as part of a Proposal, may depend upon official or judicial determinations made pursuant to the Public Records Law.

2.9 Investigation of References: County reserves the right to investigate all references in addition to those supplied references and investigate past performance of any Proposer with respect to its successful performance of similar services, its compliance with specifications and contractual obligations, its completion or delivery of a project on schedule, its lawful payment of subcontractors and workers, and any

other factor relevant to this RFP. County may postpone the award or the execution of the contract after the announcement of the apparent successful Proposer in order to complete its investigation.

2.10 RFP Proposal Preparation Costs and Other Costs: Proposer costs of developing the Proposal, cost of attendance at an interview (if requested by County), or any other costs are entirely the responsibility of the Proposer, and will not be reimbursed in any manner by County.

2.11 Clarification and Clarity: County reserves the right to seek clarification of each Proposal, or to make an award without further discussion of Proposals received. Therefore, it is important that each Proposal be submitted initially in the most complete, clear, and favorable manner possible.

2.12 Right to Reject Proposals: County reserves the right to reject any or all Proposals or to withdraw any item from the award, if such rejection or withdrawal would be in the public interest, as determined by County.

2.13 Cancellation: County reserves the right to cancel or postpone this RFP at any time or to award no contract.

2.14 Proposal Terms: All Proposals, including any price quotations, will be valid and firm through a period of one hundred and eighty (180) calendar days following the Closing date. County may require an extension of this firm offer period. Proposers will be required to agree to the longer time frame in order to be further considered in the procurement process.

2.15 Oral Presentations: At County's sole option, Proposers may be required to give an oral presentation of their Proposals to County, a process which would provide an opportunity for the Proposer to clarify or elaborate on the Proposal but will in no material way change Proposer's original Proposal. If the evaluating committee requests presentations, the Procurement Division will schedule the time and location for said presentation. Any costs of participating in such presentations will be borne solely by Proposer and will not be reimbursed by County. **Note:** Oral presentations are at the discretion of the evaluating committee and may not be conducted; therefore, **written Proposals should be complete.**

2.16 Usage: It is the intention of County to utilize the services of the successful Proposer(s) to provide services as outlined in the below Scope of Work.

2.17 Review for Responsiveness: Upon receipt of all Proposals, the Procurement Division or designee will determine the responsiveness of all Proposals before submitting them to the evaluation committee. If a Proposal is incomplete or non-responsive in significant part or in whole, it will be rejected and will not be submitted to the evaluation committee. County reserves the right to determine if an inadvertent error is solely clerical or is a minor informality which may be waived, and then to determine if an error is grounds for disqualifying a Proposal. The Proposer's contact person identified on the Proposal will be notified, identifying the reason(s) the Proposal is non-responsive. One copy of the Proposal will be archived and all others discarded.

2.18 RFP Incorporated into Contract: This RFP will become part of the Contract between County and the selected contractor(s). The contractor(s) will be bound to perform according to the terms of this RFP, their Proposal(s), and the terms of the Sample Contract.

2.19 Communication Blackout Period: Except as called for in this RFP, Proposers may not communicate with members of the Evaluation Committee or other County employees or representatives about the RFP during the procurement process until the apparent successful Proposer is selected, and all

protests, if any, have been resolved. Communication in violation of this restriction may result in rejection of a Proposer.

2.20 Prohibition on Commissions and Subcontractors: County will contract directly with persons/entities capable of performing the requirements of this RFP. Contractors must be represented directly. Participation by brokers or commissioned agents will not be allowed during the Proposal process. Contractor shall not use subcontractors to perform the Work unless specifically pre-authorized in writing to do so by the County. Contractor represents that any employees assigned to perform the Work, and any authorized subcontractors performing the Work, are fully qualified to perform the tasks assigned to them, and shall perform the Work in a competent and professional manner. Contractor shall not be permitted to add on any fee or charge for subcontractor Work. Contractor shall provide, if requested, any documents relating to subcontractor's qualifications to perform required Work.

2.21 Ownership of Proposals: All Proposals in response to this RFP are the sole property of County, and subject to the provisions of ORS 192.410-192.505 (Public Records Act).

2.22 Clerical Errors in Awards: County reserves the right to correct inaccurate awards resulting from its clerical errors.

2.23 Rejection of Qualified Proposals: Proposals may be rejected in whole or in part if they attempt to limit or modify any of the terms, conditions, or specifications of the RFP or the Sample Contract.

2.24 Collusion: By responding, the Proposer states that the Proposal is not made in connection with any competing Proposer submitting a separate response to the RFP, and is in all aspects fair and without collusion or fraud. Proposer also certifies that no officer, agent, elected official, or employee of County has a pecuniary interest in this Proposal.

2.25 Evaluation Committee: Proposals will be evaluated by a committee consisting of representatives from County and potentially external representatives. County reserves the right to modify the Evaluation Committee make-up in its sole discretion.

2.26 Commencement of Work: The contractor shall commence no work until all insurance requirements have been met, the Protest of Awards deadline has been passed, any protest have been decided, a contract has been fully executed, and a Notice to Proceed has been issued by County.

2.27 Best and Final Offer: County may request best and final offers from those Proposers determined by County to be reasonably viable for contract award. However, County reserves the right to award a contract on the basis of initial Proposal received. Therefore, each Proposal should contain the Proposer's best terms from a price and technical standpoint. Following evaluation of the best and final offers, County may select for final contract negotiations/execution the offers that are most advantageous to County, considering cost and the evaluation criteria in this RFP.

2.28 Nondiscrimination: The successful Proposer agrees that, in performing the work called for by this RFP and in securing and supplying materials, contractor will not discriminate against any person on the basis of race, color, religious creed, political ideas, sex, age, marital status, sexual orientation, gender identity, veteran status, physical or mental handicap, national origin or ancestry, or any other class protected by applicable law.

2.29 Intergovernmental Cooperative Procurement Statement: Pursuant to ORS 279A and LCRB, other public agencies shall have the ability to purchase the awarded goods and services from the awarded contractor(s) under terms and conditions of the resultant contract. Any such purchases shall be between

the contractor and the participating public agency and shall not impact the contactor's obligation to County. Any estimated purchase volumes listed herein do not include other public agencies and County makes no guarantee as to their participation. Any Proposer, by written notification included with their Proposal, may decline to extend the prices and terms of this solicitation to any and/or all other public agencies. County grants to any and all public serving governmental agencies, authorization to purchase equivalent services or products described herein at the same submitted unit bid price, but only with the consent of the contractor awarded the contract by the County.

SECTION 3
SCOPE OF WORK

3.1. INTRODUCTION

Clackamas County Water Environment Services ("WES"), and Clackamas County Service District No. 1 ("CCSD #1"), collectively referred to as "Districts", is seeking Proposals from consultants to qualify as telemetry system integrators for the District, The most qualified proposer will serve as the Districts Telemetry System Integrator of Record (SCADA).

Please direct all Technical/Specifications or Procurement Process Questions to the indicated representative referenced in the Notice of Request for Proposals and note the communication restriction outlined in Section 2.19**.**

3.2 BACKGROUND

The Districts' telemetry and control system consists of five (5) Wastewater Treatment Plant facilities, twenty (20) Pumping Stations, (25) Flow Monitoring Stations and one (1) North Clackamas Park Regional Detention Facility.

The existing SCADA system includes operational control, monitoring and data logging for the Tri-City and Kellogg Creek Plants utilizing fiber optic communications for Remote Bases, PLCs and Servers.

In the future, it is the desire of the Districts to incorporate fiber optic communication to other assets, such as Treatment Facilities, Pumping Stations, Flow Monitoring Stations and a Regional Water Detention Facility. The desire is to have a similar level of operational control, monitoring and data logging at the two (2) main plants. Currently, data is collected manually and is not stored in the SCADA system archives.

The Tri-City WPCP runs two different processes, Conventional Activated Sludge (CAS) and Membrane Bioreactor (MBR). Both processes share a common SCADA system which consists of various types and ages of instrumentation, drives and PLCs.

The CAS side of the plant consists of Siemens S7-300 and S7-400 PLCs (one redundant S7400) utilizing Siemens 505 series and Siemens S7-300 style I/O mounted in remote racks.

The MBR side of the plant consists of Siemens S7-200, S7-300 and S7-400 PLCs (three redundant S7-400s) utilizing Siemens S7-200 and S7-300 style I/O. There is a redundant Allen Bradley PLC, which runs the MBR process and utilizes Allen Bradley I/O. The Process and Air Scour Blowers are also controlled by Allen Bradley PLCs, utilizing Allen Bradley I/O.

The Fiber Optic system consists of running Profibus from Remote Bases to PLCs and Ethernet from PLCs to Servers. There are also Fiber Optic cables connecting the Tri-City, Kellogg Creek and Hoodland Treatment Plants.

The Servers located at the Tri-City Plant consist of I/O, INSQL, Application, Auto Dialer and a PDC Server. The Plant is manned eight (8) hours per day and seven (7) days per week and relies on two (2) auto dialers for notification of an alarm during the off hours. The HMI application is Wonderware InTouch version 10.1. There are various Operator Work Stations and Development Work Stations located in the plant.

The Kellogg Creek WPCP runs a Conventional Activated Sludge (CAS) process and has a SCADA system, which consists of various types and ages of instrumentation and drives.

The PLCs consist of Siemens S7-300 and S7-400 PLCs utilizing Siemens 505 series and Siemens S7-300 style I/O mounted in remote racks.

The Fiber Optic system consists of running Profibus from Remote Bases to PLCs and Ethernet from PLCs to Servers.

The Servers located at the Kellogg Creek Plant consist of I/O, INSQL, Application and Auto Dialer. The Plant is manned eight (8) hours per day and seven (7) days per week and relies on two (2) auto dialers for notification of an alarm during the off hours. The HMI application is Wonderware InTouch version 10.1. There are various Operator Work Stations and Development Work Stations located in the plant.

The Hoodland Sewage Treatment Facility is a small Rotating Biological Contactor ("RBC") Plant. There is with some automation but no SCADA system. The Plant is manned eight (8) hours per day, seven (7) days per week and relies on one (1) auto dialer for notification of an alarm during the off hours.

The Boring Sewage Treatment Facility is a small Lagoon system. There is some automation but no SCADA system. The plant is not manned and is tested on a regular basis. Currently Fiber Optic cables are not available at the site. If they do become available, a decision will be made at that time whether or not to automate.

Fischer's Forest Park Water Pollution Control Facility consists of a recirculation structure and disposal lift station system. There is some automation but no SCADA system. Currently Fiber Optic cables are not available at the site. If they do become available, a decision will be made at that time whether or not to automate.

Remote Pumping Stations: Approximately half of the Pumping Stations are controlled by PLCs (mostly Siemens); some stations also have HMI touch panels utilizing Wonderware InTouch and Siemens software. The rest are controlled by float switches and bubbler systems. The telemetry system consists of one (1) master and approximately twenty (20) remote sites. Currently there is a project underway to replace the existing Telemetry System with one (1) master controller and twenty (20) remote sites. Each site will consist of a PLC, radio modem and radio. The master will provide information to the HMI workstation and alarms will be sent out by the means of an auto dialer. Currently Fiber Optic cables are not available at any sites. If they do become available, a decision will be made at that time to automate or not.

The Flow Monitoring Stations monitor the sewage conveyance systems and stream flows. They consist of various types of instruments such as flow, temp and pH. Data is manually collected at each station. There is no SCADA system or automation. Currently Fiber Optic cables are not available at any sites. If they do become available, a decision will be made at that time whether or not to automate.

The North Clackamas Park Regional Detention Facility: The purpose of this facility is to reduce flooding to the area without causing negative impacts to upstream and downstream properties. The system is controlled with a PLC and has a float system for redundant backup. There is some automation but no SCADA system. Currently Fiber Optic cables are not available at this site. If they do become available, a decision will be made at that time whether or not to automate.

4. AVAILABLE INFORMATION

SCADA/Telemetry Development Plan June 30, 2014 – Exhibit "A"

3.3. SCOPE OF SERVICES AND SCHEDULE

The selected firms or consultants that meet the qualifications, will be authorized to propose or serve as sub-consultants on District projects relating to the design and installation, of the instrumentation and SCADA systems. The single most qualified proposer will be identified as the Districts Integrator of Record and will provide the Districts with control system on-call services and project-specific services related to the design, installation and operation and maintenance of the Districts' instrumentation and SCADA systems. However, the System Integrator will be required to negotiate individual scopes of work and budgets during the duration of the contract for either operational support as needed for the SCADA system or for services pertaining to a specific project. As the need arises, the Districts will request a proposal from the remaining qualified integrators selected to perform design, installation and operational support for new or existing SCADA system. The successful proposer will enter into a contract with the Districts for the specific project. The Districts reserve the right to make multiple contract awards.

The System Integrator of Record shall be available as an on-call service provider and work with future capital project designers and contractors for design, design assistance, programming, installation, implementation and startup of Instrumentation, SCADA and Telemetry control systems.

3.3.3. Term of Contract:

The term of the contract shall be a period of one (1) year with the mutual option to renew for four (4) additional one (1) year periods. The total term of the contract cannot exceed five (5) years.

3.3.4 Sample Contract:

Submission of a Proposal in response to this RFP indicates Proposer's willingness to enter into a contract containing substantially the same terms (including insurance requirements) of the sample contract identified below. No action or response to the sample contract is required under this RFP. Any objections to the sample contract terms should be raised in accordance with Paragraphs 2.2 or 2.3 of this RFP, pertaining to requests for clarification or change or protest of the RFP/specifications, and as otherwise provided for in this RFP. This RFP and all supplemental information in response to this RFP will be a binding part of the final contract.

The applicable Sample Professional Services Contract, for this RFP can be found at http://www.clackamas.us/bids/terms.html.

The following insurance requirements will be applicable.

☒ Professional Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for damages caused by error, omission or negligent acts.

☒ Commercial General Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for Bodily Injury and Property Damage.

☒ Automobile Liability: combined single limit, or the equivalent, of not less than $500,000 per occurrence for Bodily Injury and Property Damage.

SECTION 4
EVALUATION PROCEDURE

4.1 An evaluation committee will review all Proposals that are initially deemed responsive and they shall rank the Proposals in accordance with the below criteria. The evaluation committee may recommend an award based solely on the written responses or may request Proposal interviews/presentations. Interviews/presentations, if deemed beneficial by the evaluation committee, will consist of the highest scoring Proposers. The invited Proposers will be notified of the time, place, and format of the interview/presentation. Based on the interview/presentation, the evaluation committee may revise their scoring.

Written Proposals must be complete and no additions, deletions, or substitutions will be permitted during the interview/presentation (if any). The evaluation committee will recommend award of a contract to the final County decision maker based on the highest scoring Proposal. The County decision maker reserves the right to accept the recommendation, award to a different Proposer, or reject all Proposals and cancel the RFP.

Proposers are not permitted to directly communicate with any member of the evaluation committee during the evaluation process. All communication will be facilitated through the Procurement representative.

4.2 Evaluation Criteria

Category	**Points available:**
Proposer's General Background and Qualifications	0-30
Project Understanding and Approach	0-45
Fees	0-25
Available points	**0-100**

4.3 Once a selection has been made, the County will enter into contract negotiations. During negotiation, the County may require any additional information it deems necessary to clarify the approach and understanding of the requested services. Any changes agreed upon during contract negotiations will become part of the final contract. The negotiations will identify a level of work and associated fee that best represents the efforts required. If the County is unable to come to terms with the highest scoring Proposer, discussions shall be terminated and negotiations will begin with the next highest scoring Proposer. If the resulting contract contemplates multiple phases and the County deems it is in its interest to not authorize any particular phase, it reserves the right to return to this solicitation and commence negotiations with the next highest ranked Proposer to complete the remaining phases. The Districts reserve the right to make multiple contract awards as a result of this solicitation.

SECTION 5
PROPOSAL CONTENTS

5.1. Vendors must observe submission instructions and be advised as follows:

5.1.1. Complete Proposals may be mailed to the below address or emailed to Procurement@clackamas.us. The subject line of the email must identify the RFP title. Proposers are encouraged to contact Procurement to confirm receipt of the Proposal. If the Proposal is mailed, an original copy and an electronic copy (on compact disk or jump drive) must be included. The Proposal (hardcopy or email) must be received by the Closing Date and time indicated in Section 1 of the RFP.

5.1.2. Mailing address including Hand Delivery, UPS and FEDEX:

Clackamas County Procurement Division – Attention George Marlton, Director
Clackamas County Public Services Building
2051 Kaen Road
Oregon City, OR 97045

5.1.3. County reserves the right to solicit additional information or Proposal clarification from the vendors, or any one vendor, should the County deem such information necessary.

Provide the following information in the order in which it appears below:

5.2 Cover Letter:
The cover letter should identify the proposing entity, the contact for the procurement and contract negotiation process, and be signed by an authorized representative or official.

5.3 Project Team:
This criterion relates to the Proposer's firm and key individuals qualifications, capabilities, and experience. Provide a description of the following:

- Description of the firm.
- Credentials/experience (including resumes) of key individuals that would be assigned to provide services to the Districts. Provide description of previous experience of the key individuals working together as a team. Must be comprehensive expertise to cover all phases of the work..
- Description of what distinguishes the firm from other firms performing similar services.

5.4 Prior Experience
This criterion relates the record of past performance, including but not limited to price and cost data from previous projects, quality of work, ability to meet schedules, cost control and contract administration. Provide a description of the following:

- Provide a description of providing similar services to public entities of similar size within the past five (5) years. Must provide project owner representative contact (phone and email) information.
- Provide a description of prior experience dealing with Wastewater Resource Recovery Facilities telemetry and SCADA systems
-

5.5 Understanding and Approach
This criterion relates to the Proposer's understanding of the Districts needs for an on-call Integrator of Record and the methodology and course of action used to meet the goals and objectives. The issue is whether the

Proposer has a clear and concise understanding of the potential problems that arise with the telemetry and SCADA systems in an active treatment facility and define what constitutes an emergency. Provide a description of the following:

- Proposer's understanding of the Districts needs as demonstrated in the RFP.
- Proposer's awareness of key issues that may occur if facilities telemetry and SCADA system fails
- Proposer's awareness of project requirements to produce the necessary project deliverables on schedule and within budget.
- Provide a description of local support.
- Provide a copy of the QA/QC program.
- Provide verification of experience with fiber-optic cable and patch panel design and troubleshooting.

5.6 Communication and Availability

This criterion relates to accessibility and availability for project work, meetings, and other interaction with the County. Provide a description of the following:

- Ongoing projects for key staff and percent contracting availability for assignment to the Districts.
- Resources available to perform the work for the duration of the contract.
- Accessibility for interaction with the Agency for meetings and other project tasks.
- Ability to establish and maintain functional, productive working relationships.

5.7 Supportive Information

Supportive material may include graphs, charts, photographs, resumes, references, etc., and is completely discretionary. Please note that the material included as supportive information will not be considered when scoring any sections of the Proposal other than "Supportive Information".

5.8. Fee Schedule

Provide a fee schedule for services your firm provides Fees should be sufficiently descriptive to facilitate acceptance of a Proposal.

5.9. References

Provide three (3) references from clients your firm has served similar to the County in the past three (3) years, including one client that has newly engaged the firm in the past thirty-six (36) months and one (1) long-term client. Provide the name, address, email, and phone number of the references.

5.10 Completed Proposal Certification (see the below form)

PROPOSAL CERTIFICATION
#2018-30 Telemetry System Integrator of Record
(SCADA) Support

Submitted by:_____
(Must be entity's full legal name, and State of Formation)

The undersigned, through the formal submittal of this Proposal response, declares that he/she has examined all related documents and read the instruction and conditions, and hereby proposes to provide the services as specified in accordance with the RFP, for the price set forth in the Proposal documents.

Proposer, by signature below, hereby represents as follows:

(a) That no County elected official, officer, agent or employee of the County is personally interested directly or indirectly in this contract or the compensation to be paid hereunder, and that no representation, statement or statements, oral or in writing, of the County, its elected officials, officers, agents, or employees had induced it to enter into this contract and the papers made a part hereof by its terms;

(b) The Proposer, and each person signing on behalf of any Proposer certifies, in the case of a joint Proposal, each party thereto, certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:

1. The prices in the Proposal have been arrived at independently, without collusion, consultation, communication, or agreement for the purpose of restraining competition as to any matter relating to such prices with any other Proposer or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in the Proposal have not been knowingly disclosed by the Proposer prior to the Proposal deadline, either directly or indirectly, to any other Proposer or competitor;
3. No attempt has been made nor will be made by the Proposer to induce any other person, partnership or corporation to submit or not to submit a Proposal for the purpose of restraining trade;

(c) The Proposer fully understands and submits its Proposal with the specific knowledge that:
1. The selected Proposal must be approved by the Board of Commissioners.
2. This offer to provide services will remain in effect at the prices proposed for a period of not less than ninety (90) calendar days from the date that Proposals are due, and that this offer may not be withdrawn or modified during that time.

(d) That this Proposal is made without connection with any person, firm or corporation making a bid for the same material, and is in all respects, fair and without collusion or fraud.

(e) That the Proposer shall use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this document.

(f) That the Proposer accepts all terms and conditions contained in this RFP and that the RFP and the Proposal, and any modifications, will be made part of the contract documents. It is understood that all Proposals will become part of the public file on this matter. The County reserves the right to reject any or all Proposals.

(g) That the Proposer holds current licenses that businesses or services professionals operating in this state must hold in order to undertake or perform the work specified in these contract documents.

(h) That the Proposer is covered by liability insurance and other insurance in the amount(s) required by the solicitation and in addition that the Proposer qualifies as a carrier insured employer or a self-insured employer under ORS 656.407 or has elected coverage under ORS 656.128.

(i) That the Proposer is legally qualified to contract with the County.

(j) That the Proposer has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, gender identity, national origin, or any other protected class. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business that is certified under ORS 200.055.

(k) The Proposer agrees to accept as full payment for the services specified herein, the amount as shown in the Proposal.

☐ Resident Bidder, as defined in ORS 279A.120
☐ Non-Resident Proposer, Resident State_____
Oregon Business Registry Number_____

Contractor's Authorized Representative:

Signature: _____ Date: _____

Name: _____ Title: _____

Firm: _____

Address: _____

City/State/Zip: _____ Phone: ( ) _____

e-mail: _____ Fax: _____

Contract Manager:

Name _____ Title: _____

Phone number: _____

Email Address: _____

FEE SCHEDULE – COST DATA PRICE PROPOSAL FORM

Date:

Name of Offeror: Solicitation No.

Business Address

Base Contract Year

Signature: **Telephone/FAX:**

Name (print): **E-Mail:**

INSTRUCTIONS_____ requires a detailed breakdown of all estimated costs for this procurement within the categories specified below. Attachments may be included to explain particular cost items. Cost data is subject to verification by government audit.

DIRECT LABOR (Identify by position)	*Est. Hrs.	Rate/Hr.	Total
TOTAL DIRECT LABOR			
LABOR OVERHEAD	O.H. Rate	Base	Total
TOTAL LABOR OVERHEAD			
OTHER DIRECT COSTS (Specify)			
TOTAL OTHER DIRECT COSTS			
TOTAL ESTIMATED COSTS			
FEE (Profit)			
TOTAL BASE CONTRACT YEAR PROPOSAL (All Est. Costs & Fee/Profit) . . .			

ARTICLE E
VENDORS RESPONSE

PORTLAND
Engineering Inc.

2020 SE 7th Ave. Suite 200 Portland, OR 97214
Telephone: (503) 256-7718 Fax: (503) 256-7679

April 25, 2018

Mr. George Marlton
Clackamas County Water Environment Services
Clackamas County Public Services Building
2051 Kaen Road
Oregon City, Oregon 97045

Dear Mr. Marlton,

Portland Engineering, Inc. (PEI) is pleased to submit our proposal to provide Telemetry System Integrator of Record (SCADA) Support to Water Environment Service (WES) and Clackamas County Service District No. 1 (CCSD #1). We are an instrumentation and control system design engineering firm with extensive experience in SCADA design, integration, maintenance, and support. We have been providing superior engineering and systems integration services to industrial and municipal partners throughout Oregon for over twenty five years on projects that include complex and critical control systems where safety and reliability are essential.

Established in 1992, PEI has grown into a multidiscipline engineering corporation employing experienced electrical, mechanical, and chemical engineers. We have built our reputation by supporting our clients with comprehensive professional engineering services and reliable systems integration. We are value engineers with experiential knowledge in a variety of applications and we strive to exceed the needs of our clients in system design, project delivery and timely support.

Over the past 15 years, through a series of successful projects and ongoing field service, PEI has developed a detailed and comprehensive knowledge of the processes and facilities maintained and controlled by WES and CCSD #1 SCADA system. Because of this PEI is uniquely suited to provide the best value in engineering and service work.

I will be your primary point of contact for questions and procurement contract negotiations. Thank you for the opportunity to submit our qualifications, we look forward to working with you in the coming years.

Best Regards,

Carl Serpa, PE
Portland Engineering, Inc.
2020 SE 7th Ave., Suite 200
Portland, OR 97214
Office: (503) 256-7718
cserpa@portlandengineers.com
General Contractors License #135739

Version Date: April 25th, 2018

PORTLAND ENGINEERING, INC.

PROPOSAL TO PROVIDE

Telemetry System Integrator of Record (SCADA) Support

Water Environment Services

CLOSING DATE: Wednesday, April 25th, 2018

CLOSING TIME: 2 PM Pacific Time

SUBMITTED TO:
George Marlton
Director
Clackamas County Procurement Division
Clackamas County Public Services Building
2051 Kaen Road
Oregon City, OR 97045

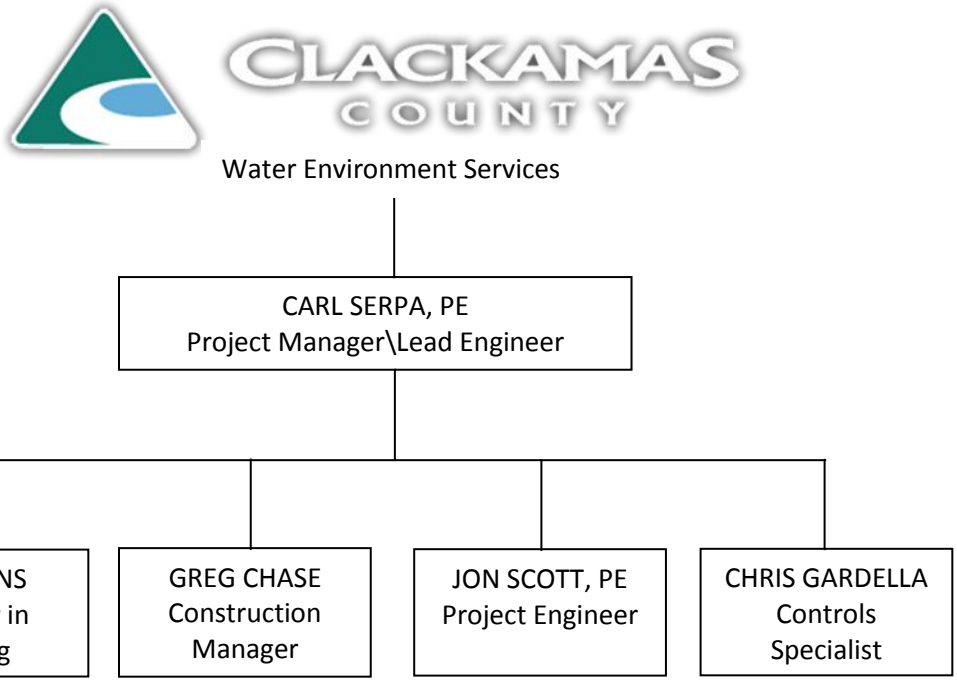
SUBMITTED BY:
Carl Serpa, PE
Project Manager & Lead Engineer
Portland Engineering, Inc.
2020 SE 7th Ave., #200
Portland, OR 97214
Phone: (503) 256-7718
Fax: (503) 256-7679
Email: cserpa@portlandengineers.com
General Contractors License: #135739

Table of Contents

1. Project Team

Portland Engineering, Inc. (PEI) is a systems integration engineering firm located in Portland, Oregon, approximately 15 miles from the Clackamas County Water Environment Services. PEI specializes in the design, programming, assembly, testing, installation, and service of municipal control systems throughout Oregon. PEI was established in 1992 and is a registered systems integrator and Value Added Reseller for Wonderware and Allen-Bradley/Rockwell Automation, Matrikon, Ignition and InduSoft. We work with all major brands of automation hardware and software and have been in the automation industry for over twenty-five years, providing us with in-depth knowledge of older systems and the ability to integrate them with today's technology. We are members of the Control System Integrators Association (CSIA) and we carry General Liability Insurance and a $2M Professional Liability Insurance. When project bonding is required we are able to obtain project bonding for Controls projects as high as $2,000,000. This ability speaks directly to our solvency as a company and our strong financial rating.

Our engineers have experience in a wide range of industrial, commercial and municipal fields providing our clients with a breadth of process experience that helps develop smart solutions. Our projects include complex and critical controls on systems where efficiency, safety, and reliability are essential. We design control solutions to optimize your system's value, reliability, and longevity, and have remained successful through the years because of our commitment to working with our clients as partners, understanding our client's problems, and developing long term, value added solutions. For this project, PEI has selected a talented and experienced group of engineers, technicians and managers. The following organizational chart shows the company organization for this project.



Portland Engineering is committing one Project Manager/Lead Engineer, one Project Engineer, one Engineer in Training, one Controls Specialist, and one Construction Manager. The Project Manager/Lead Engineer is Carl Serpa, PE; the Project Engineer is Jon Scott, PE; the Engineer in Training is Jim Evans; the Controls Specialist is Chris Gardella, and the Construction Engineer is Greg Chase. The PEI team members selected for this project bring many years of experience and advanced skill sets. All of PEI technical staff members that will support WES project have four engineering degrees or two year technical degrees.

Carl Serpa, PE is selected as Project Manager/Lead Engineer for his extensive experience managing the design, installation and integration of SCADA projects for Clackamas County, WES, CCSD#1, and the District. Carl is a registered professional engineer in Controls Engineering in the state of Oregon and can provided stamped engineering design documents. Additionally, Carl has over 15 years of experience working at WES treatment plants and other facilities and will bring a high level of institutional knowledge to future projects. Carl will provide hands on, onsite management as needed and oversee the execution of the project. Carl will guide design phase engineering to produce accurate budget estimation that informs design decisions and provides pre-construction resolution of design-related issues that result in improved project quality and financial performance.

As determined by project needs, Carl will utilize resources of Jim Evans, Greg Chase, Jon Scott and Chris Gardella. This group of skilled engineers, specialists and managers brings over 65 years of combined experience in process control, SCADA and telemetry engineering. A brief statement about each person's experience and qualifications as well as the anticipated role they will fill on the project team is provided below. Resumes are provided in Section 5, Supportive Information, showing details on education, certifications and relevant project experience.

Jon Scott, PE is a professional engineer with many years of design, programming and troubleshooting experience in water and waste water treatment processes. Jon provides important engineering knowledge including project scope development; estimation and bids; detailed design; PLC & HMI programming; start-up and commissioning. Jon frequently manages PLC programming and conversions, HMI development and start-up for municipal and industrial projects. It is anticipated that Jon will provide design support and QA/QC services for WES projects.

Jim Evans, EIT is an Engineer in training who recently passed the Professional Engineering exam with Professional Engineer Registration anticipated in the summer of 2018. Jim has recently been the lead design engineer for several waste water lift stations. Additionally, Jim is a skilled programmer with 5 years of experience in the field doing equipment startups and field service. Jim will provide design services, programming and QA/QC for WES projects.

Chris Gardella is a controls specialist with over 20 years of relevant experience. Chris is a specialist in field startups, instrumentation setup and calibration, IO checkouts and system commissioning. Additionally, Chris is a highly skilled and efficient control panel designer. He is an experienced control and configuration development specialist and field service engineer with excellent troubleshooting skills. For WES, Chris will be utilized for quick response service calls as well as field service, programming and design support.

Greg Chase is PEI's construction manager and will provide support for project management and construction services that require installation or electrical services. Greg has over 20 years of experience in project and construction management which facilitates efficient installation and electrical work and he is able to blend the needs of owners, managers, designers, and users to deliver results that exceed expectations.

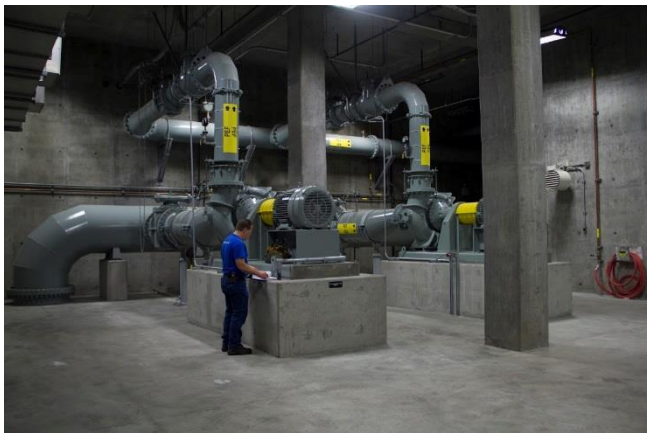
The overwhelming majority of the project work will be executed by our Project Manager and Lead Engineer, Carl Serpa, PE. PEI uses a team approach for all of our projects and this is no different. The intent of this approach is to include all of the involved parties throughout the course of any project and ensure effective communication about the status, progress, and schedule of the project. PEI typically includes the owner, operators, maintenance personnel, engineers, electricians, mechanics, and vendors in the team, and insures that all of these parties are keenly aware of the objectives of the project. We strongly believe that this approach leads to projects that are successful for all parties over the long term rather than projects that are merely "completed".

Internally PEI uses the same approach for managing our Team. Our Project Manager is responsible for maintaining communications, handling contractual obligations, attending project meetings, and maintaining the project schedule. This allows our controls engineers to focus on completing the technical aspects of the project effectively. Further, this provides a layer of quality control by providing a second and third set of eyes on internal project reviews.

2. Prior Experience

PEI has been a collaborative partner working with WES since 2004. PEI's first project with WES was to develop complete control panel wiring schematics for the Kellogg treatment plant when none existed at the time. Between 2004 and 2012 PEI provided engineering services and programming support at Tri-City, Kellogg, Hoodland and Boring treatment plants, numerous pump stations and flow monitoring locations. Several major projects of note during this time period include the 2010 Tri-City Phase 1 Expansion Project, 2011 Tri-City Biosolids (Backup Centrifuge) and the Kellogg Maintenance Improvement project in 2011.

During the **Tri-City Phase 1 Expansion**, PEI provided engineering services for control panel design, fiber optic network design, instrumentation configuration, PLC and HMI programming. This was a multi-year project that included integration and coordination of several vendor supplied control systems for the MBR, Lime System, Odor Control, UV, Aeration Blowers. For this project PEI developed custom PLC function blocks and HMI graphics for new systems that adhered to WES programming standards. PEI maintained all P&ID drawings throughout the duration of the project providing key consistency of equipment tag numbering.



Tri-City Phase 1 Expansion Project

The **Tri-City Biosolids** project (also known as the BUC for Backup Centrifuge) consisted of adding a new solids handling system. PEI provided engineering for control panel design, instrument configuration, and programming to integrate the new equipment into the existing SCADA and control system.

For the **Kellogg Maintenance Improvement** project PEI provided key onsite engineering services to supply and install instrumentation and control panels all while keeping the existing plant running. This included major revisions to existing control panels to upgrade components and clean up wiring. PEI maintained and updated all the control panel wiring schematics throughout the duration of the project.

Starting in 2013 to the present, PEI has been the WES System Integrator of Record completing a diversity of projects on time and on budget, ranging from small service calls to major PLC and telemetry upgrade projects. A partial list of projects completed in the last five years is provided below. A few of the larger projects to note in the list below are the **WES SCADA and Telemetry and Development Plan, WES Telemetry System Upgrade, Tri-City Plant Aeration Blower Integration and Startup, Tri-City Air Scour Blower Integration and Startup**.

WES Telemetry System Replacement

2013 WES Projects:

- Tri-City Plant Parallel Digester
- Intertie #2 Pump Station integration, programming and troubleshooting
- Tri-City Plant Biogas Flare integration, programming and startup
- Kellogg Plant Aeration Blower programming and tuning
- WES SCADA and Telemetry Development Plan
- Tri-City Plant Bisulfite System Integration
- Collection System Telemetry System Replacement

2014 WES Projects:

- Willamette Pump Station PLC upgrade
- Tri-City and Kellogg HMI and Historian version upgrade
- Collection System Flow Monitoring
- Clackamas Pump Station PLC upgrade
- Collection System Cellular Telemetry Design and Installation
- Hoodland Plant Alarm System Upgrade
- Tri-City Plant Aeration Blower Master Control Programming

2015 WES Projects:

- Tri-City Plant Energy Meter Install and Integration
- Tri-City Plant Aeration Blower Replacement Design and Specifications
- Boring Plant Effluent Temperature Data Acquisition and Integration
- Intertie 2 Pump Station flow control and coordination
- Tri-City Plant Generator IO Re-Design and Integration

2016 WES Projects:

- Tri-City Plant Emergency Aeration Blower Design and Integration
- Tri-City Plant Influent Pump Station PLC Upgrade
- Kellogg Plant Digester Gas Flow Meter Integration

2017 WES Projects:

- Kellogg Plant Improvement Project Control System Design and Specifications
- Tri-City Plant Aeration Blower Integration and Startup
- Tri-City Plant MBR Air Scour Blower Integration and Startup
- Tri-City Plant MBR Chlorine Dosing System Integration
- Collection System Flow Meter Integration-8 sites
- Tri-City Plant Washer Compactor Control System Design and Integration
- Hoodland and Arrahwanna Pump Station Upgrade Design and Specifications

For each of the projects discussed above PEI provided a consistent project approach. Upon identification of a project, PEI's project manager would complete an initial evaluation of the project and provide a written scope of work and budget for the project. This was then evaluated and approved by WES and PEI would begin work. All of these projects were completed on time and under budget.

In addition to the ongoing work for WES, PEI regularly provides similar engineering services to other public entities including the **City of Lake Oswego, City of Tigard, City of Wilsonville, and City of Astoria**. Descriptions of major projects completed for both WES and other municipal clients are provided below.

WES Tri-City Plant Phase One Expansion

Water Environment Services

LOCATION: Oregon City, OR

RFERENCE CONTACT

Randy Rosane PE, Engineering Supervisor, Water Environment Services, (503)742-4573, 150 Beavercreek Road, Oregon City, OR 97045, RandyRos@co.clackamas.or.us

YEAR COMPLETED: 2010

PROPOSED STAFF WHO WORKED ON THE PROJECT

Carl Serpa, PE, Chris Gardella

Tri-City Expansion: Onsite Checkout

Project Description

The Tri-City Water Pollution Control Plant is a waste water instrumentation and control project completed by Portland Engineering, Inc. in 2010. The project was completed with Slayden Construction for Water Environment Services (WES) in Oregon City, Oregon. This project included the addition of a Membrane Bioreactor package system in addition to new support systems and improvements to existing processes. The Tri-City Water Pollution Control Plant (WPCP) Phase 1 expansion design was done in collaboration with MWH (Now Stantec).

The addition of the Membrane Bioreactor (MBR) expanded the existing plant's wet and dry weather treatment capabilities. Upon completion of the upgrade, the plant's treatment process operates as a blend of conventional activated sludge (CAS) along with the MBR system. Additional elements were added under the project that included UV, Odor Control, Sodium Hypo feed, Band Screens, Standby Power, Power Monitoring as well as control function integration with exiting CAS equipment.

Portland Engineering performed the following services:

- Instrumentation supply, set up and calibration.
- PLC control panel wiring drawings.
- Fiber Optic and Network design. PEI drawings identified all fiber ports, patch panels, managed switches and cable layouts for a complete network configuration
- Provided point-to-point checkout for all I/O to the control panels and worked with package vendors for I/O checkout.
- Systems testing, startup and commissioning. Additionally, PEI supported a seven day clean water test that included all systems prior to start up.
- Process Control Programming and Integration of existing plant control with the MBR expansion and Balance of Plant systems.
- Wonderware HMI programming and the existing plant updates. This included coordination with the Membrane supplier for integration of their control screens.
- Control Panel design and supply as well as Control Panel checkout.
- Complete Project Integration with Vendor Packages including, Profibus and Ethernet communications along with hardwire I/O.

Kellogg Creek Wastewater Pollution Control Plant Maintenance Improvement Project

Water Environment Services

LOCATION: Milwaukee, OR

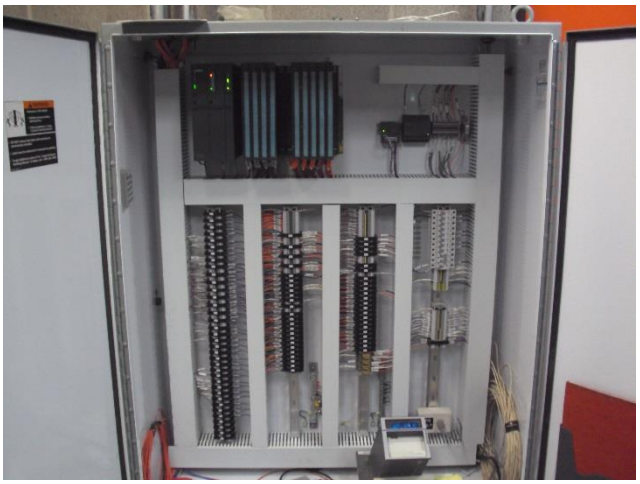
RFERENCE CONTACT

Randy Rosane PE, Engineering Supervisor, Water Environment Services, (503)742-4573, 150 Beavercreek Road, Oregon City, OR 97045, RandyRos@co.clackamas.or.us

YEAR COMPLETED: 2011

PROPOSED STAFF WHO WORKED ON THE PROJECT

Carl Serpa, PE, Chris Gardella



Kellogg Plant: New Control Panel

Project Description

PEI served as a key contractor for the Kellogg Creek Water Treatment Plant System Maintenance Project in 2011. As a contractor for Stettler Supply Company and working with the other main contractor CH2M, this project involved the integration of new PLC's and I/O, network equipment and instrumentation. The primary goal of the project was to replace obsolete control hardware (PLC's and I/O) and network equipment. PEI's responsibilities included design engineering and drafting, OEM/vendor system compliance, construction management, procurement and CAD drafting, network design and startup coordination. The project included panel design as well as network design and configuration. PEI provided supervision of the electrical and mechanical installation, testing, startup, and commissioning of the instrumentation and equipment. One particularly difficult aspect of this project that was skillfully managed by PEI was the installation and testing of all the new control equipment and instrument while keeping the plant fully operational.

Willamette Pump Station Engineering Evaluation and Upgrade

Water Environment Services

LOCATION
West Linn, OR

RFERENCE CONTACT
Randy Rosane PE, Engineering Supervisor, Water Environment Services, (503)742-4573, 150 Beavercreek Road, Oregon City, OR 97045, RandyRos@co.clackamas.or.us

YEAR COMPLETED
2014

PROPOSED STAFF WHO WORKED ON THE PROJECT
Carl Serpa, PE

Willamette Pump Station

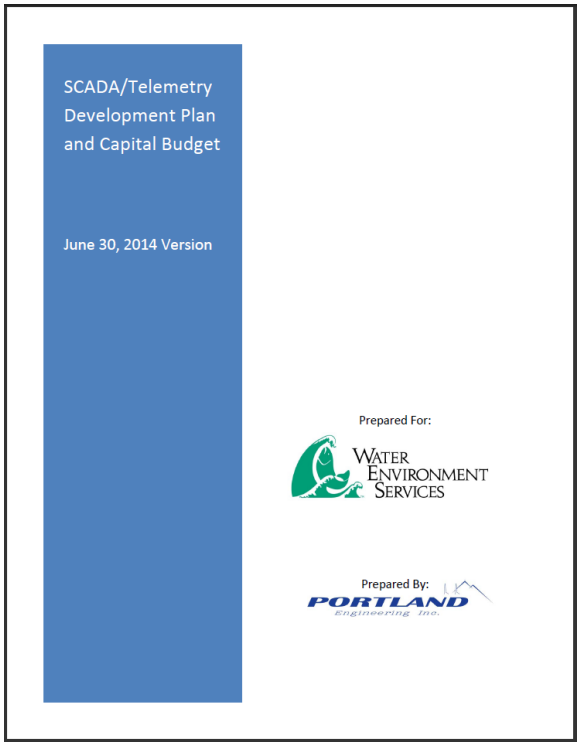
Project Description

In February of 2014, MWH Global (MWH) was selected by Water Environment Services (WES) to provide engineering service for the purpose of evaluating Willamette pump station. Willamette pump station is a key asset located in the City of West Linn responsible for the collection and conveyance of waste water for a large area. The station was built in 1986 and needed significant attention to address operational deficiencies. To support this effort MWH teamed with Portland Engineering Inc. (PEI) to perform a detailed engineering analysis of the station and provide recommendations and costs for improving the operation and reliability of the station.

In support of Willamette Pump Station evaluation project, PEI provided services to evaluate the existing pump station control and telemetry system. This evaluation covered the age and condition of the PLC and hardwired controls, operator Interface and instrumentation. In addition, the condition and performance of the telemetry communication system was closely scrutinized due to the critical importance of the station and the need for reliable and accurate status information. PEI performed operational testing to document the pumping capabilities of the station and determine if control programming changes would help reduce the pump ragging problems and improve performance. PEI provided a written assessment report for the pump station discussing the current state of the instrumentation and controls, detailing deficiencies, and defining an action plan for improvements and modernization. As a direct result of this work, a modernization project was quickly initiated where PEI replaced obsolete control equipment which resulted in an immediate improvement in station reliability and maintainability.

SCADA/Telemetry Development Plan and Capital Budget

Water Environment Services



LOCATION: West Linn, OR

RFERENCE CONTACT

Randy Rosane PE, Engineering Supervisor, Water Environment Services, (503)742-4573, 150 Beavercreek Road, Oregon City, OR 97045, RandyRos@co.clackamas.or.us

YEAR COMPLETED: 2014

PROPOSED STAFF WHO WORKED ON THE PROJECT

Carl Serpa, PE

Project Description

In 2013, as part of Water Environment Services (WES) effort to improve and maintain the SCADA and telemetry systems, a need for a long term development plan and budget was identified. In fiscal year 2014 (July 2013 through June 2014) Portland Engineering completed the yearlong project to evaluate the SCADA, control and telemetry systems encompassed by the WES treatment plants, pump stations, meter stations and communication networks. WES provides wastewater collection & treatment and biosolids reuse for seven cities and several unincorporated areas in Clackamas County, as well as storm water management, on-site sewage disposal, and water quality and stream enhancement.

This comprehensive Plan identified and developed goals relating to the following factors: flow measurement and management, specifically how the SCADA/Telemetry system can be used to monitor real time flow and allow operations to manage the flow; energy measurement and management, particularly how energy measurement and data collection can be used to track the efficiency of treatment and pumping operations; system wide operation and control coordination, namely the ability of operators to centrally manage and control wastewater flow including the development of automated control algorithms for flow control; telemetry, primarily the long term structure of remote data gathering systems and how to ensure that the system is modernized to meet the goals of the Plan; modernization, particularly documenting all control hardware, communication equipment and instruments to identify and determine the priority time frame of equipment replacement; design and equipment standards, specifically setting forth the basic design and equipment standards that will be used when adding or replacing control equipment; and standard procedures, because the large collection of controllers, operator interface terminals, and other programmable devices make managing the system difficult due to the sheer size.

The end result of this effort was a comprehensive condition summary and recommendation for future improvements and development including a budget for each recommendation. This Development Plan and Capital Budget provides a detailed road map for operating, maintaining, and improving the WES operations control and data acquisition systems over the coming five to ten years. The plan has been subsequently used by WES to prioritize spending for projects on control and telemetry system improvements. Completion of this project further increased PEI's knowledge and understanding of the WES systems and needs and has positioned PEI to provide high value service for future control system projects.

Lake Oswego Tigard Water Partnership

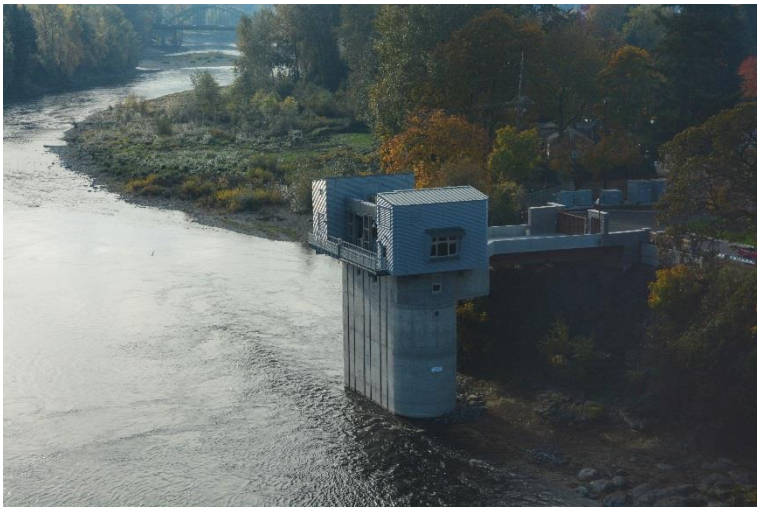
City of Lake Oswego and City of Tigard, OR

LOCATION: Lake Oswego/Tigard, OR

RFERENCE CONTACT
Kari Duncan, Water Treatment Plant Manager, City of Lake Oswego, (503) 635-0393, Lake Oswego Water Treatment Plant, PO Box 369, Lake Oswego, OR 97304

YEAR COMPLETED: 2017

PROPOSED STAFF WHO WORKED ON THE PROJECT
Carl Serpa, PE, Chris Gardella



Lake Oswego Tigard Raw Water Intake

Project Description

Portland Engineering is currently providing control system design engineering services for the $250 million Lake Oswego Tigard Water Partnership Water Treatment Plant expansion. This project doubled the capacity of an existing water treatment plant through a multi-year phased construction plan; keeping the plant fully operational throughout the project. In addition to a complete rebuilding of the treatment plant the project also included a new intake structure, a new storage reservoir, a new pump station, and pipelines between locations. PEI provided control system designs for all locations which included telemetry systems, communication networks, a plant-wide fiber-optic network, security/video systems, access controls and other ancillary systems as well as the PLC and HMI controls.

The Control system is based on redundant Allen-Bradley ControlLogix PACs, I/O partitioning, and redundant HMIs with numerous client HMIs located throughout the plant, and historical data collection. The hardwired I/O at the plant will be approximately 1200 points with roughly an equal number of network I/O and vendor I/O. HMI tag counts are expected to be in the 5-10,000 range. A redundant Allen-Bradley ControlLogix System has been designed with redundant HMI communications, a historical data server, and numerous HMI computers located throughout the plant.

PEI is providing fully detailed panel layouts and wiring diagrams, PLC and HMI development and programming, instruments and instrument calibration, O&M manuals for the complete scope of work including as-built electrical schematics, and all control strategies. Additionally Control Narratives were developed by the process engineers with support from PEI. As part of the plant's O&M manual, fully detailed control strategies were provided with all interlocks, alarms, modes of operations, operator controls, available trends and other data that serve as a basis for PLC and HMI programming, start-up and commissioning.

City of Astoria Pump Station #1 Electrical and Control Upgrade

City of Astoria, OR

LOCATION: Astoria, OR

RFERENCE CONTACT: Cindy Moore, PE, Assistant City Engineer, City of Astoria, 1095 Duane St. Astoria, OR 97103. (503) 338-5173

YEAR COMPLETED: 2017

PROPOSED STAFF WHO WORKED ON THE PROJECT
Carl Serpa, PE, Jim Evans

Astoria Pump Station #1 Finished MCC Lineup

In the summer of 2016, Portland Engineering Inc. (PEI) completed a project for the City of Astoria to replace the electrical and control system for their main sewage lift station. The project utilized a newly approved for the state of Oregon and highly efficient delivery method call Progressive Design Build. With this delivery method the job was completed much more quickly than can be done using a standard design, bid, build method. Progressive design build projects are completed in phases where a team of engineering and construction contractors provide design services in phase 1 and implement the design in subsequent work phases. This approach is highly collaborative and allows the engineers, contractors and the client to work together during the design phase to resolve problems and eliminate unknowns so that the costs for construction phases can be accurately determined.

The City of Astoria Pump Station #1 handles between 2 and 18 million gallons of combined sewage and wastewater per day. The station is 40 years old and was still using original electrical distribution and control equipment which was in need of replacement. The general scope of work included removing and replacing the existing Motor Control Center (MCC) and power distribution, designing and installing new controls and instrumentation, supply of two 125 hp pump motors, programming and startup. The job also required installing temporary power distribution and controls to keep the station operating during the construction work.

For this project, PEI led a team consisting of an electrical contractor and several key equipment suppliers to fully develop the project scope and complete the design in Phase 1. Phase 1 deliverables included electrical, control and instrumentation design, drawings, instrument list, construction schedule, construction sequence and guaranteed price for the construction phase.

In Phase 2, PEI was the general contractor overseeing the construction work. Work began with installation of temporary electrical equipment, controls and instruments to allow uninterrupted station operation. This was immediately followed by the demolition and removal of the existing MCC's and installation of a new MCC line up. A new control panel and instruments were installed and connected. Additionally, PEI provided and installed two new 125 hp pump motors. The Progressive Design Build approach benefited the project by allowing PEI design engineers to work closely with the electrical contractor and equipment suppliers to quickly resolve problems and keep construction on schedule. Phase 2 of the project was completed over a three week period in August 2016, all the while keeping the pump station operational

3. Understanding and Approach

Through many years of work with WES and other municipal partners, PEI has gained an appreciation for the critical nature of the water and waste water process systems. Along with working safely, PEI's top priority is keep our clients system operating even when work on them must be done. As work on each project progresses PEI routinely coordinates with client engineers, managers, operations staff and technicians to schedule activities that may affect process operations to ensure timely completion of work without disruption to WES activities. No one system is the same and our approach focuses on customizing on-call, project specific integration solutions to the needs of each project individually through hands-on development

Portland Engineering has been working with Clackamas County as a control system integrator, in some capacity, for more than fifteen years. We understand the District's operational structure and need for a wide range of consulting services associated with control system on-call and projects-specific services and budgets related to the design, installation and operation and maintenance of the Districts' instrumentation and control systems. As the Districts' Integrator of Record we will bring a team based project approach when identifying a Scope of Services and Fee, one that identifies and understands project needs; assesses and minimizes risk; and manages and reduces cost while providing a reliable and superior product. PEI will utilize a single point of contact for all project and service needs. PEI's project manager/lead engineer will be responsible for evaluating all requests for project and service work and coordinate the activities of other PEI engineers to ensure efficient delivery of services. PEI's project manager/lead engineer will utilize the following project approach:

1. **Initial Evaluation:** PEI discusses the request with WES staff to determine the nature of the work required. If the request is for urgent field service support, PEI will immediately dispatch resources to resolve the issue. For project work, PEI will continue through the project approach steps below.
2. **Project Definition and Scope Development**: PEI will develop the project scope of work, schedule requirements and prepare the project budget.
3. **Allocate Resources**: Upon approval to proceed with a project, PEI will assign tasks to engineers to ensure timely completion of project work.
4. **Work Delivery Planning**: In this step of the project approach, PEI will coordinate with WES engineers, operation staff and technicians to identify the best implementation of project deliverables. This includes coordination with plant operations for any programming or configuration that must be done on operating systems.
5. **QA/QC**: PEI maintains a rigorous Quality Assurance\Quality Control program to ensure correctness of drawings, documents and checkout services. PEI's QA/QC program is discussed in detail below.
6. **Startup/Final Delivery**: Because most project work involves implementation of programming and control system, this step generally entails onsite startup, configuration and testing for SCADA and control systems. This requires PEI to be sensitive to the needs of operation staff to eliminate disruption to ongoing operation. As needed, PEI will also provide training to operations staff for any new functionality of SCADA and control systems.
7. **Wrap up/Record Documents**: For project wrap up and close out, PEI will provided final documents (drawings, O&M's, training materials). Record drawings will always incorporate startup redlines and field modifications.

The general scope of work is based on a broad and diverse range of services the District may require for maintaining and improving the SCADA and Telemetry systems. Broadly speaking these services can include all or some parts of project management; concept planning and engineering; preliminary and final design; construction engineering and field services; fiber-optic network design and troubleshooting; and/or investigations, studies, analyses, or other consulting pertaining to the design, installation and operational support for new or existing SCADA system. With this in mind the **initial evaluation** is the key for PEI to provide both project work and field service support for WES. For technical support and immediate field service, PEI's project manager/lead engineer will be the first responder and coordinate additional PEI resources as needed. During periods where the project manager/lead engineer will not be locally available PEI will designate a secondary contact to respond to immediate needs. PEI understands the importance of WES's SCADA and

telemetry systems and continually takes a proactive approach to predict possible problems and respond to unexpected equipment failures.

Often times responding to these problems requires a degree of flexibility with the understanding that problems can arise at any time. Further, control systems and their constituent components penetrate deeply into process systems, generally meaning that when problems do arise to operations, to some extent it will require working with the control system. When these problems come up they require an immediate response and capable resource that can rapidly respond and resolve these problems as they arise and in a cost efficient manner. PEI has routinely provided after hours and weekend support to ensure continual operation of WES systems. This includes a 24 hour emergency support contact service that will ensure WES will get timely support at all times. All PEI team members dedicated to WES projects and support are local to the Portland metro area so assistance is never far away.

With over 15 years of experience with WES, PEI brings a deep understanding of needs and requirements of SCADA and telemetry systems. This wide ranging institutional knowledge allows PEI to quickly **define projects and accurately estimate project costs**. In fact, nearly every project PEI has done for WES in the last 10 years has been delivered on time and on budget.

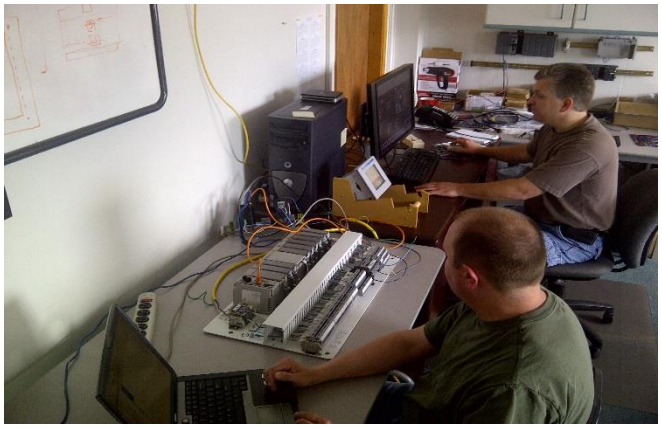
After WES has reviewed and approved a project PEI will begin **resource allocation and planning**. This included schedule development and coordination of activities with WES plant operation staff for work on continually operating systems. This step is key for coordinating PEI activities with other contractors and vendor systems. Our Project Manager and Lead Engineer is responsible for maintaining communications, handling contractual obligations, attending project meetings, and maintaining the project schedule. This allows our controls engineers to focus on completing the technical aspects of the project effectively. Further, this provides a layer of Quality Assurance by providing a second and third set of eyes on projects, ensuring that we have staff intimately aware of the project, capable of stepping in to problem solve any issues that may arise, and to provide internal review. We routinely collaborate as a team in the development of our engineering solution to aid in problem solving, relying on other members of our staff to handle issues specific to their knowledge or to provide additional analysis.

We take proactive steps to ensure the reliability of our systems by routinely servicing them for scheduled version upgrades, operating system improvements, and general usability issues relating to aging systems. To this end, we have rigorous **Quality Assurance and Quality Control** program to guide each step of the project. The QA/QC program utilizes three main components that are customized to the In the SCADA and telemetry industry:

1. Design Review QA/QC Checkoff Sheet
2. Factory Acceptance Test (FAT) Checkoff Sheet
3. Site Acceptance Test (SAT) Checkoff Sheet.

A copy of each of these QA/QC tools is provided in Section 5: Supportive Information.

Each of these QA/QC components serves a specific function to ensure quality and eliminate mistakes and oversights during design activities, equipment setup and system startup. The Design Review QA/QC Checkoff Sheet is used to cross check many design elements and documents to ensure consistency. For example, during this review, an engineer not familiar with the project will be tasked with checking instrumentation type and wiring details against IO lists, control panel wiring and design specifications.



Factory Acceptance Testing: PLC and HMI Checkout

The Factory Acceptance Test Checkoff sheet ensures that all

checks of equipment and programming code is completed prior to delivery to the job. Generally this means doing live electrical testing and checking of new control panels and instruments as well as testing new PLC code along with corresponding human machine interface programming. This effort eliminates errors and greatly improves quality of delivered product and improves efficiency of system testing and commissioning.

The Site Acceptance Test is the final check on systems and programming that takes place in the real world operational environment. The SAT Checkoff Sheet ensures that all elements of the system are systematically checked and verified and that the goals of the project are fulfilled. Activities of this effort include field verification of instrument and signal wiring, IO checkouts, control loop verification, and operator interface implementation.

Site Acceptance Testing at Tri-City PLC7R

The culmination of PEI's project approach discussed here is the startup and final delivery of the work product. This typically includes onsite configuration, setup, testing and commissioning of systems. These complex task require exquisite attention to detail and continual communication with plant staff to ensure the work is completed without disturbing regular operation activities. Depending on the size and complexity of the project this can take anywhere from a few hours to several days or months. PEI will keep a consistent presence for however long is required to ensure all work is completed with the highest level of quality and ensure a successful project.

4. Communication and Availability

As with any project, PEI promises to commit any and all resources required to fulfill our agreement and we make the full breadth of our engineering services available to the District. PEI uses a team approach for all of our projects, meaning the project manager can break down tasks and assign them to support members to maintain work efficiency. This team will be led and managed by Carl Serpa, PEI's project manager and lead engineer. Carl is currently supporting several long term WES project as well as managing all immediate service and support needs. Currently Carl is spending approximately 75% of his availability on WES projects, however at certain times in the past this level has risen to nearly 100%. PEI has no intention of changing resource allocation for WES, so Carl will remain as the point of contact for responding to service and project needs. Because PEI is a flexible and dynamic organization we can easily organize resources to support WES projects as the needs arise. PEI maintains weekly resource allocation meetings to discuss upcoming work and determine how best to provide the necessary resources. As the work load for WES projects increases, PEI will delegate tasks to other members of the team. For large or long duration projects, PEI will build this into the staffing model and assign a dedicated engineer to support the project from beginning to end.

Anticipated staff availability and loading for key project members over the next year is provided below.

Carl Serpa: Availability 75%

Ongoing Projects:

- WES Hoodland/Arrahwanna Pump Station Design
- City of Tualatin ASR Upgrades
- City of North Planes Reservoir and Pump Station Design
- Kellogg WRRF Improvements

Jim Evans, Availability 60%

Ongoing Projects:

- Puget Sound Energy Jackson Prairie Control Upgrade
- Puget Sound Energy Sumas Upgrades
- City of Tualatin Miscellaneous PLC upgrades
- Design support and Miscellaneous Service

Jon Scott, Availability 60%

Ongoing Projects:

- The Dalles Waste Water Treatment Plant Upgrade
- Clean Water Services Programming Support
- City of Ridgefield Booster Pump Station

Chris Gardella, Availability 25%

Ongoing Projects:

- Project Design Support and Miscellaneous Service

Greg Chase, Availability 50%

Ongoing Projects:

- The Dalles Waste Water Treatment Plant Upgrade
- City of Vancouver Water Station #1
- City of Wilsonville Waste Water Telemetry

Given the current work loading and availability of PEI's team, we are well positioned to support all upcoming WES project throughout the duration of the contract.

5. Supportive Information

RESUMES

Carl Serpa, PE

Education
BS, Chemical Engineering, University of Washington

Licenses/Registrations
Professional Engineer Control System Engineering - Oregon
PE# 98440PE
December 17, 2014

CERTIFICATIONS
Invensys Wonderware Certified System Integrator
InduSoft Certified Developer

Project Manager/Lead Engineer

Carl Serpa, PE is a Professional Engineer with an education in chemical engineering and over twenty five years of experience in process and control system engineering. Carl has deep knowledge and broad experience developing control system design standards, process control programming, integrating operator interfaces, control system networks, and historians; in addition to a strong understanding of project management related to industrial and municipal control projects.

Carl will be the project manager and lead engineer responsible for all aspects of scope development, engineering design, programming and quality assurance/quality control. Carl has extensive knowledge of all industry standard control platforms and software including Allen Bradley, Siemens, Modicon, Rockwell Automation, and Wonderware.

Relevant Project Experience

Water Environment Services Kellogg Wastewater Treatment Improvement Project
Working with Brown & Caldwell, Carl provided control system design and analysis for the Kellogg Plant improvement project. Carl provided design support for P&ID development, control panel modifications and wiring and equipment specifications..

Water Environment Services, SCADA and Telemetry Development Plan 2014
Carl was the Project Manager and Lead Engineer to Water Environment Services for the development of a system wide SCADA Development Plan. This extensive and comprehensive plan addresses several pressing issues for WES. They include: system wide flow measurement and management; energy measurement and management; system wide operation and control coordination; telemetry; SCADA/telemetry modernization; design and equipment standards; and standard procedures. Once complete, this plan served as a road map for all current and future controls related projects at WES.

Water Environment Services, Tri-Cities Waste Pollution Control Facility
The Tri-City Water Pollution Control Plant wastewater instrumentation and control project includes the addition of a Membrane Bioreactor package system in addition to new support systems and improvements to existing processes. The addition of the Membrane Bioreactor (MBR) expands the existing plant's wet and dry weather treatment capabilities. The upgrade allows the plant's treatment process to operate as a blend of conventional activated sludge (CAS) along with the MBR system. Additional elements were added under the project that included UV, Odor Control, Sodium Hypo feed, Band Screens, Standby Power, Power Monitoring as well as control functions to exiting CAS equipment.

Project Manager, City of Tigard SCADA Telemetry System
PEI upgraded the SCADA telemetry system for the City of Tigard as a design/build project. Carl served as the project manager, ensuring that we provided the system design scope, equipment specification, radio frequency licensing application management, supply of all required hardware per design/build specification, installation, and new operator interface system integration for the master and 14 remote sites. The City of Tigard was able to benefit from removal of the leased line modems and the utilization of a licensed frequency radio system.

Jon Scott, PE

Project Engineer

Jonathan Scott is a Professional Engineer with well over twenty five years of diversified experience. Jon provides important engineering knowledge including project scope development; estimation and bids; detailed design; PLC & HMI programming; start-up and commissioning. Jon frequently manages PLC programming and conversions, HMI development and start-up for municipal and industrial projects.

Jon's responsibilities include but are not limited to technical oversight, start-up and quality assurance/quality control for new SCADA telemetry RTU panels; SCADA integration for leased line systems; embedded controls to Allen-Bradley ControlLogix; and performing system enhancements on Allen-Bradley equipment. In addition, Jon excels at troubleshooting, field service and emergency call-outs.

Jon has experience with a variety of software and hardware products including PanelView Plus, RSView32 and RSView ME, Wonderware, ABB Infi90, Allen-Bradley PLC 5, SLC, ControlLogix, DeviceNet, Ethernet, Allen-Bradley/Siemens interface, Siemens S7-300, GE Fanuc 90/30, 90/70, Cimplicity, Genius Bus, DeviceNet, Rosemount HMVCU, Johnson Metasys.

Education
BS Electrical Engineering, Washington State University

LICENSES/ REGISTRATIONS
Professional Engineer– Oregon
PE# 17628PE
January 17, 1995

CERTIFICATIONS
Certified Wonderware Intouch and Historian System Platform Developer

Relevant Project Experience

University of Oregon Steam Plant Upgrade
Jon was the lead HMI development engineer for a large scale upgrade of the Steam Plant for the University of Oregon under the General Contract of Turner Construction. Jon worked with Wonderware Archestra to develop Intouch managed applications on redundant I/O servers and multiple workstations associated with the compete change out of boilers and boiler controls as well as a co-generation and HSRG boiler, and new redundant PLC controls.

Odell Sanitary Wastewater Treatment Plant, Odell, OR
PEI provided engineering services for influent wet well pumping station at the Odell Sanitary District wastewater treatment plant, including influent and effluent flow monitoring and well monitoring, flow and level control, aeration basin blowers, and sludge transfer load out pumps. Additionally, we integrated a GE Zenon membrane filtration system into the plant HMI system to filter and process waste. We provided and configured operator interface computers, including the incorporation of the membrane vendor's screens and tag database into a single application. We supplied and configured PLC control panels, computers, VPN equipment to allow for secure remote access to the control system, and all other specified system instrumentation.

City of Wilsonville Wastewater Treatment Plant, Wilsonville, OR
Portland Engineering served as the system integrator and general contractor for the City of Wilsonville, OR. We were selected by the city to complete a $291,000 telemetry system upgrade for the city's eight operating lift stations. This extensive design-build project required a complete SCADA telemetry system upgrade of the lift stations and we developed the project scope of work and comprehensive fixed costs. The scope included a licensed frequency radio survey and license application, hardening the lift station controls and operational redundancy, integrating the lift station visualization with the waste treatment plant, adding local visualization displays, adding building, panel and wet well security and smoke detectors.

PEI developed a master Wonderware HMI system and local operator interface terminals (OIT), tying each lift station to the waste treatment plant.

Greg Chase

Education
BS Political Science,
University of Oregon

CERTIFICATIONS
Verizon Wireless
M2M Solutions
Provider

Construction Management

Greg Chase has been a project and construction manager for more than twenty five years. His project management experience covers all types of industrial and municipal process facilities, commercial/residential development, historic restoration, industrial conversion, and education facilities. He has extensive experience managing a variety of projects and is able to blend the needs of owners, managers, designers, and users to deliver results.

Greg has knowledge of what is required to develop the project requisites, schedule, and budget; and to take the project through the design process, bidding, construction, move-in, and project close-out stages. Greg routinely builds successful project teams and manages the often difficult interplay between owners, management, and operations.

Additionally, Greg his extensive knowledge of modern telemetry systems and fiber optic networks, cabling and equipment. He is an expert in cellular M2M telemetry and has managed the installation and modification of many radio modem telemetry projects, bringing facilities into compliance with steadily changing and tightening Federal Regulation, an extremely valuable asset for any modern day SCADA system controls project.

Relevant Project Experience

Project Manager, Lake Oswego Tigard Water Partnership, Lake Oswego, OR
Portland Engineering provided control system design engineering services for the $250 million Lake Oswego Tigard Water Partnership Water Treatment Plant expansion. This project, when complete, will doubled the capacity of an existing water treatment plant through a multi-year phased construction plan; keeping the plant fully operational throughout the project. In addition to a complete rebuilding of the treatment plant the project also included a new intake structure, a new storage reservoir, a new pump station, and pipelines between locations.

Project Manager, University of Oregon Steam Plant Upgrade
Greg served as the Project Manager for the Steam Plant for the University of Oregon under the General Contract of Turner Construction. Greg oversaw all Process, DDC, and Controls Integration for the University of Oregon Central Power Station Upgrade Project over the course of two years. Portland Engineering was selected by the University to complete an approximately two million dollar contract for a comprehensive control system upgrade of the existing central power station that provides steam, chilled water, and electricity to the campus. PEI combined information and control features from six different vendor supplied control systems using various communication protocols into one integrated package for the operators' use. For this comprehensive project, PEI provided full installation and integration of new programmable logic controllers for balance of plant controls, operator interfaces and instruments, development of the control strategies, and start-up services.

Project Manager, WES Tri-Cities Phase 1 Plant Expansion, Oregon City, OR
Greg served as the Project Manager for the Tri-City Water Pollution Control Plant completed in 2010. Greg managed all aspects of the instrumentation, control panel supply, configuration, programming and startup for the project which included a new Membrane Bioreactor (MBR) UV, Odor Control, Sodium Hypo feed, Band Screens, Standby Power, Power Monitoring as well as control functions integration with exiting plant systems.

Chris Gardella

EDUCATION
AAS, Electrical Engineering Technology,Portland Community College

CERTIFICATIONS
Ignition Certified
Certified Labview Associate Developer

Chris Gardella is a controls specialist with more than twenty years of experience and a background in automated manufacturing. He is an experienced control and configuration development specialist and field service engineer with excellent troubleshooting skills. His past projects have included SCADA telemetry, industrial machine control, water/wastewater systems modernization and expansion.

Chris is involved in many different capacities depending on the project. His project responsibilities include, control panel design; operator interface programming; equipment specification; instrumentation specification; PLC configuration and programming, network design; wiring diagrams; equipment troubleshooting; testing and start-up. Chris excels at difficult on site start up coordination task that generally arise during plant expansions and modernization projects.

Relevant Project Experience

Startup Coordinator, WES Tri-Cities Phase 1 Plant Expansion, Oregon City, OR

The Tri-City Water Pollution Control Plant is a recent wastewater instrumentation and control project for Portland Engineering, Inc. The Tri-City Water Pollution Control Plant (WPCP) Phase 1 expansion design was led by MWH. The addition of the Membrane Bioreactor (MBR) expands the existing plant's wet and dry weather treatment capabilities. Upon completion of the upgrade, the plant's treatment process operates as a blend of conventional activated sludge (CAS) along with the MBR system. Additional elements were added under the project that included UV, Odor Control, Sodium Hypo feed, Band Screens, Standby Power, Power Monitoring as well as control functions to exiting CAS equipment.

Chris provided onsite operations for PEI and coordinated instrumentation supply and calibration, network configuration, wiring diagrams, startup testing and I/O coordination. Chris was instrumental in the fiber network layout configuration. Testing was coordinated by Chris for the point-to-point checkout for all I/O to the control panels and working with package vendors for I/O checkout. Chris provided support to the Wonderware HMI programming and the PLC programming coordinated and implemented on this project by PEI.

Project Manager, Kellogg Creek Wastewater Pollution Control Plant Maintenance Improvement Project, Milwaukee, OR

PEI served as a key service provider for the Kellogg Creek Water Treatment Plant System Maintenance Project in 2011. As a contractor for Stettler Supply Company and working with the other main contractor CH2MHill, this project involved the integration of new PLC's and I/O, network equipment and instrumentation. The primary goal of the project was to replace obsolete control hardware (PLC's and I/O) and network equipment. As project manager and lead engineer Chris Gardella's responsibilities included design engineering and drafting, OEM/vendor system compliance, construction management, procurement and CAD drafting, network design and startup coordination.

Jim Evans, EIT

EEDUCATION
BS Renewable Energy Engineering, 2012, Oregon Institute of Technology

LICENSES/ REGISTRATIONS
Engineer In Training

Airframe and Powerplant Aircraft Mechanics Permit – Federal Aviation Administration

CERTIFICATIONS
Ignition Certified

Jim Evans is a highly motivated and intuitive programmer with strong system installation and start up experience. He has a background in water and wastewater systems, and specializes in complex HMI systems, control system optimization, communications, network design, and network security. Jim is involved in many different capacities depending on the project and he is a skilled field service engineer with excellent troubleshooting skills.

Jim is capable of supporting many roles including field service and process controls engineering, SCADA equipment design standards, control and configuration, start up and commissioning, integrating operator interfaces and historians, and project specification and scope development. Jim is tenacious in his work ethic and the type of control specialist who will lose sleep so that his clients don't have to. Jim is involved in many different capacities depending on the project. His project responsibilities include:

- Project management
- Operator interface engineering
- Security systems IT design
- Controls network design
- Equipment and instrumentation specification
- PLC controls configuration and system design
- Field service engineering and equipment troubleshooting
- Testing and startup

Relevant Project Experience

Controls Engineer, Lake Oswego Tigard Water Partnership, Lake Oswego, OR

Portland Engineering provided control system design engineering services for the $250 million Lake Oswego Tigard Water Partnership Water Treatment Plant expansion. This project doubled the capacity of an existing water treatment plant through a multi-year phased construction plan; keeping the plant fully operational throughout the project. In addition to a complete rebuilding of the treatment plant the project also included a new intake structure, a new storage reservoir, a new pump station, and pipelines between locations. Following design, Jim has served as a PEI's lead engineer for the final programming, commissioning, and troubleshooting of the new system.

Controls Engineer, University of Oregon Steam Plant Upgrade

Jim has provided ongoing controls engineering development and support for a large scale upgrade of the Steam Plant for the University of Oregon under the General Contract of Turner Construction. Jim worked with Wonderware Archestra to develop InTouch managed applications on redundant I/O servers and multiple workstations associated with the compete change out of boilers and boiler controls as well as a co-generation and HSRG boiler, and new redundant PLC controls.

QA/QC Program: Design Checkoff Sheet

Portland Engineering Inc.
2020 SE 7th Ave., Suite 200, Portland, OR 97214
Ph: 503-256-7718 Fax: 503-256-7679

PROJECT DESIGN QA/QC CHECKOFF SHEET

PROJECT # _____

DATE: _____

CHECKED BY: _____

SIGNATURE: _____

	DOCUMENTS: INDICATE WHAT DOCUMENTS ARE INCLUDED IN THIS QA/QC CHECK ALL THAT APPLY
	PANEL DESIGN
	BILL OF MATERIALS
	WIRING SCHEMATICS
	LAYOUT DRAWINGS
	P&ID DRAWINGS
	I/O LIST
	WIRE/CONDUIT SCHEDULE
	INSTRUMENT LIST
	SPECIFICATIONS: EQUIPMENT
	SPECIFICATIONS: INSTRUMENTS
	SPECIFICATIONS: OTHER

CHECK OFF	**QA/QC TASKS**
	PANEL DESIGN: CROSS CHECK PANEL BOM WITH LAYOUT
	PANEL DESIGN: CHECK PANEL SIZE WITH INSTALL LOCATION SPACE
	PANEL DESIGN: CHECK ENCLOSURE TYPE AGAINST INSTALL ENVIRONMENT
	PANEL DESIGN: CHECK POWER SUPPLY SIZING
	WIRING SCHEMATICS: CHECK I/O LIST AGAINST WIRING SCHEMATICS
	WIRING SCHEMATICS: CHECK I/O POINT LABELING ON SCHEMATICS TO MATCH IO LIST
	WIRING SCHEMATICS: CHECK POWER DISTRIBUTION, BREAKER, FUSE SIZING
	WIRING SCHEMATICS: CHECK IO MODULE WIRING ACCURACY
	WIRING SCHEMATICS: CHECK WIRE LABELING FOR CONSISTENCY
	WIRING SCHEMATICS: CHECK WIRE COLOR CALL OUT AGAINST JOB REQUIREMENTS
	WIRING SCHEMATICS: INTRINSIC SAFETY BARRIERS AND INTRINSIC CIRCUIT WIRING (IF APPLICABLE)
	I/O LIST: CROSS CHECK IO LIST WITH INSTRUMENT LIST
	LAYOUT DRAWINGS: CHECK PANEL INSTALL LOCATION
	LAYOUT DRAWINGS: CROSS CHECK LAYOUT WITH CONDUIT SCHEDULE
	P&ID DRAWINGS: CROSS CHECK DRAWINGS WITH IO LIST
	P&ID DRAWINGS: CHECK INSTRUMENT NUMBERING AGAINST INSTRUMENT LIST/IO LIST
	SPECIFICATIONS: CHECK SPECS FOR PLC BRAND/MODEL AGAINST PANEL BOM
	SPECIFICATIONS: CHECK INSTRUMENT SPECS AGAINST INSTRUMENT LIST
	SPECIFICATIONS: VERIFY CORRECT QUANTITY AND TAG # INSTRUMENTS CALLED OUT AND MATCH INSTRUMENT LIST
	SPECIFICATIONS: VERIFY SPECIFICATION NUMBERS ARE CORRECT FOR JOB
	SPECIFICATIONS: REIVEW CONTROL NARRATIVES FOR ACCURACY (IF APPLICABLE)
	INSTRUMENTATION: VERIFY RANGE OF SELECTED EQUIPMENT FOR ANALOG DEVICES
	INSTRUMENTATION: VERIFY SUITABILITY FOR USE IN CLASS 1 DIV 1, DIV2 AREAS (IF APPLICABLE)

QA/QC Program: Factory Acceptance Testing (FAT) Form Example

FACTORY ACCEPTANCE TEST CHECKLIST

ITEM	CHECK	NOTES
PANEL REVIEW, DRAWING MARKUPS		
VERIFY FUSE SIZES		
APPLY MAIN POWER		
CLOSE MAIN CIRCUIT BREAKER		
CHECK AC DISTRIBUTION BUS AND VOLTAGE		
CHECK DC DISTRIBUTION BUS AND VOLTAGE		
SEQUENCED POWER UP OF EACH COMPONENT		

FACTORY ACCEPTANCE TEST I/O CHECKOUT FORM

Test each Digital Input and verify the signal back to the PLC Processor.						Simulate all Analog Input signal ranges as shown and document the results.						
Trigger each Digital Output signal from the PLC Processor.						Generate an Analog Output signal and document the results.						
NEW CONFIGURATION						Analog Signal Test Range					Digital	
RACK	SLOT	CHANNEL	ADDRESS	TYPE	SIGNAL ID	0%	25%	50%	75%	100%	X	NOTES
01	01	00	zzRIO11A:1:I.Ch0Data	AI	BFS11AI1102							
01	01	01	zzRIO11A:1:I.Ch1Data	AI	BFS11ZI1401							
01	01	02	zzRIO11A:1:I.Ch2Data	AI	BFS11FI1102							
01	01	03	zzRIO11A:1:I.Ch3Data	AI	BFS11AI1101							
01	01	04	zzRIO11A:1:I.Ch4Data	AI	BFS11SI1201							
01	01	05	zzRIO11A:1:I.Ch5Data	AI	BFS11SI1103							
01	01	06	zzRIO11A:1:I.Ch6Data	AI	BFS11ZI1107							
01	01	07	zzRIO11A:1:I.Ch7Data	AI	BFS11ZI1207							
01	01	08	zzRIO11A:1:I.Ch8Data	AI	BFS11ZI1301							
01	01	09	zzRIO11A:1:I.Ch9Data	AI	SPARE							
01	01	10	zzRIO11A:1:I.Ch10Data	AI	SPARE							
01	01	11	zzRIO11A:1:I.Ch11Data	AI	SPARE							
01	01	12	zzRIO11A:1:I.Ch12Data	AI	SPARE							
01	01	13	zzRIO11A:1:I.Ch13Data	AI	SPARE							
01	01	14	zzRIO11A:1:I.Ch14Data	AI	SPARE							
01	01	15	zzRIO11A:1:I.Ch15Data	AI	SPARE							
01	02	00	zzRIO11A:2:O.Ch0Data	AI	BFS11AI1102							
01	02	01	zzRIO11A:2:O.Ch1Data	AO	BFS11ZI1401							
01	02	02	zzRIO11A:2:O.Ch2Data	AO	BFS11FI1102							
01	02	03	zzRIO11A:2:O.Ch3Data	AO	BFS11AI1101							
01	02	04	zzRIO11A:2:O.Ch4Data	AO	BFS11SI1201							
01	02	05	zzRIO11A:2:O.Ch5Data	AO	BFS11SI1103							
01	02	06	zzRIO11A:2:O.Ch6Data	AO	BFS11ZI1107							
01	02	07	zzRIO11A:2:O.Ch7Data	AO	BFS11ZI1207							
01	02	08	zzRIO11A:2:O.Ch8Data	AO	BFS11ZI1301							
01	02	09	zzRIO11A:2:O.Ch9Data	AO	SPARE							
01	02	10	zzRIO11A:2:O.Ch10Data	AO	SPARE							
01	02	11	zzRIO11A:2:O.Ch11Data	AO	SPARE							
01	02	12	zzRIO11A:2:O.Ch12Data	AO	SPARE							
01	02	13	zzRIO11A:2:O.Ch13Data	AO	SPARE							
01	02	14	zzRIO11A:2:O.Ch14Data	AO	SPARE							
01	02	15	zzRIO11A:2:O.Ch15Data	AO	SPARE							
01	13	00	zzRIO11A:13:I.Data.0	DI	FDR10YI0101							
01	13	01	zzRIO11A:13:I.Data.1	DI	FDR10YA0101A							
01	13	02	zzRIO11A:13:I.Data.2	DI	FDR10YA0101B							
01	13	03	zzRIO11A:13:I.Data.3	DI	FDR10TAH0101							
01	13	04	zzRIO11A:13:I.Data.4	DI	FDR10LSH1001							
01	13	05	zzRIO11A:13:I.Data.5	DI	FDR10LSHH1001							
01	13	06	zzRIO11A:13:I.Data.6	DI	BFS11YA1102							
01	13	07	zzRIO11A:13:I.Data.7	DI	BFS11ZI1401							
01	13	08	zzRIO11A:13:I.Data.8	DI	BFS11YA1401							
01	13	09	zzRIO11A:13:I.Data.9	DI	BFS11YI1102							
01	13	10	zzRIO11A:13:I.Data.10	DI	BFS11ZI1102							
01	13	11	zzRIO11A:13:I.Data.11	DI	BFS11YA1102							
01	13	12	zzRIO11A:13:I.Data.12	DI	SPARE							
01	13	13	zzRIO11A:13:I.Data.13	DI	SPARE							
01	13	14	zzRIO11A:13:I.Data.14	DI	SPARE							
01	13	15	zzRIO11A:13:I.Data.15	DI	SPARE							
02	01	00	zzRIO11B:1:I.Data.0	DI	FDR10YI0201							
02	01	01	zzRIO11B:1:I.Data.1	DI	FDR10YA0201A							
02	01	02	zzRIO11B:1:I.Data.2	DI	FDR10YA 0201B							
02	01	03	zzRIO11B:1:I.Data.3	DI	FDR10TAH0201							
02	01	04	zzRIO11B:1:I.Data.4	DI	BFS11YA1101							
02	01	05	zzRIO11B:1:I.Data.5	DI	BFS11YI1201							
02	01	06	zzRIO11B:1:I.Data.6	DI	BFS11ZI1201							
02	01	07	zzRIO11B:1:I.Data.7	DI	BFS11YA1201							
02	01	08	zzRIO11B:1:I.Data.8	DI	BFS11YI1103							
02	01	09	zzRIO11B:1:I.Data.9	DI	BFS11ZI1103							
02	01	10	zzRIO11B:1:I.Data.10	DI	BFS11YA1103							
02	01	11	zzRIO11B:1:I.Data.11	DI	SPARE							
02	01	12	zzRIO11B:1:I.Data.12	DI	SPARE							
02	01	13	zzRIO11B:1:I.Data.13	DI	SPARE							
02	01	14	zzRIO11B:1:I.Data.14	DI	SPARE							
02	01	15	zzRIO11B:1:I.Data.15	DI	SPARE							
02	03	00	zzRIO11B:3:0.Data.0	DO	BFS11HS1401A							
02	03	01	zzRIO11B:3:0.Data.1	DO	BFS11HS1401B							
02	03	02	zzRIO11B:3:0.Data.2	DO	BFS11HS1401C							
02	03	03	zzRIO11B:3:0.Data.3	DO	BFS11HS1102							
02	03	04	zzRIO11B:3:0.Data.4	DO	BFS11HS1201							
02	03	05	zzRIO11B:3:0.Data.5	DO	BFS11HS1103							
02	03	06	zzRIO11B:3:0.Data.6	DO	BFS11HS1107A							
02	03	07	zzRIO11B:3:0.Data.7	DO	BFS11HS1107B							
02	03	08	zzRIO11B:3:0.Data.8	DO	BFS11HS1107C							
02	03	09	zzRIO11B:3:0.Data.9	DO	SPARE							
02	03	10	zzRIO11B:3:0.Data.10	DO	SPARE							
02	03	11	zzRIO11B:3:0.Data.11	DO	SPARE							
02	03	12	zzRIO11B:3:0.Data.12	DO	SPARE							
02	03	13	zzRIO11B:3:0.Data.13	DO	SPARE							
02	03	14	zzRIO11B:3:0.Data.14	DO	SPARE							
02	03	15	zzRIO11B:3:0.Data.15	DO	SPARE							

QA/QC Program: Site Acceptance Testing (SAT) Form Example

SITE ACCEPTANCE CHECKLIST		DATE:	SITE/JOB:
ITEM	**CHECK**	**NOTES**	
PANEL INSTALLATION REIVEW WITH INSTALLER			
CHECK IO TERMINATIONS AND LABELING			
APPLY MAIN POWER			
CLOSE MAIN CIRCUIT BREAKER			
CHECK AC DISTRIBUTION BUS AND VOLTAGE			
CHECK DC DISTRIBUTION BUS AND VOLTAGE			
CLOSE IO FUSES ONE AT A TIME			
FIELD IO CHECKOUT (SEE LIST BELOW)			

SITE ACCEPTANCE TEST I/O CHECKOUT FORM

Verify wiring of each point

Check IO signal against state of device in the field

NEW CONFIGURATION						
RACK	**SLOT**	**CHANNEL**	**ADDRESS**	**TYPE**	**SIGNAL ID**	**NOTES**
01	01	00	zzRIO11A:1:I.Ch0Data	AI	BFS11AI1102	
01	01	01	zzRIO11A:1:I.Ch1Data	AI	BFS11ZI1401	
01	01	02	zzRIO11A:1:I.Ch2Data	AI	BFS11FI1102	
01	01	03	zzRIO11A:1:I.Ch3Data	AI	BFS11AI1101	
01	01	04	zzRIO11A:1:I.Ch4Data	AI	BFS11SI1201	
01	01	05	zzRIO11A:1:I.Ch5Data	AI	BFS11SI1103	
01	01	06	zzRIO11A:1:I.Ch6Data	AI	BFS11ZI1107	
01	01	07	zzRIO11A:1:I.Ch7Data	AI	BFS11ZI1207	
01	01	08	zzRIO11A:1:I.Ch8Data	AI	BFS11ZI1301	
01	01	09	zzRIO11A:1:I.Ch9Data	AI	SPARE	
01	01	10	zzRIO11A:1:I.Ch10Data	AI	SPARE	
01	01	11	zzRIO11A:1:I.Ch11Data	AI	SPARE	
01	01	12	zzRIO11A:1:I.Ch12Data	AI	SPARE	
01	01	13	zzRIO11A:1:I.Ch13Data	AI	SPARE	
01	01	14	zzRIO11A:1:I.Ch14Data	AI	SPARE	
01	01	15	zzRIO11A:1:I.Ch15Data	AI	SPARE	
01	02	00	zzRIO11A:2:O.Ch0Data	AI	BFS11AI1102	
01	02	01	zzRIO11A:2:O.Ch1Data	AO	BFS11ZI1401	
01	02	02	zzRIO11A:2:O.Ch2Data	AO	BFS11FI1102	
01	02	03	zzRIO11A:2:O.Ch3Data	AO	BFS11AI1101	
01	02	04	zzRIO11A:2:O.Ch4Data	AO	BFS11SI1201	
01	02	05	zzRIO11A:2:O.Ch5Data	AO	BFS11SI1103	
01	02	06	zzRIO11A:2:O.Ch6Data	AO	BFS11ZI1107	
01	02	07	zzRIO11A:2:O.Ch7Data	AO	BFS11ZI1207	
01	02	08	zzRIO11A:2:O.Ch8Data	AO	BFS11ZI1301	
01	02	09	zzRIO11A:2:O.Ch9Data	AO	SPARE	
01	02	10	zzRIO11A:2:O.Ch10Data	AO	SPARE	
01	02	11	zzRIO11A:2:O.Ch11Data	AO	SPARE	
01	02	12	zzRIO11A:2:O.Ch12Data	AO	SPARE	
01	02	13	zzRIO11A:2:O.Ch13Data	AO	SPARE	
01	02	14	zzRIO11A:2:O.Ch14Data	AO	SPARE	
01	02	15	zzRIO11A:2:O.Ch15Data	AO	SPARE	
01	13	00	zzRIO11A:13:I.Data.0	DI	FDR10YI0101	
01	13	01	zzRIO11A:13:I.Data.1	DI	FDR10YA0101A	
01	13	02	zzRIO11A:13:I.Data.2	DI	FDR10YA0101B	
01	13	03	zzRIO11A:13:I.Data.3	DI	FDR10TAH0101	
01	13	04	zzRIO11A:13:I.Data.4	DI	FDR10LSH1001	
01	13	05	zzRIO11A:13:I.Data.5	DI	FDR10LSHH1001	
01	13	06	zzRIO11A:13:I.Data.6	DI	BFS11YA1102	
01	13	07	zzRIO11A:13:I.Data.7	DI	BFS11ZI1401	
01	13	08	zzRIO11A:13:I.Data.8	DI	BFS11YA1401	
01	13	09	zzRIO11A:13:I.Data.9	DI	BFS11YI1102	
01	13	10	zzRIO11A:13:I.Data.10	DI	BFS11ZI1102	
01	13	11	zzRIO11A:13:I.Data.11	DI	BFS11YA1102	
01	13	12	zzRIO11A:13:I.Data.12	DI	SPARE	
01	13	13	zzRIO11A:13:I.Data.13	DI	SPARE	
01	13	14	zzRIO11A:13:I.Data.14	DI	SPARE	
01	13	15	zzRIO11A:13:I.Data.15	DI	SPARE	
02	01	00	zzRIO11B:1:I.Data.0	DI	FDR10YI0201	
02	01	01	zzRIO11B:1:I.Data.1	DI	FDR10YA0201A	
02	01	02	zzRIO11B:1:I.Data.2	DI	FDR10YA 0201B	
02	01	03	zzRIO11B:1:I.Data.3	DI	FDR10TAH0201	
02	01	04	zzRIO11B:1:I.Data.4	DI	BFS11YA1101	
02	01	05	zzRIO11B:1:I.Data.5	DI	BFS11YI1201	
02	01	06	zzRIO11B:1:I.Data.6	DI	BFS11ZI1201	
02	01	07	zzRIO11B:1:I.Data.7	DI	BFS11YA1201	
02	01	08	zzRIO11B:1:I.Data.8	DI	BFS11YI1103	
02	01	09	zzRIO11B:1:I.Data.9	DI	BFS11ZI1103	
02	01	10	zzRIO11B:1:I.Data.10	DI	BFS11YA1103	
02	01	11	zzRIO11B:1:I.Data.11	DI	SPARE	
02	01	12	zzRIO11B:1:I.Data.12	DI	SPARE	
02	01	13	zzRIO11B:1:I.Data.13	DI	SPARE	
02	01	14	zzRIO11B:1:I.Data.14	DI	SPARE	
02	01	15	zzRIO11B:1:I.Data.15	DI	SPARE	
02	03	00	zzRIO11B:3:0.Data.0	DO	BFS11HS1401A	
02	03	01	zzRIO11B:3:0.Data.1	DO	BFS11HS1401B	
02	03	02	zzRIO11B:3:0.Data.2	DO	BFS11HS1401C	
02	03	03	zzRIO11B:3:0.Data.3	DO	BFS11HS1102	
02	03	04	zzRIO11B:3:0.Data.4	DO	BFS11HS1201	
02	03	05	zzRIO11B:3:0.Data.5	DO	BFS11HS1103	
02	03	06	zzRIO11B:3:0.Data.6	DO	BFS11HS1107A	
02	03	07	zzRIO11B:3:0.Data.7	DO	BFS11HS1107B	
02	03	08	zzRIO11B:3:0.Data.8	DO	BFS11HS1107C	
02	03	09	zzRIO11B:3:0.Data.9	DO	SPARE	
02	03	10	zzRIO11B:3:0.Data.10	DO	SPARE	
02	03	11	zzRIO11B:3:0.Data.11	DO	SPARE	
02	03	12	zzRIO11B:3:0.Data.12	DO	SPARE	
02	03	13	zzRIO11B:3:0.Data.13	DO	SPARE	
02	03	14	zzRIO11B:3:0.Data.14	DO	SPARE	
02	03	15	zzRIO11B:3:0.Data.15	DO	SPARE	

7. References

New Client Reference:

Cindy Moore, PE
Assistant City Engineer
City of Astoria
1095 Duane St.
Astoria, OR 97103.
503.338.5173
cmoore@astoria.or.us

Long Term Client References:

Rob Murchison, PE
Senior Project Engineer
City of Tigard Public Works Department
13125 SW Hall Blvd
Tigard, OR 97223
503.718.2699
robm@tigard-or.gov

Kari Duncan
Water Treatment Plant Manager
City of Lake Oswego
Lake Oswego Water Treatment Plant,
PO Box 369, Lake Oswego, OR 97304
(503) 635-0393
kduncan@ci.oswego.or.us

8. Completed Proposal Certification Form

PROPOSAL CERTIFICATION
#2018-30 Telemetry System Integrator of Record
(SCADA) Support

Submitted by: Portland Engineering, Inc., State of Oregon
(Must be entity's full legal name, and State of Formation)

The undersigned, through the formal submittal of this Proposal response, declares that he/she has examined all related documents and read the instruction and conditions, and hereby proposes to provide the services as specified in accordance with the RFP, for the price set forth in the Proposal documents.

Proposer, by signature below, hereby represents as follows:

(a) That no County elected official, officer, agent or employee of the County is personally interested directly or indirectly in this contract or the compensation to be paid hereunder, and that no representation, statement or statements, oral or in writing, of the County, its elected officials, officers, agents, or employees had induced it to enter into this contract and the papers made a part hereof by its terms;

(b) The Proposer, and each person signing on behalf of any Proposer certifies, in the case of a joint Proposal, each party thereto, certifies as to its own organization, under penalty of perjury, that to the best of thei knowledge and belief:

1. The prices in the Proposal have been arrived at independently, without collusion, consultation, communication, or agreement for the purpose of restraining competition as to any matter relating to such prices with any other Proposer or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in the Proposal have not been knowingly disclosed by the Proposer prior to the Proposal deadline, either directly or indirectly, to any other Proposer or competitor;
3. No attempt has been made nor will be made by the Proposer to induce any other person, partnership or corporation to submit or not to submit a Proposal for the purpose of restraining trade;

(c) The Proposer fully understands and submits its Proposal with the specific knowledge that:

1. The selected Proposal must be approved by the Board of Commissioners.
2. This offer to provide services will remain in effect at the prices proposed for a period of not less than ninety (90) calendar days from the date that Proposals are due, and that this offer may not be withdrawn or modified during that time.

(d) That this Proposal is made without connection with any person, firm or corporation making a bid for the same material, and is in all respects, fair and without collusion or fraud.

(e) That the Proposer shall use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this document.

(f) That the Proposer accepts all terms and conditions contained in this RFP and that the RFP and the Proposal, and any modifications, will be made part of the contract documents. It is understood that all Proposals will become part of the public file on this matter. The County reserves the right to reject any or all Proposals.

(g) That the Proposer holds current licenses that businesses or services professionals operating in this state must hold in order to undertake or perform the work specified in these contract documents.

Telemetry System Integrator of Record
(SCADA) Support

(h) That the Proposer is covered by liability insurance and other insurance in the amount(s) required by the solicitation and in addition that the Proposer qualifies as a carrier insured employer or a self-insured employer under ORS 656.407 or has elected coverage under ORS 656.128.

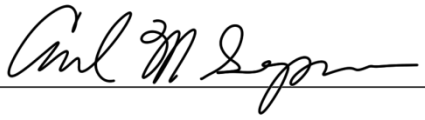
(i) That the Proposer is legally qualified to contract with the County.

(j) That the Proposer has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, gender identity, national origin, or any other protected class. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business that is certified under ORS 200.055.

(k) The Proposer agrees to accept as full payment for the services specified herein, the amount as shown in the Proposal.

[X] Resident Bidder, as defined in ORS 279A.120
[ ] Non-Resident Proposer, Resident State _____
Oregon Business Registry Number 306020-80

Contractor's Authorized Representative:

Signature:		Date:	April 20, 2018
Name:	Carl Serpa, PE	Title:	Principal Engineer
Firm:	Portland Engineering, Inc.		
Address:	2020 SE 7th Ave., Suite 200		
City/State/Zip:	Portland, OR 97214	Phone:	(503) 256-7718
e-mail:	cserpa@portlandengineers.com	Fax:	(503) 256-7679

Contract Manager:

Name Greg Chase Title: Secretary of Board

Phone number: (503) 256-7718

Email Address: gchase@portlandengineers.com

Telemetry System Integrator of Record
(SCADA) Support

ARTICLE F
FEE SCHEDULE

6. Fee Schedule

Portland Engineering, Inc.
Clackamas County WES Integrator
Service & Fee Schedule

• System Design • Scope of Work Development • Cost Evaluation and Estimation • Project Management • Construction Management • Software Specification, Procurement, Installation • Historian, MES, Data Systems Configuration • Industrial Networks, VPNs, Security • Computer Virtualization • Training • HMI Application Development • PLC Programming • Field Service • Telephone and Remote Access Support • Wiring Diagrams • Panel Design	$130.00/hour
• Administrative Services	$55.00/hour

Normal business hours are Monday through Friday, 8:00 am to 5:00 pm. Service and travel time outside of normal business hours will be billed at 1.5 times the above fees. Service and travel time on Sunday and Holidays will be billed at 2 times the above fees. Four hour minimum charge.

Travel time will be billed from the location of the dispatched engineer with an additional mileage charge of $0.56/mile. Travel expenses will be billed at cost with a minimum charge of $165.00 per night.

Terms - Net 30 days. A 1.5% per month interest fee will apply on all outstanding invoices.

All applicable state and local tax fees apply.

All standard fees are subject to change without notice.

PEI Holidays: New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Day.

FEE SCHEDULE – COST DATA PRICE PROPOSAL FORM

Date: 4-25-18

Name of Offeror: PORTLAND ENGINEERING INC. Solicitation No.

Business Address 2020 SE 7TH AVE #200
PORTLAND, OR 97214

2018
Base Contract Year

Signature: Carl M Serpa Telephone/FAX: (503) 256-7718

Name (print): CARL M. SERPA E-Mail: CSerpa@portlandengineers.com

INSTRUCTIONS_____ requires a detailed breakdown of all estimated costs for this procurement within the categories specified below. Attachments may be included to explain particular cost items. Cost data is subject to verification by government audit.

DIRECT LABOR (Identify by position)	*Est. Hrs.	Rate/Hr.	Total
Engineer	1	42.50	
TOTAL DIRECT LABOR			
LABOR OVERHEAD	O.H. Rate	Base	Total
Medical, vacation, holiday, taxes, training, retirement, Non billable Employees, Equipment	74.50	42.50	117.00
TOTAL LABOR OVERHEAD			
OTHER DIRECT COSTS (Specify)			
TOTAL OTHER DIRECT COSTS			
TOTAL ESTIMATED COSTS			
FEE (Profit)			13.00
~~TOTAL~~ RATE **BASE CONTRACT** ~~YEAR~~ **PROPOSAL (All Est. Costs & Fee/Profit) . . .**			130.00