



*"Protecting Public Health and the Environment"*

LONGO ELECTRICAL MECHANICAL, INC.

CONTRACT B002

PASSAIC VALLEY SEWERAGE COMMISSION  
600 WILSON AVENUE  
NEWARK, NEW JERSEY 07105

CONTRACT AND SPECIFICATIONS

FOR

SCADA SYSTEM INTEGRATION SERVICES ON AN AS NEEDED BASIS  
FOR A TWO (2) YEAR PERIOD

Contract No. B002  
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600 WILSON AVENUE  
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FOR A TWO (2) YEAR PERIOD

**THIS AGREEMENT**, made and executed this 7<sup>th</sup> day of August, 2015, by and between the Passaic Valley Sewerage Commission, a public body of the County of Essex, State of New Jersey, hereinafter called the "Commission," acting through its Chairman, and

Longo Electrical Mechanical, Inc.

a corporation chartered under the laws of the State of New Jersey partnership, individual with principals offices at

One Harry Shupe Boulevard  
Wharton, New Jersey 07885

hereinafter called the "Contractor."

**WITNESSETH:** That the said Contractor has agreed and by these presents does agree with the Commission, for the Prices bid and stipulated in the Proposal herein contained or hereunto annexed and under the terms and conditions expressed in Bonds bearing even date with these presents, and herein contained or hereunto annexed, to furnish at his own cost and expense all the necessary materials, labor, superintendence, tools, and appliances and shall execute, construct, and finish and test in an expeditious and workmanlike manner all the work as described in the contract specifications commencing the work within ten (10) days from the date of Notice to Proceed and executing the same within the time and proceed in the manner specified and in conformity with the requirements set forth in the Contract Documents herein contained or hereunto attached and in accordance with the Contract Specifications of said Work.

In the event that the contract documents, exclusive of the Contractor's Bid Form, are in conflict with the Contractor's Bid or Bid Form, the provisions, terms and conditions of the Commission Contract Documents and specifications shall bind the parties.

The Contractor shall proceed with the said Work in a prompt and diligent manner and shall do all parts thereof at such times in such order as the Commission may approve.

The Commission shall not be liable to the Contractor for any neglect, default, delay or interference of or by another other contractor, nor shall any such neglect, default, delay or interference of any other contractor, or alteration which may be required in said Work, release the Contractor from the obligation to finish the said Work within the time aforesaid or from the damages to be paid in default thereof.

Name and addresses of each person or company interested in the Contract:

Longo Electrical-Mechanical, Inc.  
1 Harry Shupe Blvd, Wharton NJ 07885  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

It is hereby mutually agreed that the Commission are to pay and the Contractor is to receive the amount bid (less retainage, if any) as stipulated in the proposal herein contained or hereto annexed, as full compensation for furnishing all material and labor and in all respects completing the herein described work in the manner and under the conditions herein specified, and for fully complying with the terms and conditions of this Contract.

Subject to the applicable provisions of law, the Contract shall be in full force and effect from and after the date when a fully executed and approved counterpart hereof is delivered to the Contractor at the address set forth above and shall remain and continue in full force and effect until after the expiration of the warranty period and the Contractor and the sureties are finally released by the Commission.

**IN WITNESS WHEREOF:** The parties hereto have executed this agreement the day and year first above mentioned.

**PASSAIC VALLEY SEWERAGE COMMISSION**

(SEAL)

BY: \_\_\_\_\_

Michael DeFrancisci  
MICHAEL DEFRANCISCI  
EXECUTIVE DIRECTOR

ATTEST BY: \_\_\_\_\_

Gregory A. Tramontozzi, Esq.  
**PASSAIC VALLEY SEWERAGE COMMISSION**  
GREGORY A. TRAMONTOZZI, ESQ.  
ACTING CLERK

LONGO ELECTRICAL MECHANICAL, INC.  
**CONTRACTOR NAME**

(SEAL)

BY: \_\_\_\_\_

Joseph M. Longo  
CONTRACTOR  
Joseph M. Longo, President

ATTEST BY: \_\_\_\_\_

Meryl Rehaut  
CONTRACTOR  
Meryl Rehaut, Asst. Secretary

**00305    AWARD SHEET (Including Terms and Conditions Applicable to the Proposal)**

**Contract No. B002  
SCADA SYSTEM INTEGRATION SERVICES ON AN AS NEEDED BASIS**

Name of Contractor: Longo Electrical Mechanical Inc.

Business Name: Same as above

Mailing Address: 1 Harry Shupe Boulevard, PO Box 511  
(Mailing Address must include Street Address)  
Wharton, New Jersey 07885

Telephone No. 973-537-0400      Fax No. 973-537-0404

Contact Person: Joseph M. Longo, President

- A.    The contractor shall provide supervision, labor, equipment, materials and supplies necessary to perform miscellaneous PVSC SCADA SYSTEM INTEGRATION services on an as needed basis.

It is the intent of this contract to provide for supplementary repair work and related services which are provided on an as needed "Time and Material" basis for various tasks including but not limited to emergency services, unscheduled repairs and system modification tasks.

All work shall be performed on a time and material (T&M) basis and shall be in accordance with the contractor's T&M Schedule which shall be submitted with the bid and will become part of this contract. The schedule shall specify all supervision, labor, materials and equipment on a per unit time basis.

The work required under this contract is indeterminate; consequently there is no fixed contract amount. When a specific task is required, a "not to exceed" price and a time frame will be established.

Costs for supervision and labor shall include all cost factors, such as wages, benefits, travel time, fuel, insurance, overhead and profit, general and administrative (G&A) and all other additional expenses. The minimum billable time for a call in will be four (4) hours.

Costs for the Contractor to supply rental equipment that is not included within this contract shall be billed at cost +15% Markup. The pricing of all rental equipment must be reasonable and competitive with prevailing market pricing and as per Equipmentwatch.com Refer to Section 13060 for additional information.

The contractor hourly rate submitted for straight time will cover PVSC's normal working hours of 8:15AM to 4:15PM Monday through Friday in accordance with Division 1, Section 01046 - Working Hours. The emergency hourly rate will be used during weekdays after 40 hours per week or for services provided on weekends, Holidays or when being requested to work during PVSC non-normal working hours.

**The contractor shall insure that all requested repairs, fabrication and programming, etc. shall be performed by personnel who are trained to provide the type of service specified, and as outlined in Section 01710 Qualifications of Contractor.**

The contractors shall be available 7 days a week for on-call and emergency service work during the life of this contract and will be compensated at the respective hourly rates.

**MATERIALS AND SUPPLIES SHALL BE BILLED AT COST, PLUS A 15% MARK-UP FEE.**

All rates shown on the bidder T&M Schedule shall be firm and shall be guaranteed for the duration of the Contract.

For purposes of evaluating and comparing bids, the contractor shall provide a cost in accordance with **Section 00400**. Actual billings will be based on the lump sum and unit costs presented by the bidder and actual quantities provided. The contractor will **not be** compensated for any traveling time between place of business and the PVSC Facility where work is to be performed.

**All bid items listed in the Schedule of Lump Sum Tasks and Rates (see Section 00400) shall be filled out in all subsections of this form. Failure to do so would be considered a non-responsive bid and may be cause for the bid to be rejected.**

**The hypothetical work crew described is for bid evaluation purposes only. Actual crews, equipment and duration will vary, depending on the specific task to be done.**

**The Commission reserves the right to perform work with its own work force or obtain competitive pricing from a third party. The Commission is also under no obligation to use the contractor's work force.**

The work required under this contract is indeterminate and will be performed on a "Time and Material" basis. When a specific task is required; a "not to exceed" price and time frame will be established for the task. Contractor's time required to develop a cost proposal for any given task or project and the time spent in pre-construction meeting(s) shall not be compensable.

The term of this contract is for a two (2) year period, beginning from the Notice to Proceed date. All prices shall hold firm and not be subject to increase during the term of the contract.

The work shall proceed in the manner specified and in conformity with the requirements set forth in the Contract Documents herein contained or hereunto attached and in accordance with the Contract Specifications.

In the event of a conflict between the bid specifications (request for proposal, invitation to bid, etc.) and the contractor's bid submission (proposal, response, etc.) the terms of the specifications (or otherwise as referenced) shall govern the agreement between PVSC and the contractor.

- B.** All prices are exclusive of N. J. State and Federal Taxes. The Passaic Valley Sewerage Commission is an agency of the State of New Jersey and is exempt from the New Jersey Sales and Use Taxes, pursuant to Section 9(a)(1) of the New Jersey Sales and Use Tax Act (N.J.S.A. 54:32B-1 et seq.).
- C.** The cost of all Warrantees shall be included.
- D.** The bidder's price shall be inclusive, including all labor, equipment, consumables, inspection and transportation. Bidder shall not include the cost of any services provided by PVSC.
- E.** Prices shall also include all transportation charges on materials removed from site and charges pertaining to disposal and other costs pertaining to the execution of the work.
- F.** The Commission reserves the right to award this contract or may accept any alternative that is deemed to be in its best interest, or may reject all bids pursuant to the Local Public Contracts Law.
- G.** The successful Bidder shall maintain for the duration of the work to be done under this contract, Liability Insurance in the amounts specified in the General Conditions, Section 00727. Upon execution of the contract, the contractor shall furnish the PVSC with all certificates of insurance as required and set forth herein.
- H.** It is the bidder's responsibility to visit the PVSC facilities to inspect and to verify all locations, dimensions, conditions and access as needed to perform the contract work. Arrangements for the site visit can be made by contacting Mr. John Bolcar at (973) 817-5790.
- I.** No variations will be permitted to the terms and conditions of the contract. Terms and conditions are in accordance with N. J. Laws for Public Bidding and the policies of the Passaic Valley Sewerage Commission. Any bids that include variations to the terms and conditions will be considered non-responsive and will be rejected.
- J.** Only Bidders with 10 years of experience with a similar type of work and necessary licenses will be considered. See section 01710. Certification of this experience, and the names and addresses of at

be supplied with the bid. A certification questionnaire form is included for the Contractor's convenience.

- K. Unless prevented by strike or strikers which prevent construction or delivery of equipment or supplies from the manufacturer, failure to complete the work within the specified time shall be considered an abandonment of the contract and the Commission may seek redress for damages.
- L. The work must be completed without interrupting the operation of the PVSC Treatment Plant. The contractor must schedule his operations in detail with PVSC as noted in Div. 1, Section 01310 of Contract Specifications.
- M. Payment will be made in accordance with the Schedule as specified in Division 1, Section 01025.
- N. **Proposals shall be enclosed in opaque sealed envelopes, addressed to Passaic Valley Sewerage Commission, 600 Wilson Avenue, Newark, New Jersey 07105, with the name and address of the bidder plainly marked upon the outside thereof. (If forwarded by preferably registered mail, the sealed envelope containing the proposal, marked as directed above must be enclosed in another envelope addressed as specified in the Proposal.) The outside envelope containing the bids must clearly identify the bid number, contract name and bid opening date. Failure to properly identify the contents may result in the bid being rejected.**

After delivery and acceptance by the PVSC the vendor shall submit a bill for the items delivered, and the Commission at their next scheduled monthly meeting will pay the amount due. All exceptions contained in N.J.S.A. 2A:30A-2(a) shall apply solely for the benefit of PVSC.

### T&M SCHEDULE

For purposes of evaluating and comparing bids, the Bidder shall provide the following cost to maintain a hypothetical work crew for the periods described, including a hypothetical material cost.

Hourly Rate per Person shall include all wages, labor, travel, taxes, insurance (including Liability Insurance), overhead, licenses, qualifications, equipment, profit and all other mark-ups and costs.

YEAR 1		YEAR 2	
Hourly Rate		Hourly Rate	
<b>A. Emergency Troubleshooting and Repair – (Response in 4 Hours)</b>  1. Instrumentation & Controls Engineer (BS in Electrical Engineering with Supervisor licensed as a NJ PE in EE) \$ <u>80.00</u> /Hr. x 10 Hrs.  2. Instrumentation & Controls Technician/Programmer \$ <u>222.00</u> /Hr. x 40 Hrs.  3. Licensed Electrician \$ <u>127.50</u> /Hr. x 10 Hrs.	= \$ <u>800.00</u> (A1)  = \$ <u>8,880.00</u> (A2)  = \$ <u>1,275.00</u> (A3)	<b>D. Emergency Troubleshooting and Repair – (Response in 4 Hours)</b>  1. Instrumentation & Controls Engineer (BS in Electrical Engineering with Supervisor licensed as a NJ PE in EE) \$ <u>80.00</u> /Hr. x 10 Hrs.  2. Instrumentation & Controls Technician/Programmer \$ <u>222.00</u> /Hr. x 40 Hrs.  3. Licensed Electrician \$ <u>127.54</u> /Hr. x 10 Hrs.	= \$ <u>800.00</u> (D1)  = \$ <u>8,880.00</u> (D2)  = \$ <u>1,275.00</u> (D3)
<b>B. Non-Emergency – Hourly Rate (includes troubleshooting, repair and all other work).</b>  1. Instrumentation & Controls Engineer (BS in Electrical Engineering with Supervisor licensed as a NJ PE in EE) \$ <u>80.00</u> /Hr. x 10 Hrs.  2. Instrumentation & Controls Technician/Programmer \$ <u>148.00</u> /Hr. x 40 Hrs.  3. Licensed Electrician \$ <u>85.00</u> /Hr. x 10 Hrs.  4. CAD Designer \$ <u>50.00</u> /Hr. x 40 Hrs.  5. Panel Shop Wireman \$ <u>80.00</u> /Hr. x 80 Hrs.	= \$ <u>800.00</u> (B1)  = \$ <u>5,920.00</u> (B2)  = \$ <u>850.00</u> (B3)  = \$ <u>2,000.00</u> (B4)  = \$ <u>6,400.00</u> (B5)	<b>E. Non-Emergency – Hourly Rate (includes troubleshooting, repair and all other work).</b>  1. Instrumentation & Controls Engineer (BS in Electrical Engineering with Supervisor licensed as a NJ PE in EE) \$ <u>80.00</u> /Hr. x 10 Hrs.  2. Instrumentation & Controls Technician/Programmer \$ <u>148.00</u> /Hr. x 40 Hrs.  3. Licensed Electrician \$ <u>85.00</u> /Hr. x 10 Hrs.  4. CAD Designer \$ <u>50.00</u> /Hr. x 40 Hrs.  5. Panel Shop Wireman \$ <u>80.00</u> /Hr. x 80 Hrs.	= \$ <u>800.00</u> (E1)  = \$ <u>5,920.00</u> (E2)  = \$ <u>850.00</u> (E3)  = \$ <u>2,000.00</u> (E4)  = \$ <u>6,400.00</u> (E5)
<b>C. Parts and Supplies – Material Mark-up including all insurance, overhead, profit and any other mark-up shall be fifteen (15) percent.</b>  Hypothetical material cost x % markup \$20,000.00 X 1.15	= \$ <u>23,000.00</u> (C)	<b>F. Parts and Supplies – Material Mark-up including all insurance, overhead, profit and any other mark-up shall be fifteen (15) percent.</b>  Hypothetical material cost x % markup \$20,000.00 X 1.15	= \$ <u>23,000.00</u> (F)
<b>Year 1: Total (Sum of A1-A3, B1-B5, &amp; C)</b>	= \$ <u>49,925.00</u>	<b>Year 2: Total (Sum of D1-D3, E1-E5, &amp; F)</b>	= \$ <u>49,250.00</u>
<b>TOTAL (Sum of Years 1 and 2)</b>		<b>\$ <u>99,850.00</u></b>	
Amount Written in Words: <u>Ninety-nine Thousand, Eight Hundred Fifty Dollars and Zero Cents</u>			

STATE OF NEW JERSEY

§

COUNTY OF MORRIS

I, Joseph M. Longo of the town of Morristown in the County of Morris and State of New Jersey, of full age, being duly sworn according to law, on my oath depose and say that:

I am President of Longo Electrical-Mechanical, Inc. the Bidder making the Bid for this Project.

I execute the said Bid with full authority to do so.

I, and to the best of my knowledge, the Bidder, and any officer, director, employee or other representative of the bidder, have not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above-named Project.

All statements contained in said Bid and all Contract Documents and in this affidavit are true and correct, and made with full knowledge that the Passaic Valley Sewerage Commission rely upon the truth of the statements contained in said Bid and Contract Documents, and in the statements contained in this Affidavit, in awarding the Contract for said Project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract agreement or understanding for a commission, percentage, brokerage or contingent fee except bona fide employees or bona fide established commercial or selling agencies maintained by the Bidder.

Sworn on Behalf of: Longo Electrical-Mechanical, Inc.

Name of Bidder: Longo Electrical-Mechanical, Inc.

Sworn and subscribed to  
before me this 24<sup>th</sup> day  
of June, 2015

Joseph M. Longo, President

Meryl Rehaut  
Notary Public of New Jersey  
MERYL REHAUT

NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires Nov. 14, 2019



00402

## PASSAIC VALLEY SEWERAGE COMMISSION

## ACKNOWLEDGMENT OF RECEIPT OF CHANGES TO BID DOCUMENTS FORM

Contract No. B002

## SCADA SYSTEM INTEGRATION SERVICES ON AN AS NEEDED BASIS

Pursuant to N.J.S.A. 40A:11-23.1a, the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the PVSC's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid. If there were no revisions or addenda write **NONE** on the top line, sign the acknowledgment below and submit with the bid documents.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received
None received.		

Acknowledgment by Bidder:

Name of Bidder:  
(Company Name) Longo Electrical-Mechanical, Inc

By Authorized Representative:

Signature: [Signature]Print Name and Title: Joseph M. Longo, PresidentDate: 6/24/15

00403

PASSAIC VALLEY SEWERAGE COMMISSION

Contract No. B002 - SUBCONTRACTOR LISTING

Failure to complete this Section may be a cause for the bid to be rejected. If no subcontractors will be used, enter "NONE".

The undersigned proposes to use the following subcontractors to perform the work indicated (use additional sheets as required).

<u>Work to be Performed</u>	<u>Name(s) and Address of Subcontractor(s)**</u>	<u>License Number(s)</u>
1. Plumbing & Gas Fitting and all Kindred Work	<u>None / N/A</u>	
2. Heating and Ventilation and all Kindred Work	<u>None / N/A</u>	
3. Electrical Work	<u>No Subcontractor -</u> <u>Work to be performed by</u> <u>Prime (Longo)</u>	
4. Structural Steel and Ornamental Iron Work	<u>None / N/A</u>	

Joseph M. Longo, President

Name and Title of Authorized Representative

[Signature]

Signature of Authorized Representative

**\*\*IMPORTANT NOTE:** Whenever a Bid sets forth more than one subcontractor for any of the specialty trade categories (1) through (4) specified hereinabove in this section, the Bidder shall submit to PVSC a certificate signed by the bidder listing each subcontractor named in the Bid for that category. The certificate shall set forth the scope of work for which the subcontractor has submitted a price quote and which the Bidder has agreed to award to each subcontractor should the Bidder be awarded the contract. The certificate shall be submitted to PVSC simultaneously with the list of subcontractors. The certificate may take the form of a single certificate listing all subcontractors or, alternatively, a separate certificate may be submitted for each subcontractor.

## PUBLIC WORKS CONTRACTOR REGISTRATION

**PASSAIC VALLEY SEWERAGE COMMISSION  
600 WILSON AVENUE  
NEWARK, NEW JERSEY 07105**

## PUBLIC WORKS CONTRACTOR REGISTRATION

**Contract No. B002**

**SCADA SYSTEM INTEGRATION SERVICES ON AN AS NEEDED BASIS  
FOR A TWO (2) YEAR PERIOD**

1. In accordance with "The Public Works Contractor Registration Act," P.L., 1999, c238 (N.J.S.A. 34:11 – 56.48 et seq.) amended by P.L. 2003, C91



"No contractor shall bid on any contract for public work as defined in section 2 of P.L. 1963, c150 (C34:11 – 56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L. 1999, c238 (C34:11 – 56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor is registered pursuant to that act." (N.J.S.A/ 34:11 – 56.51)

"Contractor means a person, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof who enters into a contract which is subject to the provisions of the "New Jersey Prevailing Wage Act," P.L 1963, c150 (C34:11 – 56.25 et seq.) and includes any subcontractor or lower tier subcontractor of a contractor defined herein" (N.J.S.A/ 34:11 – 56.50)

2. Proof of registration is required before an award can be made:

"Each contractor shall, after the bid is made and prior to the awarding of this contract, submit to the public entity the certificates of registration for all subcontractors listed in the bid proposal. Applications for registration shall not be accepted as a substitute for a certificate of registration for the purposes of this section." (N.J.S.A. 34:11 – 56.55)

3. On and after August 16, 2003, Contractors and their listed subcontractors bidding on covered work shall provide proof of the required registration prior to the contract award. [As a practical matter, proof of required registration should be submitted with the Bid].
4. By signing this form, the Contractor certifies that they shall provide proof of the required registration prior to the contract award.

\_\_\_\_\_  
 (Signature) (Date)

Joseph M. Longo, President  
(Name and Title of Signer - Please type)

00700

**GENERAL CONDITIONS – INDEX**

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**00700    GENERAL CONDITIONS**

**00701**    The Contractor enters into this agreement with the full knowledge of the conditions and requirements of the specifications, including the physical characteristics above, on and below the surface of the ground where applicable.

**00702    NOT APPLICABLE TO THIS CONTRACT**

**00703**    The Contractor agrees that during the entire term of the contract it will pursue the work faithfully and diligently and will, at all times, have the necessary sources of supply, labor, material and machinery necessary to complete the contract in accordance with the terms of the specifications.

**00704**    All work done under this contract shall be done to the satisfaction of the Engineer of PVSC, who shall in all cases determine the amount, quality, acceptability and fitness of the material and work which are to be paid for hereunder and shall decide any questions which may arise as to the fulfillment of this decision thereon shall be final and conclusive. The word "Engineer" shall mean the person holding the position of Manager of Plant Engineering of the Passaic Valley Sewerage Commission, or his duly authorized representative.

**00705**    If the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should persistently or repeatedly refuse or should fail to supply enough skilled workmen or proper materials, or if it should fail to make prompt payment to subcontractors for material, labor, or equipment rental, or persistently disregard laws, ordinances, or other instructions of the Engineer, or this contract, then PVSC, upon the certificate of the Engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the Contractor thirty (30) days written notice, terminate the employment of the Contractor. The termination of the employment of the Contractor under the provisions of this paragraph shall not relieve the surety of its responsibility.

**00706    NOT APPLICABLE TO THIS CONTRACT**

**00707**    All notices, demands, requests, instructions, approvals and claims shall be in writing. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor specified in the bid (or at such other offices as the Contractor may from time to time designate to the Engineer in writing) or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered by telephone electronic/facsimile (FAX) transmission system. All papers required to be delivered to PVSC shall, unless otherwise specified to the Contractor in writing, be delivered to the office of PVSC AT 600 Wilson Avenue, Newark, New Jersey and any notice to or demand upon PVSC shall be sufficiently given if delivered to the said office, or if deposited in the United States mail in a sealed, postage-prepaid envelope, certified mail, return receipt requested.

**00708**    No final payment shall be made until the Engineer has certified to PVSC that the work has been completed by the Contractor in accordance with the requirements of the plans, specifications and contract.

**00709**    The Contractor shall not assign the contract or sublet it in whole or in part without the prior written consent of PVSC, nor shall the Contractor assign any monies due or becoming due to it without the prior written consent of PVSC.

**00710**    This contract, and all incorporations by reference together with the plans, specifications and bid documents, constitutes the entire agreement and understanding between the parties. This contract may not be modified, altered, abridged, amended or supplemented, except by written agreement executed by the parties.

**00711**    Neither the inspection by the Engineer or any agent or employee of PVSC, nor any order by PVSC for the payment of money, nor any payment for, or acceptance of, the whole or any part of the work, by PVSC or the Engineer, nor any possession taken by PVSC or their employees,

individual and/or entity whose contributions are attributable to the vendor.

Enter the full name of the person authorized to complete the certification and disclosure, the person's title or position, date and telephone number.

### **USEFUL DEFINITIONS FOR THE PURPOSES OF Ch. 51 and E.O. 117**

- **“Vendor”** means the contracting entity.
- **“Business Entity”** means any natural or legal person, business corporation, professional services corporation, limited liability company, partnership, limited partnership, business trust, association or any other legal commercial entity organized under the laws of New Jersey or any other state or foreign jurisdiction. The definition also includes (i) if a business entity is a for-profit corporation, any officer of the corporation and any other person or business entity that owns or controls 10% or more of the stock of the corporation; (ii) if a business entity is a professional corporation, any shareholder or officer; (iii) if a business entity is a general partnership, limited partnership or limited liability partnership, any partner; (iv) if a business entity is a sole proprietorship, the proprietor; (v) if the business entity is any other form of entity organized under the laws of New Jersey or any other state or foreign jurisdiction, any principal, officer or partner thereof; (vi) any subsidiaries directly or indirectly controlled by the business entity; (vii) any political organization organized under 26 U.S.C.A. § 527 that is directly or indirectly controlled by the business entity, other than a candidate committee, election fund, or political party committee; and (viii) with respect to an individual who is included within the definition of “business entity,” that individual’s spouse or civil union partner and any child residing with that person.<sup>1</sup>
- **“Officer”** means a president, vice-president with senior management responsibility, secretary, treasurer, chief executive officer, or chief financial officer of a corporation or any person routinely performing such functions for a corporation. Please note that officers of non-profit entities are excluded from this definition.
- **“Partner”** means one of two or more natural persons or other entities, including a corporation, who or which are joint owners of and carry on a business for profit, and which business is organized under the laws of this State or any other state or foreign jurisdiction, as a general partnership, limited partnership, limited liability partnership, limited liability company, limited partnership association, or other such form of business organization.
- **“Reportable Contributions”** are those contributions, including in-kind contributions, in excess of \$300.00 in the aggregate per election made to or received by a candidate committee, joint candidates committee, or political committee; or per calendar year made to or received by a political party committee, legislative leadership committee, or continuing political committee.
- **“In-kind Contribution”** means a contribution of goods or services received by a candidate committee, joint candidates committee, political committee, continuing political committee, political party committee, or legislative leadership committee, which contribution is paid for by a person or entity other than the recipient committee, but does not include services provided without compensation by an individual volunteering a part of or all of his or her time on behalf of a candidate or committee.
- **“Continuing Political Committee”** includes any group of two or more persons acting jointly, or any corporation, partnership, or any other incorporated or unincorporated association, including a political club, political action committee, civic association or other organization, which in any calendar year contributes or expects to contribute at least \$4,300 to aid or promote the candidacy of an individual, or the candidacies of individuals, for elective public office, or the passage or defeat of a public questions, and which may be expected to make contributions toward such aid or promotion or passage or defeat during a subsequent election, provided that the group, corporation, partnership, association or other organization has been determined by the Commission to be a continuing political committee in accordance

with N.J.S.A. 19:44A-8(b).

- “**Candidate Committee**” means a committee established by a candidate pursuant to N.J.S.A. 19:44A-9(a), for the purpose of receiving contributions and making expenditures.
- “**State Political Party Committee**” means a committee organized pursuant to N.J.S.A. 19:5-4.
- “**County Political Party Committee**” means a committee organized pursuant to N.J.S.A. 19:5-3.
- “**Municipal Political Party Committee**” means a committee organized pursuant to N.J.S.A. 19:5-2.
- “**Legislative Leadership Committee**” means a committee established, authorized to be established, or designated by the President of the Senate, the Minority Leader of the Senate, the Speaker of the General Assembly, or the Minority Leader of the General Assembly pursuant to N.J.S.A. 19:44A-10.1 for the purpose of receiving contributions and making expenditures.

<sup>1</sup> Contributions made by a spouse, civil union partner or resident child to a candidate for whom the contributor is eligible to vote or to a political party committee within whose jurisdiction the contributor resides are permitted.

- “**Political Party Committee**” means:
  1. The State committee of a political party, as organized pursuant to N.J.S.A. 19:5-4;
  2. Any county committee of a political party, as organized pursuant to N.J.S.A. 19:5-3; or
  3. Any municipal committee of a political party, as organized pursuant to N.J.S.A. 19:5-2.

### **Agency Submission of Forms**

The agency should submit the completed and signed Two-Year Vendor Certification and Disclosure forms, together with a completed Ownership Disclosure form, either electronically to [cd134@treas.state.nj.us](mailto:cd134@treas.state.nj.us) or regular mail at Chapter 51 Review Unit, P.O. Box 039, 33 West State Street, 9<sup>th</sup> Floor, Trenton, NJ 08625. Original forms should remain with the Agency and copies should be sent to the Chapter 51 Review Unit.

### **Questions & Answers**

Questions regarding the interpretation or application of Public Law 2005, Chapter 51 (N.J.S.A. 19:44A-20.13) or Executive Order 117 (2008) may be submitted electronically through the Division of Purchase and Property website at <http://www.state.nj.us/treasury/purchase/execorder134.shtml>. Responses to previous questions are posted on the website, as well as additional reference materials and forms.

**NOTE:** The Chapter 51 Q&A on the website **DOES NOT** address the expanded pay-to-play requirements imposed by Executive Order 117. The Chapter 51 Q&A are only applicable to contributions made prior to November 15, 2008. There is a separate, combined Chapter 51/E.O. 117 Q&A section dealing specifically with issues pertaining to contributions made after November 15, 2008, available at <http://www.state.nj.us/treasury/purchase/execorder134.shtml#state>.

**00901**

**NOTICE OF EXECUTIVE ORDER 125 REQUIREMENT FOR POSTING  
WINNING PROPOSAL AND CONTRACT DOCUMENTS**

Pursuant to Executive Order No. 125, signed by Governor Christie on February 8, 2013, the Office of the State Comptroller ("OSC") is required to make all approved State contracts for the allocation and expenditure of federal reconstruction resources available to the public by posting such contracts on an appropriate State website. Such contracts are posted on the New Jersey Sandy Transparency website located at:

[http://nj.gov/comptroller/sandytransparency/contracts/sandy/.](http://nj.gov/comptroller/sandytransparency/contracts/sandy/)

The contract resulting from this RFQ/RFP is subject to the requirements of Executive Order No. 125. Accordingly, the OSC will post a copy of the contract, including the RFQ/RFP, the winning bidder's proposal and other related contract documents for the above contract on the Sandy Transparency website.

In submitting its proposal, a bidder may designate specific information as not subject to disclosure. However, such bidder must have a good faith legal and/or factual basis to assert that such designated portions of its proposal (i) are proprietary and confidential financial or commercial information or trade secrets or (ii) must not be disclosed to protect the personal privacy of an identified individual. The location in the proposal of any such designation should be clearly stated in a cover letter, and a redacted copy of the proposal should be provided.

The State reserves the right to make the determination as to what is proprietary or confidential, and will advise the winning bidder accordingly. The State will not honor any attempt by a winning bidder to designate its entire proposal as proprietary, confidential and/or to claim copyright protection for its entire proposal. In the event of any challenge to the winning bidder's assertion of confidentiality with which the State does not concur, the bidder shall be solely responsible for defending its designation.



## **DIVISION 1 - GENERAL REQUIREMENTS**

### **01010 SCOPE OF WORK**

The contractor shall provide supervision, labor, equipment, materials, training and supplies necessary to perform miscellaneous repairs and upgrades to the PVSC SCADA system on an as needed basis. The SCADA system consists primarily of Allen-Bradley Programmable Logic Controllers and Wonderware HMI software. In addition, there are multiple Allen-Bradley PanelView Operator Interface Terminals (OIT) throughout the plant.

It is the intent of this contract to provide for work and related services which are provided on an as needed "Time and Material" basis for various tasks including but not limited to emergency services, unscheduled repairs, system modification and new system tasks.

Work shall include but not be limited to the following:

- Emergency Troubleshooting and Repair of SCADA equipment - Troubleshoot and repair errors to PLC, SCADA network, computer equipment and controls. Response onsite will be expected within 4 hours for Emergency.
- Non-Emergency Troubleshooting and Repair of SCADA equipment - Troubleshoot and repair errors to PLC, SCADA network, computer equipment and controls. Response onsite will be expected within 48 hours for Non-Emergency.
- SCADA System Design, Point-to-Point diagrams, shop drawings, Integration, training, O&M's development and Start-Up.
- Panel Fabrication (UL-508A or approved). Mechanical Assembly and Wiring.
- Human Machine Interface (HMI) and SCADA programming. Programmable Logic Controller (PLC) programming and configuration.
- SCADA System Hardware/Software Upgrades
- Parts and Supplies – All equipment provided shall be the same manufacturer as existing equipment and shall be the equivalent model. Reimbursement for supplied equipment shall be as a direct cost plus a standard markup. It is the intent of this contract to require an installation or repair complete in every detail, whether or not indicated in the Specifications.

### **01011 ERRORS OR OMISSIONS OF DETAILS IN SPECIFICATIONS**

Errors in the specifications which are purely typographical shall be interpreted as would be the logical conclusion or brought to the attention of the Owner for interpretation.

The Contractor is required to check all dimensions and quantities on any drawings or schedules made available by the Owner, and shall notify the Owner of all errors therein which he may discover by such examination.

### **01025 PAYMENT**

Simultaneously with his delivery of the executed Contract, the Contractor shall furnish and deliver to the Owner for review and approval a breakdown of the lump sum bid in such detail and form as will be acceptable to the Owner for use in facilitating the preparation of monthly estimates for progress payments to the Contractor. The breakdown shall also show the delivered price of material, equipment, and the allowance for installation.

The Owner will make partial payment to the Contractor on the basis of an approved estimate of the work performed during the preceding calendar month by the Contractor, duly approved and certified by the engineer which estimate includes the allowances as noted above. All such

payments shall be considered tentative only, subject to correction in the semifinal estimate, and need not be based on accurate measurement.

In addition to the formal contract documents, the Contractor will receive a copy of a PVSC Purchase Order. To assure proper payment, the PVSC purchase order number must appear on the Contractor's invoice.

After acceptance by the PVSC of an invoice for the items delivered and the work done, the Commission at their next scheduled monthly meeting will pay the amount due, less two (2%) per cent retainage as a guarantee against warranty claims.

To assure timely payment, bills must be received by the PVSC Plant Engineering Department not less than eighteen (18) days prior to the Commission meeting date. (Meeting dates will be provided by PVSC.)

**01037 REPLACEMENTS**

In the event of damage to any PVSC property or equipment, immediate necessary repairs and/or replacements shall be made subject to the approval of the Engineer, and at no additional cost to the Owner.

In the event of damage to any equipment critical to the Sewerage Treatment Plant, repairs will be made by PVSC and the cost will be backcharged to the Contractor.

**01038 CARE AND PROTECTION OF PROPERTY AND MATERIALS**

From the commencement of the work until its completion, the Contractor shall be solely responsible for damages caused to the property of the Owner, for the care, protection and security of the work covered by the contract, and for all materials delivered to the site or incorporated in the work.

**01040 CONCURRENT WORK AND OTHER CONTRACTORS**

The right is reserved by the Owner to do work using its own forces or other contractors and to permit public utility companies and others to do work during the progress and within the limits of or adjacent to the Project, and the Contractor shall conduct his work and cooperate with such other parties so as to cause as little interference as possible with such other work, as the Owner may direct.

If, in the judgment of the Owner, the joint occupation of the site of the work by the Owner or by two (2) or more contractors working on different contracts at the same time actually impedes progress in the work herein described, the Owner may extend the time for the completion of the work and in an amount which accords with and compensates for the delays so caused.

**01046 WORKING HOURS**

Contractor will have access to the site and work of this contract twenty four (24) hours, seven (7) days per week, including Holidays.

**01047 CONTRACTOR'S WORK FORCE**

The Contractor shall employ a sufficient work force to maintain the schedule established by the Plant Engineer. The contractor is not expected to maintain a full-time workforce on-site unless work is available to maintain such workforce. However, the contractor shall report to the site with adequate workforce to perform all work requested or to make necessary emergency repairs commencing within eight (8) hours of receiving notice from PVSC by telephone, e-mail, US mail and/or fax. Depending on the amount of work assigned, this may require the Contractor to retain additional resources.

#### **01048 SUBCONTRACTS AND SUBCONTRACTORS**

The Contractor shall, within ten (10) days after "Notice to Proceed" notify the Engineer in writing of the names, addresses and experience records of subcontractors (if any) he proposes for principal parts of the work. PVSC reserves the right to review the qualifications of all subcontractors and to reject any deemed not qualified to perform the work required.

Subcontractors must be covered by insurance as required in the General Conditions, Sections 00725, 00726 and 00727.

The Contractor agrees that he is as fully responsible to the Owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them as he is for acts and omissions of persons directly employed by him. He further agrees that he will bind his subcontractors to each and every part of the Contract Documents.

Nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the Owner.

#### **01049 WORK BY PVSC PERSONNEL**

The right is reserved by the owner to do work using its own forces and/or other contractors to do work during the progress and within the limits of or adjacent to the work of this contract, and this contractor shall conduct his work and cooperate with such other parties so as to cause as little interference as possible with such other work.

#### **01300 SUBMITTALS**

The Contractor shall submit for the Owner's review and approval, Shop Drawings (JIC format) showing the details of all materials, equipment and installations which the Contractor proposes to furnish in conformance with the Specifications. The Shop Drawings shall be reviewed for conformance with all the Contract Documents.

The Shop Drawings shall consist of catalog cuts, manufacturer's details, bill of materials, programming ladder logic, text, drafted drawings, layout drawings, assembly drawings, floor plans and any other documents which describe the item being submitted.

Shop Drawings shall give all ratings, configurations, dimensions and ancillary items in sufficient detail to enable the Owner to pass on the suitability of the equipment, materials or layout for the purpose intended. The drawings shall, where needed for clarity, include outline and sectional views, and detailed dimensions and designations of the kind of material. Drawings for submission shall be coordinated by the Contractor with the drawings previously approved and with the existing space, equipment, structure, and all other requirements of the Contract.

The Contractor shall submit two (2) copies of all Shop Drawings for approval. The Owner shall retain one (1) copies for his records, and return one (1) to the Contractor.

#### **01310 SCHEDULING**

The contractor shall report to the site with adequate workforce to perform all emergency work requested or to make necessary repairs commencing within business four (4) hours of receiving notice from PVSC by telephone or email.

The contractor shall report to the site with adequate workforce to perform all non-emergency work requested or to make necessary repairs commencing within business forty eight (48) hours of receiving notice from PVSC by telephone, e-mail, US mail and/or fax.

#### **01420 INSPECTION AND ACCEPTANCE**

Inspection of materials by the Commission' personnel shall not relieve the vendor of any obligations to fulfill the terms of this contract, and any defective part found at the time of installation shall be made good. All unsuitable materials shall be rejected notwithstanding that such part and materials have been previously overlooked by the engineer and accepted.

**01421 DEFECTIVE WORK, EQUIPMENT OR MATERIALS**

If the Contractor shall fail or neglect to replace any defective work and or material or to discard condemned materials within two (2) days after the service by the Owner of an order to replace such defective work or discard such equipment or materials, or to prove to the satisfaction of the Owner that he is initiating effective efforts to replace defective materials, the Owner may cause such defective work to be replaced or the condemned materials to be discarded, and acceptable materials provided. The expense thereof shall be deducted from the monies as are or may become due under this contract; or if such monies are not sufficient to meet said expense, the additional monies shall be furnished by the contractor or his Surety. If, during the warranty period provided for hereinafter, any work done in accordance with that article shall be found defective before the end of the warranty period, such defective work shall be made good in the same manner as provided herein. The Owner will have the option at all times to allow the defective or improper work to stand and to accept an equitable deduction from the contract price therefore.

**01422 OWNER'S RIGHT TO DO WORK AND THREE-DAY CLAUSE**

If the Contractor or his subcontractors should neglect to prosecute the work properly or fail to perform any provisions of the contract documents, the Owner, after three (3) days written notice to the Contractor may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

**01302 TOOLS, EQUIPMENT AND UTILITIES**

All tools, and equipment, required to perform the work described in the contract shall be provided by the Contractor.

**01303 SAFETY**

The Contractor is solely responsible for the safety of its employees, subcontractors, suppliers and representatives, including but not limited to the development and implementation of effective safety practices and programs in accordance with Federal, State and Local requirements, including the requirements of PVSC's Construction Safety & Health Manual for Contractors:

<http://www.nj.gov/pvsc/home/forms/pdf/ConstructionSafetyHealthManualforContractors08272012.pdf>

**Prior to commencing any work at the site the Contractor shall designate in writing to PVSC the name of the person who is their on-site safety officer.** The contractor shall provide a competent safety officer that must be on the project site at all times. The competent safety officer must hold (or furnish suitable proof of course completion and application for), at a minimum, a valid 10 Hour OSHA Construction card prior to the performance of any work under the contract. The contractor shall also furnish personnel meeting the requirements of "competent person" as defined by OSHA for all applicable aspects of the work.

The Contractors designated on-site safety officer shall be in charge of all of the safety programs of the Contractor and will be responsible to ensure the proper development, implementation and enforcement of all necessary and appropriate safety practices. The Contractor's designated on-site safety officer shall be on site **at all times** that work is being conducted, and shall be solely responsible for supervision of the Contractor's employees, subcontractors, suppliers and representatives for safety.

The Contractor throughout the work of this contract shall comply with the PVSC Safety Rules, as well as the Federal Occupational Safety and Health Act and the applicable New Jersey Department of Labor Administrative Codes. The Contractor will be provided with a copy of the PVSC Safety Rules, these rules, including the wearing of protective head gear, shall be strictly enforced by the Contractor in respect to his own employees, subcontractor's employees, and other personnel engaged in business with the Contractor on PVSC's property.

Contractor's (and subcontractor's) personnel when on PVSC property shall wear OSHA approved hard hats and shall prominently display the Company Name or Logo on the hard hat.

The Contractor is advised of the 15 MPH speed limit on all plant roads, and will be held responsible for his employees (and subcontractors) compliance with this and all rules for traffic safety in the plant.

The Contractor's attention is directed toward several OSHA Safety and Health Standards and New Jersey Labor Department Administrative Codes that influence the conduct of his work in specific areas.

1. OSHA Confined Space Standard, 29 CFR 1910.146 – Work in Confined Spaces
2. OSHA Control of Hazardous Energy (Lockout/Tagout) Standard, 29 CFR 1910.147 (Electrical energy lockout and other energy sources such as steam, air, liquids.)
3. NJAC 7:31-1-6 – Toxic Catastrophe Prevention Act

Before any work commences on PVSC property, the Contractor's Superintendent shall contact the PVSC Facility Supervisor at the site. The PVSC Supervisor will inform the Contractor of the PVSC emergency plant evacuation plan and where he is to assemble his personnel.

The Contractor shall instruct and show his personnel where to assemble, at the sound of the PVSC emergency evacuation siren. The Facility Supervision will notify the Contractor's personnel of the emergency evacuation route they are to follow. At the assembly point, the Contractor's person in charge shall account for all his personnel, supply transportation, and see that they utilize the prescribed evacuation route.

Every third Wednesday of each month at 11:00 a.m. the evacuation siren is put through a test cycle. The Contractor should check with PVSC each month shortly before that time to confirm the test is going to be performed. If so, it is not required to assemble for the test cycle.

Where portions of the work of the contract fall under the authority of these Administrative Codes for Public Employees, the Contractor shall at all times maintain safety standards for his employees at least as comprehensive as that imposed by the Codes. This includes, for example (and not limited to), monitoring of air in confined spaces with appropriate instrumentation for noxious or toxic gases % oxygen, and lockout and tagout of hazardous energy such as electrical, steam, air or liquids under pressure.

The Contractor shall be responsible for providing first aid, and emergency medical assistance for any of his employees injured on the work site. The Contractor shall be responsible for arranging emergency assistance with local hospitals, and/or EMT services. The Contractor's arrangements shall be submitted in writing, with required telephone numbers to PVSC's Security Department. PVSC Security will summon the Contractor's emergency personnel, if the Contractor calls PVSC Security from any in plant telephone.

Contractor's personnel will not be treated in the PVSC Dispensary for minor injuries, cuts or services.

#### **01304 MATERIALS HANDLING AND STORAGE**

Material storage and staging area shall be approved by the Owner. All equipment and materials to be incorporated in the work shall be so placed as not to injure the work or the Owner's property as so that free access may be had at any time to all parts of the work, and to all utility installations in the vicinity of the work.

Materials and equipment shall be kept neatly piled and compactly and conveniently stored so as to inconvenience as little as possible travel in the area. Contractor shall obtain approval of PVSC for storage of his materials and equipment.

All loss, injury, or damage to the work or materials from whatever cause, shall be made good at the Contractor's expense.

Contractor shall be responsible for daily cleanup. All removed materials, rubbish and other things not required to be incorporated in the work shall be promptly removed from the property.

The Contractor will be responsible for the security of his tools, equipment and all his materials.

Any spillage caused by the Contractor, his subcontractors, suppliers or his equipment, while on PVSC property, shall be the Contractor's responsibility to properly clean up at the Contractor's expenses. The clean up shall meet all Federal and State requirements, including proper documentation as may be required.

**01630 DOMESTIC PRODUCTS AND MATERIALS**

In accordance with N.J.S.A. 40A:11-18, only products and materials produced, mined or manufactured in the United States which will ultimately become the property of the PVSC may be used in this contract.

**01710 QUALIFICATION OF CONTRACTOR**

The Contractor shall have experience in the following:

- A minimum of 10 Years providing SCADA Integration Services for Water or Waste Water Treatment Plants with 50 MGD Capacity or Greater.
- Industrial Control Panel Design and Integration, including Allen-Bradley PLC's and PanelView OIT's
- Programming for Allen-Bradley PLC's and PanelView OIT's
- Programming for plant SCADA systems including Wonderware InTouch
- Startup services for PLC, instrumentation, and plant SCADA system modifications
- Creating Preliminary Design Documents: P&ID drawing(s), sequence of operation, network diagram, and I/O and alarm lists.
- Creating Final Design Documents: control panel drawings, etc.
- Addition of graphics (and/or modification of existing graphics as needed) to incorporate changes to SCADA
- Modification of historic alarm list
- Modification of reports out of Historian (or creation of new reports)

**The contractor shall insure that all requested repairs, design, programming, integration, fabrication etc. shall be performed by personnel who are trained to provide the type of service specified,**

**The Contractor and/or subcontractor must submit with his contract proposal all information as required by Section 00403- SUBCONTRACTOR LISTING**

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**The Contractor shall use only workers with at least three (3) years' documented experience in the particular craft that is requested by PVSC. The contractor shall submit WITH HIS CONTRACT PROPOSAL a certification of this experience for all workers scheduled to perform the work. The certification for each worker shall include that persons craft(s) and the names and address of at least (3) customers that they have performed similar work for within the past (3) years. No worker will be permitted on site**

**to perform any work unless their certification for that particular craft which they were hired to do has been submitted, approved and on file in the PVSC Engineering Department.**

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**01720    TRADE PRACTICE/SUPERVISION**

The Contractor shall retain skilled craftsmen for the duration of the job and shall provide continual supervision to insure that good trade practices, including safety, are adhered to.

Further, the Contractor's Superintendent and trade Foreman shall be available for consultation with regard to work performed under this specification, to the PVSC designated representative, throughout each day for the duration of the contract.

Contractor will be held responsible for the conduct of his personnel on site, and shall promptly remove individuals who are drunk, disorderly, or found with controlled substances, when requested by the Owner.

Personnel experience/resumes shall be provided at the beginning of the contract to receive acceptance and confirmation to perform work onsite.

Parking for Contractor trucks and employees vehicles with the plant is at the Commission convenience. Parking shall be where designated by the Commission and is subject to change.

**01730    WARRANTY AND QUALITY ASSURANCE**

Contractor shall warrant all work to PVSC for one (1) year against defective materials and workmanship. Warranty to begin from date of substantial completion as defined/determined by PVSC.

Inspection of work and materials by the Owner shall not relieve the Contractor of any obligations to fulfill the terms of this contract, and any defective work found at the time of installation shall be made good. All unsuitable materials shall be rejected notwithstanding that such materials have been previously overlooked by the Owner and accepted.

The work site shall remain open to the Owner for purposes of inspection. The Owner reserves the right to halt progress as he deems the specifications or the intent of the specifications are not being adhered to. The terms Owner, Engineer or Plant Engineer, shall be construed to be interchangeable in this Contract.

## **DIVISION 13 INSTRUMENTATION AND CONTROL**

### **13050 GENERAL**

#### **A. General**

1. Provide regular maintenance and repair work, on-call emergency services, design, integration services and parts and supplies as requested to keep the SCADA system in proper working order.
2. Provide conduit, wiring, control devices, control panels and electrical equipment furnished and provided under Division 1.
3. Disconnecting, removing, and relocating existing electrical equipment is a part of this Contract. Make equipment schedule for removal free of shock hazard. Coordinate the sequence of demolition with the sequence of construction to maintain facility operation. Remove and demolish equipment and materials in such a sequence that the existing and proposed plant will function properly with no power disruption.

#### **4. All conduit shall be rigid galvanized steel.**

#### **B. Submittals**

1. Shop drawings and data are required for the following list:
  - a. Enclosures
  - b. Control Panels
  - c. Safety Switches
  - d. Protective Devices
  - e. Completed manufacturer's data sheets.
  - f. Operating and Maintenance Manuals

#### **C. Quality Assurance**

Install electrical work in conformance with the latest rules and requirements of National Fire Protection Association Standard No. 70 (National Electrical Code) latest adopted version and in accordance with requirements of State and Local Codes.

#### **D. Interference and Erroneous Location**

1. Locations of electrical equipment, devices, outlets, and similar items, as indicated, are approximate only. Exact locations shall be determined during construction.
2. Verify in field, all data and final locations of work installed under other sections of specifications, required for placing of electrical work.
3. In case of interference with other work or erroneous locations with respect to equipment of structures, furnish all labor and materials to complete the work.

#### **E. Area Classifications**



1. Materials and equipment for all outdoor areas shall conform to corrosive requirements.
2. The locations and requirements shall be in accordance with the following:
  - a. Materials, equipment and incidentals installed in corrosive areas shall meet NEC and NEMA requirements for corrosive locations. Enclosures installed in corrosive locations shall meet NEMA 4X requirements.
  - b. Materials, equipment and incidentals installed in dry dusty areas shall meet NEMA 12 requirements.
  - c. Materials, equipment and incidentals installed in explosion proof areas shall be rated NEMA 7/4X or as approved.

F. Nameplates

1. Provide nameplates for equipment (including pushbutton and selector switch stations) listed in this section and other controls furnished under this contract, to designate the equipment controlled and their function.
2. Provide all junction boxes, pull boxes, disconnect switches and control panels with a nameplate to designate the system wiring contained within.

**13051** SCOPE OF WORK

The work of this section shall consist of providing all supervision, labor, equipment and materials, required to perform various electrical work created by associated SCADA Integration Services provided in Division 1, throughout the PVSC Facility. All wiring, conduit and electrical supports associated with mechanical equipment shall be furnished and installed by a licensed electrician.

**13052** QUALITY ASSURANCE

**A. Codes:** Perform all work in accordance with applicable codes. Provide and ground all electrical equipment in compliance with the latest edition of the National Electrical Code.

**B. Testing Laboratory Labels:** Electrical material and equipment shall be new and shall bear the label of the Underwriters' Laboratories, Inc., or other nationally recognized, independent testing laboratory, wherever standards have been established and label service regularly applies. Control panels shall be listed and labeled as industrial control panels (UL-508A) or other approved listing.

**C. Area Classifications:**

Materials and equipment shall conform to the area classifications specified.

- **Corrosive Locations:** All outdoor locations shall be classified as wet and corrosive. Materials, equipment and incidentals in wet and corrosive areas shall meet NEC and NEMA requirements for corrosive locations. Enclosures installed in corrosive locations shall meet NEMA 4X requirements, **unless specified otherwise.**
- **Dusty Locations:** All indoor areas shall be considered as dusty locations. Materials, equipment and incidentals in dusty locations shall meet NEC and NEMA 12 requirements, **unless specified otherwise.**

**D. Field Quality Control:**

1. Conduct field quality control work for the electrical work performed under this contract. Field quality control shall be in accordance with the contract requirements and all applicable Federal, State and Local codes.

**13053      QUALIFICATIONS, GENERAL**

The Contractor shall have experience in the construction modifications or maintenance in Sewerage Treatment Plants, Pump Stations or similar facilities.

**The contractor shall insure that all requested repairs, shall be performed by personnel who are trained to provide the type of service specified, and as outlined in Section 01710 Qualifications of Contractor.**

**13054      MATERIALS, PARTS AND SUPPLIES**

All parts and materials supplied by Contractor under the contract resulting from this Invitation and Bid shall be new, first quality products meeting original equipment manufacturer (OEM) specifications, but are not required to be provided by the OEM.

All materials and supplies shall be billed at cost plus a 15% contractor markup fee. The Contractor must submit a clear and legible copy of the original material invoice with his payment request in order to get reimbursed for the materials.

The pricing of all materials and supplies must be reasonable and competitive with prevailing market pricing.

Examples of reimbursable Materials and Supplies include but are not limited to the following:

- Wires
- Kindorf, Greenfield
- Junction boxes
- Plastic and Steel Conduit
- Cable
- Fixtures

Examples of items that are to be included with the Contractor General Equipment and are not considered reimbursable materials and supplies include but are not limited to the following:

- Pipe and Tube bender
- Cable pulling Equipment
- Lineman's pliers, Diagonal pliers, Needle-Nose-pliers
- Conduit bending equipment
- Wire Strippers, cable cutters, Rotosplit
- Mechanical Hoists
- Ladders
- Multimeter, Test Light
- Step Bit, Cord, Rope and/or Fish Tape
- Insulation Resistance Tester i.e. Megger

- Knockout Punch
- Other general use tools with application in electric power wiring including , screwdrivers, hammers, reciprocating saws, drywall saws, metal punches, flashlights, chisels, adjustable slip-joint pliers, drills etc.

**13055      OEM or SPECIALTY SUBCONTRACTOR SERVICES**

When requested by the Engineer, work shall include the services of a qualified factory-trained field representative of the manufacturer or specialty subcontractor to properly assist the Contractor for diagnostic services, repair and removal, or installation and startup at cost + 5%. The Contractor must submit clear legible copy of the OEM or Specialty Subcontractors services invoice with his payment request in order to get reimbursed for their services.

The pricing of the OEM and Specialty Subcontractor Services must be reasonable and competitive with prevailing market pricing.

**13056      SUBMITTALS**

Submit under provisions of Section 01300, Shop Drawings, Product Data and Samples.

1. Shop Drawings and Product Data: Include manufacturer's drawings, bills of material, panel and equipment layouts, catalog data, schematics diagrams, wiring diagrams and other documentary or descriptive information etc. as required for each assembly

a. Bills of material: Include a numbered list of all components, with manufacturer's name, catalog number, rating, and other identification. Place item number or similar identification on all other drawings where item appears.

b. Where additions and modifications are made to existing equipment, provide drawings, which include both retained existing equipment and new work.

c. For informational purposes only, submit equipment installation instructions in separate submittals from other shop drawings.

**13057      JOB CONDITIONS**

**A. Existing Conditions:**

1. Examine the Site and existing facilities to compare them with the Contract Documents relative to the conditions of the premises, location of and connection to existing facilities, and obstructions that may affect the Work.

2. Perform the Work with due regard to safety and in a manner that will not interfere with the existing equipment or cause interruption of the functions of the Site, unless specified otherwise.

3. Where the Work ties in with existing installations, CONTRACTOR shall take precautions and safeguards in connecting the Work to existing operating circuits to prevent interruption to existing circuits. Connection of Work to existing circuits shall be performed in the presence of OWNER and ENGINEER.

**B. Staging.**

1. Where the Work requires certain equipment to be taken out of service, CONTRACTOR shall perform the Work with due regard to maintenance of operations.

2. The level of service and control existing at the start of the Contract shall be maintained at all times, except as required during actual change-over to new equipment. Interruptions of existing circuits shall be coordinated with the OWNER who will determine the length of time a circuit may be de-energized to maintain the OWNER's processes in dependable and safe operation.

## **13058 PRODUCTS**

### **13058.1 IDENTIFICATION DEVICES**

#### **A. Equipment and Device Nameplates:**

1. Provide nameplates to identify equipment, item's function and the equipment to which it serves.
2. Nameplates shall be laminated plastic with black letters on a white background.
3. Letter engravings shall be 1/2-inch high for equipment identification and 1/4-inch high for pilot device identification.
4. Nameplates one-inch or less in height shall have one mounting hole at each end. Nameplates greater than one-inch in height shall have mounting holes in all four corners.
5. Fasteners: Fasten all signs and nameplates with 3/16-inch diameter, round head, stainless steel, self-tapping screws.

### **13058.2 Mounting and Supporting Material**

#### **A. Channels, Fittings and Brackets:**

1. Provide channels, fittings, brackets and related hardware for mounting and supporting the electrical equipment. Include all anchor bolts, concrete inserts and related hardware for proper support of equipment.
2. Channels shall conform to ASTM A569 or A570. Channels shall have a minimum thickness of 12 gauge and a cross sectional width dimension of 1-1/2 inch minimum. The depth shall be as required to satisfy load requirements.
3. Attachment holes, when required, shall be factory punched on hole centers approximately equal to the cross sectional width and shall be 9/16 inch diameter.
4. Fittings and brackets shall have 9/16 inch diameter holes on centers identical to the channel or as required to align with the channel holes. Fittings and brackets shall have the same width as the channel and shall be 1/4 inch thick minimum. Fittings and brackets shall mate properly with the channel.
5. All channels, fittings, brackets and related hardware shall be steel and have an electro-plated zinc finish according to ASTM B633.
6. In corrosive areas, channels, fittings, brackets and related hardware shall be Type 316 stainless steel.

#### **B. Conduit Hangers, Supports and Inserts:**

1. Provide channels, rods, straps, anchors and related hardware for support of the exposed conduit system. Include all anchor bolts, concrete inserts and related hardware for proper support of the conduit system.
2. Conduit hangers and supports in corrosive areas shall be 316 stainless steel.

**C. Manufacturers: Provide one of the following:**

1. B-Line Systems.
2. Kindorf.
3. Or equal

**13059 EXECUTION**

**13059.1 SUPPORT INSTALLATION**

- A. Install supporting devices level, parallel and perpendicular to building walls and floors, such that the support system is installed in a neat and professional manner.
- B. The channels, fittings and brackets shall be rigidly bolted together and braced to make a substantial supporting framework support system.
- C. All holes in hung ceilings for support rods and other equipment shall be made adjacent to bars where possible, to facilitate removal of ceiling panels.
- D. All equipment fastenings to steel columns, beams and trusses shall be by beam clamps. In lieu of beam clamps, equipment may be welded to steel structures,

**13059.2 EQUIPMENT IDENTIFICATION**

- A. Identify equipment by means of nameplates. Re-label existing equipment whose designation has been changed.
- B. Color code and identify wires and cables by means of wire markers. Color and markers shall match the existing installation. Determine existing identification requirement in advance with OWNER. Identify power conductors by circuit number and phase. Identify each control, signal and status wire by a unique number. Numbering system shall reflect the actual designations used in the Work. Coil spare wiring neatly. Tag each spare wire and note its origin.
- C. All feeders and branch circuit devices shall have nameplates identifying the served equipment name and number. For modified circuits under this Contract the CONTRACTOR shall remove nameplates that are no longer valid and provide new nameplates reflecting the modifications. The nameplates shall identify the served equipment name and number and shall be installed on the existing equipment.

**13059.3 EQUIPMENT GROUNDING**

- A. Equipment grounding conductors shall be pulled into conduits with non-grounded conductors shall be insulated. Insulation shall be green.
- B. Connect ground conductors to conduit with copper clamps, straps or with grounding bushings.
- C. Connect to equipment by means of lug compressed on cable end. Bolt lug to equipment frame using holes or terminals provided on equipment specifically for grounding. Do not use hold down bolts. Where grounding provisions are not included, drill suitable holes in locations designated by OWNER.
- D. Connect to motors by bolting directly to motor frames, not to sole plates or supporting structures.
- E. Scrape bolted surfaces clean and coat with a conductive oxide resistant compound.

#### **13059.4     DEMONSTRATION OF EQUIPMENT**

- A. Demonstrate, in the presence of the OWNER, when the work is substantially complete that all electrical systems and electrically operated equipment operates as specified, designed and as required.
- B. Coordinate the demonstration of equipment tests with the OWNER's personnel in advance and in accordance with the requirements of Section 01750, Maintenance of Plant Operations During Construction.
- C. Include the following operational tests:
  - 1. Operate power circuits to verify proper operation and connection to equipment.
  - 2. Removed and reapplied supplies to automatic transfer equipment to verify their operation.
  - 3. Operate all control circuits including pushbuttons, indicating lights and similar devices to verify proper connection and function. Operate all devices, such as pressure and flow switches and similar devices to verify that shut-downs and control sequences operate as required.
- D. Provide a demonstration of equipment report. The report shall include complete information on the tests performed and the results.

#### **13059.5     FIELD QUALITY CONTROL**

- A. Provide field services for the interface and demolition of the existing circuits. The equipment and circuit requirements of each system shall be field determined prior to performing system modifications.
- B. The field services required at a minimum shall include the following:
  - 1. Coordinate the interface of equipment with OWNER's personnel and field conditions.
  - 2. Obtain existing record control panel diagrams from the OWNER and field determine circuit terminations and sources of power. Coordinate with the OWNER for the termination requirements for the additional signals.
  - 3. Field compare existing starter and panel control circuit terminations from as-built record drawings with the existing circuits.
  - 4. Field trace existing circuits as required for the demolition and interface of the equipment provided.
  - 5. Field identify starter and panel control terminations for follow function for the purpose of reconnection. The existing source of supplies shall be field determined, identified and disconnected prior to the demolition of each circuit.
- C. Provide all tools and equipment as required to perform the tracing of circuits necessary for proper execution of the work.
- D. It shall be the responsibility of this CONTRACTOR to defined and identify all wiring, circuit terminations and equipment to be modified to ensure the proper interface of all components. The CONTRACTOR shall include in his bid all costs associated with the field services specified as required to ensure a complete functional system.

#### **13060     Field Equipment/ Rental Equipment / Rental Rates.**

Should the contractor be required to supply equipment that is not included within this contract he must submit the rental cost to the engineer for review and approval

prior to the delivery of such equipment. All such equipment shall be billed at cost. (+15% Markup) The Contractor must submit a clear and legible copy of the original equipment invoice with his payment request in order to get reimbursed

The pricing of all rental equipment must be reasonable and competitive with prevailing market pricing and as per Equipmentwatch.com

All rates shall include all fuel, lubricants, supplies, small tools, necessary attachment, repairs, overhaul, any maintenance, storage fees and insurance required.

In addition to the usual field maintenance equipment; vehicles, hoists, compressors, tools and the like, the successful bidder will be required to have ladders, all safety equipment, air monitors, harnesses, etc. for purposes of providing on-site repair of equipment. A request for these services will be advised with sufficient notice to allow fitting the crew and trucks for the specific work. The Contractor shall be expected to commence the service operation within three (3) working days of the request for service. The operation will be as directed by the Engineer who may, entirely at his option, terminate the service for whatever reason.

Laborers required in addition to the above specified persons shall be provided and paid for in accordance with the items bid for these services.

#### **13060.1      CONTRACTOR OWNED EQUIPMENT**

Should the contractor be required to supply equipment that he owns and is not included within these contract requirements he must submit the hourly rate for such Contractor owned equipment.

The pricing of all contractors owned equipment must be reasonable and competitive with prevailing market pricing and as per Equipmentwatch.com

All rates shall include all fuel, lubricants, supplies, small tools, necessary attachment, repairs, overhaul, any maintenance, storage fees and insurance required.

Idle time for equipment will not be paid for, except where the equipment has been held on the site on a standby basis at the request of the Engineer.

#### **END OF SECTION**

THE PARTICULAR PREVAILING WAGE SCHEDULES  
INCLUDED IN THIS CONTRACT ARE NOT REPRINTED HERE  
DUE TO SIZE.