

**SERVICE CONTRACT**  
**Plant 2 Trickling Filter Pump Station Pumps Variable Speed Drive Replacement**  
**Specification No. S-2021-1273BD**

**THIS CONTRACT** is made and entered into as of the date fully executed below, by and between Orange County Sanitation District, with a principal place of business at 10844 Ellis Avenue, Fountain Valley, CA 92708 (hereinafter referred to as "OC San") and [\_\_\_\_\_] with a principal place of business at [\_\_\_\_\_] (hereinafter referred to as "Contractor") collectively referred to as the "Parties".

**WITNESSETH**

**WHEREAS**, OC San desires to temporarily retain the services of Contractor for Plant 2 Trickling Filter Pump Station Pumps Variable Speed Drive Replacement, "Services", as described in Exhibit "A"; and

**WHEREAS**, OC San has chosen Contractor to conduct Services in accordance with Ordinance No. OC SAN-56; and

**WHEREAS**, on [\_\_\_\_\_] , the Board of Directors of OC San, by minute order, authorized execution of this Contract between OC San and Contractor; and

**WHEREAS**, Contractor is qualified by virtue of experience, training, and expertise to accomplish such Services,

**NOW, THEREFORE**, in consideration of the mutual promises and mutual benefits exchanged between the Parties, the Parties mutually agree as follows:

**1. Introduction**

1.1 This Contract and all exhibits hereto is made by OC San and the Contractor. The terms and conditions herein exclusively govern the purchase of Services as described in Exhibit "A".

1.2 Exhibits to this Contract are incorporated by reference and made a part of this Contract as though fully set forth at length herein.

Exhibit "A" Scope of Work  
Exhibit "B" Bid  
Exhibit "C" Determined Insurance Requirement Form  
Exhibit "D" Contractor Safety Standards  
Exhibit "E" Human Resources Policies  
Exhibit "F" General Conditions

1.3 In the event of any conflict or inconsistency between the provisions of this Contract and any of the provisions of the exhibits hereto, the provisions in the document highest in precedence shall be controlling. The order of precedence of the Contract is set forth below:

- a. Addenda issued prior to opening of Bids – the last in time being the first in precedence
- b. Service Contract
- c. Exhibit "F" General Conditions

- d. Exhibit "C" Determined Insurance Requirement Form
- e. Exhibit "D" Contractor Safety Standards
- f. Permits and other regulatory requirements
- g. Exhibit "E" Human Resources Policies
- h. Exhibit "A" Scope of Work
- i. Exhibit "B" Bid Price Form

1.4 The provisions of this Contract may be amended or waived only by a writing executed by authorized representatives of both Parties hereto.

1.5 The various headings in this Contract are inserted for convenience only and shall not affect the meaning or interpretation of this Contract or any paragraph or provision hereof.

1.6 The term "hours", when used in this Contract, shall be as defined in Exhibit "A".

1.7 Contractor shall provide OC San with all required premiums and/or overtime work at no charge beyond the price provided under "Compensation" below.

1.8 Except as expressly provided otherwise, OC San accepts no liability for any expenses, losses, or action incurred or undertaken by Contractor as a result of work performed in anticipation of purchases of said services by OC San.

2. **Compensation** Compensation to be paid by OC San to Contractor for the Services provided under this Contract shall be a total amount not exceed [ \_\_\_\_\_ ] Dollars (\$[ \_\_\_\_\_ ].00).

3. **California Department of Industrial Relations (DIR) Registration and Record of Wages**

3.1 To the extent Contractor's employees and/or its subcontractors who will perform Work during the design and preconstruction phases of a construction contract or perform work under a maintenance contract for which Prevailing Wage Determinations have been issued by the DIR and as more specifically defined under Labor Code Section 1720 et seq, Contractor and its subcontractors shall comply with the registration requirements of Labor Code Section 1725.5. Pursuant to Labor Code Section 1771.4, the work is subject to compliance monitoring and enforcement by the DIR.

3.2 The Contractor and its subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code Section 1776, and shall submit payroll records to the Labor Commissioner pursuant to Labor Code 1771.4(a)(3). Penalties for non-compliance with the requirements of Section 1776 may be deducted from progress payments per Section 1776.

3.3 Pursuant to Labor Code Section 1776, the Contractor and its subcontractors shall furnish a copy of all certified payroll records to OC San and/or general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the Department of Industrial Relations.

3.4 The Contractor and its subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulation Section 16461(e).

3.5 In addition, refer to General Conditions, Exhibit "F", GC-4, LAWS TO BE OBSERVED.

4. **Payments and Invoicing**

4.1 OC San shall pay, net thirty (30) days, upon receipt and approval, by OC San's Project Manager or designee, of itemized invoices submitted for Pump Drives completed as follows: 16% upon completion of each of the first five (5) Pump Drives and 20% upon completion of the final Pump Drive, in accordance with Exhibit "A".

4.2 OC San, at its sole discretion, shall be the determining party as to whether the Services have been satisfactorily completed.

4.3 Invoices shall be emailed by Contractor to OC San Accounts Payable at [APStaff@OCSan.gov](mailto:APStaff@OCSan.gov) and "INVOICE" with the Purchase Order Number shall be referenced in the subject line.

4.4 In addition, refer to General Conditions, Exhibit "F", PAYMENT FOR WORK.

5. **Audit Rights** Contractor agrees that, during the term of this Contract and for a period of three (3) years after its termination, OC San shall have access to and the right to examine any directly pertinent books, documents, and records of Contractor relating to the invoices submitted by Contractor pursuant to this Contract.

6. **Scope of Work** Subject to the terms of this Contract, Contractor shall perform the Services identified in Exhibit "A". Contractor shall perform said Services in accordance with generally accepted industry and professional standards.

7. **Modifications to Scope of Work** Requests for modifications to the Scope of Work hereunder can be made by OC San at any time. All modifications must be made in writing and signed by both Parties.

8. **Contract Term** The Services provided under this Contract shall be completed within 180 calendar days from the effective date of the Notice to Proceed.

9. **Extensions** The term of this Contract may be extended only by written instrument signed by both Parties. In addition, refer to General Conditions, Exhibit "F", GC-27, EXTENSION OF TIME FOR DELAY.

10. **Performance** Time is of the essence in the performance of the provisions hereof.

11. **Termination**

11.1 OC San reserves the right to terminate this Contract for its convenience, with or without cause, in whole or in part, at any time, by written notice from OC San of intent to terminate. Upon receipt of a termination notice, Contractor shall immediately discontinue all work under this Contract (unless the notice directs otherwise). OC San shall thereafter, within thirty (30) days, pay Contractor for work performed (cost and fee) to the date of termination. Contractor expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Contract. Such notice of termination shall terminate this Contract and release OC San from any further fee, cost or claim hereunder by Contractor other than for work performed to the date of termination.

11.2 OC San reserves the right to terminate this Contract immediately upon OC San's determination that Contractor is not complying with the Scope of Work requirements, if the level of service is inadequate, or any other default of this Contract.

- 11.3 OC San may also immediately cancel for default of this Contract in whole or in part by written notice to Contractor:
- if Contractor becomes insolvent or files a petition under the Bankruptcy Act; or
  - if Contractor sells its business; or
  - if Contractor breaches any of the terms of this Contract; or
  - if total amount of compensation exceeds the amount authorized under this Contract.
- 11.4 All OC San property in the possession or control of Contractor shall be returned by Contractor to OC San upon demand, or at the termination of this Contract, whichever occurs first.
12. **Insurance** Contractor and all subcontractors shall purchase and maintain, throughout the life of this Contract and any periods of warranty or extensions, insurance in amounts equal to the requirements set forth in the signed Determined Insurance Requirement Form (attached hereto and incorporated herein as Exhibit "C"). Contractor shall not commence work under this Contract until all required insurance is obtained in a form acceptable to OC San, nor shall Contractor allow any subcontractor to commence service pursuant to a subcontract until all insurance required of the subcontractor has been obtained. Failure to maintain required insurance coverage shall result in termination of this Contract.
13. **Bonds – Not Used**
14. **Indemnification and Hold Harmless Provision** Contractor shall assume all responsibility for damages to property and/or injuries to persons, including accidental death, which may arise out of or be caused by Contractor's services under this Contract, or by its subcontractor(s) or by anyone directly or indirectly employed by Contractor, and whether such damage or injury shall accrue or be discovered before or after the termination of the Contract. Except as to the sole active negligence of or willful misconduct of OC San, Contractor shall indemnify, protect, defend and hold harmless OC San, its elected and appointed officials, officers, agents and employees, from and against any and all claims, liabilities, damages or expenses of any nature, including attorneys' fees: (a) for injury to or death of any person or damage to property or interference with the use of property, arising out of or in connection with Contractor's performance under the Contract, and/or (b) on account of use of any copyrighted or uncopyrighted material, composition, or process, or any patented or unpatented invention, article or appliance, furnished or used under the Contract, and/or (c) on account of any goods and services provided under this Contract. This indemnification provision shall apply to any acts or omissions, willful misconduct, or negligent misconduct, whether active or passive, on the part of Contractor or anyone employed by or working under Contractor. To the maximum extent permitted by law, Contractor's duty to defend shall apply whether or not such claims, allegations, lawsuits, or proceedings have merit or are meritless, or which involve claims or allegations that any of the parties to be defended were actively, passively, or concurrently negligent, or which otherwise assert that the parties to be defended are responsible, in whole or in part, for any loss, damage, or injury. Contractor agrees to provide this defense immediately upon written notice from OC San, and with well qualified, adequately insured, and experienced legal counsel acceptable to OC San.
15. **Contractor Safety Standards and Human Resources Policies** OC San requires Contractor and its subcontractor(s) to follow and ensure their employees follow all Federal, State, and local regulations as well as Contractor Safety Standards while working at OC San locations. If during the course of the Contract it is discovered that Contractor Safety Standards do not comply with Federal, State, or local regulations, then the Contractor is required to follow the most stringent regulatory requirement at no additional cost to OC

San. Contractor and all of its employees and subcontractors, shall adhere to the Safety requirements in Exhibit "A", all applicable Contractor Safety Standards attached hereto in Exhibit "D" and the Human Resources Policies in Exhibit "E".

16. **Warranties** - Refer to General Conditions, Exhibit "F", GC-19 WARRANTY (CONTRACTOR'S GUARANTEE).
17. **Liquidated Damages – Not Used**
18. **Force Majeure** Neither party shall be liable for delays caused by accident, flood, acts of God, fire, labor trouble, war, acts of government or any other cause beyond its control, but said party shall use reasonable efforts to minimize the extent of the delay. Work affected by a Force Majeure condition may be rescheduled by mutual consent or may be eliminated from the Contract.
19. **Freight (F.O.B. Destination)** Contractor assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Contract.
20. **Familiarity with Work** By executing this Contract, Contractor warrants that: 1) it has investigated the work to be performed; and 2) it understands the facilities, difficulties and restrictions of the work under this Contract. Should Contractor discover any latent or unknown conditions materially differing from those inherent in the work or as represented by OC San, it shall immediately inform OC San of this and shall not proceed, except at Contractor's risk, until written instructions are received from OC San.
21. **Regulatory Requirements** Contractor shall perform all work under this Contract in strict conformance with applicable Federal, State, and local regulatory requirements including, but not limited to, 40 CFR 122, 123, 124, 257, 258, 260, 261, and 503, Title 22, 23, and California Water Codes Division 2. In addition, refer to General Conditions, Exhibit "F", GC-35, STORMWATER REQUIREMENTS.
22. **Environmental Compliance** Contractor shall, at its own cost and expense, comply with all Federal, State, and local environmental laws, regulations, and policies which apply to the Contractor, its subcontractors, and the Services, including, but not limited to, all applicable Federal, State, and local air pollution control laws and regulations.
23. **Licenses, Permits, Ordinances and Regulations** Contractor represents and warrants to OC San that it has obtained all licenses, permits, qualifications, and approvals of whatever nature that are legally required to engage in this work. Any and all fees required by Federal, State, County, City and/or municipal laws, codes and/or tariffs that pertain to the work performed under the terms of this Contract will be paid by Contractor.
24. **Applicable Laws and Regulations** Contractor shall comply with all applicable Federal, State, and local laws, rules, and regulations. Contractor also agrees to indemnify and hold harmless from any and all damages and liabilities assessed against OC San as a result of Contractor's noncompliance therewith. Any permission required by law to be included herein shall be deemed included as a part of this Contract whether or not specifically referenced.
25. **Contractor's Employees Compensation - In addition, refer to General Conditions, Exhibit "F", GC-4, LAWS TO BE OBSERVED**
  - 25.1 **Davis-Bacon Act** – Contractor will pay and will require all subcontractors to pay all employees on said project a salary or wage at least equal to the prevailing rate of per

diem wages as determined by the Secretary of Labor in accordance with the Davis-Bacon Act for each craft or type of worker needed to perform the Contract. The provisions of the Davis-Bacon Act shall apply only if the Contract is in excess of two thousand dollars (\$2,000.00) and when twenty-five percent (25%) or more of the Contract is funded by Federal assistance. If the aforesaid conditions are met, a copy of the provisions of the Davis-Bacon Act to be complied with are incorporated herein as a part of this Contract and referred to by reference.

- 25.2 General Prevailing Rate – OC San has been advised by the State of California Director of Industrial Relations of its determination of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which the work is to be performed for each craft or type of work needed to execute this Contract, and copies of same are on file in the Engineering Department. The Contractor agrees that not less than said prevailing rates shall be paid to workers employed on this Contract as required by Labor Code Section 1774 of the State of California. Per California Labor Code 1773.2, OC San have on file copies of the prevailing rate of per diem wages at its principal office and at each project site, which shall be made available to any interested party upon request.
- 25.3 Forfeiture For Violation – Contractor shall, as a penalty to OC San, forfeit fifty dollars (\$50.00) for each calendar day or portion thereof for each worker paid (either by the Contractor or any subcontractor under it) less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.
- 25.4 Apprentices – Sections 1777.5, 1777.6, 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices are applicable to this Contract and the Contractor shall comply therewith if the prime contract involves thirty thousand dollars (\$30,000.00) or more or twenty (20) working days or more; or if contracts of specialty contractors not bidding for work through the general or prime Contractor are two thousand dollars (\$2,000.00) or more or five (5) working days or more.
- 25.5 Workday – In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and the Contractor shall not require more than eight (8) hours of labor in a day from any person employed by it hereunder. Contractor shall conform to Article 3, Chapter 1, Part 7 (Section 1810 et seq.) of the Labor Code of the State of California and shall forfeit to OC San as a penalty, the sum of twenty-five dollars (\$25.00) for each worker employed in the execution of this Contract by Contractor or any subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) week in violation of said Article. Contractor shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the project.
- 25.6 Record of Wages; Inspection – Contractor agrees to maintain accurate payroll records showing the name, address, social security number, work classification, straight-time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by it in connection with the project and agrees to require that each of its subcontractors do the same. All payroll records shall be certified as accurate by the applicable

Contractor or subcontractor or its agent having authority over such matters. Contractor further agrees that its payroll records and those of its subcontractors shall be available to the employee or employee's representative, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards and shall comply with all of the provisions of Labor Code Section 1776, in general. Penalties for non-compliance with the requirements of Section 1776 may be deducted from project payments per the requirements of Section 1776.

26. **South Coast Air Quality Management District's (SCAQMD) Requirements** It is Contractor's responsibility that all equipment furnished and installed be in accordance with the latest rules and regulations of the South Coast Air Quality Management District (SCAQMD). All Contract work practices, which may have associated emissions such as sandblasting, open field spray painting or demolition of asbestos containing components or structures, shall comply with the appropriate rules and regulations of the SCAQMD.
27. **Governing Law** This Contract shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in the County of Orange, in the event any action is brought in connection with this Contract or the performance thereof.
28. **Breach** The waiver of either party of any breach or violation of, or default under, any provision of this Contract, shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Contract or default thereunder. Any breach by Contractor to which OC San does not object shall not operate as a waiver of OC San's rights to seek remedies available to it for any subsequent breach.
29. **Remedies** In addition to other remedies available in law or equity, if the Contractor fails to make delivery of the goods or Services or repudiates its obligations under this Contract, or if OC San rejects the goods or Services or revokes acceptance of the goods or Services, OC San may (1) cancel the Contract; (2) recover whatever amount of the purchase price OC San has paid, and/or (3) "cover" by purchasing, or contracting to purchase, substitute goods or Services for those due from Contractor. In the event OC San elects to "cover" as described in (3), OC San shall be entitled to recover from Contractor as damages the difference between the cost of the substitute goods or Services and the Contract price, together with any incidental or consequential damages.
30. **Dispute Resolution - Refer to General Conditions, Exhibit "F", GC-25, DISPUTES**
31. **Attorney's Fees - Refer to General Conditions, Exhibit "F", GC-24, CLAIMS**
32. **Survival** The provisions of this Contract dealing with Payment, Warranty, Indemnity, and Forum for Enforcement, shall survive termination or expiration of this Contract.
33. **Severability** If any section, subsection, or provision of this Contract, or any agreement or instrument contemplated hereby, or the application of such section, subsection, or provision is held invalid, the remainder of this Contract or instrument in the application of such section, subsection or provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby, unless the effect of such invalidity shall be to substantially frustrate the expectations of the Parties.
34. **Damage to OC San's Property** Any of OC San's property damaged by Contractor, any subcontractors or by the personnel of either will be subject to repair or replacement by Contractor at no cost to OC San. In addition, refer to General Conditions, Exhibit "F", GC-9, PRESERVATION OF PROPERTY.

35. **Disclosure** Contractor agrees not to disclose, to any third party, data or information generated from this project without the prior written consent from OC San.
36. **Independent Contractor** The legal relationship between the parties hereto is that of an independent contractor, and nothing herein shall be deemed to make Contractor an OC San employee. During the performance of this Contract, Contractor and its officers, employees, and agents shall act in an independent capacity and shall not act as OC San's officers, employees, or agents. Contractor and its officers, employees, and agents shall obtain no rights to any benefits which accrue to OC San's employees.
37. **Limitations upon Subcontracting and Assignment** Contractor shall not delegate any duties nor assign any rights under this Contract without the prior written consent of OC San. Any such attempted delegation or assignment shall be void.
38. **Third Party Rights** Nothing in this Contract shall be construed to give any rights or benefits to anyone other than OC San and Contractor.
39. **Non-Liability of OC San Officers and Employees** No officer or employee of OC San shall be personally liable to Contractor, or any successor-in-interest, in the event of any default or breach by OC San or for any amount which may become due to Contractor or to its successor, or for breach of any obligation for the terms of this Contract.
40. **Read and Understood** By signing this Contract, Contractor represents that he has read and understood the terms and conditions of the Contract.
41. **Authority to Execute** The persons executing this Contract on behalf of the Parties warrant that they are duly authorized to execute this Contract and that by executing this Contract, the Parties are formally bound.
42. **Entire Agreement** This Contract constitutes the entire agreement of the Parties and supersedes all prior written or oral and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.



43. **Notices** All notices under this Contract must be in writing. Written notice shall be delivered by personal service or sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Rejection or other refusal to accept or the inability to deliver because of changed address for which no notice was given as provided hereunder shall be deemed to be receipt of the notice, demand or request sent. All notices shall be effective when first received at the following addresses:

OC San: Darius Ghazi, Senior Buyer  
Orange County Sanitation District  
10844 Ellis Avenue  
Fountain Valley, CA 92708

Contractor: [Contact Name]  
[Contact Title]  
[Company Name]  
[Street Address]  
[City, State, Zip Code]

Each party shall provide the other party written notice of any change in address as soon as practicable.

**IN WITNESS WHEREOF**, intending to be legally bound, the Parties hereto have caused this Contract to be signed by the duly authorized representatives.

**ORANGE COUNTY SANITATION DISTRICT**

Dated: \_\_\_\_\_ By: \_\_\_\_\_  
John B. Withers  
Chair, Board of Directors

Dated: \_\_\_\_\_ By: \_\_\_\_\_  
Kelly A. Lore  
Clerk of the Board

Dated: \_\_\_\_\_ By: \_\_\_\_\_  
Ruth Zintzun  
Purchasing & Contracts Manager

**[CONTRACTOR]**

Dated: \_\_\_\_\_ By: \_\_\_\_\_

\_\_\_\_\_  
Print Name and Title of Officer

CMM

**EXHIBIT A**

**SCOPE OF WORK**

**For**

**Plant 2 Trickling Filter Pump Station Pumps  
Variable Speed Drive Replacement**

**EXHIBIT A**  
**SCOPE OF WORK**  
**Plant 2 Trickleing Filter Pump Station Pumps**  
**Variable Speed Drive Replacement**  
**SPECIFICATION NO. S-2021-1273BD**

**SCOPE OF WORK**

**1 Location of Work**

The work covered under this Contract will take place at the Orange County Sanitation District's ("OC San's") Plant 2 – 22212 Brookhurst Street, Huntington Beach, CA 92646.

**2 General**

The Contractor shall furnish all labor, equipment, materials, machinery, tools, supplies, insurance, bonds, permits, licenses, transportation, and other incidentals necessary to complete all tasks and items of work described within Attachment A and within other portions of the Contract Documents and Drawings and as more specifically described below.

**3 Description of the Work**

A. This project includes modifications to existing Plant 2 Trickleing Filter Pump Station (TFPS) Variable Drive Cabinets ("Pump Drives", quantity of 6) located in TFPS Electrical Room.

Contractor's work includes replacing existing obsoleted Rockwell Automation/Allen - Bradley Model PowerFlex 700H Variable Speed Drives with new up-to-date Variable Speed Drives Rockwell Automation/Allen Bradley Model PowerFlex 753 or manufacturer approved equal direct replacement and associated components required for variable speed drive functionality including precharge boards, line and load reactors, Human Interface Modules, input/output modules and other components as deemed necessary for new drive functionality. The work includes procurement, installation, programming and testing of the Variable Speed Drives.

B. The work to replace existing Variable Speed Drives and associated components necessary for new drive functionality includes the items listed below:

- a. Review existing P2-90 Project shop drawings (by Rockwell Automation/Allen-Bradley Products), existing P2-90 Project Single Line Diagram for 480V Switchgear SWGR-JA-A/B and SWGR-JB-A/B, and Control Schematic Diagrams for six (6) Variable Speed Drives.
- b. Provide proposed replacement Variable Speed Drives model, manufacturer and detailed submittal information, including associated components to OC San Electrical Engineer ("Project Manager") for review and acceptance.
- c. Provide markups to the original drawings for the affected wiring for this Project.
- d. Validate all connection points for the new Variable Speed Drives internal and field wiring prior to demolition of existing Variable Speed Drives.
- e. Finish all labor, equipment and materials to demolish existing and install new Variable Speed Drives, control keypads and other associated equipment in accordance contract drawings and specifications.
- f. Program Variable Speed Drives to function as a replacement of existing Variable Speed Drives.
- g. Perform Acceptance Tests in accordance with Drive Manufacturer Recommendations and OC San Standards

- h. Perform Functional Tests of completed installations to validate existing motor schematic functionality and loop diagrams inputs and outputs.
- i. Startup assistance to OC San's Operations and Maintenance Personnel to recommission affected equipment.
- j. New equipment training for OC San's Operations and Maintenance Personnel.

C. List of As-Built Project P2-90 Drawings and Specifications:

Drawing Title	Dwg No.	Sheet No.
<b>Project P2-90 As Built Electrical Drawings</b>		
Distribution Center J 480V Switchgear JA Single Line Diagram	0E7003	443
Distribution Center J 480V Switchgear JB Single Line Diagram	0E7004	444
TFPS Electrical Room Control Plan	1E1005	492
TFPS Pump Control Wiring Schematic-Sheet 1	0E8001	460
TFPS Pump Control Wiring Schematic-Sheet 2	0E8002	461
TFPS WetWell Low Level Control Wiring Schematic	0E8003	462
VFD Manufacturer Data	N/A	N/A
Pumps and Motors Manufacture Data	N/A	N/A
<b>OC San Applicable Drawings</b>		
Distribution Center J SWGR-JA	PL2-79	N/A
Distribution Center J SWGR-JB	PL2-80	N/A
Instrument Loop Diagram TF Pump Station Pump A1 22KPMP020	22K-L-020-1	
Instrument Loop Diagram TF Pump Station Pump A1 22KPMP020	22K-L-020-2	
Instrument Loop Diagram TF Pump Station Pump A1 Speed Control 22KSC020	22K-L-020-3	
Instrument Loop Diagram TF Pump Station Pump A2 22KPMP040	22K-L-040-1	
Instrument Loop Diagram TF Pump Station Pump A2 22KPMP040	22K-L-040-2	
Instrument Loop Diagram TF Pump Station Pump A2 Speed Control 22KSC040	22K-L-040-3	
Instrument Loop Diagram TF Pump Station Pump B1 22KPMP060	22K-L-060-1	
Instrument Loop Diagram TF Pump Station Pump B1 22KPMP060	22K-L-060-2	
Instrument Loop Diagram TF Pump Station Pump B1 Speed Control 22KSC060	22K-L-060-3	
Instrument Loop Diagram TF Pump Station Pump B2 22KPMP080	22K-L-080-1	
Instrument Loop Diagram TF Pump Station Pump B2 22KPMP080	22K-L-080-2	
Instrument Loop Diagram TF Pump Station Pump B2 Speed Control 22KSC080	22K-L-080-3	

Instrument Loop Diagram TF Pump Station Pump C1 22KPMP100	22K-L-100-1	
Instrument Loop Diagram TF Pump Station Pump C1 22KPMP100	22K-L-100-2	
Instrument Loop Diagram TF Pump Station Pump C1 Speed Control 22KSC100	22K-L-100-3	
Instrument Loop Diagram TF Pump Station Pump C2 22KPMP120	22K-L-120-1	
Instrument Loop Diagram TF Pump Station Pump C2 22KPMP120	22K-L-120-2	
Instrument Loop Diagram TF Pump Station Pump C2 Speed Control 22KSC0120	22K-L-120-3	
<b>Specifications</b>		
Specification Section 16080 "Electrical Testing"	N/A	N/A
Specification Section 16419 "Variable Frequency Drives 100 Horsepower and Above"	N/A	N/A

#### 4 Project/Work Elements

##### 4.1 General

Request for outages shall be made 14 days in advance in writing. OC San's Project Manager's acceptance shall be obtained for the outage.

The operation (closing and opening) of all electrical circuits shall be performed by OC San personnel only. No exceptions allowed.

While working on energized circuits during programing and commissioning of the Variable Speed Drives, the Contractor shall wear appropriate personal protective equipment per NFPA 70E.

All shutdowns will be scheduled such that OC San Maintenance and Inspection Staff is present for all testing and critical work performed.

All testing required by Specification 16080 must be complete and all punch list items successfully addressed prior to Project completion.

OC San may require several pumps to be available to run at any given time so that OC San's treatment process is never jeopardized limiting one or two Pump Drives available for drive replacement at any given time.

##### 4.2 Safety

The Contractor will be responsible for all aspects of health and safety on the worksite, as required under the provisions of General Conditions Attachment B, and OC San Safety Standards located on OCSan.gov, and of California and Federal OSHA. The following items represent some of the documents and procedures required of the Contractor during the course of the work:

- A. Job Site Safety Analysis (JSSA) and Job Hazard Analysis (JHA): These two assessments must be completed prior to the beginning of the work to identify hazards at the work location.

- B. Any other documents that are required by OC San during its safety evaluation and review as described herein or by regulatory agencies shall be provided by the Contractor.
- C. The Contractor shall barricade and make safe the work area in order to prevent egress by unauthorized personnel.

The Contractor shall provide proper personal protective equipment including safety goggles for Contractor's workers and subcontractors during all stages of the work.

#### **4.3 Submittals**

##### **A. General**

The Contractor shall submit, for Project Manager's review and acceptance, all required shop drawings and other Work-related submittals in accordance with the section entitled "Shop Drawing Submittals", and applicable individual Specifications sections.

The Contractor shall submit all submittals electronically for review. Electronic submittals shall be in PDF format with security restrictions set to enable commenting so that Project Manager's comments can be added to the document using Adobe Reader or using Adobe Reader or Bluebeam Revu. PDF files shall be searchable and include Bookmarks/Tabs identifying specific sections/sub-sections to separate each product and system.

##### **Submittal Transmittal**

Each submittal shall be accompanied by a dedicated transmittal signed by the Contractor. OC San will provide Contractor a sample transmittal following Notice to Proceed. If the Contractor proposed to provide material, equipment, or method of Work which deviates from Contract Documents, the Contractor shall indicate under "deviations" on the Submittal Transmittal Form accompanying the submittal copies.

##### **List of Submittals:**

- i. Contractor's Work Plan
- ii. Construction Schedule
- iii. Control Schematic mark ups (OC San Schematics and Rockwell Automation/Allen-Bradley Schematic mark ups)
- iv. Variable Speed Drive Shop Drawings (for new Variable Speed Drives)
- v. Testing Plan to demonstrate functionality of new work.
- vi. Test Data Sheets and Test Reports
- vii. Equipment Manuals and Test Reports
- viii. Training/Lesson Plan
- ix. VFD Programming Files
- x. Manufacturer Certifications for new Variable Speed Drives and components
- xi. Other submittals as required.

##### **B. Shop Drawing Submittals**

Shop drawings are drawings, schedules, brochures, and other data that are prepared by the Contractor, Subcontractors, manufactures, suppliers, and/or distributors, and which illustrate some portion of the Work.

Shop Drawing Review - The Contractor shall review, mark with Manufacturer's approval, and submit for OC San review and acceptance. Shop drawings shall

show the name of the Project, the Contractor, and if any, the names of Suppliers, manufactures and Subcontractors.

Shop Drawing Submittal Return Status – along with submittal comments, OC San will return each submittal with status as defined below:

1. RESUBMITTAL NOT REQUIRED (RNR)
2. RESUBMITTAL REQUIRED, AS NOTED (RRN)
3. REVISE AND RESUBMIT (R&R)
4. NOT ACCEPTABLE (NA)

“RESUBMITTAL NOT REQUIRED” -the submittal is in general conformance with the design concept of the Project and general compliance with the Contract Documents.

“RESUBMITTAL REQUIRED, AS NOTED” -the Contractor shall address and incorporate all OC San comments and resubmit within 10 days including responses to all OC San comments.

“REVISE AND RESUBMIT” implies there were a significant amount of missing or illegible information, errors on multiple documents, or significant amount of comments were made such that the entire packet needs to be resubmitted and reviewed again. A “REVISE AND RESUBMIT” response does not mean the entire submittal was reviewed and all possible comments have been provided.

“NOT ACCEPTABLE” means that Contractor has either submitted an item that is significantly not per specifications, the submittal lacked even the bare minimum of information to begin a review, or there were significant errors or illegible information provided with the submittal.

If the submittal is returned to the Contractor marked “NOT ACCEPTABLE” or “REVISE AND RESUBMIT”, the Contractor shall correct the shop drawings to conform to Project Manager’s comments and resubmit. The complete shop drawing(s) shall be resubmitted in its entirety to include a copy of the Contractor’s responses to all comments received on the submittal series.

No portion of the Work requiring a shop drawing resubmittal shall be commenced until the submittal has been reviewed by the Project Manager’s and returned to the CONTRACTOR with a notation indicating “RESUBMITTAL NOT REQUIRED” or “RESUBMITTAL REQUIRED AS NOTED” where the noted comments do not affect the Work for which Contractor is commencing. No payment for facilities constructed and/or installed will be made until the final submittal has received a “RESUBMITTAL NOT REQUIRED” response and is considered accepted as complete.

If the Contractor believes that any shop drawings or communication relative thereto calls for changes in the Work for which the Contract Amount or time or completion should be changed, the Contractor shall immediately notify the Project Manager and request a Change Order in accordance with Section 8 Change Management of these Specifications.

Contractor Approval – The Contractor shall obtain and review the manufacturer’s shop drawings and other pertinent data for conformance with all requirements of

the Contract Documents prior to forwarding submittals to Project Manager for review. The Contractor, at its sole expense, shall make any necessary changes in the shop drawings to make them conform to the Contract Documents. After completion of the review, verification and revisions, the Contractor shall stamp and sign the shop drawings indicating compliance with Contract Documents and the Contractor's approval.

#### **4.4 Equipment Removal**

Contractor shall remove existing Variable Speed Drives and associated components that will not be used with new Variable Speed Drives, such as control keypads, and dispose off-site.

Prior to performing any demolition work, the following activities, at a minimum, shall be completed by a Qualified Person(s) who is an electrician certified by the State of California working under C-10 Electrical Contractor licensed in the State of California, to ensure the system or equipment have been made safe for demolition work:

- A. Review applicable drawings
- B. Locate equipment and wiring to be demolished.
- C. Identify voltage levels and other hazards
- D. Ensure all equipment and wiring have been adequately identified (end to end wire checks) for demolition.

#### **4.5 Equipment Installation**

Refer to the specifications and drawings

#### **4.6 Equipment Service Manuals**

Manual shall be submitted for Variable Speed Drives. Include:

- A. Cover Sheet
- B. Device Data Sheet (include model number)
- C. Approved Shop Drawings (OC San approved)
- D. Installation, Operation, and Maintenance (O&M) Manuals.
- E. Supplemental drawings and instructions
- F. As-Built Information

#### **4.7 Testing**

Contractor shall provide qualified service Technician to perform acceptance testing on new Variable Speed Drives and assist in performance/functional testing of completed system. Refer to Specification Section 16080 and 16418 for complete details.

#### **4.8 Deliverables/As Built Drawings/Manufacturer's Documentation**

Record Drawings/As Built Drawings

#### **4.9 Training**

Upon completion of the Variable Speed Drive Replacement, commissioning and functional testing, the Contractor shall provide training for the Electrical Maintenance Staff and Operations to review the modifications and Pump Operation with new Variable Speed Drives. Contractor shall provide two (2) one -hour sessions as scheduled by OC San, at OC San facilities. Instructor shall be familiar with work done on the project.



Instructor shall be fully experienced, qualified and factory trained to operate and maintain Variable Speed Drives.

Contractor provided Equipment Service Manuals serve as the principle basis for instruction. The Contractor shall submit for Project Manager review and acceptance the equipment service manuals prior to training.

**4.10 Warranties**

- A. The Contractor shall warrant that the work performed will be free of defects in materials and workmanship for a period of one year from the date of acceptance by OC San. All warranty periods shall begin after satisfactory installation, testing and acceptance.
- B. The Contractor shall be responsible for removal, installation and shipping costs of any replacement parts and for correcting any other defective work at no cost to OC San.
- C. In addition, refer to GC-19 WARRANTY (CONTRACTOR’S GUARANTEE)

**5 Resources Available**

- Laydown and Staging Area
- Temporary Power and Utilities – Including Water
- Use of Restroom Facilities

**6 Project Schedule**

The Contractor shall complete the project within 180 calendar days from the date of the Notice to Proceed. Contractor shall adhere to the following schedule:

Milestones/Timeline	Deadline (Weeks from Kick-Off/NTP)	Review Period (Weeks)	Cumulative Weeks
Kick-Off Meeting (NTP)	NTP Date	N/A	1 business day
Submittal of Schedule	2 weeks from NTP	1 week	3 weeks
Submittals	3 weeks from submittal of schedule	3 weeks for all submittals	9 weeks
Final Completion of Work	180 calendar days of NTP	N/A	180 calendar days

**7 Project Management**

**7.1 Project Kick-Off Meeting**

A minimum of one week prior to start of work, a meeting with OC San staff shall be held to establish appropriate contacts and review the Contractor’s plan to implement this work.

**7.2 Meetings**

Contract conferences shall be held on an on-call basis with OC staff to keep OC San apprised of the job, review work in progress, and receive comments. Conferences shall be held at the OC San’s offices. All notes and decision items shall be captured by the Contractor and reported in electronic format. The formal agenda shall be submitted with the previous meeting notes at least one week prior to each meeting. At a minimum, progress meetings shall be held bi- weekly though-out the duration of the project.

**8 Change Management**

See Contract Exhibit "F" – General Conditions – Section GC-22 REQUEST FOR CHANGE (CHANGES AT CONTRACTOR'S REQUEST).

**9 Staff Assistance**

The Contractor will be assigned a single point of contact on this project. Any meetings and/or correspondence related to this project shall be scheduled and approved by the Project Manager.