

**Agreement for the Design, Installation, Implementation, and
Maintenance of a Process Control System**

Between

Orange County Sanitation District

and

ABB Inc.

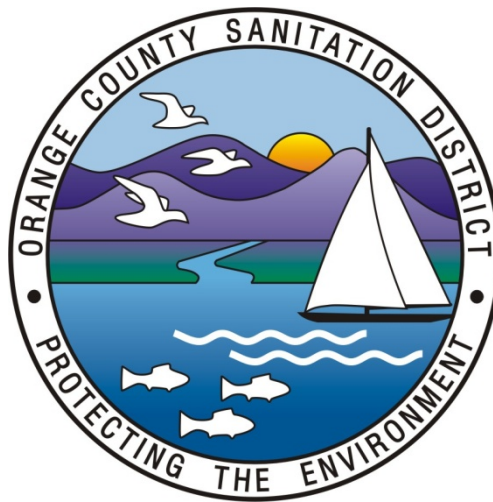


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EXHIBITS:

- EXHIBIT 1 – List of Lift/Pump Stations
- EXHIBIT 2 – Project J-120 Scope of Work
- EXHIBIT 3 – Signed Non-disclosure Agreement
- EXHIBIT 4 – Unit Prices
- EXHIBIT 5 – Contractor Safety Standards
- EXHIBIT 6 – Escrow Agreement
- EXHIBIT 7 – General Conditions
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- EXHIBIT 10 – Reference Specifications (Not Used)
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- EXHIBIT 12 – Allowable Direct Costs

Agreement for the Design, Installation, Implementation, and Maintenance of a Process Control System

This Agreement for the Design, Installation, Implementation, and Maintenance of a Process Control System (“Agreement”) is entered into by and between the Orange County Sanitation District, a county sanitation district (“SANITATION DISTRICT”) and ABB Inc., a Delaware corporation, (“CONTRACTOR”) and is dated as of July 28, 2021.

RECITALS

WHEREAS, the SANITATION DISTRICT owns and operates two wastewater treatment plants, nearly 400 miles of regional trunk sewers, and 15 lift/pump stations; and

WHEREAS, the SANITATION DISTRICT’s existing process control system utilizes a Supervisory Control and Data Acquisition (“SCADA”) Platform running Copeland Roland Interpreted Sequential Processor (“CRISP”) software and other commercial-off-the-shelf software to communicate with the Schneider Electric Modicon Quantum and M580 Programmable Logic Controllers (“Modicon PLCs”); and

WHEREAS, many elements of this SCADA Platform are outdated, and it is becoming increasingly difficult to procure services and parts for the SCADA Platform; and

WHEREAS, the SANITATION DISTRICT desires to meet new challenges for efficient operations, maintenance, management and regulatory reporting, and knowledge management by replacing the existing DEC VAX/VMS-based SCADA Platform running the CRISP SCADA software with a modern Windows-based SCADA Platform and continue to communicate with the existing Modicon PLCs; and

WHEREAS, a unified and modern SCADA Platform for the entire SANITATION DISTRICT asset base has been determined to be a profound enabler to meet the SANITATION DISTRICT’s current, new, and emerging efficiency requirements; and

WHEREAS, standardization of the SCADA Platform elements, engineering processes, and repeat-use libraries are required to maximize the SANITATION DISTRICT’s efficiency for programming, troubleshooting, and maintaining the SCADA Platform; and

WHEREAS, on the effective date of this Agreement, the SANITATION DISTRICT requires a high-availability and high-performance SCADA Platform that is fully licensed to meet or exceed the requirements in Specification Section 17440, Performance, Growth, and Licensing, such that the SANITATION DISTRICT can grow its capabilities at no additional license cost; and

WHEREAS, the SANITATION DISTRICT developed an RFP for a comprehensive suite of unit prices for products and services to be guaranteed for the duration of the Agreement; and

WHEREAS, in order to pre-qualify firms to receive the RFP, the SANITATION DISTRICT issued a Request for Qualifications for the Process Control System Upgrades Project (RFQ) to firms who are manufacturers and experts in the design, development, procurement, installation, and start-up of SCADA Platforms and who can guarantee the long-term product viability, system performance, and reliability; and

WHEREAS, based on the Statements of Qualifications (“SOQs”) received, the SANITATION DISTRICT established a candidate list of qualified firms to advance to the proposal phase; and

WHEREAS, the SANITATION DISTRICT issued an RFP to prequalified firms to further evaluate the technical merit of the proposed SCADA Platforms and project delivery approach through written proposals, hands-on reviews in proposer trials, and proposer interviews; to establish long-term guaranteed prices; and a fixed price for the first project to be performed under this Agreement (“Project J-120”); and

WHEREAS, the SANITATION DISTRICT evaluated the SOQs and proposals of such firms based on commercial and technical compliance with all Contract Documents, as defined in the General Conditions herein; project delivery approach; product technical requirements; pricing of equipment, products, and services; experience of team members; and long-term viability of the firms, including their product lines, to select the firm that represents the best value to the SANITATION DISTRICT; and

WHEREAS, throughout the selection process, CONTRACTOR demonstrated that it has the products, engineering, and delivery capabilities to perform the Work; and

WHEREAS, CONTRACTOR was selected to perform the Work under this Agreement based on the best-value selection process described in the RFQ and RFP;

WHEREAS, capitalized terms used in this Agreement and not defined herein shall have the same meanings assigned to them in the RFQ, RFP, General Conditions, Specifications, and other documents referenced herein and, in the event of conflict, the order of precedence in section 7.7 herein shall apply.

NOW, THEREFORE, in consideration of the promises, covenants, and agreements hereinafter set forth, the parties hereby agree to be bound by the terms and conditions of this Agreement, including documents attached to the Agreement and documents referenced or articulated as part of the Agreement, and hereby further agree as follows:

ARTICLE I SCOPE OF SERVICES

1.1 Scope of Services

A. General

The SANITATION DISTRICT will retain CONTRACTOR to replace the SANITATION DISTRICT’s current SCADA Platform with a modern standardized SCADA Platform that will meet the SANITATION DISTRICT’s current and future needs, expand with the SANITATION DISTRICT’s Capital Improvement Program (“CIP”), serve to enhance the

operation and maintenance of the SANITATION DISTRICT's assets, maintain and improve operational efficiencies, and mitigate risk across the SANITATION DISTRICT's enterprise. Under this Agreement, the SANITATION DISTRICT will issue task orders to CONTRACTOR for the purchase of goods and services for the new SCADA Platform.

CONTRACTOR shall:

1. Supply hardware and software, including, but not limited to, engineering workstations, operator workstations, process controllers, simulation devices, networking equipment, historians, and servers/clients;
2. Grant all licenses needed to utilize the supplied hardware and software; and
3. Provide services related to the SCADA Platform, including, but not limited to, project management, engineering, graphics programming, system configuration, testing, commissioning, system administration, system updates, support services, training, and custom integration services.

B. Work Locations

1. All on-site project management, engineering, integration, and services work shall be performed at the SANITATION DISTRICT's facilities, including, but not limited to, the following:
 - a. Plant No. 1 located at 10844 Ellis Avenue, Fountain Valley, CA 92708;
 - b. Plant No. 2 located at 22212 Brookhurst Street, Huntington Beach, CA 92646;
 - c. The 15 off-site lift/pump stations listed in Exhibit "1";
 - d. The staging site as detailed in Section 01505, Mobilization of the Project J-120 Scope of Work; and
 - e. Other facilities which the SANITATION DISTRICT may construct, acquire, and/or operate during the term of this Agreement.
2. Manufacturing, assembling, programming, and testing CONTRACTOR's product-line components may be performed at CONTRACTOR's facilities and delivered to the SANITATION DISTRICT's facilities. In addition, programming of applications such as process graphics, controller code, reports, and the like, may be performed in CONTRACTOR's facilities so long as the development of the engineering requirements (to ensure accurate definition of the Work prior to its production), bench testing, and commissioning are performed at the SANITATION DISTRICT's facilities through meetings and workshops.

C. Delivery of Work and Work Scope

1. Without exception, all Work completed and accomplished by this Agreement shall be based on individual written task orders ("Task Orders") developed exclusively by the SANITATION DISTRICT. Should the terms of this Agreement conflict with

the terms or requirements of the Task Order, the terms of this Agreement shall prevail. Detailed descriptions of Task Order Types and the Task Order Procedure are included below.

2. To initiate this Agreement, the SANITATION DISTRICT has developed the following Task Order:

Task Order #1 (Type 2 Task Order) shall be the implementation of the Project J-120 Scope of Work. The Project J-120 Scope of Work includes the design and delivery of a new enterprise-wide SCADA Platform for the SANITATION DISTRICT's two treatment facilities, off-site lift/pump stations, and the Santa Ana River Interceptor collections system based on CONTRACTOR's proposed SCADA Platform. The specific requirements are more specifically described in the Scope of Work for Project J-120 attached hereto as Exhibit 2. The cost of the Project J-120 Task Order shall be a lump sum, fixed price, unless the SANITATION DISTRICT requires changes to the plans.

3. All future Task Orders will be released to CONTRACTOR as they are developed by the SANITATION DISTRICT. CONTRACTOR hereby agrees to perform all Work identified in future Task Orders, as described below, for new projects as a sole-source provider for the SANITATION DISTRICT, CIP Contractors (defined below), and Other Contractors (defined below) in order to design, implement, and integrate the SCADA Platform elements into the SANITATION DISTRICT's facilities.

D. Key Requirements

1. Performance Growth and Licensing

This Agreement demands CONTRACTOR provide the SANITATION DISTRICT a high-performance, high-availability, feature-rich, extensible, and expandable SCADA Platform through a series of Task Orders, with Task Order #1, Project J-120, being the first "project-based" task order in the series. Specification Section 17440, Performance, Growth, and Licensing, included in the Specifications herein, shall apply to all Task Orders of any type and shall take precedence over any and all other documents or materials except for this Agreement.

2. Additional Requirements

As CONTRACTOR's direct product line and technology improve, at the sole direction of the SANITATION DISTRICT and at no additional cost to the SANITATION DISTRICT, CONTRACTOR shall assist the SANITATION DISTRICT to update applicable specifications, including, but not limited to, the specifications listed below, to provide greater performance, additional features, and greater capacity.

- a. 17040 SCADA ICS Network
- b. 17050 SCADA Servers
- c. 17405 Control Panels

- d. 17406 PLC & Controller Hardware
- e. 17425 SCADA Workstations
- f. 17435 Facility Historian
- g. 17440 Performance, Growth, and Licensing

1.2 Task Order Procedure

- A. All Work under this Agreement shall be initiated by the SANITATION DISTRICT through a Task Order presented to CONTRACTOR. Each Task Order will contain a scope of work; schedules; defined deliverables; specifications; associated liquidated damages, if applicable; and special provisions specific to the Task Order. Each Task Order will also specify CONTRACTOR' s products, third-party supplied equipment, configuration and integration services, startup services, and other deliverables required to complete the Work in the Task Order.
- B. Upon receipt of a Task Order from the SANITATION DISTRICT, CONTRACTOR shall develop and submit to the SANITATION DISTRICT a Task Order Proposal strictly adhering to the terms and conditions of this Agreement, unless otherwise dictated by the Task Order. Each Task Order Proposal shall include a narrative scope of services, material(s) buildup, detailed cost estimate, schedule-of-values, and Critical Path Method Schedule ("CPM Schedule") detailing all Work required by the Task Order. The scope of services shall include all anticipated Work activities that are necessary for the successful completion of each task requested by the SANITATION DISTRICT.
- C. The SANITATION DISTRICT will review each Task Order Proposal, provide comments, and, if the SANITATION DISTRICT believes it to be reasonably necessary, negotiate with CONTRACTOR regarding the Work. CONTRACTOR shall thereafter submit a final Task Order Proposal for written approval by the SANITATION DISTRICT.
- D. Once a Task Order is approved, CONTRACTOR shall submit the required sureties. CONTRACTOR shall begin the Work described in a Task Order only after receiving a written Notice to Proceed for the Task Order ("Task Order NTP") from the SANITATION DISTRICT. Prior to the issuance of the Task Order NTP, CONTRACTOR shall comply with all applicable laws, rules, regulations, ordinances, and directives.
- E. Upon CONTRACTOR's successful completion of the Work, the SANITATION DISTRICT will issue a Task Order Statement of Completion; release retention, bonding requirements, and other commercial liabilities of CONTRACTOR; and initiate the Warranty period, if applicable.

1.3 Task Order Types

The SANITATION DISTRICT will issue the following types of Task Orders:

A. Type 1 Task Order (Product and Services Task Order)

Type 1 Task Orders may contain system hardware, product and commercial-off-the shelf software, and an allocation of hourly services. Generally, this type of Task Order will be issued when the SANITATION DISTRICT will require equipment and/or staff augmentation to perform work with the SANITATION DISTRICT's internal forces.

B. Type 2 Task Order (Project-based Task Order)

1. Type 2 Task Orders may contain system hardware, product and commercial-off-the shelf software, and services to achieve a specific outcome and meet requirements in the Task Order scope of work. Generally, this type of Task Order will be issued when the scope of work is developed by the SANITATION DISTRICT and assigned to CONTRACTOR for implementation.

2. General requirements of Type 2 Task Order

- a. Complete field verification, design, engineering, fabrication, system integration, bench testing, procurement, installation of non-field-side equipment and software, commissioning, documentation, management, ancillary services, training, warranties, maintenance, upgrades as specifically described in the Scope of Work for the applicable Task Order, and any other services and equipment necessary to create and install a fully-functional, feature-rich SCADA platform that meets all the Task Order's requirements.
- b. Provide all labor, materials, equipment, transportation, tools, consumables, project management, engineering/design, procurement, project scheduling, project controls, coordination with and assistance to the project engineer regarding work performed by others, construction services, startup and testing services, equipment delivery, documentation services, and ongoing management and support services that are necessary to meet all the Task Order's requirements.
- c. Integrate the Task Order Work into the SCADA Platform and with the SANITATION DISTRICT's system, including existing and future facilities, in order to meet the requirements of said Task Order.
- d. Coordinate the integration of the SCADA Platform at future construction projects that have a SCADA Platform component.

C. Type 3 Task Order (Project-based Task Order Assigned to Other Contractors)

1. Type 3 Task Orders will allow the SANITATION DISTRICT to develop pricing, scope of work, and schedule for CIP project's contract documents with construction contractors ("CIP Contractors") for the construction of CIP projects or to assign the Task Order to other contractors ("Other Contractors") performing work for the SANITATION DISTRICT. Generally, this type of Task Order will be issued to provide field-side hardware and/or services.

2. General requirements of Type 3 Task Order

- a. Complete field verification, design, engineering fabrication, system integration, bench testing, procurement, installation of non-field-side equipment, shipping, commissioning, documentation, certification of proper installation, certification of proper operation, management, ancillary services, training, and warranties, as more specifically described in the Scope of Work for the applicable Task Order, and any other services and equipment the SANITATION DISTRICT finds necessary to create and deliver a fully-functional, feature-rich SCADA Platform that meets the Task Order's requirements.
- b. Provide all labor, materials, equipment, transportation, tools, consumables, project management, engineering/design, procurement, project scheduling, project controls, coordination with and assistance to the CIP Contractors or Other Contractors, testing services, equipment delivery, and documentation services.
- c. Integrate the Task Order Work into the SCADA Platform and with the SANITATION DISTRICT's system and existing and future facilities to meet the requirements of said Task Order.
- d. Deliver the SCADA Platform to CIP Contractors or Other Contractors, consistent with the Task Order, for future construction projects that have a SCADA Platform component.

All Task Orders shall strictly follow the pricing requirements specified in Article III of this Agreement.

1.4 Task Order Administration

- A. For Type 1 Task Orders and Type 2 Task Orders, CONTRACTOR shall perform the Work at the direction of the SANITATION DISTRICT's designated representative. The SANITATION DISTRICT's designated representative will communicate with CONTRACTOR on all matters related to the administration of the Task Order and CONTRACTOR's performance of the Task Order Work. The SANITATION DISTRICT is the task administrator for these task orders.
- B. Type 3 Task Orders Work shall be negotiated by the SANITATION DISTRICT and assigned to the CIP Contractors or Other Contractors for administration and management. Such CIP Contractors or Other Contractors shall communicate with CONTRACTOR on all matters related to the administration of the Task Order and CONTRACTOR's performance of the Task Order work unless otherwise specified in the Task Order.

1.5 Modification of Scope of Services

Without invalidating this Agreement, the SANITATION DISTRICT may, at any time, modify any Task Order by altering, adding to, or deducting from the services to be performed. All such changes shall be in writing. If any such changes cause an increase or decrease in CONTRACTOR's cost of, or the time required for, the performance of any of the services, CONTRACTOR shall immediately notify the SANITATION DISTRICT consistent with the

requirements specified in the General Conditions. If the SANITATION DISTRICT deems it appropriate in its sole discretion, the SANITATION DISTRICT may make an equitable adjustment to CONTRACTOR's compensation based on modification of a Task Order, provided that any adjustment must be approved by both parties in writing and must be consistent with the Unit Price provisions and the General Conditions.

1.6 Written Authorization

Prior to performing any services in connection with the Task Orders, CONTRACTOR shall obtain from the SANITATION DISTRICT a written authorization to proceed as specified in this Article and throughout this Agreement. Further, throughout the term of this Agreement, CONTRACTOR shall immediately advise the SANITATION DISTRICT, in writing, of any anticipated need to modify any Task Order, including, but not limited to, any changes to the time for completion or the compensation and pricing sheet. CONTRACTOR shall obtain the SANITATION DISTRICT's written consent to the change prior to proceeding with any changes. In no event shall the SANITATION DISTRICT's consent be construed to relieve CONTRACTOR from its duty to render all services in accordance with applicable laws, rules, regulations, accepted industry standards, or the terms of this Agreement.

1.7 Key Personnel

CONTRACTOR's "Key Personnel" for the Work to be performed under this Agreement shall include, but not be limited to, project manager, project engineer, and integration leader. Such Key Personnel shall be available for the term of the Agreement. No person designated as Key Personnel shall be removed or replaced without prior written consent of the SANITATION DISTRICT, which consent shall not be unreasonably withheld, provided that the replacement personnel have equivalent or higher required experience and qualifications. At its sole discretion, the SANITATION DISTRICT may require CONTRACTOR to submit qualifications and experience of the replacement personnel and may require a formal interview of such personnel prior to replacement approval. If the SANITATION DISTRICT requires CONTRACTOR to remove a person designated as Key Personnel, CONTRACTOR shall agree to do so immediately regardless of the reason or the lack of reason.

1.8 Confidentiality and Non-disclosure

The Non-disclosure Agreement CONTRACTOR signed during the proposal phase, attached hereto as Exhibit "3," shall continue in full force and effect for the term of the Agreement.

1.9 Final Inspection, Completion, and Acceptance of all Work under the Agreement and/or Task Order

A. Final Inspection

CONTRACTOR shall notify the ENGINEER, in writing, when all punch list items for all the Work under the Agreement and/or each applicable Task Order have been completed, all Work is completed in accordance with the Contract Documents, and all

clean-up has been completed. Clean-up shall be completed when all waste, materials, excess materials, tools, and equipment related to the applicable Task Order are removed from the SANITATION DISTRICT's facilities. The ENGINEER will thereafter make a Final Inspection for the purpose of ascertaining that the Work has been fully completed in accordance with the requirements of the Contract Documents.

B. Final Completion

The ENGINEER shall certify, in writing, the full completion of the Work, including the date of completion after the ENGINEER has made the Final Inspection and is satisfied that the Work has been completed in accordance with the Contract Documents, including all punch list items, and is satisfied that all submittals have been made and accepted, including, but not limited to, all materials required by the Contract Documents and all As-Builts, Record Drawings by CONTRACTOR, if required by the Agreement and/or Task Order, and any other required record documents have been completed and accepted; all Change Order Work has been completed and accepted by the ENGINEER; and all other requirements of the Contract Documents, except for any unexecuted Change Orders and possible future warranty and guarantee Work, have been accomplished.

C. Final Acceptance

The Work, after achieving Final Completion, is subject to Final Acceptance by the SANITATION DISTRICT. Final Acceptance is defined herein as the "action taken by the SANITATION DISTRICT accepting the Work as fully completed after certification by the ENGINEER," and occurs in accordance with the following:

1. CONTRACTOR is required to provide adequate resources to fully support the Agreement and/or Task Order close-out efforts identified in the Contract Documents including, but not limited to, execution of all Change Orders, agreement on all final quantities and all other activities specified herein titled "Final Completion," "Final Acceptance," and "Final Payment." Such support and completion of all administrative close-out activities as required herein must be provided within the timeframe(s) requested by the SANITATION DISTRICT and is a condition precedent to Final Acceptance.
2. After certifying the date of Final Completion of the Agreement and/or Task Order, the ENGINEER shall make a final estimate of the amount of Work performed thereunder and the General Manager or designee shall certify, as specified in the SANITATION DISTRICT Delegation of Authority, as amended, ("designated authority") the value of such Work and the date of Final Completion. If the designated authority finds that the Work has been completed according to the Contract Documents, the designated authority shall establish the date of Final Acceptance and find and declare the Work accepted pursuant to this section, which shall be evidenced by a Notice of Completion.
3. Only upon Final Acceptance shall Final Payment be processed. Processing of Final Payment shall occur in accordance with the provisions herein titled "Final Completion" and "Final Acceptance." Final Completion and Final Acceptance are for purposes of issuing Final Payment and neither shall act to relieve CONTRACTOR from any of its obligations under the Contract Documents and

under no circumstances shall Final Acceptance of the Agreement and/or Task Order Work waive any rights related to any claims that may be asserted by the SANITATION DISTRICT under this Agreement or California law pertaining to warranties and guarantees, latent defects, indemnity, fraud on the part of CONTRACTOR, gross mistakes on the part of CONTRACTOR amounting to fraud, or any breach of the Contract Documents.

1.10 Warranty

- A. Warranties shall be applied on a Task Order basis. CONTRACTOR shall warrant all the provisions below for a period of one (1) year after Final Acceptance for Task Order. However, the requirements specified in Specification Section 17440, Performance, Growth, and Licensing, and other applicable specifications, shall be in effect for the entire term of the Agreement and shall supersede all warranties specified below.

1. System Warranty

CONTRACTOR warrants that, for the term of the Agreement, the system will meet the functional, performance, and reliability specifications and requirements as defined in this Agreement and/or applicable Task Orders. The system and/or each of its subsystems, components, and interfaces will be capable of operating fully and correctly in conjunction with the system hardware and the requirements of the applicable Task Order. CONTRACTOR warrants that for the term of this Agreement and/or for one (1) year after the acceptance of the applicable Task Order Work, as applicable, the system will perform as required in the Agreement and/or applicable Task Orders. In the event the system does not meet these warranties, CONTRACTOR shall, within seven (7) days of its discovery by CONTRACTOR or the SANITATION DISTRICT, remedy the defect and provide, at no cost to the SANITATION DISTRICT, the necessary software, hardware, and/or services required to attain the levels or standards contained in the warranties of the Agreement and warranties of the applicable Task Orders.

2. Software Warranties

CONTRACTOR warrants that it owns or otherwise has the right to license CONTRACTOR's product software and any third-party software required for CONTRACTOR's product suite to the SANITATION DISTRICT and that CONTRACTOR possesses all rights and interests necessary to enter into this Agreement. CONTRACTOR shall maintain such warranties for the term of the Agreement. In addition, CONTRACTOR warrants that, during the term of the Agreement:

- a. All product software and application software (software work product developed exclusively under this Agreement) licensed or provided under this Agreement will be free of known defects, viruses, worms, and trojan horses.
- b. CONTRACTOR's product software and application software will meet or exceed the functional, performance, and reliability specifications and requirements herein or in the applicable Task Order.
- c. These warranties will be in addition to other warranties in Article VI herein.

3. Work Quality Warranty

CONTRACTOR warrants that, for the term of the Agreement, all work performed by CONTRACTOR and/or its Subconsultants and Subcontractors of any tier under this Agreement will conform to best industry practices and will be performed in a professional and workmanlike manner by staff with the necessary training, skills, experience, and knowledge to do so.

4. Regulatory Warranty

CONTRACTOR warrants that, for the term of this Agreement, the system will comply with all processing and reporting requirements for all Federal, State, and local laws and regulations. If the software requires updating due to a change in a Federal, State, or local law or regulation affecting the SANITATION DISTRICT, CONTRACTOR will provide these changes per a mutually-agreed-to schedule at no additional cost to the SANITATION DISTRICT. Notwithstanding this provision, in no event shall CONTRACTOR provide said update later than the date required by the Federal, State, or local law or regulation affecting the SANITATION DISTRICT. In the event the SANITATION DISTRICT is notified of a change in Federal, State, or local law or regulations that requires updating the software, the SANITATION DISTRICT will notify CONTRACTOR of that change as soon as reasonably possible.

5. Documentation Warranty

CONTRACTOR warrants that, for the term of this Agreement, the documentation for all of CONTRACTOR's licensed product software and application software will be complete and accurate in all material respects. CONTRACTOR shall revise the documentation to reflect all updates of product software and application software provided by CONTRACTOR under this Agreement. This includes documentation on any product software and application software modification or configuration changes made to the system by CONTRACTOR during the installation process.

B. In the event of failure to comply with the above-mentioned conditions within one (1) week after being notified in writing, the SANITATION DISTRICT is hereby authorized to proceed to have the defects remedied at the expense of CONTRACTOR who hereby agrees to pay the cost and charges thereof immediately on demand. CONTRACTOR's warranty shall continue as to any corrected deficiency until the later of:

1. The remainder of the original one-year warranty period; or
2. One year after the SANITATION DISTRICT's acceptance of the corrected Work.

Such action by the SANITATION DISTRICT will not relieve CONTRACTOR of the warranties required by this section or elsewhere in the Contract Documents.

C. If, in the opinion of the SANITATION DISTRICT, defective Work is detected during the warranty period which creates a dangerous condition or requires immediate correction or modification to prevent further loss to the SANITATION DISTRICT or to prevent interruption of the SANITATION DISTRICT operations, the SANITATION DISTRICT will attempt to give the notice required by this section. If CONTRACTOR cannot be

contacted or does not comply with the SANITATION DISTRICT's request for correction within a reasonable time as determined by the SANITATION DISTRICT, the SANITATION DISTRICT may, notwithstanding the provisions of this section, proceed to make such correction or provide such modification. The costs of such correction or modification shall be charged against CONTRACTOR. Such action by the SANITATION DISTRICT will not relieve CONTRACTOR of the warranties required by this section or elsewhere in the Contract Documents.

- D. This section does not in any way limit the warranty on any items for which a longer warranty is specified or on any items for which a manufacturer or Supplier gives a warranty for a longer period. CONTRACTOR agrees to act as a co-guarantor with such manufacturer or Supplier and shall furnish the SANITATION DISTRICT all appropriate guarantee or warranty certificates upon completion of the Project and acceptance by the SANITATION DISTRICT. No warranty period, whether provided for in this section or elsewhere, shall in any way limit the liability of CONTRACTOR, Sureties or insurers.

ARTICLE II DURATION OF AGREEMENT AND SPECIAL TERMS

2.1 Term of Agreement

The Agreement shall be effective for fifteen (15) years after the date of its signing by the SANITATION DISTRICT. Upon written agreement of the parties, the Agreement may be extended for additional terms in one (1) to five (5) year increments for a maximum aggregate term of twenty-five (25) years.

2.2 Notification of Delay

CONTRACTOR shall immediately notify the SANITATION DISTRICT, in writing, if CONTRACTOR experiences or anticipates experiencing a delay in performing the Work within the time frame set forth in any Task Order. The written notice shall include an explanation of the cause for, and a reasonable estimate of the length of, the delay.

2.3 Liquidated Damages

- A. CONTRACTOR shall complete all or any designated portion of the Work called for under the Agreement and/or Task Order in all parts and requirements within the time set forth in the Contract Documents. For the duration of each Task Order, CONTRACTOR shall furnish the ENGINEER a monthly statement showing the following:

1. Number of days originally specified for completion,
2. Number of days charged to date,
3. Number of days of time extensions approved,
4. Number of days remaining to completion, and
5. Revised date for completion.

- B. If at any time CONTRACTOR's Critical Path Work progress falls behind schedule, the SANITATION DISTRICT reserves the right to require CONTRACTOR to accelerate the Work to bring the Task Order back on schedule. Such acceleration cost shall be at CONTRACTOR's sole expense.
- C. Failure of CONTRACTOR to perform any covenant or condition contained in the Contract Documents within the time period specified shall constitute a material breach of this Agreement entitling the SANITATION DISTRICT to terminate CONTRACTOR's performance under the Agreement unless CONTRACTOR applies for, and receives, an extension of time in accordance with the procedures set forth in the General Conditions. Such termination shall be in addition to any and all other remedies available to the SANITATION DISTRICT by law, in equity, or pursuant to the provisions of this Agreement.
- D. Failure of the SANITATION DISTRICT to insist upon the performance of any covenant or condition within the time period specified in the Agreement shall not constitute a waiver of CONTRACTOR's duty to complete performance within the designated period unless the waiver is in writing.
- E. The SANITATION DISTRICT's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provisions contained in the Contract Documents. Failure of CONTRACTOR to complete performance promptly within the additional time authorized in the waiver or extension of time agreement shall constitute a material breach of this Agreement entitling the SANITATION DISTRICT to terminate CONTRACTOR's performance under the Agreement and to any and all other legal or equitable remedies.
- F. CONTRACTOR shall not be assessed Liquidated Damages nor the cost of engineering and inspection during any delay in the completion of the Work caused by acts of God, acts of a public enemy, acts of public utilities, delays caused by failure of a public agency or owner of a utility to provide for removal or relocation of existing main or trunkline utility facilities or other known utility facilities, fire, floods, earthquake, epidemic, quarantine restrictions, strikes, and unusually severe weather, or delays necessarily resulting from war or national or local emergencies, or delays of Subcontractors and Subconsultants due to such causes; provided that CONTRACTOR shall, within fifteen (15) days from the beginning of any such delay, request an extension of time in accordance with the procedures set forth in this section and as specified in the General Conditions. Such delays shall not entitle CONTRACTOR to any additional compensation. CONTRACTOR's sole remedy shall be to seek an extension of time. This provision shall not apply to, and CONTRACTOR shall not be entitled to an extension of time for, a delay caused by the acts or omissions of CONTRACTOR. The SANITATION DISTRICT shall ascertain the facts and the extent of the delay and its findings of the facts thereon shall be final and conclusive.
- G. In the event CONTRACTOR fails to achieve Final Completion of the Work for the Agreement and/or Task Order within the period of performance or fails to meet any other time requirements set forth in the Agreement and/or Task Order, including any designated milestones, after due allowance for extensions of time made in accordance with the Contract Documents, if any, the SANITATION DISTRICT will sustain damage which would be extremely difficult and impracticable to ascertain. The parties

therefore agree that CONTRACTOR will pay to the SANITATION DISTRICT as Liquidated Damages, and not as a penalty, a **daily sum specified in the individual Task Order** for each and every calendar day during which Final Completion of the Agreement and/or Task Order is so delayed and for each day CONTRACTOR fails to achieve any designated milestone as set forth in the Agreement and/or Task Order. CONTRACTOR agrees to promptly pay such Liquidated Damages and further agrees that SANITATION DISTRICT may offset the amount of Liquidated Damages from any monies due or that may become due CONTRACTOR under this Agreement. CONTRACTOR also agrees that to the extent the amount of Liquidated Damages exceeds any monies due CONTRACTOR under this Agreement, CONTRACTOR shall promptly pay all such amounts to the SANITATION DISTRICT upon demand.

2.4 Right to Suspend for Convenience

At the SANITATION DISTRICT's sole option, for its convenience, and at no cost to the SANITATION DISTRICT, the SANITATION DISTRICT may suspend all or any portion of CONTRACTOR's performance of this Agreement for a reasonable period of time not to exceed six (6) months. In accordance with the provisions of this Agreement, the SANITATION DISTRICT will give written notice to CONTRACTOR of such suspension. In the event of such a suspension, the SANITATION DISTRICT shall pay to CONTRACTOR a sum equivalent to the reasonable value of the Work that CONTRACTOR has performed up to the date of suspension. Thereafter, the SANITATION DISTRICT may rescind such suspension by giving written notice of rescission to CONTRACTOR. The SANITATION DISTRICT may then require CONTRACTOR to resume performance of the Work in compliance with the terms and conditions of this Agreement; provided, however, that CONTRACTOR shall be entitled to an extension of time equal to the length of the suspension, unless otherwise agreed to in writing by the parties.

2.5 Temporary Suspension of Work

- A. The ENGINEER shall have the authority to suspend the Work, wholly or in part, for such period as deemed necessary due to unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the Work, or for such time as deemed necessary due to the failure on the part of CONTRACTOR to carry out instructions given or to perform any provision of the Agreement. CONTRACTOR shall immediately comply with the written order of the ENGINEER to suspend the Work wholly or in part. The suspended Work shall be resumed when conditions are favorable and methods are corrected, as ordered by the ENGINEER.
- B. If a suspension of Work is ordered by the ENGINEER due to the failure on the part of CONTRACTOR to carry out orders given or to perform any provision of the Agreement, CONTRACTOR shall bear all costs associated with the suspension of Work and no extension of time for the completion of the Work shall be granted.
- C. If a suspension of Work is ordered by the ENGINEER due to unsuitable weather or to such other conditions as are considered unfavorable for the suitable prosecution of the Work, CONTRACTOR shall be entitled to an extension of time equal to the length of the suspension and 15 calendar days considered as the time necessary to resume performance of the Work when applicable, unless otherwise agreed to in writing by the parties.

2.6 Termination for Convenience

- A. The SANITATION DISTRICT may terminate CONTRACTOR's performance under the Agreement, in whole or in part, for any reason or no reason, at the SANITATION DISTRICT's sole and absolute discretion; or when conditions encountered during the Work make it impossible or impracticable to proceed; or when the SANITATION DISTRICT is prevented from proceeding with the Agreement by an act of God, by law, or by official action of a public authority; or upon a determination that such termination is in the best interest and convenience of the SANITATION DISTRICT; or when the SANITATION DISTRICT is prohibited from completing the Work for any reason.
- B. The SANITATION DISTRICT shall provide no less than ten (10) days written notice of its intent to terminate for convenience and shall provide CONTRACTOR with consultation with the SANITATION DISTRICT prior to termination.
- C. Upon receipt of such written notice of termination, CONTRACTOR shall:
 - 1. Stop Work as specified in the written notice;
 - 2. Terminate all orders and Subcontractors and Subconsultants except as necessary to complete Work which is not terminated;
 - 3. If directed in writing by the SANITATION DISTRICT to do so, assign all right, title, and interest in subcontracts and materials in progress, in which case the SANITATION DISTRICT will have the right, at its discretion, to settle or pay any or all claims arising out of the termination of such Subcontractors and Subconsultants, but in no event shall recovery by any contractor include lost profits for uncompleted portions of Work;
 - 4. Deliver or otherwise make available to the SANITATION DISTRICT all data, Drawings, Specifications, reports, estimates, summaries and such other information and material as may have been accumulated by CONTRACTOR in performing the Agreement whether completed or in process;
 - 5. Settle outstanding liabilities and claims with approval of the SANITATION DISTRICT;
 - 6. Complete performance of such part of the Work as has not been terminated; and
 - 7. Take such other actions as may be necessary, or as may be directed by the SANITATION DISTRICT for the protection and preservation of the Work and/or property related to the Agreement.
- D. Upon receipt of the SANITATION DISTRICT's written notice of termination for convenience, and within a period of thirty (30) days, as determined by the ENGINEER at the time of termination, CONTRACTOR shall submit to the ENGINEER a Termination Proposal which shall include, but not be limited to: CONTRACTOR's estimated costs to be incurred by CONTRACTOR as a result of the termination for convenience as allowed by the Contract Documents, including all documentation to support such costs; the status of the Work at time of termination; the status of termination of CONTRACTOR's agreements with Subcontractors, Subconsultants, and Suppliers, including the amount of each said agreement, amount paid under each

agreement up to the date of termination, and the amount that currently remains due and owing under each agreement for Work completed as of the date of termination, if any; a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the ENGINEER; and any other information and/or documentation as required by the SANITATION DISTRICT.

- E. Upon receipt of the SANITATION DISTRICT's written notice of termination for convenience, CONTRACTOR shall submit to the ENGINEER a request for Final Payment, pursuant to the requirements set forth herein. Such request shall be submitted promptly, but no later than thirty (30) days from the effective date of termination.
- F. The Final Payment to CONTRACTOR after termination for convenience shall be limited to amounts due and owing under the Agreement at the time of termination, including the following:
 - 1. Any actual costs incurred by CONTRACTOR for restocking charges;
 - 2. The agreed upon price of protecting the Work in any manner, if any, as directed by the SANITATION DISTRICT;
 - 3. The cost of settling and paying claims arising out of the termination of the Work under Subcontractor and/or Subconsultant agreements or orders with the SANITATION DISTRICT's approval, as specified above, exclusive of the amounts paid or payable on account of goods delivered or Work furnished by Subcontractor or Subconsultant prior to the effective date of the termination; and
 - 4. The Task Order Price allocable to the portion of the Work properly performed or goods supplied by CONTRACTOR as of the date of termination, as determined in accordance with the provision herein entitled Payment – General reduced by any sums previously paid to CONTRACTOR.
- G. The SANITATION DISTRICT shall have the right to withhold any portion or the whole of the Final Payment under this provision in the event there are any outstanding claims for compensation asserted by the SANITATION DISTRICT against CONTRACTOR or by any third party against the SANITATION DISTRICT which arises out of CONTRACTOR's Work.

2.7 Termination of a Portion of the Work

- A. If the termination is only for a portion of the Work, the compensation amount shall be reduced by the amount applicable to the portion of the Work which is terminated, including overhead and profit. The SANITATION DISTRICT shall, in its sole discretion, select the basis of reduction based on one of the following:
 - 1. Unit Prices specified in the Agreement.
 - 2. A lump sum determined by the SANITATION DISTRICT based on the estimate costs, including overhead and profit, of the terminated portion of the Work.

B. If the termination is only for a portion of the Work, the SANITATION DISTRICT reserves its right to continue with CONTRACTOR's products, items, and/or components with a SANITATION DISTRICT delivery team, including consultants to the SANITATION DISTRICT. As a condition of this partial termination, CONTRACTOR shall:

1. For the duration of the original term of the Agreement, provide its products, items, and components at the Unit Price specified in the Agreement. However, any product, item, or component in CONTRACTOR's product line NOT in the Unit Price of the Agreement shall be provided at either (a) 10% above its unburdened cost (i.e., exclusive of all profit, markups, overheads, or other CONTRACTOR's direct costs) or (b) 50% of its published list price.

The SANITATION DISTRICT shall have the exclusive and sole right to choose the method of compensation from the above methods that best serves the SANITATION DISTRICT. This shall include the most current, future, and previous versions of all products, items, and components delivered, to be delivered for the Work of this Agreement, and their entire product line related to the Work of the Agreement. Pricing provided by CONTRACTOR under this provision shall be subject to a full audit by the SANITATION DISTRICT or a third party of the SANITATION DISTRICT's choice.

2. Provide the SANITATION DISTRICT, as evidence of proper pricing, CONTRACTOR's pricing for such products, items, and components on CONTRACTOR's most current relevant projects and/or properly published list price schedule.
3. Provide the SANITATION DISTRICT updates to said pricing every 24 months.
4. Provide all training required by the SANITATION DISTRICT at a 40% discount of CONTRACTOR's published list price.

2.8 Termination for Default

A. CONTRACTOR shall be considered in default of this Agreement if CONTRACTOR (1) refuses to provide a Task Order Proposal, negotiate the Task Order Proposal in good faith, or execute the Task Order, so long as the Work of the Task Order is relevant and consistent with the Scope of Work under the Agreement; (2) refuses or fails to prosecute the Work or any separable part thereof with such diligence as will ensure its completion within the time specified herein or any authorized extension thereof; (3) fails to perform the Work in a manner required by the Contract Documents and/or industry standards; (4) fails to complete such Work within such time as required under the Contract Documents; (5) if CONTRACTOR should be adjudged as bankrupt or is otherwise deemed insolvent by the SANITATION DISTRICT based on good cause and is unable to proceed with the Work; (6) if CONTRACTOR should make a general assignment for the benefit of creditors; (7) if a receiver should be appointed on account of insolvency; (8) if the CONTRACTOR files a petition to take advantage of any debtor's act; (9) should any Subcontractor or Subconsultant violate any of the provisions of the Agreement; (10) if CONTRACTOR should persistently or repeatedly refuse or fail, except in cases for which an authorized extension of time is provided, to supply enough properly skilled personnel or proper materials to complete the Work in the time specified; (11) if CONTRACTOR should fail to make prompt payment to

Subcontractors and/or Subconsultants for material or labor; (12) if CONTRACTOR should persistently disregard laws or instructions given by the SANITATION DISTRICT; or (13) if CONTRACTOR otherwise substantially fails to fulfill its obligations under the Contract Documents. In the event CONTRACTOR is in default of this Agreement, the SANITATION DISTRICT may, without prejudice to any other right or remedy available under federal, state, or local law, serve written notice upon CONTRACTOR and Sureties of the SANITATION DISTRICT's intention to terminate CONTRACTOR's performance under the Agreement. Said notice shall contain the reasons for such intention to terminate CONTRACTOR's performance under the Agreement and, unless within ten (10) days after the service of such notice such violations cease and/or satisfactory arrangements for the corrections thereof have been made, the SANITATION DISTRICT may terminate CONTRACTOR's performance under the Agreement.

- B. In the event of any such termination, the SANITATION DISTRICT shall serve written notice thereof upon the Surety and CONTRACTOR and the Surety shall have the right to take over and perform the Agreement. However, if the Surety, within five (5) days after the service of a notice of termination, does not give the SANITATION DISTRICT written notice of its intention to take over and perform the Agreement or if the Surety serves such notice of its intent to take over and perform the Agreement and does not begin performance thereof within fifteen (15) days from the date of serving said notice, the SANITATION DISTRICT may take over the Work and prosecute the same to completion by contract or by any other method it may deem advisable. In the event the SANITATION DISTRICT exercises its rights under this provision, all Work shall be at the sole expense of CONTRACTOR and the Sureties and/or CONTRACTOR shall be liable to the SANITATION DISTRICT for any excess cost or other damage incurred by the SANITATION DISTRICT thereby. In such an event, the SANITATION DISTRICT may, without liability for so doing, take possession of and utilize such materials, licenses, tools, equipment, supplies, and other property belonging to CONTRACTOR, including use of CONTRACTOR and/or third-party intellectual property, and/or assume assignment of any and all subcontracts for Subcontractors, Subconsultants, and/or Suppliers that may be on the worksite and be necessary to complete the Work. For any portion of such Work that the SANITATION DISTRICT elects to complete by furnishing its own employees, materials, tools, and equipment, the SANITATION DISTRICT shall be compensated in accordance with the schedule of compensation for force account work as stated in the General Conditions.
- C. If the Surety assumes CONTRACTOR's terminated Work, the Surety shall take CONTRACTOR's place in all respects for that part of the Work and shall be paid by the SANITATION DISTRICT for all Work performed by it in accordance with the terms of the Contract Documents. If the Surety assumes the Agreement, all money due CONTRACTOR at the time of its default shall be payable to the Surety as the Work progresses, subject to the terms of the Agreement.
- D. CONTRACTOR hereby consents to assigning to the SANITATION DISTRICT and/or the SANITATION DISTRICT's replacement contractor all subcontracts and other agreements of any and all Subcontractors, Subconsultants, and/or Suppliers that may be on the worksite and/or may be necessary to complete the Work in the event of Termination for Default or Termination for Convenience, as set forth above. CONTRACTOR agrees to obtain, by way of a subcontract provision, the consent of

each and every Subcontractor, Subconsultant, and/or Supplier for such assignment prior to the commencement of each such Subcontractor's, Subconsultant's, and/or Supplier's Work on the Task Order.

- E. In the event of such termination, CONTRACTOR will be paid the actual amount due based on Unit Prices, the Task Order, and the quantity of Work completed at the time of termination, less damages caused to the SANITATION DISTRICT by acts of CONTRACTOR causing the termination, including, but not limited to, all costs to the SANITATION DISTRICT arising from professional services and attorneys' fees and all costs generated to insure or bond the Work of substituted contractors, subcontractors, or subconsultants utilized to complete the Work. If such costs exceed the unpaid balance, CONTRACTOR shall pay the difference to the SANITATION DISTRICT promptly upon demand. On failure of CONTRACTOR to pay, the Surety shall pay on demand by the SANITATION DISTRICT. Any portion of such difference not paid by CONTRACTOR or Surety within thirty (30) days following the mailing of a demand for such costs shall earn interest at the maximum rate authorized by California law.
- F. On demand or at the termination of the Agreement, whichever occurs first, CONTRACTOR shall return to the SANITATION DISTRICT all property of the SANITATION DISTRICT in the possession or control of CONTRACTOR. CONTRACTOR shall also deliver to the SANITATION DISTRICT all work product currently in existence and for which the SANITATION DISTRICT has made payment.
- G. Upon termination or expiration of this Agreement, CONTRACTOR will cooperate with the SANITATION DISTRICT to assist with the orderly transfer of services, functions, and operations provided by CONTRACTOR under this Agreement to another provider or to the SANITATION DISTRICT as determined by the SANITATION DISTRICT in its sole discretion. Prior to the termination or expiration of this Agreement, the SANITATION DISTRICT may require CONTRACTOR to perform certain transition services that the SANITATION DISTRICT deems necessary to migrate CONTRACTOR's work to another provider or to the SANITATION DISTRICT. Transition services may include, but are not limited to, the following:
 - 1. Working with the SANITATION DISTRICT to jointly develop a mutually-agreed-upon transition services plan to facilitate the termination of the services;
 - 2. Notifying all affected vendors, Subcontractors, and Subconsultants;
 - 3. Performing the transition services plan activities;
 - 4. On an as needed basis, answering questions regarding the system or the services performed by CONTRACTOR; and
 - 5. Providing such other reasonable services needed to effectuate an orderly transition.
- H. The foregoing provisions are in addition to and shall not limit any other rights or remedies under law or in equity available to the SANITATION DISTRICT.

2.9 Dispute Resolution

- A. In the event of a dispute as to the construction or interpretation of this Agreement or any rights or obligations hereunder, the parties shall first attempt, in good faith, to resolve the dispute by mediation. The parties shall mutually select a mediator to facilitate the resolution of the dispute. I

- B. In the event the parties are unable to timely resolve the dispute through mediation, the issues in dispute shall be submitted to arbitration pursuant to California Code of Civil Procedure, Part 3, Title 9, sections 1280 et seq. For such purpose, an agreed arbitrator shall be selected, or, in the absence of agreement, each party shall select an arbitrator and those two (2) arbitrators shall select a third arbitrator who shall arbitrate the dispute. Discovery may be conducted in connection with the arbitration proceeding pursuant to California Code of Civil Procedure Section 1283.05. The arbitrator shall take such evidence and make such investigation as deemed appropriate and shall render a written decision on the matter in question. The arbitrator shall decide all disputes in accordance with the laws of the State of California. The arbitrator's decision and award shall be subject to review for errors of fact or law in the Superior Court for the County of Orange with a right of appeal from any judgment issued therein.

2.10 Responsibility for Loss, Damage, or Injury

Neither the SANITATION DISTRICT, nor its Directors, officers, employees or agents shall be held responsible in any manner for any of the following: any loss or damage that may happen to the Work or any part thereof during the performance of the Agreement; any loss or damage to any of the materials, equipment, supplies, or other things used or employed in performing the Work; injury to or death of any person, either workers or the public; or damage to property, from any cause that might have been prevented by CONTRACTOR, CONTRACTOR's workers, or anyone employed by CONTRACTOR.

2.11 Non-Liability of the SANITATION DISTRICT's Officers and Employees

No director, officer, employee, or agent of the SANITATION DISTRICT shall be personally responsible for any liability arising under or by virtue of the Agreement.

ARTICLE III PRICING AND COMPENSATION

3.1 Unit Prices

- A. Unit prices, as specified in Exhibit 4, ("Unit Prices") shall remain in full effect for the term of the Agreement, except as specified in section G, below. ALL UNIT PRICES SHALL BE FULLY BURDENED PURSUANT TO THE TERMS AND CONDITIONS OF THIS AGREEMENT.

- B. Each Unit Price shall include:
 - 1. All direct and indirect costs necessary for CONTRACTOR to deliver one unit of the specified good or service. Such costs may include, but are not limited to, costs for labor, equipment, and materials; insurance and bonds; field and office staff; onsite

project administration; security; small tools and consumables; incidental job burdens; back-office Information Technology equipment; and testing equipment required for CONTRACTOR to deliver the Work of the associated Unit Price.

- a. Pricing in UP Schedule 1, Hardware Systems & Components, includes materials, labor, and engineering submittals as required by the referenced specification section(s) and any notes as applicable.
 - b. Pricing in UP Schedule 3, Labor Rates, inclusive of raw labor rates, fringe costs, and profit as required by the referenced specification section(s) and any notes as applicable.
 - c. Pricing in UP Schedule 4 – Training, Support & Other Costs, includes materials, labor and engineering submittals as required by the referenced specification section and the course descriptions therein.
2. Field and office staff hourly rates, which includes, but is not limited to, supervision, clerical, and general office support. These hourly rates will be used for negotiating services that are outside of the specific items or tasks identified in the Unit Price Schedules 1, 3, and 4.
 3. Project administration, which includes, but is not limited to, review and coordination, estimating, engineering, scheduling and updating, furnishing record drawings to incorporate changes, and home office salaries and expenses.
 4. Incidental job burdens, which include, but are not limited to, office equipment and supplies, telephone, utilities, safety equipment, warning devices, personal protective equipment, and conformance with the job requirements of the Occupational Safety and Health Administration, if applicable, required to accomplish the Work of the associated Unit Price.
 5. All costs for taxes, tariffs, licenses, storage, parts procurement and delivery Freight or Free on Board (F.O.B.) to the SANITATION DISTRICT's facilities at locations directed by the receiving owner (SANITATION DISTRICT, CONTRACTOR, CIP Contractor, or Other Contractor), project management, design, installation of non-field-side equipment and supervision, related submittals and documentation, testing, bonds, fees, insurance, training, startup, and warranty required for the associated Unit Price.
- C. Unit Prices shall be CONTRACTOR's exclusive basis for pricing Task Orders of all types and any additive or deductive changes to such Task Orders. The Unit Prices for Task Orders shall be locked at the applicable Unit Prices effective on the date the SANITATION DISTRICT accepts CONTRACTOR's Task Order Proposal.
- D. For Type 3 Task Orders, the Unit Prices shall extend to CIP Contractors performing CIP work on the SANITATION DISTRICT's assets/facilities. The SANITATION DISTRICT will develop the Scope of Work for the Type 3 Task Orders. CONTRACTOR shall determine the price for the Work in the Type 3 Task Order by applying the Unit Prices and following the negotiation and approval process of said Task Order. CONTRACTOR shall provide the total cost of the final Type 3 Task Order to the CIP Contractor who will include it in CIP Contractor's bid for the CIP Project

work. CONTRACTOR shall also extend the Unit Prices to the CIP Contractor for any change orders requested by the SANITATION DISTRICT or for change orders requested by the CIP Contractor and approved by the SANITATION DISTRICT.

- E. For Type 3 Task Orders, the Unit Prices shall extend to Other Contractors performing work on the SANITATION DISTRICT's assets/facilities. The SANITATION DISTRICT will develop the Scope of Work for the Type 3 Task Orders. CONTRACTOR shall determine the price for the Work in the Type 3 Task Order by applying the Unit Prices and following the negotiation and approval process for the Work of said Task Order. CONTRACTOR shall provide the total cost of the final Type 3 Task Order to the Other Contractor who will include it in the Other Contractor's bid for the Other Contractor's work. CONTRACTOR shall also extend the Unit Prices to the Other Contractor for any change orders requested by the SANITATION DISTRICT or for change orders requested by the Other Contractor and approved by the SANITATION DISTRICT.
- F. The Unit Prices established under this Agreement shall also apply to Work a CIP Contractor and Other Contractor may request as part of the bidding process with CONTRACTOR that is beyond the Type 3 Task Order Scope of Work negotiated between the SANITATION DISTRICT and CONTRACTOR or for any work that a CIP Contractor or Other Contractor performs for the SANITATION DISTRICT that does not have a Task Order.
- G. Unit Prices shall be adjusted in accordance with the commonly published annual indices identified below after a five (5) year price guarantee from the effective date of the Agreement or the completion of Project J-120, whichever is later. Thereafter, Unit Prices may be adjusted every two (2) years and shall remain in effect for a two (2) year term. All adjustments shall only consider changes based on the lower of: (1) the percent difference of the annual increase/decrease for the immediate prior two years as reported in the indices below, or (2) the percent change in CONTRACTOR's list price provided by CONTRACTOR with evidence of proper pricing as required in subsection L below. The selection of which method to use shall be at the sole discretion of the SANITATION DISTRICT.

Provided that the indices are available, valid, and representative of the market segment/conditions, the following annual indices shall be used to calculate price adjustments under this provision:

- 1. Engineering/Professional and Field Services – Mercer Global Compensation Planning Report
 - 2. Equipment/Hardware/Software – Producer Price Index for Process Control
- H. For any extension of the term of this Agreement or as part of the adjustment process following the aforementioned price guarantees, the SANITATION DISTRICT, at its sole discretion, shall have the right to maintain the Unit Prices as specified in the Agreement or the Unit Prices current at that time if a mutually-agreed-upon change to Unit Prices cannot be reached. Unit Prices shall be the basis for all price proposals herein, all new Work in the Agreement, and any changes in said Work, whether additive or deductive. Any mistakes or other differences in Unit Prices or price proposals shall be resolved to the benefit of the SANITATION DISTRICT.

- I. Any Work in a Task Order of any type, inclusive of components, equipment, devices, or software, not included in the Unit Prices, but included in CONTRACTOR's product line, shall be (i) subject to a fifty percent (50%) multiplier from CONTRACTOR's published list price or (ii) the price CONTRACTOR charges to a client similar to the SANITATION DISTRICT, whichever is lower.
- J. In the event that market conditions have, in the SANITATION DISTRICT's sole judgment, rendered certain products, items, components, or services operationally undesirable, inadequate, or obsolete, the SANITATION DISTRICT reserves the right to compel CONTRACTOR to replace them with new state-of-the-art and most current products, items, components, or services at the Unit Price specified in the Unit Price schedules in effect at that time or CONTRACTOR's current product price, whichever is lower.
- K. For any products, items, components, or services contained in the Unit Price schedules that are native to CONTRACTOR's product lines, inclusive of third-party products or Original Equipment Manufacturer products integrated into the product line or services provided by a Subcontractor, Subconsultant, or Supplier, CONTRACTOR shall offer and provide such product, item, component, or service as if it is its "own" product, item, component, or service and fully license, warrant, and guarantee the performance of the product, item, component, or service.
- L. At any time during the term of the Agreement, the SANITATION DISTRICT reserves the exclusive right to require CONTRACTOR to submit, as evidence of proper pricing, its prices of such products, items, components, or services on their most current relevant executed projects and, if such prices are lower than the Unit Prices under this Agreement, reduce the Unit Prices to match the prices in such other projects. CONTRACTOR shall, at all times, provide such evidence during the price escalation process.
- M. Upon the SANITATION DISTRICT's execution of Type 2 and Type 3 Task Orders or change to Type 2 or Type 3 Task Orders, the Unit Price buildup will revert to a lump sum price proposal for that Work in the Task Order.

3.2 Compensation

- A. Each Task Order will require CONTRACTOR to provide a time-based compensation schedule consistent with CONTRACTOR's CPM Schedule in addition to the Unit Price schedules consistent with the requirements in the Task Order. The SANITATION DISTRICT will approve the compensation schedule as part of the Task Order process and compensate CONTRACTOR accordingly.
- B. The SANITATION DISTRICT agrees to pay, and CONTRACTOR agrees to accept, as full consideration for the faithful performance of the Work, subject to any additions or deductions as provided in approved Change Orders, the sum specified in each approved Task Order.
- C. Payments shall be made on payment applications accompanied by a certificate signed by the ENGINEER stating that the Work for which payment is demanded has been performed in accordance with the terms of the Contract Documents and that the amount stated in the certificate is due under the terms of the Agreement. Payment

applications shall also be accompanied with all documentation, records, and releases as required by the Agreement, Unit Prices and/or payment milestones per the Task Order, and General Conditions. The Total amount of Progress Payments shall not exceed the actual value of the Work completed as certified by the ENGINEER. The processing of payments shall not be considered an acceptance of any part of the Work.

D. As used in this section, the following terms shall have the following meanings:

1. "Net Progress Payment" means a sum equal to the Progress Payment less the Retention Amount and other qualified deductions identified in this Agreement, the applicable Task Order, or other Contract Documents (Liquidated Damages, stop payment notices, etc.).
2. "Progress Payment" means a sum equal to:
 - a. the value of the actual Work completed since the commencement of the Work as determined by the SANITATION DISTRICT;
 - b. less all previous Net Progress Payments;
 - c. less all amounts of previously qualified deductions;
 - d. less all amounts previously retained as Retention Amounts.
3. "Retention Amount" for each Progress Payment means the percentage of each Progress Payment to be retained by the SANITATION DISTRICT to assure satisfactory completion of the Agreement and/or Task Order. The amount to be retained from each Progress Payment shall be determined as specified below.

E. Payment – General

1. Progress Payments will be based on an approved detailed breakdown of the Task Order Price, which shall be furnished by CONTRACTOR showing Unit Prices and quantities, and adequate invoices for services. CONTRACTOR's payment application shall be organized pursuant to CONTRACTOR's itemized breakdown of the Unit Prices, which shall be prepared and submitted to the ENGINEER in the time and manner more particularly specified herein in the section entitled Payment – Itemized Breakdown of Task Order Price, appropriately itemized as described therein.
2. Items shown in the detailed Itemized Breakdown of the Task Order Price as unit costs will be included in the Progress Payments based on the percentage completed for any particular item. Progress Payment applications shall be accompanied by revised progress CPM Schedule, as specified in the Contract Documents.
3. Each Progress Payment application shall show each Subcontractor, Subconsultant, and Supplier participating in the Work completed during the previous Progress Payment period and the dollar amount of such participation. Each Progress Payment application shall be accompanied by:

- a. A conditional waiver and release upon progress payment pursuant to Civil Code Section 8132 for each Subcontractor, Subconsultant, and Supplier participating in the Work completed during the previous Progress Payment period, which shall be in an amount no less than the dollar amount of such participation;
 - b. A conditional waiver and release upon progress payment pursuant to Civil Code Section 8132 on behalf of CONTRACTOR which shall be in an amount no less than the dollar amount of the total requested in the Progress Payment application; and
 - c. Completed Progress Payment Form, supplied by the SANITATION DISTRICT, which includes a payment certification by CONTRACTOR certifying that the Work for which payment is requested has been accomplished.
4. CONTRACTOR shall thereafter, within twenty (20) days of receipt of the payment from the SANITATION DISTRICT, complete (1) an unconditional waiver and release upon progress payment pursuant to Civil Code Section 8134 for each Subcontractor, Subconsultant, and Supplier participating in the Work completed during the previous Progress Payment period, and (2) an unconditional waiver and release upon progress payment pursuant to Civil Code Section 8134 on behalf of CONTRACTOR in an amount no less than the amount received from the SANITATION DISTRICT. CONTRACTOR shall submit such unconditional waivers and releases with CONTRACTOR's subsequent Progress Payment application.

F. Payment – Application for Payment

1. CONTRACTOR shall submit payment applications to the SANITATION DISTRICT addressed as follows:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708-7018
Attention: Resident Engineer

2. Payment terms shall be net 30 days from receipt of properly submitted, complete payment application. CONTRACTOR's payment application shall include, at a minimum:
 - a. Clear reference to the SANITATION DISTRICT's Project and/or Task Order number as well as the SANITATION DISTRICT's Project and/or Task Order title and Project Manager to which the payment application applies.
 - b. CONTRACTOR's payment application number, payment application date, as well as the contract payment number the invoice represents. For example, CONTRACTOR's submittal of its first payment application is payment number 1, its second payment application submittal is payment number 2, and so on. Any CONTRACTOR re-submittal/revision to a submitted payment application shall have a letter suffix (a, b, c, etc.) added to the payment number signifying the payment application revision. For example, CONTRACTOR's first re-submittal of its first payment application shall be designated as payment for number "1a".

- c. Clear reference to the payment schedule item(s) being invoiced and the appropriate milestone description of activities and/or Work related to the billing.
- d. The itemized and total amount being invoiced (in U.S. dollars), less the amount of all contractual retention and deductions applicable for the invoiced amount (in U.S. dollars), and the resulting total net payment due.
- e. The time period during which the Work was performed and for which the payment application is submitted.

G. Payment – Mobilization Payment Requirements

Unless the SANITATION DISTRICT specifically includes mobilization as a Task Order Proposal item in the Schedule of Prices, CONTRACTOR shall not receive an initial progress payment for mobilization and full compensation for any necessary mobilization required shall be considered as included in the prices paid for all of the various items of Work under the Contract Documents and no additional compensation shall be allowed therefore. To the extent mobilization is included by the SANITATION DISTRICT as a line item in the Schedule of Prices and the mobilization amount is provided by the SANITATION DISTRICT, CONTRACTOR shall be entitled to an initial progress payment in the amount provided by the SANITATION DISTRICT upon the completion of all mobilization items as specifically delineated in the Mobilization Specification for the applicable Task Order. If CONTRACTOR is requested to provide the mobilization amount in the Schedule of Prices, CONTRACTOR shall be allowed to invoice and be paid for its mobilization costs as specified in the Mobilization Specification for the applicable Task Order.

H. Payment – Itemized Breakdown of Task Order Price

1. Within thirty (30) days of the Task Order NTP for each Task Order, CONTRACTOR shall submit an itemized breakdown of all lump sum Task Order Proposal items for the ENGINEER's approval and subsequent use for progress estimates and for determining Progress Payments. The itemized breakdown shall include only those items of Work that can be specifically identified with the Work of improvement and shall not include the following such items unless specifically included as a Task Order Proposal item by the SANITATION DISTRICT in the Schedule of Prices for the applicable Task Order:
 - a. Mobilization/Move-in
 - b. Field Offices
 - c. Bond Costs
 - d. Insurance Costs
2. The cost breakdown shall be consistent with the Work items and dollar values used by the ENGINEER in preparing monthly estimates. The special form shall include columns for Item, Cost, Percent of Total Cost, Percent Completed

Previous Period, Percent Completed for Period, Percent Completed to Date, and Percent of Contract Completed. Form of breakdown shall be subject to the ENGINEER's review.

- I. If CONTRACTOR fails or refuses to comply with the requirements set forth in this section, CONTRACTOR shall not be deemed to have provided the required data and shall not be entitled to progress payments unless and until it has provided the required information and data set forth herein.

J. Suspension of Payments

If after written notice to CONTRACTOR of deficiencies in Work; failure to comply with this Agreement; failure to comply with the quality, schedule, and Work requirements of the Task Order; or failure to revise and keep current with the Project and/or Task Order Schedule, the ENGINEER recommends that all or a portion of payments due or to become due under the Agreement be suspended until CONTRACTOR corrects any such deficiency. The ENGINEER may suspend said payments until such deficiencies are corrected.

K. The SANITATION DISTRICT's Right to Withhold Certain Amounts and Make Application Thereof

- 1. In addition to the amount which the SANITATION DISTRICT may retain as Retention, the SANITATION DISTRICT may withhold a sufficient amount or amounts from any payment otherwise due to CONTRACTOR as in its judgment may be necessary to cover any of the following:
 - a. Payments which may be past due and payable for properly filed claims against CONTRACTOR or any of its Subconsultants and/or Subcontractors for labor or materials furnished in or about the performance of the Work under the Agreement.
 - b. Estimated or actual costs for correcting defective Work not remedied.
 - c. Amounts claimed by the SANITATION DISTRICT as forfeiture due to delays or other offsets to the Agreement and/or Task Order completion caused by CONTRACTOR as set forth in this Agreement, the Task Order, or other Contract Documents.
- 2. The SANITATION DISTRICT may contact CONTRACTOR's Surety and make it aware of the Agreement and/or Task Order deficiencies, delays, and other Agreement and/or Task Order non-conformance.
- 3. The SANITATION DISTRICT may apply such withheld amount or amounts to the payment of such claims at its discretion. In so doing, the SANITATION DISTRICT shall be deemed the agent of CONTRACTOR and any payments so made by the SANITATION DISTRICT shall be considered as a payment made under the Agreement by the SANITATION DISTRICT to CONTRACTOR and the SANITATION DISTRICT shall not be liable to CONTRACTOR for such payment made in good faith. Such payments may be made without prior judicial determination of the claim or claims. The SANITATION DISTRICT will render to CONTRACTOR a proper accounting of such funds disbursed on behalf of CONTRACTOR.

3.3 Retained Funds; Substitution of Securities

- A. From each Progress Payment, the SANITATION DISTRICT shall retain ten percent (10%) of the first fifty percent (50%) of the total value of each Task Order, as adjusted by Change Orders, as the Retention Amount to assure satisfactory completion of the Agreement and/or Task Order. The cumulative amount retained as Retention Amounts shall be retained by the SANITATION DISTRICT until the Final Payment and shall not exceed ten percent (10%) of the Task Order Price, as adjusted by Change Orders.
- B. To ensure performance under the Contract Documents, CONTRACTOR may, at its sole expense, substitute securities equivalent to the retention withheld by the SANITATION DISTRICT. Such securities shall be deposited with an escrow agent approved by the SANITATION DISTRICT who shall then pay such retention to CONTRACTOR. Upon satisfactory completion of the Work, the securities shall be returned to CONTRACTOR. CONTRACTOR shall be the beneficial owner of any security substituted for monies withheld and shall receive any accrued interest thereon. Securities eligible for investment shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by CONTRACTOR and the SANITATION DISTRICT. No such substitution shall be accepted until the escrow agreement, securities, and any other documents related to the substitution are executed by CONTRACTOR and reviewed and accepted in writing by the SANITATION DISTRICT.

3.4 Final Payment

- A. CONTRACTOR shall, prior to Final Acceptance, prepare and submit an application for Final Payment to the SANITATION DISTRICT in the manner required by the SANITATION DISTRICT.
- B. The Final Payment, including retention, shall not be due and payable until satisfaction of the following conditions: the SANITATION DISTRICT has issued a Final Acceptance for the Task Order as set forth herein; the SANITATION DISTRICT's receipt of all documentation, records, and releases as required by the Agreement and executed by CONTRACTOR; and the expiration of thirty-five (35) days from the date of the SANITATION DISTRICT's recordation of Notice of Completion, if applicable.
- C. If CONTRACTOR fails to complete the Work as specified in the Contract Documents and if the unpaid balance of the Task Order Price exceeds the direct and indirect costs of completing the Task Order, including, but not limited to, all costs necessary to insure or bond the Work of substituted contractors, subconsultants, or subcontractors utilized to complete the Work, such excess shall be paid to CONTRACTOR. If such costs exceed the unpaid balance, CONTRACTOR shall pay the difference to the SANITATION DISTRICT promptly upon demand. On failure of CONTRACTOR to pay, the Surety shall pay on demand by the SANITATION DISTRICT. Any portion of such difference not paid by CONTRACTOR or Surety within thirty (30) days following the mailing of a demand for such costs by the SANITATION DISTRICT shall earn interest at the maximum rate authorized by California law.

- D. It is mutually agreed between the parties to the Agreement that no certificate given or payment made under the Agreement shall be conclusive evidence of performance of the Agreement and/or Task Order and no payment shall be construed to be an acceptance of any defective Work or improper materials.
- E. CONTRACTOR further agrees that the payment of the final amount due under the Agreement and/or Task Order and the adjustments and payments for any Work done in accordance with any alterations of the same shall release the SANITATION DISTRICT and its directors, officers, employees, and agents from any and all claims or liability on account of Work performed under the Agreement and/or Task Order or any alteration thereof.

ARTICLE IV CONTRACTOR RESPONSIBILITIES

4.1 Use of Standards

CONTRACTOR shall be responsible for the adequacy of its own Work and that of all Subcontractors and Subconsultants under contract to CONTRACTOR for this Agreement. Where approval by the SANITATION DISTRICT or other representatives of the SANITATION DISTRICT is required, it is understood to be conceptual approval only and does not relieve CONTRACTOR of any of the following: the CONTRACTOR's responsibility of complying with all laws, codes, industry and SANITATION DISTRICT standards; liability for damages caused by errors, omissions, or non-compliance with industry standards; or negligence on the part of CONTRACTOR or its Subcontractors and Subconsultants. CONTRACTOR expressly agrees that the services to be provided under this Agreement shall be performed in accordance with the standards customarily provided by an experienced and competent professional organization rendering the same or similar services. CONTRACTOR shall, without additional compensation, correct or revise any errors or deficiencies in its services or products in accordance with all agreed-upon warranties.

4.2 Licenses

CONTRACTOR represents and warrants to the SANITATION DISTRICT that it has obtained all licenses legally required to engage in this Work and/or that it will subcontract portions of the Work to organizations that possess the proper licenses to perform the Work.

4.3 Permits

CONTRACTOR represents and warrants to the SANITATION DISTRICT that, if required by the Task Order, it will obtain all permits, qualifications, and approvals of whatever nature that are legally required to perform the Work of the Task Order. Any and all fees required by Federal, State, County, City, and/or municipal laws, codes, and/or tariffs that pertain to Work to be performed under a Task Order will be paid by CONTRACTOR.

4.4 Office Space and Staging Area

If required by the Task Order, the SANITATION DISTRICT will provide CONTRACTOR an on-premises area which can be used for office space and staging area. CONTRACTOR, however, shall be responsible for all business infrastructure for such area, including, but

not limited to, office furniture, computer systems and software, internet connection, and phone service, as necessary. CONTRACTOR shall use this staging area only to perform services for the SANITATION DISTRICT.

4.5 Applicable Laws and Regulations

CONTRACTOR shall, at its own cost and expense, comply with all applicable Federal, State, and local laws, rules, and regulations and hereby agrees to indemnify and hold the SANITATION DISTRICT harmless from any and all damages and liabilities assessed against the SANITATION DISTRICT as a result of CONTRACTOR's noncompliance. Any item or provision required to be included herein under any applicable law, rule, or regulation shall be deemed included as a part of this Agreement regardless of whether such item or provision is specifically identified herein.

4.6 Familiarity with Work

By executing this Agreement, CONTRACTOR warrants that: (1) it has investigated the Work to be performed; (2) it has investigated the sites of the Work and is aware of all conditions there; (3) it understands the facilities, difficulties, and restrictions of the Work under this Agreement; (4) it warrants that the SANITATION DISTRICT has provided answers to all CONTRACTOR's questions and provided CONTRACTOR adequate time and access to evaluate the facilities; and (5) it warrants that CONTRACTOR had all the information necessary to provide a complete proposal. Should CONTRACTOR discover any latent or unknown conditions materially differing from those inherent in the Work, through future Task Orders or as represented by the SANITATION DISTRICT, it shall immediately inform the SANITATION DISTRICT of those conditions and shall not proceed, except at CONTRACTOR's sole risk, until written instructions are received from the SANITATION DISTRICT.

4.7 Submittals and Shop Drawings

All submittals and design-based drawings shall be reviewed and stamped by a California Registered Engineer qualified to review and approve such submittals and/or shop drawings.

4.8 Environmental Compliance

Without limiting the foregoing, CONTRACTOR shall, at its own cost and expense, comply with all Federal, State, and local environmental laws, regulations, and policies which apply to CONTRACTOR, its Subcontractors and Subconsultants, or the Work to be performed under the Agreement.

4.9 Safety Standards and Human Resources Policies

While working at the SANITATION DISTRICT's facilities, CONTRACTOR and its Subcontractors and Subconsultants shall follow and ensure their employees follow all Federal, State, and local regulations as well as the SANITATION DISTRICT's Safety Standards attached hereto as Exhibit "5" and the Human Resources Policies accessible through the following link: <https://www.ocsd.com/about-us/transparency/safety-and-human-resources-policy/-folder-632>. If there is a conflict between (i) the SANITATION

DISTRICT's Safety Standards and/or Human Resources Policies and (ii) Federal, State, or local laws and regulations, CONTRACTOR shall, at its own cost and expense, follow the most stringent applicable requirement. CONTRACTOR shall promptly notify the SANITATION DISTRICT of any such conflict upon discovery.

4.10 Damage to the SANITATION DISTRICT's Property

Any of the SANITATION DISTRICT's property damaged by CONTRACTOR or Subconsultants and Subcontractors shall be repaired or replaced by the CONTRACTOR at the SANITATION DISTRICT's discretion and at no cost to the SANITATION DISTRICT.

4.11 F.O.B. Destination

CONTRACTOR shall assume full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Agreement or any Task Order issued pursuant to this Agreement.

4.12 Audits

During the term of the Agreement and for a period of three (3) years after termination of the Agreement, CONTRACTOR shall give the SANITATION DISTRICT access to examine any pertinent books, documents, and records of CONTRACTOR relating to this Agreement, including, but not limited to, materials relating to Unit Prices, product-based prices, and all services performed under this Agreement.

4.13 Escrow Agreement

CONTRACTOR shall deposit into escrow the required intellectual property documents and materials as specified in the Escrow Agreement attached hereto as Exhibit "6."

4.14 No Solicitation of Employees

During the term of this Agreement and for a period of one (1) year immediately following termination of this Agreement, or any extension hereof, CONTRACTOR shall not call on, solicit, or hire any SANITATION DISTRICT employees about whom CONTRACTOR became aware as a result of CONTRACTOR's Work for the SANITATION DISTRICT. If CONTRACTOR violates this provision, CONTRACTOR will pay the SANITATION DISTRICT fifty percent (50%) of the former employee's annual salary which payment is in addition to any other rights and remedies that may be available to the SANITATION DISTRICT.

4.15 Conflict of Interest and Reporting

- A. CONTRACTOR shall, at all times, avoid any conflict of interest or appearance of any conflict of interest in performance of this Agreement.
- B. CONTRACTOR affirms that to the best of its knowledge, there exists no actual or potential conflict between CONTRACTOR's families, business, or financial interest and the Work to be performed under this Agreement. In the event of a change in either its

private interests or Work under this Agreement, CONTRACTOR shall discuss with the SANITATION DISTRICT any questions regarding possible conflicts of interest which may arise as a result of such change.

4.16 Changes in Control of CONTRACTOR

- A. CONTRACTOR shall notify the SANITATION DISTRICT within ten (10) days of the occurrence of a change in control of the operation or ownership of CONTRACTOR. As used in this section, "control" is defined as the possession, direct or indirect, of either:
 - 1. The ownership or ability to direct the voting of fifty-one percent (51%) or more of the equity interests, value, or voting power in CONTRACTOR; or
 - 2. The power to direct or cause the direction of CONTRACTOR's management and policies, whether through ownership of voting securities, by contract, or otherwise.
- B. In the event of a change in control of CONTRACTOR, the SANITATION DISTRICT shall have the option of terminating this Agreement by written notice to CONTRACTOR.

4.17 Right to Review Work, Facilities, and Records

- A. The SANITATION DISTRICT reserves the right to review any portion of the Work performed by CONTRACTOR and its Subcontractors or Subconsultants under this Agreement and CONTRACTOR hereby agrees to cooperate with the SANITATION DISTRICT to the greatest extent possible.
- B. CONTRACTOR shall furnish to the SANITATION DISTRICT such reports, statistical data, and other information pertaining to CONTRACTOR's Work under the Agreement as shall be reasonably required by the SANITATION DISTRICT to carry out its rights and responsibilities under any of its agreements relating to the Work performed under this Agreement.
- C. The SANITATION DISTRICT's right to review or approve drawings, specifications, procedures, instructions, reports, test results, calculations, schedules, or other data developed by CONTRACTOR shall not relieve CONTRACTOR of any of its obligations herein.

4.18 Work Requirements

All required Work for the Project, including, but not limited to, programming, project management, programming standards, specifications updates, and design drawings must be performed in the United States. By signing this Agreement, CONTRACTOR certifies that all labor categories, including engineers, that perform Work on the Project will comply with all applicable laws and regulations to work in the United States.

4.19 Protection of documents and information

CONTRACTOR shall not disclose or share any physical document, electronic media of any type, or verbal information related to the RFP, including, but not limited to, the RFP

and its attachments, addenda, product(s) of the Work itself, and any information shared by the SANITATION DISTRICT during the prosecution of the Work itself with any foreign country without the prior written consent of the SANITATION DISTRICT.

ARTICLE V
INSURANCE, BONDS, INDEMNIFICATION, AND LIMITATION OF LIABILITY

5.1 Insurance

A. General Requirements

1. CONTRACTOR, Subcontractors, and Subconsultants shall purchase and maintain, throughout the term of this Agreement and any periods of warranty or extensions, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder and the results of that Work by CONTRACTOR, its agents, representatives, employees, Subcontractors, and Subconsultants in amounts equal to the requirements set forth below.
2. CONTRACTOR shall not commence Work under this Agreement until all required insurance is obtained in a form acceptable to the SANITATION DISTRICT nor shall CONTRACTOR allow any Subcontractors or Subconsultants to commence any Work until all insurance required of the Subcontractors or Subconsultants has been obtained. Failure to maintain required insurance coverage shall result in termination of this Agreement or stoppage of Work at CONTRACTOR's sole cost and without additional time.
3. Insurance coverage shall be issued and underwritten by insurance companies acceptable to the SANITATION DISTRICT.
4. CONTRACTOR's insurers must have an "A-" Policyholder's Rating, or better, and Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best's Guide Rating. CONTRACTOR shall substitute any insurer whose rating drops below the levels herein specified within twenty (20) days of the SANITATION DISTRICT's written notice to CONTRACTOR.
5. CONTRACTOR shall maintain all of the foregoing insurance coverages in force through the point at which the Work under this Agreement is fully completed and accepted by the SANITATION DISTRICT pursuant to the "Final Completion" and "Final Acceptance" provisions herein. Furthermore, CONTRACTOR shall maintain all of the foregoing insurance coverages in full force and effect throughout the warranty period commencing on the date of Final Acceptance.
6. The SANITATION DISTRICT reserves the right to amend the required limits of insurance commensurate with CONTRACTOR's risk at any time during the term of the Agreement.

B. Required Insurance Policies

1. General Liability

- a. CONTRACTOR shall maintain during the term of the Agreement, including the period of warranty, Commercial General Liability Insurance written on an occurrence basis providing minimum limits of liability coverage of Ten Million Dollars (\$10,000,000) per occurrence and Twenty Million Dollars (\$20,000,000) aggregate for bodily injury, personal injury, and property damage.
- b. Said insurance shall include coverage for the following hazards: Premises-Operations, blanket contractual liability (for this Agreement), products liability/completed operations (including any product manufactured or assembled), broad form property damage, blanket contractual liability, independent contractors liability, personal and advertising injury, mobile equipment, owners and contractors protective liability, and cross liability and severability of interest clauses.

2. Automobile/Vehicle Liability Insurance

- a. CONTRACTOR shall maintain a policy of Automotive Liability Insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing minimum limits of liability coverage of Five Million Dollars (\$5,000,000), combined single limit per accident, for bodily injury, personal injury, and property damage.
- b. No vehicles may enter the SANITATION DISTRICT's premises/worksites without possessing the required insurance coverage.

3. Worker's Compensation Insurance

CONTRACTOR shall provide such Workers' Compensation Insurance as required by the Labor Code of the State of California in the amount of the statutory limit, including Employer's Liability Insurance with a minimum limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury or disease. Such Worker's Compensation Insurance shall be endorsed to provide for a waiver of subrogation in favor of the SANITATION DISTRICT. A statement on an insurance certificate will not be accepted in lieu of the actual endorsement.

4. Errors and Omissions/Professional Liability

- a. CONTRACTOR shall maintain in full force and effect, throughout the term of the Agreement, standard industry form professional negligence errors and omissions insurance coverage in an amount of not less than Five Million Dollars (\$5,000,000) and in accordance with the provisions of this Paragraph. If the policy of insurance is written on a "claims made" basis, said policy shall be continued in full force and effect at all times during the term of the Agreement and for a period of five (5) years from the date of the completion of the services thereunder.

- b. In the event of termination of said policy during this period, CONTRACTOR shall obtain continuing insurance coverage for the prior acts or omissions of CONTRACTOR during the course of performing services under the Agreement. Said coverage shall be evidenced by either a new policy evidencing no gap in coverage or by separate extended "tail" coverage with the present or new carrier.
- c. In the event the present policy of insurance is written on an "occurrence" basis, said policy shall be continued in full force and effect during the term of the Agreement or until completion of the services provided for in the Agreement, whichever is later.
- d. CONTRACTOR shall provide to the SANITATION DISTRICT a certificate of insurance in a form acceptable to the SANITATION DISTRICT indicating the deductible and the expiration date of said policy and shall provide renewal certificates not less than ten (10) days prior to the expiration of each policy term.

5. Pollution Liability Insurance

- a. CONTRACTOR shall purchase and maintain insurance for pollution liability covering bodily injury, property damage (including loss of use of damaged property or property that has not been physically injured or destroyed), cleanup costs, and defense costs (including costs and expenses for investigation, defense, or settlement of claims). Coverage shall carry limits of at least Five Million Dollars (\$5,000,000) and shall apply to sudden and non-sudden pollution conditions (including sewage spills), both at the site or needed due to migration of pollutants from the site, resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants, or pollutants.
- b. The SANITATION DISTRICT, at its sole discretion, shall require CONTRACTOR to increase the minimum insurance coverage required in the prior sub-section if such increase is required by the applicable Task Order.
- c. If CONTRACTOR provides coverage written on a claims-made basis, the SANITATION DISTRICT has the right to approve or reject such coverage in its own discretion. If written on a claims-made basis, CONTRACTOR warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the Agreement and that continuous coverage will be maintained, or an extended discovery period will be exercised, for a period of two years beginning from the time that the Work under the Agreement is completed.

- 6. Cyber Liability Insurance: Cyber liability insurance must be maintained by CONTRACTOR in the amount of Two Million Dollars (\$2,000,000) in a form acceptable to SANITATION DISTRICT.

C. Proof of Coverage

CONTRACTOR shall furnish the SANITATION DISTRICT with original certificates and amendatory endorsements effecting coverage. Said policies and endorsements shall conform to the requirements stated herein. All certificates and endorsements must be

received and approved by the SANITATION DISTRICT before Work commences. The SANITATION DISTRICT reserves the right to, at any time, require complete, certified copies of all required insurance policies, including endorsements, effecting the coverage required. The following are approved forms that must be submitted as proof of coverage:

- Certificate of Insurance ACORD Form 25 (5/2010) or equivalent.
- Commercial General Liability Form CG-0001 10 01
- General Aggregate (ISO Form) CG 25 03 or 25 04
- Additional Insured (General Liability) (ISO Form) CG2010 11 85 or
The combination of (ISO Forms)
CG 2010 10 01 and CG 2037 10 01
All other Additional Insured endorsements must be submitted for approval by the SANITATION DISTRICT and the SANITATION DISTRICT may reject alternatives that provide different or less coverage to the SANITATION DISTRICT.
- Additional Insured (Auto Liability) Submit endorsement provided by carrier for the SANITATION DISTRICT approval.
- Waiver of Subrogation State Compensation Insurance Fund Endorsement No. 2570 or equivalent.
- Cancellation Notice State Compensation Insurance Fund Endorsement No. 2065 or equivalent.

D. Subcontractors and Subconsultants

CONTRACTOR shall be responsible for establishing insurance requirements for any Subcontractor and Subconsultant hired by CONTRACTOR. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subcontractor's and/or Subconsultant's operations and work.

E. Separation of Insured

All liability policies shall contain a "Separation of Insureds" clause.

F. Additional Insured and Primary Insurance Requirement

Each policy of General Liability Insurance, Automobile Liability Insurance, and Pollution Liability Insurance shall be endorsed to contain the following provisions:

1. The SANITATION DISTRICT, its Directors, officers, agents, subcontractors, subconsultants, and employees and all public agencies from whom permits will be obtained, and their Directors, officers, agents, and employees are hereby declared to be additional insureds under the terms of this policy, but only with respect to the operations of CONTRACTOR at or from any of the SANITATION DISTRICT's sites

in connection with the Agreement or acts and omissions of the additional insured in connection with its general supervision or inspection of said operations related to the Agreement.

2. Insurance afforded by the additional insured endorsement shall apply as primary insurance and other insurance maintained by the SANITATION DISTRICT shall be excess only and not contributing with insurance provided under this policy.

G. Limits Are Minimums

If CONTRACTOR maintains higher limits than any minimums shown above, the SANITATION DISTRICT requires and shall be entitled to coverage for the higher limits maintained by CONTRACTOR.

H. Non-Limiting

Nothing in this document shall be construed as limiting in any way nor shall it limit the indemnification provision contained in the Agreement or the extent to which CONTRACTOR may be held responsible for payment of damages to persons or property.

I. Defense Costs

Liability policies shall have a provision specifying that defense costs for all insureds and additional insureds are paid in addition to and do not deplete any policy limits.

J. Cancellation Notice

Each insurance policy required herein shall be endorsed to state that coverage shall not be cancelled, except after thirty (30) days' prior written notice. The Cancellation Section of ACORD Form 25 (5/2010) shall state the required thirty (30) days' written notification. The policy shall not terminate, nor shall it be cancelled, nor the coverage reduced until thirty (30) days after written notice is given to the SANITATION DISTRICT except for nonpayment of premium, which shall require not less than ten (10) days written notice to the SANITATION DISTRICT. Should there be changes in coverage, CONTRACTOR and its insurance broker/agent shall send to the SANITATION DISTRICT a certified letter which includes a description of the changes in coverage. The certified letter must be sent to the attention of Risk Management, and shall be received by the SANITATION DISTRICT not less than thirty (30) days prior to the effective date of the change(s) if the change would reduce coverage or otherwise reduce or limit the scope of insurance coverage provided to the SANITATION DISTRICT.

5.2 Bonds

- A. Prior to the execution of a Type 1 or Type 2 Task Order, CONTRACTOR shall file with the SANITATION DISTRICT Surety bonds satisfactory to the SANITATION DISTRICT for the purpose and in the amounts required herein. Bonds shall be duly executed by a responsible corporate Surety, authorized to issue such bonds in the State of California, and secured through an authorized agent with an office in California. Bonds shall be issued by a Surety who is listed in the latest revision of U.S. Department of Treasury

Circular 570, is authorized to issue bonds in California, and whose bonding limitation shown in said circular is sufficient to provide Bonds in the amount required by the Agreement. CONTRACTOR shall pay all Bond premiums, costs, and incidentals.

- B. Each Bond shall be signed by both CONTRACTOR and the Surety and the signature of the authorized agent of the Surety shall be notarized.
- C. Each Bond shall be executed in the name of the Surety insurer under penalty of perjury or the fact of execution of each Bond shall be duly acknowledged before an officer authorized to take and certify acknowledgments and either one of the following conditions shall be satisfied:
 - 1. A copy of the transcript or record of the unrevoked appointment, power of attorney, by-laws, or other instrument duly certified by the proper authority and attested by the seal of the insurer entitling or authorizing the person who executed the Bond to do so for and on behalf of the insurer, is on file in the Office of the County Clerk of the County of Orange; or
 - 2. A copy of a valid power of attorney is attached to the Bond.
- D. CONTRACTOR shall provide good and sufficient surety bonds for implementation of Task Order as follows: (1) for Type 1 Task Orders, a Payment Bond and (2) for Type 2 Task Orders, a Payment Bond and a Performance Bond. New Bonds shall be acquired and maintained by CONTRACTOR for each Task Order that requires them. The Bonds shall be in full force prior to the issuance of the Task Order NTP for the applicable Task Order and shall be maintained by CONTRACTOR in full force and effect until the expiration of the warranty period of the applicable Task Order, including all extensions thereof as provided by the Contract Documents. At no time shall Work be performed by CONTRACTOR without the proper Bonds required herein.

CONTRACTOR shall present the following Bonds prior to the issuance of the Task Order NTP:

- 1. "Payment Bond" (Material Bond) shall be for not less than one hundred percent (100%) of the Task Order price to satisfy claims of material suppliers. The bond shall be maintained by CONTRACTOR in full force and effect until the Work of the applicable Task Order is fully accepted by the SANITATION DISTRICT and until all claims for materials are paid. As changes to the Task Order occur via approved Change Orders, CONTRACTOR shall assure that the amount of the Bond is adjusted to maintain 100% of the Task Order price.
- 2. "Performance Bond" shall be for not less than one hundred percent (100%) of the Task Order price to guaranty faithful performance of all Work, within the time period prescribed, in a manner satisfactory to the SANITATION DISTRICT and to guaranty that all materials and workmanship will be free from original or developed defects and comply with all the requirements of the Agreement and applicable Task Order. The bond shall be maintained by CONTRACTOR in full force and effect until the Work of the applicable Task Order is fully accepted by the SANITATION DISTRICT. This Bond shall also apply to the use of patented articles, materials, or processes and to guarantee the payment of all stop payment notice claimants until Final

Acceptance by the SANITATION DISTRICT. As changes to the Task Order occur via approved Change Orders, CONTRACTOR shall assure that the amount of the Bond is adjusted to maintain the 100% of the Task Order price.

- E. For Type 3 Task Orders, CONTRACTOR shall secure bonds as required by law and the CIP Contractor and/or Other Contractor. Compensation for such bonding requirements will not be included in the SANITATION DISTRICT's pre-negotiated Task Order with CONTRACTOR, but will be included in CONTRACTOR's contract with the CIP Contractor.
- F. Should any Surety or Sureties ever be deemed unsatisfactory by the SANITATION DISTRICT, CONTRACTOR shall be notified to that effect and CONTRACTOR shall forthwith substitute a new Surety or Sureties satisfactory to the SANITATION DISTRICT. No further payment shall be deemed due or will be made under such Task Order until the new Sureties shall qualify and be accepted by the SANITATION DISTRICT.

5.3 Indemnification

- A. Except for the active negligence or willful misconduct of the SANITATION DISTRICT, CONTRACTOR undertakes and agrees to defend, indemnify, and hold harmless, through legal counsel acceptable to the SANITATION DISTRICT, the SANITATION DISTRICT, and any and all of the SANITATION DISTRICT's Board members, officers, agents, employees, assigns, and successors in interest from and against all third-party suits, causes of action, claims, losses, demands, and expenses, including, but not limited to, attorney's fees, costs of litigation, and any damages or liabilities to third parties of any nature whatsoever, arising out of or related to the performance or nonperformance by CONTRACTOR, or any of CONTRACTOR's Subconsultants, Subcontractors, or suppliers, of any tier, of any portion of the performance of the Work, including, but not limited to, CONTRACTOR's negligent acts, errors, omissions, breach of contract, breach of warranty (express or implied), or willful misconduct.
- B. With respect to all Work covered by or incidental to the Contract Documents, CONTRACTOR shall be responsible for any liability imposed by law and shall indemnify, defend, and hold the SANITATION DISTRICT, ENGINEER, the SANITATION DISTRICT consultants and subconsultants, and all public entities issuing permits to CONTRACTOR (collectively, "Indemnified Parties"), and each of the Indemnified Parties' directors, officers, agents, and employees, free and harmless from and against all of the following:
 - 1. Any claim, suit, or action of every name, kind, and description, loss, damage, cost, expenses, including reasonable attorney's fees and expert fees, costs of compliance with administrative orders and directives, litigation, arbitration, awards, fines, and administratively- or judicially-imposed penalties or judgments arising by reason of death or bodily injury to person(s), injury to property, or other loss, damage, or expense resulting from the performance of the Work, design defects (if design originated by CONTRACTOR only), defects in the Work, or by or on account of acts, errors, or omissions of CONTRACTOR or CONTRACTOR's Subcontractors and Subconsultants, Suppliers, employees, invitees, or agents or from any other cause whatsoever arising during the progress of the Work or at any time prior to its completion and Final Acceptance. Said responsibility shall extend to claims, demands, or liability for loss, damage or injuries occurring or discovered after completion of the Work as well as during the progress of the Work. However,

CONTRACTOR shall not be obligated under this Agreement to indemnify the SANITATION DISTRICT, the ENGINEER, or its consultants with respect to the active negligence, sole negligence, or willful misconduct of the SANITATION DISTRICT, the ENGINEER, or its consultants.

2. In any and all claims against the Indemnified Parties by an employee of CONTRACTOR, its Subcontractor, Subconsultant, or Supplier, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation as specified herein shall not be limited in any way by the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR, or any Subcontractor, Subconsultant, Supplier, or other person under Workers' Compensation acts, disability benefit acts, or other employee acts.
 3. The obligations of CONTRACTOR as specified herein shall not extend to the liability of the SANITATION DISTRICT's consultants or their subconsultants and each of their directors, officers, agents, and employees arising out of or resulting from or in connection with their preparation of or approval of maps, Drawings, opinions, reports, surveys, designs, or Specifications provided that the foregoing was the sole and exclusive cause of the loss, damage, or injury.
- C. CONTRACTOR shall also be responsible for and shall indemnify, defend, and hold harmless the SANITATION DISTRICT, ENGINEER, SANITATION DISTRICT consultants and their subconsultants, and each of their directors, officers, employees, and agents, from and against all losses, expenses, damages (including damages to the Work itself), attorney's fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of CONTRACTOR to faithfully perform the Work and all of CONTRACTOR's obligations under the Agreement. Such costs, expenses, and damages shall include all costs, including attorney's fees incurred by the indemnified parties in any lawsuit to which they are a party.
- D. In the event CONTRACTOR or its insurer refuses or fails to provide a legal defense to the SANITATION DISTRICT after receiving written notice of the legal action and a tender and demand for defense, the SANITATION DISTRICT shall have the right to select counsel of its own choice to represent all the interests of the SANITATION DISTRICT at CONTRACTOR's sole cost and expense. CONTRACTOR agrees that the amount of legal costs and expenses, including attorneys' fees, may be withheld by the SANITATION DISTRICT from any amounts due under the Agreement and owing to CONTRACTOR until such time as a final determination is made as to the responsibility for payment of said fees and costs. CONTRACTOR further agrees that to the extent the SANITATION DISTRICT incurs such damages and the damages exceed any remaining amounts due under the Agreement and owing to CONTRACTOR, CONTRACTOR shall reimburse the SANITATION DISTRICT for all such additional damages upon demand by the SANITATION DISTRICT for the same.
- E. The rights and remedies are cumulative of those provided for elsewhere in this Agreement and those allowed under the laws of the United States, the State of California, and the local laws under which the SANITATION DISTRICT operates.

5.4 Joint and Several Liability

If CONTRACTOR is a joint venture, partnership, or limited liability company, each venturer, partner, or member shall be jointly and severally liable for any and all of the duties and obligations of CONTRACTOR that are assumed under or arise out of the Agreement. Each of such venturer, partner, or member waives notice of the breach or non-performance of any undertaking or obligation of CONTRACTOR contained in, resulting from, or assumed under the Agreement and the failure to give any such notice shall not affect or impair such venturer's, partner's, or member's joint and several liability hereunder.

5.5 Limitation of Liability

Except for CONTRACTOR's obligations to indemnify and defend the SANITATION DISTRICT for personal injury, bodily injury, or property damage, CONTRACTOR's total liability to the SANITATION DISTRICT arising out of or in connection with this Agreement shall not exceed 300% of the value of each Task Order for Type 2 and Type 3 Task Orders and shall not exceed 100% of the value of each Type 1 Task Order.

ARTICLE VI INTELLECTUAL PROPERTY

6.1 Ownership of Work Products

A. The SANITATION DISTRICT shall own all title, rights, and interests in all Work Products created by CONTRACTOR and its Subcontractors and Subconsultants for the SANITATION DISTRICT under this Agreement. For the purposes hereof, "Work Products" shall include all intellectual property rights, including copyrights, patentable inventions, and other intellectual property rights in all materials, tangible or not, created in whatever medium specifically for the Work of this Agreement, including, without limitation, reports, manuals, specifications, drawings and sketches, computer programs (including, but not limited to, SCADA Platform configuration files, application programming for the field-side hardware, graphic user interface programming, reports, and any other programming development within CONTRACTOR's application and product software to create, configure, and control the SCADA Platform) and source codes for all programs developed for the SANITATION DISTRICT, computer files, databases, schematics, maps, marks, logos, graphic designs, notes, formulas, matters, and combinations thereof (patentable or not), and all forms of intellectual property ("Work Products"). CONTRACTOR shall not dispute or contest, directly or indirectly, the SANITATION DISTRICT's rights and title to the Work Products as described in this Agreement, nor shall CONTRACTOR contest the validity of the intellectual property embodied therein. CONTRACTOR hereby assigns, and if later requested by the SANITATION DISTRICT, shall assign to the SANITATION DISTRICT all title, rights, and interests, tangible or not, in all Work Products. CONTRACTOR shall cooperate, and cause Subcontractors and Subconsultants to cooperate, in perfecting the SANITATION DISTRICT's title, rights, or interests, tangible or not, in any Work Product, including prompt execution of documents as presented by the SANITATION DISTRICT.

CONTRACTOR and its Subcontractors and Subconsultants shall not file for or attempt to assert any ownership, copyright, patent, or trademark on Work Products.

- B. If applicable, upon the SANITATION DISTRICT's request, CONTRACTOR agrees to assist the SANITATION DISTRICT, at the SANITATION DISTRICT's expense, in obtaining patents or copyrights for such Work Products, including the disclosure of all pertinent information and data with respect thereto and the execution of all applications, specifications, assignments, and all other instruments and papers which the SANITATION DISTRICT shall deem necessary to apply for and to assign or convey to the SANITATION DISTRICT, its successors, and assigns the sole and exclusive right, title, and interest in such Work Products. CONTRACTOR agrees to obtain or has obtained written assurances from its employees and contract personnel of their agreement to the terms hereof regarding the Work Products.

6.2 Non-disclosure and Notice by Contractor

- A. As specified in the non-disclosure agreement signed by the parties, CONTRACTOR shall exercise best commercial efforts to guard the SANITATION DISTRICT's Work Products, including intellectual property therein, against and from unauthorized transfer, disclosure, or possession to or by non-SANITATION DISTRICT personnel, unless prior written consent from authorized personnel of the SANITATION DISTRICT is obtained.
- B. In the unlikely event that inventions, discoveries, novel matters, or combination thereof, (collectively "Matters"), whether patentable or not, come to exist or are suspected to exist during the course of CONTRACTOR's performance of this Agreement, CONTRACTOR shall notify the SANITATION DISTRICT promptly without undue delay, shall secure all information pertaining to the Matters, and shall not disclose any information about the Matters to any non-SANITATION DISTRICT personnel.

6.3 Obligations of Subconsultants and Subcontractors of any Tier

CONTRACTOR agrees that before commencement of any subconsultant or subcontract Work it shall incorporate all provisions in this Agreement on intellectual property ownership, including Paragraphs 6.1 and 6.2, of this Article, in CONTRACTOR's agreement with the Subconsultant or Subcontractor to contractually bind or otherwise oblige its Subconsultants and Subcontractors and their personnel performing Work under this Agreement such that the SANITATION DISTRICT's title, rights, and interests in Work Products are preserved and protected as intended herein.

6.4 Reservation of Rights and Titles

All intellectual property, documents, information, and public safety and security plans and materials provided by the SANITATION DISTRICT to CONTRACTOR and its Subconsultants or Subcontractors arising out of or related to this Agreement shall remain the exclusive property of the SANITATION DISTRICT. Nothing herein may be construed to transfer or vest any of the SANITATION DISTRICT's property rights, tangible or not, to CONTRACTOR, any of its Subconsultants or Subcontractors, or any other third party. Outside the scope of its performance under this Agreement, CONTRACTOR may not use, reproduce, distribute, or otherwise make public in any manner, either for profit or not, any of the information, documentation, plans, or

procedures developed for or provided by the SANITATION DISTRICT hereunder without the prior written consent and security clearance from authorized personnel of the SANITATION DISTRICT.

6.5 License to use pre-existing Intellectual Property

A. License Grant

CONTRACTOR hereby grants to the SANITATION DISTRICT, its consultants, agents, assigns, and successors in interest a royalty-free, perpetual, non-exclusive, and irrevocable license to use CONTRACTOR's pre-existing intellectual property ("Pre-Existing IP") included, embedded, or embodied in the Work Products delivered under this Agreement. Pre-Existing IP herein shall mean all intellectual property, including, without limitation, patents, copyright, trademarks, trade secrets, and proprietary information that had already been created by CONTRACTOR and/or any third party prior to the commencement of performance under this Agreement and that was not created under this Agreement.

B. Third Party License

CONTRACTOR shall procure and pay for all necessary intellectual property licenses, rights, clearances, and permission (collectively "Licenses") for the SANITATION DISTRICT to use all third-party intellectual property or CONTRACTOR's Pre-Existing IP included, embedded, or embodied in the Work Products to fully enjoy the benefits of this Agreement. The Licenses granted to the SANITATION DISTRICT shall be, at minimum, royalty-free, perpetual, and irrevocable.

C. License Agreements

In the event that a CONTRACTOR's software license agreement is operationally required, the terms for the SANITATION DISTRICT's use of the software shall be detailed in that license; provided, however, to the extent of any conflict or ambiguity between CONTRACTOR's software license agreement and the requirements of this Agreement, the terms of this Agreement shall prevail.

6.6 Non-infringement Warranty

CONTRACTOR represents and warrants that performance of all obligations, including those performed by its Subconsultants or Subcontractors, under this Agreement does not infringe in any way, directly or contributorily, upon any third-party's intellectual property rights, including, without limitation, patents, copyrights, trademarks, trade secrets, and proprietary information.

6.7 Intellectual Property Infringement

A. Indemnification

CONTRACTOR will defend, at its expense, and hold the SANITATION DISTRICT harmless in any infringement claim, demand, proceeding, suit, or action ("Action") against the SANITATION DISTRICT, its Board members, officers, directors, agents, employees, assigns, or successors in interest ("SANITATION DISTRICT Defendants")

for any infringement or violation, actual or alleged, direct or contributory, intentional or otherwise, of any intellectual property rights (1) on or in any design, medium, matter, article, process, method, application, equipment, device, instrumentation, software, hardware, or firmware used by CONTRACTOR or its Subconsultants or Subcontractors of any tier in performing the Work under this Agreement or (2) as a result of the SANITATION DISTRICT's actual or intended use of any Work Products furnished by CONTRACTOR under the Agreement. CONTRACTOR also shall indemnify the SANITATION DISTRICT against all reasonable attorney's fees, losses, costs, expenses, liability, and damages awarded against the SANITATION DISTRICT or settlement award as a consequence of such Action.

B. Participation in Defense

In CONTRACTOR's defense of the SANITATION DISTRICT Defendants, negotiation, compromise, and settlement of any such infringement Action, the SANITATION DISTRICT shall retain discretion in and control of the litigation, negotiation, compromise, settlement, and appeals therefrom, as required by applicable law.

C. Rights and Remedies are Cumulative

The rights and remedies are cumulative of those provided for elsewhere in this Agreement and those allowed under the laws of the United States, the State of California, and the local laws under which the SANITATION DISTRICT operates.

D. Business Non-Interruption

1. Should CONTRACTOR have information that (1) any of the Work Products allegedly or actually infringe or may infringe on any third-party intellectual property rights, including, without limitation, patents, copyrights, trademarks, trade secrets, and other proprietary information, or (2) any of the licenses procured on behalf of the SANITATION DISTRICT under this Agreement is due to expire, to be terminated, or enjoined sooner than the term procured for, CONTRACTOR shall immediately notify the SANITATION DISTRICT of such alleged, actual, or potential infringement or license status. Upon the SANITATION DISTRICT's request, CONTRACTOR shall, at CONTRACTOR's own expense:
 - a. Procure for the SANITATION DISTRICT the right or license to continue using the intellectual property at issue; or
 - b. Replace the intellectual property at issue with a functionally equivalent, non-infringing product, if practicable.
2. Exercise of any of the above-mentioned options shall not cause undue business interruption to the SANITATION DISTRICT or diminish the intended benefits and use of the Work Products by the SANITATION DISTRICT under the specifications herein.

6.8 Survivability

All rights and remedies available to the SANITATION DISTRICT under this Agreement and all provisions of Article 6 shall survive the expiration or other termination of this Agreement.

**ARTICLE VII
OTHER GENERAL PROVISIONS**

7.1 Wage Requirements

To the extent CONTRACTOR intends to utilize employees who will perform work during the Agreement, as more specifically defined under Labor Code Section 1720, CONTRACTOR shall be subject to prevailing wage requirements with respect to such employees.

7.2 Drug Free Workplace

CONTRACTOR hereby certifies that it will provide a drug-free workplace consistent with the requirements of California Government Code section 8355 and any other applicable law or regulation.

7.3 Non-Discrimination and Equal Opportunity Requirements

- A. CONTRACTOR hereby declares that it has not violated or been found in violation by final judgment (after all appeals have been exhausted) of a court of competent jurisdiction, of discrimination pursuant to any law, including, without limitation, California Government Code section 12940. CONTRACTOR further declares that during the performance of the Agreement, CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such actions shall include, but not be limited to, employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training or apprenticeship.
- B. In every contract with Subcontractors or Subconsultants, CONTRACTOR shall include provisions regarding non-discrimination in employment consistent with the requirements above.

7.4 Independent Contractors

- A. The legal relationship between the parties herein is that of an independent contractor and nothing herein shall be construed as creating an employment or agency relationship. CONTRACTOR shall act independently and not as an officer or employee of the SANITATION DISTRICT and, as such, the SANITATION DISTRICT assumes no liability for CONTRACTOR's action and performance nor assumes responsibility for taxes, funds, payments, or other commitments, implied or expressed, by or for CONTRACTOR. CONTRACTOR shall be obligated to pay any and all applicable Federal, State, and local payroll and other taxes incurred as a result of fees hereunder.
- B. CONTRACTOR shall not be entitled to any benefits accorded to those individuals listed on the SANITATION DISTRICT's payroll as regular employees including, without limitation, worker's compensation, disability insurance, vacation, holiday, or sick pay. CONTRACTOR

shall be responsible for providing, at CONTRACTOR's expense, disability, worker's compensation, and other insurance as well as licenses and permits usual or necessary for performing the Work hereunder. CONTRACTOR shall remain ineligible for such benefits or participation in such benefit plans even if a court later determines that the SANITATION DISTRICT misclassified CONTRACTOR for tax purposes.

- C. CONTRACTOR shall not be considered an agent of the SANITATION DISTRICT for any purpose whatsoever nor shall CONTRACTOR have the right to, and shall not, commit the SANITATION DISTRICT to any agreement, contract, or undertaking. In addition, CONTRACTOR shall not use the SANITATION DISTRICT's name in its promotional material or for any advertising or publicity purposes without prior expressed written consent of the SANITATION DISTRICT.
- D. CONTRACTOR hereby indemnifies the SANITATION DISTRICT for any claims, losses, costs, fees, liabilities, damages, and penalties suffered by the SANITATION DISTRICT arising out of CONTRACTOR's breach of this provision.

7.5 Public Records

This Agreement is a public document subject to the California Public Records Act ("PRA") and, as such, may be subject to public review. All documents in connection with the Agreement are subject to disclosure unless a specific exemption in the PRA applies. If CONTRACTOR submits information clearly marked confidential or proprietary, the SANITATION DISTRICT may protect such information and treat it with confidentiality only to the extent permitted by law. Should the SANITATION DISTRICT choose to withhold such information, it will be the responsibility of CONTRACTOR to provide to the SANITATION DISTRICT the specific legal grounds on which the SANITATION DISTRICT can rely in withholding information requested under the PRA. General references to sections of the PRA will not suffice. Rather, CONTRACTOR must provide a specific and detailed legal basis, including applicable case law, that clearly establishes the requested information is exempt from the disclosure requirements of the PRA. If CONTRACTOR does not provide a specific and detailed legal basis for withholding the requested information within a time specified by the SANITATION DISTRICT, the SANITATION DISTRICT will release the information as required by the PRA and CONTRACTOR will hold the SANITATION DISTRICT harmless for the release of this information. CONTRACTOR may timely seek, at CONTRACTOR's sole cost and expense, a protective order or other judicial determination to prevent disclosure of any such information. It will be CONTRACTOR's obligation to defend, at CONTRACTOR's expense, any legal actions or challenges seeking to obtain from the SANITATION DISTRICT any information requested under the PRA withheld by the SANITATION DISTRICT at CONTRACTOR's request. Furthermore, CONTRACTOR shall indemnify the SANITATION DISTRICT and hold it harmless for any claim or liability and defend any action brought against the SANITATION DISTRICT resulting from the SANITATION DISTRICT's refusal to release information requested under the PRA withheld at CONTRACTOR's request. Nothing in this Agreement creates any obligation for the SANITATION DISTRICT to notify CONTRACTOR or obtain CONTRACTOR's approval or consent before releasing information subject to disclosure and not clearly marked confidential or proprietary.

7.6 Governing Law and Jurisdiction

This Agreement shall be governed by and interpreted under the laws of the State of California with venue in Orange County for any claim or action in connection with this Agreement or the performance thereof.

7.7 Precedence of Documents

If an apparent conflict or inconsistency exists between the main body of this Agreement and the exhibits and other incorporated documents, the main body of this Agreement shall control. If a conflict exists between an applicable Federal; State; or local law, rule, regulation, order, or code and this Agreement, the law, rule, regulation, order, or code shall control. Varying degrees of stringency among the main body of this Agreement; the exhibits; other incorporated documents; and laws, rules, regulations, orders, or codes are not deemed conflicts and the most stringent requirement shall control. Each party shall notify the other immediately upon the identification of any apparent conflict or inconsistency concerning this Agreement.

In resolving inconsistencies or ambiguities among two (2) or more documents of this Agreement, the document highest in precedence shall control. The precedence shall be as follows:

- A. Applicable law
- B. This Agreement
- C. Exhibit 6 – Escrow Agreement
- D. Exhibit 7 – General Conditions
- E. Exhibit 8 – General Requirements
- F. Exhibit 4 – Unit Prices
- G. Exhibit 9 – Standard Specifications
- H. Exhibit 10 – Reference Specifications
- I. Exhibit 11 – Reference Plans

7.8 No Waiver

No failure of either the SANITATION DISTRICT or CONTRACTOR to insist upon the strict performance by the other of any covenant, term, or condition of this Agreement nor any failure to exercise any right or remedy consequent upon a breach of any covenant, term, or condition of this Agreement shall constitute a waiver of any such breach of such covenant, term, or condition. No waiver of any breach shall affect or alter this Agreement and each and every covenant, term, and condition hereof shall continue in full force and effect without respect to any existing or subsequent breach.

7.9 Successors in Interest

This Agreement and all rights and obligations created by this Agreement shall be in force and effect whether or not any parties to the Agreement have been succeeded by another entity and all rights and obligations created by this Agreement shall be vested and binding on any party's successor in interest.

7.10 Non-Assignment

CONTRACTOR shall not delegate any duties nor assign any rights under this Agreement without the SANITATION DISTRICT's prior written consent. Any such attempted delegation or assignment shall be null and void.

7.11 Attorney's Fees

If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which it may be entitled.

7.12 Notices

All notices under this Agreement must be in writing. Written notice shall be delivered by personal service; regular U.S. mail; 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 of 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:

The SANITATION DISTRICT:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts Administration

And

Project Manager,
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Donald Cutler

With a Copy To:
Bradley R. Hogin, Esq.
Woodruff, Spradlin & Smart
555 Anton Boulevard, Suite 1200
Costa Mesa, CA 92626

CONTRACTOR:

ABB Inc.
3055 Orchard Drive
San Jose, CA 95134

Attention: Vijay Rengaraju, Business Manager

7.13 Section Headings and Contract Interpretation

All titles, subtitles, and/or section headings appearing herein have been inserted for convenience and shall not be deemed to govern, limit, modify, or in any manner affect the scope, meaning, intent, or construction of any of the terms or provisions hereof. The language of this Agreement shall be construed according to its fair meaning and not strictly for or against the SANITATION DISTRICT or CONTRACTOR. The singular shall include the plural; use of feminine, masculine, or neutral genders shall be deemed to include the genders not used.

7.14 Drafting Ambiguities

The parties agree that they are aware that they have the right to be advised by counsel with respect to the negotiations and terms and conditions of this Agreement. The decision of whether or not to seek advice of counsel with respect to this Agreement is a decision which is the sole responsibility of each party. This Agreement shall not be construed in favor of or against either party by reason of the extent to which each Party participated in the drafting of the Agreement.

7.15 Exhibits Incorporated.

All Exhibits referenced in this Agreement are incorporated into the Agreement by this reference.

7.16 Severability

The unenforceability, invalidity, or illegality of any provision of this Agreement shall not render any other provision of this Agreement unenforceable, invalid, or illegal.

7.17 Agency Powers

Nothing contained in this Agreement shall be construed as a limitation upon the powers of the SANITATION DISTRICT under the laws of the State of California.

7.18 Counterparts

This Agreement may be executed in counterparts all of which when taken together shall constitute a single, signed document as though all parties had executed the same agreement.

7.19 Entire Agreement

This Agreement and the exhibits, documents, and document references incorporated into this Agreement, including the RFQ, Requests for Information, RFP, and CONTRACTOR's SOQs, fully express all understandings of the parties concerning the matters covered in this Agreement. No change, alteration, amendment, or modification of the terms or conditions of this Agreement and no verbal understanding of the parties, their officers, agents, or employees shall be valid unless made in the form of a written change agreed to in writing by both parties. All prior negotiations and agreements are merged into this Agreement.

7.20 Amendments

The Agreement may be supplemented, amended, or modified only by the mutual written agreement of the parties.

[Intentionally left blank. Signatures follow on next page.]

IN WITNESS WHEREOF, the Agreement has been executed in the name of the SANITATION DISTRICT and CONTRACTOR, by their officers thereunto duly authorized, as of the day and year first written above.

ORANGE COUNTY SANITATION DISTRICT

John B. Withers
Board Chairman

Date

Kelly A. Lore
Clerk of the Board

Date

Ruth Zintzun
Purchasing & Contracts Manager

Date

ABB, INC.

Signature

Date

Printed Name & Title

Signature

Date

Printed Name & Title

EXHIBIT 1
List of Lift/Pump Stations

EXHIBIT 1
List of Lift/Pump Stations

Name	Location	Number PLCs	Redundant PLCs (Y/N)	CRISP Workstation (Y/N)	Meets SANITATION DISTRICT Control Standard	Communications Type to Plants
Crystal Cove	Newport Beach	1	N	N	N	MPLS
A Street	Newport Beach	1	Y	Y	Y	MPLS
15th Street	Newport Beach	1	Y	Y	Y	MPLS
Lido	Newport Beach	1	Y	Y	Y	MPLS
Bay Bridge	Newport Beach	1	N	N	N	MPLS
Rocky Point	Newport Beach	1	Y	Y	Y	MPLS
Bitter Point	Newport Beach	1	Y	Y	Y	Direct Fiber
Main Street East	Irvine	1	Y	Y	Y	MPLS
Main Street West	Irvine	1	N	Y	N	MPLS
College Avenue	Costa Mesa	1	Y	Y	Y	MPLS
Yorba Linda	California State University, Fullerton campus	1	N	N	N	MPLS
Seal Beach	Seal Beach	1	N	N	N	MPLS
Slater	Huntington Beach	1	N	N	N	MPLS
Westside	Los Alamitos	1	Y	Y	Y	MPLS
Edinger	Huntington Beach	1	N	N	N	MPLS
MacArthur	Newport Beach	1	N	N	N	MPLS

EXHIBIT 2
Project J-120 Scope of Work

TASK ORDER #1 J-120 SCOPE OF WORK

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PART 1 – SUMMARY

TASK ORDER #1 J-120 shall replace the existing CRISP based HMI solution with CONTRACTOR's new SCADA Platform. CONTRACTOR shall provide products and services to design, develop, test, and deliver all Work for the project described herein. A summary of key Work activities and deliverables is as follows:

- New SCADA System
 - Workstations (Engineering and Operator)
 - Facility Historian
 - System Architecture
 - Replace existing Access Database and interface with SAT tool
 - New M580 or DCS controller programming standards
 - New HMI Standards
 - Application Architecture
 - Modification of Engineering Specifications
 - Hardware Standards Development (for DCS Proposers)
 - Training and Development System
 - Mobile and Commissioning system
 - Maximo Integration
 - Automatically Generated Reports
 - Read-Only SCADA System
 - Enterprise-Level Dashboard Reports
- New graphics
 - All new graphics programmed, installed, tested and commissioned per the new HMI graphics standards.
- All licensing as described in 17440
- All training as described in 01820

In addition to this, provide line item pricing for the following optional item:

- Replacement of the Enterprise Historians.

Unless otherwise stated, all of the Work described herein applies to the following systems and locations at the SANITATION DISTRICT:

- Plant 1 Process SCADA System
- Plant 1 Electrical SCADA System

- Plant 1 Central Generation System
- Plant 2 Process SCADA System
- Plant 2 Electrical SCADA System
- Plant 2 Central Generation System
- Collections System
- Plant 1 Load Shedding System
- Plant 2 Load Shedding System

PART 2 – GENERAL PROJECT DESCRIPTION, REQUIREMENTS

2.1 GENERAL PROJECT DESCRIPTION

TASK ORDER #1 J-120 is an enterprise-wide SCADA upgrade where SANITATION DISTRICT endeavors to install a single SCADA platform to replace the existing obsolete CRISP SCADA platform currently used for Plant 1 and Plant 2 process, pump stations, and P1 electrical and the existing Wonderware SCADA platforms currently in use for Plant 1 and Plant 2 Cen Gen. It is SANITATION DISTRICT’s goal to have a uniform SCADA platform provided by a single CONTRACTOR. CONTRACTOR shall complete the TASK ORDER #1 J-120 Work indicated herein and all associated attachments. In addition, TASK ORDER #1 J-120 will provide PLC/controller hardware and the associated remote I/O for development and testing.

The Work provided by the CONTRACTOR shall include the completed field verification, design, engineering, development and testing of HMI and PLC/Controller standards, fabrication, systems integration, bench testing, procurement, construction, installation, commissioning, documentation, management, ancillary services, training, warranty, maintenance and upgrades (during TASK ORDER #1 J-120 and prior to final acceptance), and any other services and equipment necessary to create and install a fully functional, feature-rich, SCADA Platform that meets the requirements of the CONTRACTOR’s proposal. The specific use of devices, equipment, software and services necessary for successful completion of the Work shall be determined by the CONTRACTOR as part of the Work and reviewed and approved by the SANITATION DISTRICT.

Unless specifically excluded by the Work statements, the inclusion of or failure to include any particular device, equipment, service, or software in the Work statement shall not relieve the CONTRACTOR of the obligation to design and provide a sound, operable, functional, and complete SCADA Platform.

2.2 REQUIREMENTS

The CONTRACTOR shall furnish all labor, materials, equipment, transportation, tools, and consumables, as well as provide all needed engineering services to accomplish the functional, performance and technical requirements of these Task Order Documents including, but not limited to, project management, engineering/design, procurement services, project scheduling and project controls, coordination with and assistance to the SANITATION DISTRICT regarding work performed by others (PLC programming by PCI or control room upgrades by a different CONTRACTOR), construction services, startup and testing services, equipment delivery, documentation services, and

ongoing management and support services.

Unit Prices shall be the basis of all pricing for the Work. However, for TASK ORDER #1 J-120 (type 2 task order per the Agreement) the price total from this buildup shall revert to a Lump Sum price for ALL Work required in the Task Order Documents. The CONTRACTOR hereby agrees to complete the Work within the required time frame, and to accept in full payment for all services, equipment, materials, licenses and Work therefore, per said Lump Sum price.

TASK ORDER #1 J-120 pricing shall include the following *optional* items:

- Replacement of the existing Wonderware enterprise historian

2.3 COORDINATION WITH OTHER PROJECTS

The following projects may impact or require coordination with this project:

- J-117B – Outfall Low Flow Pump Station & Plant 2 SCADA system network and Upgrades
 - Project Description: This project will rehabilitate the mechanical, electrical, and civil systems at the Ocean Outfall Booster Station at Plant 2 which is the primary pumping station for the discharge of secondary effluent to the ocean outfall system. This project also includes replacement of portions of the Ocean Outfall Booster Station pumping systems with a low flow pump station to more efficiently pump dry weather flow and provide several major electrical upgrades at Plant No. 2. In addition, this project will replace the plant water pump station to accommodate the GWRS Final Expansion.
Project P2-107 is the part of the same construction contract. It will replace the existing fiber optic network with a series of looped fiber networks and network switches, creating an industrial control system that increases the reliability of this critical system. This project will also provide two new server rooms in existing buildings that will contain core switches and other equipment for the process and IT networks.
- J-124 Digester Gas Facilities Rehabilitation
 - This project will rehabilitate the low and high pressure digester gas facilities at Plant Nos. 1 and 2 to meet current and future OCSD needs such as Air Quality Management District and National Fire Protection Association regulations, and future projected gas production. The Project includes rehabilitation of the existing gas compressor building at Plant 1 and replacement of all compressors and flares. The Plant 2 work includes construction of the new gas compressor building, new flares and replacement of existing gas compressors.
- P1-105 Headworks Rehabilitation at Plant 1
 - This project will rehabilitate and upgrade facilities at the Plant 1 Headworks. Facilities to be rehabilitated include the Metering and Diversion Structure, the Bar Screen Building, the Bin Loading Building, the Main Sewage Pump Station, the Grit Basins, the Primary Influent channels, the Headworks Odor Control Scrubbers, and

electrical power distribution and control systems. The project will also include demolition of the original Headworks No. 1 facilities and the unused Chlorine Building pumps.

- P2-122 Headworks Modification at Plant 2 for GWRS Expansion
 - This project will modify the Headworks, related piping, and sidestream flow routing to separate reclaimable and non-reclaimable flows to accommodate the Orange County Water District's Groundwater Replenishment System Final Expansion. Work elements include splitting of an existing PLC into two PLC's, modification of graphics and addition of two new RIO panels.
- P2-128 TPAD Digester Facility at Plant 2
 - This project is the largest of a set of related projects to replace the mesophilic anaerobic digesters at Plant 2 with new digesters in a temperature-phased anaerobic digester (TPAD) configuration. This project will include six new thermophilic digesters, batch tanks, cooling facilities, and associated sludge pumping, digester mixing, power distribution, and controls. Replacement and demolition of existing digesters will be included in a separate project.
- FE-XXX Plant 1 and Plant 2 Control Room Upgrades
 - This project will upgrade the control room facilities at Plant 1 and Plant 2 with new flooring, lighting and operator workstation consoles. Additional consoles for workstations may also be provided in other key areas.

The CONTRACTOR shall furnish and install a complete and fully functional SCADA system that is integrated with existing facilities and coordinated with other construction projects that have a SCADA system component. In many cases, coordination will only affect the sequencing of graphics development and commissioning sequence. The CONTRACTOR shall review reports, plans and specifications to identify potential conflicts with the following adjacent projects and participate in the number of meetings indicated in the following table:

Project	Number of Meetings
FE-XXX	2 meetings @ 2 hrs.
J-117B	2 meetings @ 2 hrs.
J-124	2 meetings @ 2 hrs.
P1-105	2 meetings @ 2 hrs.
P2-128	4 meetings @2 hrs.

The Project Manager is the only required attendee for all of the project coordination meetings.

PART 3 – PROJECT SCHEDULE

The table below lists the time frames associated with each major project deliverable and SANITATION DISTRICT’s review and approval of those deliverables. CONTRACTOR shall comply with the deadlines indicated in the table.

The ENGINEER will issue a Notice to Proceed (NTP) that will authorize CONTRACTOR to begin preparation of the Project Management Plan (PMP) specified in Section 4.1.2, Project Management.

CONTRACTOR shall include scheduled milestones and activities required to be performed by the SANITATION DISTRICT in their CPM schedule. SANITATION DISTRICT concurrent engineering activities shall be limited to no more than two unless approved by the SDMT. See Specification Section 01300 for the requirement.

Proposed Work Sequence and schedule:

Milestone ID	Description	Processor Milestone & Duration	Note/Comments
A	Task Order Notice to Proceed	NTP	
B	Mobilization and PMP	NTP +60 days	
C	Engineering Complete (all enterprise submittals)	NTP + 360 days	
D	Plant 1 (Programming, Testing, Commissioning, and Installation)	C + 400 days	
E	Plant 2 (Programming, Testing, Commissioning, and Installation)	D + 400 Days	
F	Collection System (Programming, Testing, Commissioning, and Installation)	E + 200 Days	
G	Final Completion and Commencement of Warranty	D, E & F + 90 days	
H	End of Warranty	E, F, & G + 1 year	

PART 4 – PROJECT EXECUTION

4.1 PROJECT ENGINEERING SERVICES

4.1.1 Mobilization

The SANITATION DISTRICT shall provide a Staging Area (location shall be provided by the

SANITATION DISTRICT) for the CONTRACTOR's staff. See Mobilization Specification Section 01505 for more information and for the requirement.

4.1.2 Project Management

CONTRACTOR shall prepare a Project Management Plan (PMP) prior to beginning technical work on the project. The purpose of the PMP is to ensure that the work is properly planned so that:

- The resources are efficiently used to complete the project scope and accomplish the project objectives.
- The Work is planned to meet the specified schedule while providing appropriate opportunities for SANITATION DISTRICT input and sufficient time to phase the startup and commissioning.
- Quality control and quality assurance measures are planned and implemented to meet SANITATION DISTRICT's expectations.

The PMP shall focus on project-specific information and be as concise as possible to document the required information. Where CONTRACTOR has a standard procedure for some activity, that procedure shall be referenced, and not repeated in detail. See Exhibit 1 for a sample Project Management Plan.

A. Project Management Progress Meetings

CONTRACTOR shall prepare an agenda and conduct monthly project management meetings with SANITATION DISTRICT's Project Manager and the CONTRACTOR's Project Manager throughout the duration of the Engineering Services work. The purpose of the meetings will be to review CONTRACTOR's Progress Report. Meetings should be arranged so that the most recent Progress Report is available for the meeting. Other meetings shall be scheduled on an as-needed basis.

B. Project Schedule

See Section 01300 Contractors Construction Schedule and Reports

C. Project Logs

CONTRACTOR shall produce and maintain on at least a monthly basis the following logs through the course of the project:

Project Decision Log. The project decision log shall track decisions made during workshops and meetings, and as a result of SANITATION DISTRICT's review of deliverables. The log shall include the date of the decision, the title of the meeting where it was made (if applicable), a description of the decision, and a brief summary of the impacts. A separate decision log is required for development of the standards and is described in more detail in that section.

Action Item Log. The action item log is used to track action items generated during meetings. Action items may only be assigned to members of the SANITATION DISTRICT or CONTRACTOR teams. If action is required by a different party, the action item shall be assigned to the person on the team to track who will track the action item with that person. The action item log is not intended to include normal CONTRACTOR tasks, nor to include

comments on deliverables. The Action Item log shall include a tracking number (typically coded to the date), a date it was created, a description of the action required, the lead person, and the date it was resolved. If action is required by more than one person, the person who will be asked to coordinate that action shall be listed.

Issues Log. The Issues log shall list general comments and concerns raised by CONTRACTOR or SANITATION DISTRICT staff during the project. This log is not intended to track SANITATION DISTRICT comments on submittals. The log shall include a very short description of how the issue will be addressed. The Issues log shall be reviewed monthly to confirm that the issue has been appropriately addressed.

Meeting Log. See Section 4.1.5 Workshops and Meetings.

Risk Management Log. See 4.1.3 Risk Management, Risk Mitigation Measure Log
CONTRACTOR shall be responsible for managing CONTRACTOR's project execution, schedule, budget, subcontractors, and coordination with other projects. The following project management requirements apply to the entirety of Part 4 – Project Execution.

4.1.3 Risk Management

CONTRACTOR staff shall develop a project-specific Risk Management Plan (RMP) in coordination with SANITATION DISTRICT staff and update the plan at key points in the project. CONTRACTOR shall assist the SANITATION DISTRICT in managing risks per the tasks described below. The RMP is intended to cover the risks during the entire project execution phase.

CONTRACTOR staff shall prepare and manage the RMP documents. CONTRACTOR's responsibilities for preparing the RMP consist of leading the risk workshops, maintaining a log of risk mitigation measures, and providing risk updates in monthly progress reports. See Exhibit 2, Risk Management Plan for a sample Risk Mitigation Plan.

A. Initial Risk Workshop

An Initial Risk Management Workshop will be held shortly after the beginning of the Enterprise Submittal effort. Attendees will include SANITATION DISTRICT's project team. CONTRACTOR's Project Manager and Project Engineer shall prepare for and leading the workshop. The purpose of the workshop will be to initially identify the key project-specific risks and discuss which risks warrant additional attention as the project progresses. CONTRACTOR shall prepare the minutes for this Workshop.

B. SCADA Graphics Risk Management Workshop

A SCADA Graphics Risk Management Workshop shall be held at least 4 weeks prior to submittal of the first Draft Area Graphics Submittal. The Workshop will be utilized to:

- Identify key project-specific risks
- Characterize the nature of the impact of each risk should it occur
- Characterize how likely the risk is to occur
- Timeline of adjacent projects that are in graphics development and potential schedule

impacts and conflicts.

- Identify potential mitigation strategies that should be implemented or be ready to be implemented to address each risk.

The Workshop shall be planned and scheduled for a duration of 3 hours and will be held at SANITATION DISTRICT's offices. CONTRACTOR shall prepare the agenda, all appropriate presentation materials, and minutes for the Workshop. The minutes shall include sufficient information for SANITATION DISTRICT to populate the project risk register to be included in the RMP.

C. Risk Mitigation Measure Log

Following CONTRACTOR's completion of the RMP, CONTRACTOR shall prepare a log of all the mitigation measures recommended in the plan to be implemented. The log is likely to include measures to be taken during the Engineering and Commissioning phases. The log is not intended to track mitigation measures that would be implemented only if and when a particular risk occurs. The risk mitigation measure log may be kept in the same worksheet (with dedicated columns) as the risk management log.

The log shall include the following information for each recommended mitigation measure:

- A brief description of the mitigation measure and the risk it is intended to address.
- A description of who has the lead to implement the measure.
- What components of the project design or execution would need to incorporate or address the measure.
- The time frame for completing the measure.
- A brief summary of the status of the measure, to be used in on-going updates.

The Risk Mitigation Measure Log will be used for on-going risk management and as a basis of reviewing CONTRACTOR submittals.

D. Risk Monitoring Updates

Prior to monthly Project Management Meetings, CONTRACTOR shall review the RMP and update the Risk Mitigation Measure Log. The monthly Progress Report shall include a discussion of the following risk issues:

- Identification of all risks included in the RMP that have occurred since the last monthly report
- Identification of all risks included in the RMP that have been resolved or are no longer a risk
- Identification of new risks that have occurred or been identified since the last progress report.

- An update of the Risk Mitigation Measure Log reflecting the status of each recommended mitigation measure.

The risk discussion in the monthly progress report shall be included in the agenda of the monthly project management progress meeting.

4.1.4 Quality Control

The following Quality Control requirements apply to the entire Project Execution phase. The CONTRACTOR shall budget the below Quality control activities during Project Execution as a part of the overall TASK ORDER #1 J-120 budget.

Submittals that contain gross deficiencies or errors requiring a significant amount of SANITATION DISTRICT staff time for checking will be rejected and will require a resubmittal. Such submittals may not be reviewed in their entirety. CONTRACTOR shall resubmit until their review, checking and correction for coherence, consistency, spelling, etc. has been performed.

A. Quality Control Requirements

The CONTRACTOR shall develop a Quality Assurance/Quality Control (QA/QC) Plan for implementation of the Scope of Work. The CONTRACTOR's QA/QC Plan shall be reviewed and approved by the ENGINEER and shall include or reference all the controls necessary for implementation. As a minimum, the QA/QC Plan shall include the following:

- Purpose and objective
- QA/QC Team – Roles and Responsibilities
- Independent Quality Control (IQC) Team – Roles and Responsibilities
- The In-house Quality Process
- QC coordination with SANITATION DISTRICT
- QC process for each type of submittal (drawings, standards, manual, graphics, programming, etc.)

QA/QC documentation shall include, but not be limited to, the following:

- IQC Comment Log
- Drawing IQC Checklists
- QC Validation Forms

On a periodic basis, SANITATION DISTRICT will conduct an audit of CONTRACTOR's work to ensure conformance with the QA/QC Plan. SANITATION DISTRICT shall notify CONTRACTOR when these audits will occur. For this project, an audit will be done before the first Area Graphics Submittal and after the ORT Test. In addition, the SANITATION DISTRICT reserves the right to conduct additional QA/QC Plan audits if necessary. CONTRACTOR shall respond to any SANITATION DISTRICT comments made during the audit within two weeks. If comments are extensive, SANITATION DISTRICT will schedule a follow-up audit approximately 60 days after the comments are received.

SANITATION DISTRICT may also make periodic visits to the CONTRACTOR's offices to review the progress of the technical work. These visits may include talking to CONTRACTOR's personnel, reviewing drawings, and documents (both hardcopy and electronic), reviewing software (graphic screens, controller logic, etc.).

A sample QA/QC Plan is included in Exhibit 1 which is a part of the project management plan. Major elements of the QA/QC Plan shall include the following:

- CONTRACTOR shall be responsible for the technical adequacy and quality control of his work.
- CONTRACTOR controls shall assure that planning and design inputs (such as decision logs) are correctly translated into planning and design documents such as static graphic screens, PLC/Controller programming templates and other work products.
- CONTRACTOR shall be responsible for the physical control, security, and distribution of controlled documents required for performance of the Scope of Work.
- CONTRACTOR's planning and design activities shall be controlled through the review workshop process, including discipline checks, coordination with other CIP Project work, and review workshops by an Independent Project Review Team.

Prior to the submittal to SANITATION DISTRICT, each Submittal identified in the Scope of Work shall be thoroughly reviewed and corrected by a member of the QC Team. The reviewer shall attest to their review in the form of a written affidavit outlining the submittal subject and identifying the corrected deficiencies.

Documentation that all reviews were performed and all comments resolved, incorporated and back checked will be recorded on a QA Validation Form and submitted to SANITATION DISTRICT for acceptance when the Design Submittal is delivered.

All submittals shall be accompanied by a transmittal letter signed by CONTRACTOR's principal-in-charge or Project Manager, if appropriate, indicating that the submitted documents have been checked, and identifying the reviewer's name. Signatures of the respective checkers shall be included where appropriate. All submittals shall be checked with a goal of insuring accuracy and consistency.

4.1.5 Workshops and Meetings

TASK ORDER #1 J-120 will have three different classes of meetings, each described in detail below. This section includes a partial list of the meetings that will be required to execute the work of this Task Order. Other required meetings are listed in other sections of this document and in the Specification Sections. It is expected that the CONTRACTOR engages with the ENGINEER and with SANITATION DISTRICT staff in a sufficient number of workshops and meetings to obtain consensus on major decisions and to produce the work required by this task order regardless of whether those workshops and meetings are listed here. CONTRACTOR to assume the length of each specified Workshop to be two hours and each specified meeting to be one hour. **WORKSHOPS ARE SOLELY INTENDED TO REPRESENT THE MINIMUM AMOUNT OF**

TIME THAT THE CONTRACTOR IS REQUIRED TO SPEND IN COLLABORATION WITH THE SANITATION DISTRICT. IT DOES NOT INCLUDE TIME SPENT BY THE CONTRACTOR ON THE DESIGN, DEVELOPMENT, EXECUTION, TESTING OR COMMISSIONING OF ANY DELIVERABLE.

A. Workshops

Workshops involve the entire SANITATION DISTRICT team and are used to make key decisions or review a deliverable. Workshops are also used to present, review, and provide comments on deliverable. The following table below is a partial listing of workshops that are required to execute the scope of work of this Project:

Submittal	Number of Workshops	Notes
Project Kick-Off Meeting	1	
Plants 1&2 Control Rooms	2	
Plants 1&2 Control Room Design (4.2.1.A.1A)	7	To include a one hour kickoff meeting, 6 workshop (one hour each) and four hours of site visits (2 hours per plant)
Enterprise Historian	6	See Note 1
System Architecture	10	See Note 1
Cybersecurity	4	
Training on existing standards	5	See Note 1, Note 2
PLC or Controller Programming Standards	50	See Note 1
HMI Standards Development	40	See Note 1
Application Architecture	2	See Note 1
Specification Section Modifications	4	See Note 1
Hardware Standards Development	4	See Note 1
Training and Development System	1	
Mobile and Commissioning System	1	
Maximo Integration	2	See Note 1
Automatically Generated Reports (including MSO's and dashboard reports)	10	See Note 1
MES Report	4	
Read-Only SCADA System	1	See Note 1
Truck Loading System	2	
Pilot PLC/Controller	8	See Note 1
Area Graphics Submittals	50	See Note 1

Note 1: CONTRACTOR's Integration Specialist required to attend

Note 2: 5 day-long training sessions led by SANITATION DISTRICT staff (minimum of 40 hours). Must include all technical personnel working on the project

B. Technical Progress Meetings

Technical progress meetings typically occur on a more-or-less regular basis and include a variety of topics on the agenda. The agenda for these meetings is determined based on whatever

issues require SANITATION DISTRICT input at the time. CONTRACTOR to assume that there will be a minimum of two Technical Progress Meetings per month for the duration of the project.

C. Focused Meetings

Focused meetings are intended to address a particular topic or discipline, and usually do not include the full project team. Focused Meeting may also be used to review interim or informal submittals. CONTRACTOR to assume that there will be a minimum of one Focused meeting (involving either the integration specialist, the project engineer or both) per week for the duration of the project. The SANITATION DISTRICT requires that the following work be performed at the SANITATION DISTRICT facilities:

- Programming Standards
- Workshops and meetings for the Enterprise and Area Graphics Submittals.
- CONTRACTOR presence is required as specified in EXHIBIT 9 for the following items:
 - Control Room Conceptual Design
 - Enterprise Historian
 - Active Directory (AD) Study
 - Cybersecurity
 - MSO/Automatic Report Generation
 - MES upgrades
- Testing and commissioning

D. Workshop and Meeting Planning

Due to limited SANITATION DISTRICT staff availability, some meetings may need to be scheduled up to two weeks in advance to find a time when all the required SANITATION DISTRICT team members are available. The CONTRACTOR's Project Manager shall create and maintain a log of all anticipated meetings. The log shall also be used to track submission, review and finalization of agendas and minutes.

The log shall include, as a minimum, the following information for each meeting:

- Subject of meeting. If the meeting is specifically included in the scope, use that title. Provide enough of a description that no two meetings have the same exact subject description.
- Scheduling Reference. Examples might include "4 weeks after Kickoff Meeting" or "Upon submittal of Area Graphic 11".
- Date. If the meeting is too far in the future to schedule, indicate that this date is tentative.
- Date Minutes Drafted. This should be the date that the draft minutes were transmitted to SANITATION DISTRICT.
- Date Minutes Reviewed. This should be the date that SANITATION DISTRICT transmitted its comments on the minutes or indicated that there were no comments on the minutes.

E. Workshop and Meeting Agendas

CONTRACTOR shall submit an agenda to SANITATION DISTRICT for review at least one week prior to each meeting and workshop. The agenda shall include the following:

- Topics: A listing of each topic to be covered with sufficient detail so that SANITATION DISTRICT attendees can reasonably determine if their participation is needed or not. A one-line description is not typically sufficient for the purpose. The topic description shall include what information will be presented, and what decisions will be needed.
- Timing: The proposed timing of each topic on the agenda including the projected start and stop time for the subject. The purpose of this item is to allow SANITATION DISTRICT staff who cannot attend the entire meeting to attend the portions where they are needed.
- Attendees. The agenda shall include both SANITATION DISTRICT and CONTRACTOR team members. The SANITATION DISTRICT Project Manager will add the SANITATION DISTRICT staff attendees to the agenda prepared by the CONTRACTOR, based on the CONTRACTOR's Agenda and the CONTRACTOR's recommendation of which SANITATION DISTRICT staff members should attend.
- Meeting time and place. The CONTRACTOR shall work with the SANITATION DISTRICT PM to set the meeting date and time. Fifty percent of the meetings will be held at SANITATION DISTRICT offices while the other fifty percent may happen via a conference call. The SANITATION DISTRICT PM will reserve the conference room.
- A preliminary list of material to be provided at the meeting.

Materials to be used or referenced by the meeting attendees to prepare for the meeting shall be sent with the meeting agenda.

The CONTRACTOR shall provide the following at the meeting:

- Hard copies of the agenda, one for each attendee
- One sign-in sheet with the names of attendees pre-listed.
- Native electronic files used for the presentation. With the exceptions noted below, hard copies of presentation materials will generally not be required. The SANITATION DISTRICT Project Manager will make the electronic files available to the SANITATION DISTRICT project team internally.
- Hardcopies of all materials that cannot be easily viewed when projected on a screen. Examples might include design drawings and spreadsheets.

F. Meeting Minutes

CONTRACTOR shall transmit the minutes to the SANITATION DISTRICT Project Manager within 3 business days of the meeting in MS Word format using SANITATION DISTRICT 's template, or an approved substitution. CONTRACTOR shall also update and transmit the Action Item Log, Decision Log, and Design Issues Log with the minutes.

The SANITATION DISTRICT Project Manager will distribute the minutes for internal review. If

there are no SANITATION DISTRICT comments on the minutes within 5 business days, they will be considered final. If there are comments, the SANITATION DISTRICT Project Manager will incorporate all appropriate SANITATION DISTRICT comments in the MS Word file with changes tracked. The updated MS Word file will be transmitted back to CONTRACTOR. If CONTRACTOR has no comments on the SANITATION DISTRICT edits, the minutes will be considered final. If CONTRACTOR has further comments on the SANITATION DISTRICT edits, those comments should be discussed with the SANITATION DISTRICT Project Manager.

G. Informal Meeting Requirements

Informal meetings such as office meetings shall be recorded as follows:

- CONTRACTOR shall notify the SANITATION DISTRICT Project Manager/ Project Engineer prior to the meeting.
- CONTRACTOR shall prepare minutes for the meeting.
- The minutes shall be submitted to the SANITATION DISTRICT Project Manager/Project Engineer.
- After review and modification, the minutes will be filed as a formal record of the meeting.
- Meetings that do not follow this procedure will not be recognized as having occurred.

CONTRACTOR shall prepare for all telephone and teleconferencing meetings in the same manner as outlined above.

A copy of all comments on project issues obtained by CONTRACTOR from SANITATION DISTRICT staff without direct SANITATION DISTRICT Engineering Project Manager's involvement shall be submitted for the Project Manager's approval within three business days of receipt.

4.2 CONFIGURATION, PROGRAMMING AND COMMISSIONING PRODUCTS AND SERVICES

4.2.1 Engineering Services

CONTRACTOR shall provide products and services which fulfill the requirements of the Work explicitly required by the Contract Documents (inclusive of this Task Order) and all work compelled or implied by the engineering submittals described herein; including but not limited to the Enterprise Submittals, the Area Graphics Submittals and submittals associated with the Contract Specifications. The list below is not a comprehensive list of submittals required for TASK ORDER #1 J-120. Additional submittals are required as detailed in the attached Contract Specification Sections.

ALL WORK INCLUDED AS PART OF AN APPROVED SUBMITTAL SHALL BE SUBSEQUENTLY IMPLEMENTED, TESTED AND COMMISSIONED IN ACCORDANCE WITH THE SUBMITTAL AND ALL REFERENCE DOCUMENTATION THAT IS INCLUDED IN THE AGREEMENT.

The activities covered by these submittals shall include all phases of the work from planning and design to installation testing and commissioning. All items listed as a part of the enterprise

submittals shall be provided by the CONTRACTOR to the SANITATION DISTRICT.

The CONTRACTOR shall perform all work implied by the submittals listed herein. The SANITATION DISTRICT will provide the following for installation:

- Network cabling from workstations and servers.
- Available power and grounding for all equipment.
- Adequate ports in network resources.

In addition to the workshops specified in 4.1.6, the CONTRACTOR shall facilitate all additional workshops necessary to gather information, reach consensus and deliver submittals in accordance with the milestones contained herein.

The engineering submittals shall be logically grouped together in the following hierarchy (submittals in bold below):

A. Enterprise Submittals

1. Plants 1&2 Control Room & Workstation Submittals

The CONTRACTOR shall include the following elements in this submittal:

- a. Workstation specification for each individual workstation type (Operator workstation, Servers, Historian, Engineering workstation)
- b. List of required equipment
- c. Power and grounding requirements
- d. Network requirements
- e. Commercial off-the-shelf software and CONTRACTOR software configuration
- f. Workstation configuration to support large screen monitors (workstation cut sheet and specification)
- g. Field and mobile workstation types and quantities
- h. Field-situated operator workstation cut sheets or specifications
- i. CONTRACTOR shall provide a total of 60 thick client Operator Workstations for the following areas:
 - Plant 1:
 - Control Center (2)
 - Central Generation (1)
 - Blower Building 2 (1)
 - Gas Compressors (1)
 - Power Building 8 (1)
 - Power Building 6 (1)
 - Power Building 3A (1)

- Plant 2:

- Control Center (2)
- Central Generation (1)
- DCH (1)
- Tricking Filters Lab (1)
- Gas Compressors (1)
- OOBs (1)
- EPSA (1)
- West RAS/PEPS (1)
- Pump Stations:
 - One thick client Operator Workstation at each facility (total of 15)
- Electrical buildings Plant 1 (15)
- Electrical buildings Plant 2 (13)
- j. CONTRACTOR shall provide a total of 50 thin client Operator Workstations between Plant 1 & Plant 2.
- k. CONTRACTOR shall provide a total of 13 thick client Engineering Workstations.
- l. CONTRACTOR shall provide a total of 10 thin client Engineering Workstations.
- m. CONTRACTOR shall work with the SANITATION district to update the 17425 Specification as required to suit the platform.
- n. For details on base workstation requirements, refer to Section 17425, SCADA Workstations

1A. Control Room Conceptual Design

The CONTRACTOR shall provide design services to replace the HMI consoles and displays located within the Control Center at Plant Nos. 1 and 2. Assume the following level of effort:

- a. Plant No. 1 Control Center
 - 1) Two alternative locations will be evaluated: 1) replacement of equipment in the existing control room, and 2) building out a new control room in a nearby conference room within the Control Center.
 - 2) There are other systems separate from the HMI that will need to be relocated:
 - a) Remote access to entry gates
 - b) IP phones
 - c) Industrial cordless phone system
 - d) Gate controls
 - e) Fire alarm system annunciator
 - f) Plant/OC Regional emergency radio system
 - g) Building door controls
 - h) Tsunami/Weather station alarm system
 - i) Emergency PA siren controls

- j) Admin/HR panic button audible alarm and strobe
- b. Plant No. 2 Control Center
 - 1) Two alternative locations will be evaluated: 1) replacement of equipment in the existing control room, and 2) building out a new control room in a nearby conference room within the Control Center.
 - 2) There are other systems separate from the HMI that will need to be relocated:
 - a) IP phones
 - b) Industrial cordless phone system
 - c) Gate controls
 - d) Fire alarm system annunciator
 - e) Plant/OC Regional emergency radio system
 - f) Building door controls
 - g) MIDLAND Public Alert All Hazards Alert Radio
 - h) Plant 2 MRT Radio Alert switch
 - i) Tsunami/Weather station alarm system
 - j) Emergency PA siren controls
- c. Refer to to Exhibit 9 – (Standard Control Room Design Study) for additional required scope for this item
- d. Both control room configuration will need to consider the following:
 - 1) The control room will need to be secured with lockable doors with card key access.
 - 2) Plant control will be monitored 24 hours/day, 365 days/year.
- e. The CONTRACTOR shall be responsible for producing both a draft conceptual design memo and a final conceptual design memo.
 - a) The conceptual design memo shall include the following items:
 - Proposed configuration of consoles, desks, displays, etc.
 - Proposed room improvements, which may include but is not limited to, elevated flooring, window treatment, partition walls, HVAC modifications, etc.
 - Proposed quantity and type of hardware and furnishings
 - Proposed connection points which include the following:
 - New electrical service connection
 - New ICS and IT connections
 - Summarize key constructability and construction sequencing constraints and plans.
 - Develop system architecture configuration of the components
 - Preliminary construction schedule
 - Draft drawings to include:
 - Control Room Renderings:
 - Isometric drawing of final control room space
 - Scalable plan view of control room space, showing critical dimensions

- Proposed points of connection with electrical, ICS, and IT networks
- AACE International Class 3 cost estimate per OC San's Engineering Design Guidelines, Chapter 01. Data used to prepare the cost estimate shall be furniture, fixtures & equipment (FF&E) only.

2. Enterprise Historian

The CONTRACTOR shall include the following elements in this submittal:

- a. Review of the existing Wonderware facility and Enterprise historian system and architecture
- b. Detailed review of replacing the enterprise Historian and how it will impact the following:
 - 1) The SCADA database
 - 2) The SAT application
 - 3) MSO's and other automatically generated reports
 - 4) Other enterprise users
- c. Complete design of the new ABB Enterprise Historian system including the following:
 - 1) Specification of server requirements
 - 2) System architecture design
 - 3) Integration with MOM application for MSO reports and augmented field procedures
 - 4) Integration with LIMS system
- d. The Contractor shall provide the following:
 - 1) Licenses for up to 50 users on the Enterprise historian
 - 2) Licenses for 150,000 tags
 - 3) Method for obtaining Enterprise historian data via SQL query or directly via an API
 - 4) Trend client and query client applications on enterprise machines including an Excel plug-in and SQL.
 - 5) Full redundancy with automatic failover
 - 6) Interface with the existing LIMS system for historization of LIMS data (The SANITATION DISTRICT LIMS system is not currently being historized by the SCADA historian)
 - 7) Fully licensed for any mix of up to 150,000 analog and discrete points at all of the SANITATION DISTRICT sites. See section 17440 for more details.
 - 8) Import of all of the existing Enterprise historian data into the new Historian
 - 9) Interface with a software/hardware package for electronic operator round sheets for historization of operator round sheet data.

- 10) For more information about the existing Enterprise Historian refer to the Historian spec and the accompanying architecture diagrams. For a listing of the existing Enterprise Historian tags, see Appendix 1-L Existing Historian Tags.
- 11) Tools for data analysis
- 12) Refer to Exhibit 9 – (Option 1: Enterprise Historian) for additional required scope for this item

3. System Architecture

In addition to design, furnish, install and commissioning, this work includes complete, construction ready drawings for all components:

- a. All servers required to deliver a complete SCADA system including application, historian and engineering servers required for the programming and integration of pilot and all future controller hardware.
 - 1) DCS CONTRACTORS shall develop any typical network diagrams specific to the proposed controller including the RIO network.
 - 2) All servers shall be provided and designed as redundant/hot standby pairs.
 - 3) System shall be architected such that there is a means to update and import changes to graphics or areas without impacting other areas or systems while maintaining full redundancy.
- b. All components shall be sized for the expansion required in Section 17440, Performance, Growth and Licensing. Facility Historians and Enterprise Historians shall be configured to capture all of the data that the Wonderware and CRISP Historians presently capture at a one second interval. Additionally, the CONTRACTOR Facility Historian shall import all of the existing Wonderware and CRISP Historian Data, which is over 20 years of data. For a list of the existing points historized on the system, see Appendix 1-L.
 - 1) All Facility Historian servers shall be provided and designed as redundant/hot standby pairs.
- c. All software components shall be licensed per section 17440, Performance Growth and Licensing.
- d. All other peripherals required to create a fully functioning SCADA Platform using CONTRACTOR’s solution..
- e. CONTRACTOR’s systems are required to utilize the SANITATION DISTRICT’s ICS network. SANITATION DISTRICT shall provide all hardware, copper and fiber optic cabling required to connect CONTRACTOR’s complete SCADA Platform.
 - 1) Include all specific CONTRACTOR network requirements such as network equipment, additional fiber optic cabling and VLAN configuration.
- f. SCADA Platform shall be designed such that SANITATION DISTRICT staff are provided with the ability to see and control ‘islanded’ local PLC’s or controllers for all pump station operator workstations and the thick client operator workstations as specified in Section 17425, SCADA Workstations.
- g. All hardware required to provide for communications between the plants and pump

stations such that thick client operator workstations meet the requirements of Section 17425, SCADA workstations.

- h. Provide an enterprise network block diagram showing interconnection between the Plant 1, Plant 2, and Collections systems. This includes the Electrical systems, CenGen and load shedding facilities.
- i. Provide individual network block diagrams for Plant 1, Plant 2 and the Collections System.
- j. Define user profiles and privileges on the platform. From user login function to user privileges, right mouse click displays and access rights. CONTRACTOR shall review, modify, and build upon the existing security infrastructure, rights and privileges.
- k. Provide an interface and integration with the SEL load shedding system
- l. Provide interface and standard for displaying Maximo data and creating and editing work orders in the SCADA system
- m. Import existing Wonderware historical data in stages and to coordinate it with commissioning of individual process areas.
- n. Configure existing thin clients connected in the field to the ICS network with the ability to access virtual operator workstations.
- o. Integrate all components with the existing SANITATION DISTRICT ICS network
- p. Design, configure, test and commission all required Proxy servers for communications between the Industrial DMZ and servers on the ICS network. This will include Proxies for the following:
 - 1) Maximo Integration
 - 2) Historian (Enterprise and Facility)
 - 3) Read-Only SCADA System
 - 4) Alarm and Event List Reporting
 - 5) Support for HTML applications to replace the 'Process' website as described herein.
 - 6) Other Proxies required by SANITATION DISTRICT policy prohibiting direct communication between the ICS and the Industrial DMZ but not listed here.
 - 7) Provide a tool that is fully licensed for alarm statistics, alarm reports and root cause analysis.
 - 8) Capability to text alarm notifications based upon priority
 - 9) Scalable graphics which can be viewed from tablets or other handheld devices
 - 10) Fully licensed process simulation capabilities such that PLCs or controllers can be fully tested in a bench top setting

3A Active Directory (AD) Study

- a. Establish a team comprised of OC San PCI, IT Personnel along with ABB System and Domain Personnel
- b. Review OC San's current approach to the ICS Domain Architecture including existing and new requirements/interactions with the corporate domain, user management philosophy
- c. Review ABB's Standard Domain Architecture
- d. Develop a common approach for the structuring of the ICS and ABB Domains to be utilized going forward for the implementation of ABB and Third-Party Systems going forward
- e. Create a final domain architecture design document outlining the structure and management of the ICS and ABB Domains

3B. Cybersecurity Suite

- a. Design and configure ABB Foundational Cybersecurity Controls server(s) (quantity to be determined based on 800xA system design)
- b. Provide two weeks of comprehensive, on-site customer training of the Allow listing software and other cybersecurity components
- c. Provide a fully-licensed version of Intelligent Allowlisting software for all server and client machines for all 800xA systems provided under this project.
 - 1) Design and build a centralized management server for administrating the allowlisting software on the existing Foundational Cybersecurity Controls server.
 - b) Deploy agents to manage allowlisting policies and engine on each machine
 - c) Build allow lists on each machine
 - d) Monitor continuously for two weeks after deployment and make adjustments per OC San requirements
 - 2) Provide five of each of the following software packages:
 - a) McAfee Application Control license extension
 - b) McAfee Device Control license extension
- d. Network Monitoring
 - 1) Provide network monitoring software solutions for the OC San HMI system (800xA)
 - 2) Design, configure and install sensors as required to collect live network information
 - 3) Design, configure and install the management console for aggregation of collected data
- e. Cyber Asset Inventory
 - 1) Perform the following work:
 - a) Configure and install the Cyber Asset Inventory server virtual machine
 - b) Connect to up to eight (8) mirror/SPAN ports (i.e. network segments)
 - c) Connect to one (1) network for web-based UI
 - d) Install one (1) device data collector
 - e) Configure ten (10) users

- 2) Test and verify the following functions operate properly:
 - a) Automatic network data collection
 - b) Evergreen asset inventory
 - c) Semi-automatic device data collection of windows devices
 - d) Automatic and manual synthesis of devices
 - e) Asset inventory event list
 - f) Export of asset list
 - g) E-mail of event list
- f. Refer to Exhibit 9 – (Option 4: Cyber Security) for additional required scope for this item

4. Import and Modification of Existing Access Databases

- a. In close coordination with the SANITATION DISTRICT and PCI programming support staff, the CONTRACTOR shall develop a method, plan and execute the work of importing all of the current SANITATION DISTRICT Access databases into the CONTRACTOR’s native SCADA platform database in their entirety. The requirements include:
 - 1) Review of the existing Access Database Schema, all of the tables in the database and how they support and interact with the functions of the custom SAT application.
 - 2) Incorporation of table data into the CONTRACTOR’s SCADA platform.
 - 3) Detailed listing of the fields in the ‘Main’ table and how they will be incorporated into the CONTRACTOR’s SCADA platform (or discarded if not necessary).
 - 4) Plan for adding custom or user-defined fields to the CONTRACTOR’s SCADA platform database and plan for the future.
 - 5) Plan for the database such that it can be used with the existing SANITATION DISTRICT’s SAT application (programmed in C#) OR a new application to produce the following file types:
 - a) Unity Pro (1 XML file)
 - b) ProWorx (1 .FIL file)
 - c) Virtual Annunciation File (1 CSV file)
 - d) Vijeo Designer Files (1 XML file)
 - e) CMMS, P&ID & Loop Verification applications
 - f) ORT/FAT Procedure Generator
 - 6) In close coordination with the ENGINEER, review of the SAT application (programmed in C#) CONTRACTOR shall develop a replacement application, which is capable of replacing the SAT functions which will not be provided by the new system.
 - 7) Import all of the master Access databases and all of the associated data into the CONTRACTOR’S SCADA database.
 - 8) See Appendix 1-A for more detail on the SAT application and the structure of the Access database.

5. PLC or Controller Programming Standards Development

- a. In close coordination with the SANITATION DISTRICT, the CONTRACTOR shall

develop programming templates/standards (custom function blocks) corresponding to existing SANITATION DISTRICT PLC programming templates. The required steps to accomplish the work are as follows:

- 1) The CONTRACTOR shall review the Decision Log for the current Unity standards. The CONTRACTOR shall review and understand the current and previous documentation and code for all standards written in Unity and Legacy Ladder Logic.
- 2) The CONTRACTOR shall prepare a Decision Log for the new standards based upon the design principles outlined in the 'UNITY Design Goals' document in Exhibit 3 and based upon the CONTRACTOR's system. The Decision Log shall have line items for each decision made and the CONTRACTOR's suggested solution. For examples of decisions made in the process of developing interim Unity Programming standards, see Exhibit 3.
- 3) In addition to the features listed above, the CONTRACTOR shall provide new template/standards with the following features:
 - a) I/O simulation: CONTRACTOR shall provide the ability to simulate all I/O signals based upon user defined values, calculations, or process/equipment simulations. This may be either internal or external to the programming templates. The simulation logic shall be designed such that minimal or no changes are made to the program to avoid introducing errors due to modifications to support bench testing.
 - b) All data between the HMI and PLC/Controller shall be communicated via data structures and/or custom data types with all template related data packed into a single tag. Individual pieces of data (such as a Hi alarm threshold) shall be tag attributes.
 - c) Provide a method of communicating all of the interlocks and/or permissives to the HMI via a structured data type.
 - Link all of the interlocks and/or permissives in existing PLCs to structured data types created in the HMI
 - d) If a common alarm is used to animate graphical objects at the HMI, provide a data structure for the common alarm such that all of the individual alarms that make up the common alarm are visible from the HMI.
 - e) Custom function blocks shall be provided to allow for the expansion of custom data types such that all attributes associated with a given custom data type is visible to someone trying to troubleshoot PLC/Controller logic in the online mode.
 - f) ALL attributes associated with custom data types and function blocks are made easily viewable while in the online mode. No additional modification of logic shall be required to enable this functionality.
- 4) The CONTRACTOR and SANITATION DISTRICT shall engage in a two (2) week, full time, exchange of information regarding the CONTRACTOR's platform and the existing SANITATION DISTRICT PLC system. The CONTRACTOR's integration specialist and Project Engineer are required to attend. The CONTRACTOR shall submit the Decision Log to the SANITATION DISTRICT one week prior to these

meetings.

- 5) Wherever possible, standard programming templates and logic may be used so long as it does not compromise or reduce the functionality of the existing SANITATION DISTRICT standard programming template. In addition, CONTRACTORS may propose to consolidate or redevelop existing templates so long as the functionality is not compromised or reduced in any way. Proposals must be reviewed and approved by the ENGINEER before development to begins.
- a. For all CONTRACTORS, develop new PLC/Controller programming standards for the provided platform which are specifically designed and implemented to optimize the transfer of data between the PLC/Controller and the CONTRACTOR's HMI platform. SANITATION DISTRICT is in the process of developing standards for the M580 PLC which are compatible with the existing CRISP HMI system. These standards are available for reference in Exhibit 3 – Existing PLC standards. These standards may be used as a basis but CONTRACTOR shall make modifications and develop new code under the direction of the SANITATION DISTRICT to optimize performance with the CONTRACTOR's HMI platform.
- b. For all CONTRACTORS, new programming standards shall be provided for the following SANITATION DISTRICT standard programming blocks (see Appendix for individual template summaries and descriptions). CONTRACTOR is responsible for developing the following templates:
 - 1) C01 – Pump Control Constant Speed
 - 2) C02 – Pump Control Variable Speed
 - 3) C04 – Valve Control Opened/Closed
 - 4) C06 – Valve Control Modulating with Limit Switches
 - 5) C07 – Chemical Addition Flow Pacing
 - 6) C08 – PLC Diagnostic Template Logic
 - 7) C09 – PID Control Closed Loop
 - 8) C10 – Lead/Lag/Standby Constant Speed
 - 9) C11 – Lead/Lag/Standby Variable Speed
 - 10) C12A – Transmitter Scaling with Alarms
 - 11) C12C – Transmitter Scaling No Alarms
 - 12) C12G – Discrete Alarm with Reset
 - 13) C13 – Motor Runtime
 - 14) C15A – Auto/Manual Station
 - 15) C15B - Cascade/Manual Station
 - 16) C15C - Manual Loading Station
 - 17) C17 – Timer sequencer
 - 18) C19 - Totalizer Template
 - 19) C20 – Gate Control Modulating

- 20) C21 – Read Modicon Quantum PLC
- 21) C41 – Circuit Breaker Control Open/Close
- 22) C42 - ATS Control
- 23) C43 – Power Monitor Communications
- 24) C44 – Power Monitor Transmitter Signals with Alarms
- 25) Unity Helper Blocks

- c. Develop framework for organizing and naming function block diagrams within a PLC/Controller
- d. Develop framework for version control of PLC/Controller software.
- e. Develop a means to bulk generate programming templates from .csv files (or another file format such as xml) either through the SAT application, through the CONTRACTOR database or both.
- f. Develop database entry format (new required columns, column descriptions) which corresponds to the SANITATION DISTRICT master database and function with Modicon Quantum and Modicon M580 PLCs
- g. Provide documentation for each template matching the documentation style and content from Exhibit 5 - Sample PLC/Controller Standards Documentation
- h. The CONTRACTOR shall assist OCS&D in the development of a new programming flow chart which best fits the CONTRACTOR SCADA platform hardware and software. For an example of an existing programming flow chart, see Exhibit 3.
- i. Bench testing of the new programming standards including the following:
 - 1) Bench testing of logic with AC800M Controllers
 - 2) Review and verification of function with alarm and graphical elements
 - 3) Testing plan will be submitted to the ENGINEER for approval
 - 4) Testing will include Unwitnessed and Witnessed testing for each step of testing
 - 5) Testing level of effort will be similar to the level of effort described in EXHIBIT – 8.

6. HMI Standards Development

In close coordination with the SANITATION DISTRICT, the CONTRACTOR shall develop the following graphics standards:

- a. Develop page navigation paradigm including menus and linking between pages
- b. Develop method and standard for reproducing the functionality of configuration screens
- c. Develop method and standard for reproducing information available on runtime and flow summary screens
- d. Develop method for handling current alarms in SANITATION DISTRICT PLC's including shelving, acknowledgement, and bad actor reporting.
- e. Develop alarm screen, alarm summary, event summary, alarm groups, alarm parameters. Including replacement of existing functionality provided by CRISP and the alarm/event/audit logs viewer on the Enterprise network (see Appendix 1-K Enterprise Reports for more details).

- f. Develop database entry format (new required columns, column descriptions) which corresponds to the SANITATION DISTRICT master database
- g. Develop new graphics standards for L1 (overview), L2 (process graphics) and equipment detail pages in a color style.
- h. Develop a new graphics standard for L1 (overview) graphics in ASM style.
- i. Develop new graphical objects to replace existing CRISP symbols, such as pumps, valves, display text, etc. These graphical objects shall correspond to all versions of the SANITATION DISTRICT PLC programming templates.
- j. Develop methods for bulk generation of graphical objects from .csv files (or another file format such as xml) either through the SAT application, through the CONTRACTOR database or both
- k. Develop standard for trend screens
- l. CONTRACTOR shall develop two (2) sets of HMI standards for the following PLCs/controllers. The standards shall be designed such that they have a similar look and feel between existing PLC template logic and new PLC/Controller template logic:
 - 1) Existing Modicon Quantum PLCs and Modicon M580 PLCs (current CRISP Standard)
 - 2) New Modicon M580 PLCs or CONTRACTOR controllers (new graphics standard)
 - 3) For both sets of standards, the CONTRACTOR shall provide the following elements for HMI graphics associated with each template:
 - a) Graphical elements for use in process overview graphics
 - b) Graphical elements for use in process graphics
 - c) Graphical elements for use in equipment detail pages
 - d) Develop graphic faceplate templates for devices which correspond to the PLC programming templates. Develop method for display of device interlocks/permissives on faceplates.
 - a. For new PLC/Controller template logic, this linking shall be done with a data type. For existing PLC/template logic, the CONTRACTOR is required to manually link all device interlocks/permissives from the PLC logic. CONTRACTOR is required to determine all device interlocks/permissives by reviewing the existing logic.
 - b. Existing scans and addressing of SANITATION DISTRICT's PLCs are optimized. Since some permissive coils are outside of the 'optimized range' of scanned PLC addresses, the CONTRACTOR shall pilot this solution for existing PLC's with the SANITATION DISTRICT and shall work with the ENGINEER to determine the best solution to implement this and to maintain update rates at one second or better.
 - e) Incorporate elements of configuration screens (such as in service/out of service buttons, lead/lag/standby lineups, etc.) into faceplate templates where possible. Where not possible, provide method for display of configuration screen elements.
 - f) Custom group faceplates for equipment that is grouped together

functionally (i.e. lead/lag/standby pumps)

- m. For all HMI standards developed, CONTRACTOR shall provide corresponding documentation that matches the content and format provided in Exhibit – 6 , HMI Standards Documentation.
- n. Bench testing of the new HMI standards including the following:
 - 1) Bench testing of graphics with logic in AC800M Controllers and Modicon Controllers
 - 2) Review and verification of function with alarm and graphical elements
 - 3) Testing plan will be submitted to the ENGINEER for approval
 - 4) Testing will include Unwitnessed and Witnessed testing for each step of testing
 - 5) Testing level of effort will be similar to the level of effort described in EXHIBIT – 8.

7. Application Architecture

- a. Develop, plan, design and implement a plan for the segmentation of facilities and corresponding PLC's within the framework of the CONTRACTOR application software.
- b. Develop, plan, design and implement the allocation or splitting of servers between clients and individual PLC's
- c. Develop, plan, design and implement a logical hierarchy for system objects including multiple levels of directories for existing and future PLC's and/or controllers.
- d. CONTRACTOR shall provide a complete and independent system and server set for each of the following areas at a minimum:
 - 1) Plant 1 Process
 - 2) Pump Stations
 - 3) Plant 1 Electrical (inclusive of the Cen Gen and Load Shedding Systems)
 - 4) Plant 2 Process
 - 5) Plant 2 Electrical (inclusive of the Cen Gen and Load Shedding Systems)

8. Specification Section Modifications

- a. For DCS CONTRACTORs, modify the following Master specification sections to suit CONTRACTOR hardware:
 - 1) Section 17405: Control Panels
 - a) Produce Representative drawing for each panel type described in the Unit Prices.
 - b) Produce all other representative drawings referred to in section 17405
 - 2) Section 17406: PLC Hardware
 - 3) Section 16120: Conductors and Cables

9. Hardware Standards Development (applicable to DCS CONTRACTORs only)

- a. Develop control panel designs, standard drawings and a corresponding bill of materials (BOM) for single controller and hot-standby controller configurations, for process, electrical and pump station panels.
- b. Develop RIO panel designs, standard drawings and a corresponding bill of materials (BOM) for single rack (36-inch wide RIO panel) and 2-rack (72 inch wide RIO panel)

configurations.

- c. Develop panel designs for wire marshalling using pre-fabricated cabling and termination assembly's integral to the RIO panels.
- d. Develop changes to existing loop drawing standards corresponding to the changes to the RIO designs befitting the proposed platform. Modify existing tools for automated checking of loop drawings against I/O lists.
- e. Develop standard format for hardwired IO listing (columns, column descriptions) which corresponds to the fields in the SANITATION DISTRICT IO database structure which will remain in place.

10. SANITATION DISTRICT Training and Development System

- a. CONTRACTOR shall furnish and install the following items at the PCI lab. Every component of the development system shall be fully licensed on the scale of the SANITATION DISTRICT SCADA system to provide complete functionality with the understanding that this is for a test system only and will not be used in a production environment.
- b. As a minimum, provide the following items from the Unit Price Schedule:
 - Two complete single Controller assemblies (includes highest feature set controller with maximum memory expansion and fastest communications capabilities, redundant power supply backplane with maximum slot and expansion capacity, two ICS Ethernet communication modules providing vendor's system native communications support and with support for Modbus TCP and Ethernet IP communications (if communications adapters cannot provide support for all protocols, provide additional Ethernet modules as necessary for redundant Modbus TCP and Ethernet IP support), single channel and dual-channel fiber optic RIO communication modules, single channel and dual-channel copper RIO communication modules, two (redundant) highest capacity power supplies). Provide any additional cards (in-rack fiber to copper converter, in-rack network switch, etc.), fiber optic cables, network cables, communications or other adapters, terminations, etc. as needed to enable the testing of the full features set of the single controller assembly. (1-001 from the Unit Price Schedule)
 - Two single power supply (non-redundant power) backplanes for single controller systems with maximum slot and expansion capacity.
 - Two (2) complete Redundant Controller assemblies (includes redundant controllers, backplanes, redundant ICS Ethernet communication modules, fiber optic RIO communication modules, redundant power supplies) (1-002 from the Unit Price Schedule)
 - Two IEC 61850 Ethernet communications modules.
 - Complete Remote (RIO) rack (minimum 12 slot, includes backplanes, single and redundant fiber optic Ethernet RIO communication modules, single and

redundant copper Ethernet RIO communication modules, two (redundant power supplies) (1-007 from the Unit Price Schedule).

- Two single power supply (non-redundant power) minimum 12 slot, Remote (RIO) backplanes.
- c. Two of each of the following modules from the Unit Price Schedule. All modules shall be provided complete with each channel wired to pre-fabricated secondary terminals or terminations units with fused disconnects via pre-fabricated cables on both ends:
- 120 VAC 16 point individually isolated neutral per point Discrete Input
 - 24 VDC 16 point Discrete Input
 - 120 VAC 16 point heavy duty rated Form C relay Discrete Output (8 point card may be provided if 16 point card is not available in product line)
 - 120 VAC 16 point heavy duty rated Form A relay Discrete Output
 - Multirange (must include 4-20mA and 0-20mA) 8 channel, individually per point isolated differential, Analog Input
 - Multirange (must include 4-20mA and 0-20mA) 8 channel individually, per point isolated differential, Analog Input with HART support
 - 4-20mA 8 channel individually, per point isolated differential, Analog Output (4 point card may be provided if 8 point card is not available in product line)
- d. In addition, CONTRACTOR shall provide the following:
- Two physical I/O simulation stations such as those typically used in CONTRACTOR classroom training
 - Two fully-licensed engineering workstations capable of ‘standing’ up a complete SCADA system including the following:
 - Graphics configuration server
 - A separate historian server/workstation machine
 - PLC/controller logic configuration/repository server
 - A SCADA server and all Modbus, Modbus TCP, Ethernet IP, and other applicable drivers
 - Dual monitors for each station including two 30-inch monitors
 - Two Industrial grade network switches for RIO networks
 - All appurtenances including cabling, kvm switch and power supplies for Controllers, RIO racks and switches mentioned above

11. Mobile and Commissioning System

The PCI group at the SANITATION DISTRICT routinely commissions new PLCs and HMI graphics associated with CIP projects and as such requires a compact and lightweight mobile commissioning workstation configured with CONTRACTOR software in order to test the interaction between graphics, the controller/PLC in the field and end devices in the field. CONTRACTOR shall provide two complete and FULLY LICENSED mobile commissioning workstations with the following features:

- Fully licensed servers capable of ‘standing’ up a complete and independent SCADA

Platform including configuration of graphics, historian and PLC/controller logic and all communication and device drivers. Licenses for two (2) operator workstations and two (2) engineering workstations.

- Configurable wireless networking capability
- PLC or Controller rack for 'headless' operation of RIO panels
- All cabling and power supplies required for operation of the PLC/Controller rack and for connection to a RIO rack from the PLC/Controller rack

CONTRACTOR shall produce a submittal with detailed drawings for a mobile and commissioning system capable of meeting the requirements above. The submittal shall include the following elements:

- Bill of Materials including required licenses for full functionality
- Engineering Drawings
- Narrative Description
- Relevant procedures and/or instructions for set-up, first time use, operation of 'headless RIO panels' and incorporation into a larger system.

12. Maximo Integration

CONTRACTOR shall provide a method for right clicking on individual objects wherever that object is located in the entire hierarchy of the SCADA system to accomplish the following tasks. In addition, CONTRACTOR shall perform the work of linking all existing Maximo tags to tags and objects in the newly created SCADA database:

- Create, edit, and cancel a work order request for the asset associated with the SCADA object and its parent object(s) with the ability to embed screenshots, trends or other relevant HMI based information to the work order request.
- View the outstanding work order requests or work orders associated with the SCADA object and its parent object(s)
- View the work order history associated with the SCADA object and its parent object(s)
- Backfill data into the work request such as date, time, location and asset tag, etc.

All data shall be displayed and integrated into the CONTRACTOR's native system and shall be represented as such. It is not the intention of the SANITATION DISTRICT to provide a link to MAXIMO but rather to have seamless integration between the CMMS system and the SCADA system.

The submittal shall contain the following:

- All required servers, network connections, and equipment
- Network diagrams
- Graphical representation of the workflows described above

- Strategy for correlating Asset ID's with native SCADA tags
- Operations level User manual containing the following:
 - How to create or cancel work requests
 - How to view outstanding work requests/orders
 - How to view work order history
- PCI level User manual containing detailed configuration and troubleshooting information

13. Automatically Generated Reports

CONTRACTOR shall review the MSO reports found in Appendix 1-J and shall replicate these reports using the MOM software package and the Enterprise Historian. This shall include interfaces to the following data:

- a. PLC/SCADA point data
- b. LIMS Database
- c. Operator Round Sheets (Augmented Field Procedures (AFP) to be built by CONTRACTOR)

CONTRACTOR shall be responsible for the following:

- a. Produce the existing 51 MSO reports from the MOM application.
- b. Operator Round Sheets (AFP's using the MOM application):
 - 1) Plant 1:
 - a) Headworks Round Template – (Large sheet)
 - b) Primary treatment Round Template (2 medium sheets)
 - c) Scrubber Round Template (2 medium sheets)
 - d) Secondary treatment Round Template (2 medium sheets)
 - e) Daily Digester CTS Feed Round Template
 - f) Digester Round Template (1 large, 1 medium sheet)
 - g) T&D Round Template (1 medium)
 - h) Cogen Master Aux Round Template (19 subsheets)
 - i) Chemical Inventory Round Template (1 medium)
 - 2) Plant 2:
 - a) Scrubber Acid Wash Log Template
 - b) East Side Round Template
 - c) Headworks D Round Template
 - d) Head works D Scrubber Bios Master Template
 - e) Headworks D Scrubber Master Template
 - f) Master Scrubber Rounds with Data Transfer Template
 - g) Solids Odor Rounds Template
 - h) AS Round Template – (3 sheets, 1 large sheet)
 - i) DAFT Rounds Template -A/B/C/D – (Very Large Sheet)
 - j) Trickling Filter Round Template (Very large sheet)
 - k) Digester Dome H2S Readings Template
 - l) Digester Rounds Master (3 sub sheets)

- m) Cengen Master Aux Template (17 sub sheets)
- c. Operator Round Reports
 - 1) Operator Round data is combined with LIMS data and history data to create Operator Round Reports. The Operator Round Sheets listed above shall also be configured as reports
- d. TPOD Report
 - 1) TPOD report is a monthly view of the data for the fiscal year while MSO is daily report of the data. One TPOD report shall be created
- e. The following meetings shall be required:

Meeting	Location	Duration	Frequency	ABB Attendees
Kick-Off Meeting	Conference Call	½ Day	1	Project Manager & Lead Engineer
Status Meetings	Conference Call	2 hours	Every other week	PM & Lead Engineer
Technical Interviews/Meetings by SME	Conference Call	2-3 hours	60	SME
Technical Interviews/Meetings by SME & Lead Engineer	At Site	3 days	3	SME & Lead Engineer
Workshops	At Site	1 week	2	SME

- f. Refer to Exhibit 9 – (Option 2: MSO Reports (MOM Reports)) for additional required scope for this item

14. Truck Loading System Replacement Study

The SANITATION DISTRICT currently uses Mettler-Toledo software to track truck loading of bio-solids at both Plant 1 and Plant 2. The software is deployed on the SANITATION DISTRICT enterprise network. The software is used to produce tickets for individual truck loads and for tracking. The system receives data from the truck loading scales over a serial link and also provides a graphical interface so that SANITATION DISTRICT can enter data pertaining to truck operators. The CMRS system interacts with other applications such as the MSO system as well. Refer to Appendix 1 – O: Truck Loading System Description for more information.

CONTRACTOR shall perform a complete field verification and study of the CMRS system and provide a recommendation for replacement software. The study shall include the following:

- Document all data links (and their associated communication protocols) coming into the software
- Document all I/O that is used by the system, produce a complete I/O list for each Plant.

- Documentation of all user functions and user input data
- Documentation of the software's interaction with other systems such as MSO's and the Bio-Solids Tracking System (BTS).
- Recommendation for replacement software.

15. Read-Only SCADA System

CONTRACTOR shall provide the design for a read only version of the complete SCADA system in the Industrial DMZ. CONTRACTOR shall size the system and licensing such that the system is available for use to up to 100 concurrent users on the SANITATION DISTRICT business network. This system shall make use of the existing SCADA graphics and shall not require configuration of new graphics. When new graphics are created on the SCADA system, they shall be propagated to the read-only SCADA system automatically.

16. Enterprise-Level Dashboard Reports

The following Enterprise level dashboard reports shall also be provided (see Appendix 1-K for more details):

- a. MES – Major Equipment Status
 - 1) Provide a complete replacement of the existing MES system using the MOM application and all of the existing features. The following enhancements shall also be provided:
 - a) Provide new, custom equipment groupings at the HMI level through use of the Asset Structure
 - b) Out of Service (OOS) buttons to send OOS signals to child equipment in the equipment hierarchy and the parent equipment as OOS. Interface shall be provided between the HMI and MES system. Assume 8-10 sub-equipment in the hierarchy for each equipment
 - c) User must fill in a service entry form when putting an equipment OOS
 - d) Some sub-equipment are critical and have special rules – if any of the equipment in that category is OOS then entire parent equipment is OOS
 - e) Operator notes made in the HMI shall be available in the MES system
 - f) Tie into Maximo to see if there is a pending workorder for the equipment
 - g) Refer to Exhibit 9 – (Option 3: MES Enhancement Reports) for additional required scope for this item
- b. Plant 1 CRISP Data
- c. Plant 1 Scrubber Runtime Hours
- d. Plant 1 Sludge Totals
- e. Plant 1 Solids Handling
- f. Plant 1 Chemical Rate of Change
- g. Plant 2 Plant Data
- h. Plant 2 Scrubber Runtime Hours

- i. Plant 2 TFPS Runtime Hours
- j. Plant 1 and Plant 2 Chemical Tanks
- k. Alarm/Event/Audit Log Viewer*

*A complete, searchable and sortable version of the Alarm and Event list shall be provided for Enterprise users. CONTRACTOR shall provide all of the same functionality of the existing alarms and events list.

B. Area Graphics Submittals

For each area, the CONTRACTOR is required to provide two (2) different submittals:

1. Field Verification (FV) Submittal. For the FV submittal, the CONTRACTOR is required to identify the active and abandoned graphics. The CONTRACTOR shall submit the following in the FV submittal:
 - o A list of the active graphics to be replaced in the area
 - o Screenshots of the active graphics to be replaced in the area
 - o A list of the tags in the area and the graphics that they appear on (this can be a modified version of the Access database with additional fields for graphic names)

The CONTRACTOR shall not proceed to the Design Submittal for an area graphics package until the FV submittal is approved.

2. Design Submittal (Described Below)

CONTRACTOR shall logically group together SANITATION DISTRICT's process areas and PLC's to perform the graphics conversion work in the most efficient manner. No more than two areas shall be grouped into a single submittal. No more than four (4) PLC's shall be grouped into a single submittal. Existing graphics are located in Appendix 1-B. Once a submittal package is complete but prior to submittal, the CONTRACTOR shall meet with the ENGINEER for detailed review. Further meetings between the ENGINEER and the CONTRACTOR may be required to ensure that each graphics package meets the new graphics standards and that all functionality and information found in the CRISP graphic is provided with the new graphics (at a minimum).

In all cases, the CONTRACTOR is required to review the SANITATION DISTRICT PLC code and corresponding Access Database and group the Access Database entries which are derived from PLC templates into objects that correspond to the custom objects created in the Enterprise Submittal. Except in the case of custom PLC logic, all on screen graphical elements and pop up windows shall be derived from the templates created in the Enterprise Submittal.

The following areas are required (note that due to the ongoing CIP program, the PLC quantities are subject to change):

1. Plant 1:
 - a. Area 10 – Preliminary Treatment (10 PLC's)

- b. Area 11 – Primary Treatment (10 PLC's)
 - c. Area 12 – Secondary Treatment (11 PLC's)
 - d. Area 15 – Solids Handling (19 PLC's)
 - e. Area 16 – Co-Generation Facilities (4 PLC's)
 - f. Area 17 – Utility Units (3 PLC's)
 - g. Area 19 – Miscellaneous Buildings (1 PLC)
2. Plant 2:
- a. Area 20 – Preliminary Treatment (6 PLC's)
 - b. Area 21 – Primary Treatment (5 PLC's)
 - c. Area 22 – Secondary Treatment (9 PLC's)
 - d. Area 24 – Effluent Disposal (8 PLC's)
 - e. Area 25 – Solids Handling (22 PLC's)
 - f. Area 26 – Central Generation Facility (7 PLC's)
 - g. Area 27 – Utility Units (3 PLC's)
 - h. Area 29 Miscellaneous Buildings (1 PLC)
3. Other:
- a. Pump Stations (15 PLC's)
 - b. Area 18 - Plant 1 Electrical (16 PLC's)
 - c. Area 28 - Plant 2 Electrical
 - d. Plant 1 Load Shedding
 - e. Plant 2 Load Shedding
 - f. Create new graphics for each area according to the new graphics standards to replace all of the aforementioned areas inclusive of all the following existing CRISP and Wonderware screen types. For a complete list of the existing screens see Appendix 1-B HMI Graphics. For the purposes of pricing, the CONTRACTOR shall assume 20% additional screens to those in the appendix.
 - 1) Menus
 - 2) Process Overviews
 - 3) Process Graphics
 - 4) Detail Screens
 - 5) Configurations
 - 6) Trend Screens
 - 7) Flow Summaries
 - 8) Sequences
 - 9) Runtimes
 - 10) A/M Stations
 - 11) Faceplate Tuning
 - 12) PLC System Screens
 - 13) All SEL load shedding HMI screens

- 14) All screens displaying power monitoring data from the Electrical and Process SCADA systems
 - 15) All screens displaying VFD data
 - 16) HMI System Screens
 - 17) All Wonderware screen types
- g. Develop 40 additional new abnormal situation management (ASM) style L1 graphics for Process Areas in addition to the existing color process overview graphics.
- 4. Each Area Graphics Submittal shall contain the following:
 - a. Screenshot of every graphics screen and a list of the CRISP screens that it is intended to replace. Graphics screens are inclusive of all summary screens, trends and pop-up windows such as faceplates.
 - b. Listing of the tags displayed on each screen.
 - c. Screenshot of the CRISP graphics the screen is intended to replace. The corresponding CRISP graphic(s) shall be on the following page.
 - d. A complete database for the PLC's associated with the area in the CONTRACTOR's native database format. This includes ALL of the records from the current SANITATION DISTRICT Access database for the PLC. All database fields shall be complete. CONTRACTOR shall also provide the database in Excel format.
 - 5. SANITATION DISTRICT is open to innovative ideas from CONTRACTOR to expedite the process of reviewing area graphic screen submittals. Pilot PLC/Controller.
- C. PLC Replacement/Interface
- CONTRACTOR shall provide a redundant/hot standby PLC/Controller pair complete with all appurtenances required to communicate with an existing Modicon PLC in the field and to test the functionality of the new HMI and PLC/controller programming standards. The preference would be to communicate directly with Quantum I/O but it is not required. The PLC/Controller shall be located in the PCI laboratory. CONTRACTOR shall program and test the PLC/Controller and the corresponding HMI screens in accordance with all of the standards developed above. The SANITATION DISTRICT will support the effort by modifying existing the existing PLC as necessary. The following submittals are required:
- 1. PLC/Controller hardware scope of supply and network connectivity to the existing PLC.
 - 2. PLC/Controller program
 - 3. See Section 01810 for required commissioning submittals
 - 4. See Appendix 1-N for the control logic and I/O list for the PLC replacement
- 4.2.2 System Configuration and Programming Services
- CONTRACTOR shall provide any and all configuration and programming required to create a fully functional SCADA System for the entirety of Plant 1 and Plant 2 (process, electrical, cogen/central generation, and load shedding) and the Pumping Plants as described elsewhere in this document. All of the activities described herein apply to all of the plant areas. CONTRACTOR shall provide all programming required by the submittals and required to create a fully functional SCADA system ; in addition, CONTRACTOR shall provide any and all configuration and programming required to create a fully functional SCADA System. The activities required in this

section include the following:

- CONTRACTOR shall convert and import all of the current SANITATION DISTRICT Access databases into their native SCADA platform in its entirety. See Exhibits for the complete SCADA tag database. CONTRACTOR shall create a submittal containing the proposed I/O database in the native format of the CONTRACTOR's platform for SANITATION DISTRICT approval. A .csv or Excel export will be acceptable.
- CONTRACTOR shall program all graphics approved through the area graphics submittals to operate with the new SCADA System.
- CONTRACTOR shall program 80 new ASM style L1 Overview graphics.
- CONTRACTOR shall review all existing PLC source code to find ALL 'Wait State' conditions and link these to the graphics standards developed for the original PLC logic.
- CONTRACTOR shall recreate all existing trends/trend groups to operate with the new SCADA System.
- CONTRACTOR shall stage, bench test, deploy and commission all SCADA System graphics approved through the area graphics submittals (including simulated testing), refer to Section 01810, Commissioning for more additional information.
- CONTRACTOR shall configure a complete a fully licensed read-only version of the SCADA system that is accessible to users on the business network. A minimum of 100 users shall be able to access the system concurrently.
- The CONTRACTOR shall access and harvest the existing archived historical record data sets from the Wonderware Enterprise Historian systems and import the data sets to the new SCADA System Historian. Data sets shall include but are not limited to process and lab data, manual inputs, reports, historical trends, logs, etc.
- The CONTRACTOR shall develop and configure the necessary software to enable the transfer of the existing data to the new SCADA System Historian.
- The data transfer process and activities shall be coordinated with the testing and commissioning activities of each phase and each process so that no existing data shall be lost. The Contractor shall develop and submit a plan that describes the process by which the data will be transferred with no data loss.
- CONTRACTOR shall provide interfaces to the following systems:
 - MAXIMO: Access to the work order history and ability to create work orders associated with a specific object on the right click of a button.

4.3 LICENSING

See Section 17440, Performance, Growth, and Licensing for the requirement.

4.4 TRAINING

See Section 1820, Training, for the specific training required as a part of this Task Order.

PART 5 – GENERAL REQUIREMENTS

5.1 SOFTWARE

5.1.1 General

The CONTRACTOR is expected to develop and provide the deliverables using the standard software currently approved for use by SANITATION DISTRICT. The standard SANITATION DISTRICT software includes, but is not limited to, the latest IT approved versions of the following software:

- Autodesk software (AutoCAD, AutoCAD Map3D or compatible dwg file format)
- Microsoft Office
- Maximo
- Bluebeam Revu eXtreme
- Primavera P6 for scheduling
- Database software as defined elsewhere in the project Scope of Work
- ProWorx NXT (PLC configuration software, only available on SANITATION DISTRICT machines)
- CRISP (HMI software, only available on SANITATION DISTRICT machines)

Any software that the CONTRACTOR needs to comply with these standards shall be purchased and maintained by the CONTRACTOR at no additional cost to the SANITATION DISTRICT. In the event SANITATION DISTRICT provides the CONTRACTOR with access to SANITATION DISTRICT software and hardware (as listed above) at a SANITATION DISTRICT facility in order to facilitate performance of their work, all software and hardware shall remain the property of SANITATION DISTRICT. Only software licensed to SANITATION DISTRICT shall be installed on SANITATION DISTRICT equipment. In addition, only SANITATION DISTRICT IT Department staff will perform the installation of this software, provide troubleshooting and maintenance support. SANITATION DISTRICT equipment, hardware, software and systems may only be taken off premises with prior SANITATION DISTRICT approval.

5.1.2 Submittal Review using Bluebeam

SANITATION DISTRICT has standardized on the use of Bluebeam Revu for reviewing and providing comments to PDF files. Prior to submitting electronic PDF files, format them as indicated below (underlined text refers to commands or functions within the Bluebeam software). See **Exhibit 17** and “SANITATION DISTRICT CAD Standards Manual” prior to submission.

PDF files will be hosted in a Bluebeam cloud-based studio session for review. See **Exhibit 18** for a detailed explanation on how Bluebeam will be used to provide, validate, and close submittal review comments.

CONTRACTOR is required to submit all submittals described in this SOW in Bluebeam. All other submittals required by the Task Order are to be submitted through the PCMS as described in

Section 01701.

- The purpose of the studio session is to provide review and collaboration. The session provides multiple attendees, despite location, the opportunity to review and comment on the same PDFs in real time. All review actions are tracked and recorded.
- SANITATION DISTRICT staff will create the Bluebeam studio session, invite attendees, configure, and manage the Studio session.
- Bluebeam provides reviewers with tools for annotating PDFs called a markup. SANITATION DISTRICT provides two toolboxes for annotating PDFs: "SANITATION DISTRICT Drawings Review" and "SANITATION DISTRICT Report Review."
- Markups are both graphical and tabular. When the graphic markup is placed, corresponding tabular data are created. The collection of tabular data is considered the markup list.
- The markup is automatically populated with various properties including author, sheet number, comment, markup type, etc. to make reviewing consistent. The tabular data within the markup list are hyperlinked to the graphical markup for back-and-forth viewing.
- The markup list may be sorted or filtered. For example, filtering markups by author makes that attendee's markups more prominent on the page by dimming everyone else's markups.
- Within a studio session, markups may only be modified by the markup author except for the Status data field using the "Set Status" command. SANITATION DISTRICT has customized this field for the reconciliation of comments and backcheck. Session attendees may "Reply" to the markup of other reviewers. Replying to a markup provides the responder the opportunity to explain how the markup will be incorporated.
- The comment reconciliation steps are summarized below:
 - Reply – respond to SANITATION DISTRICT provided review comment with: **Agree, Disagree, or Flag for Discussion.**
 - Direct – meet with SANITATION DISTRICT to reconcile the non-agrees with either an **Incorporate or Do Not Incorporate** response. SANITATION DISTRICT will work with CONTRACTOR to ensure clear direction is provided.
 - QC Check – CONTRACTOR tells SANITATION DISTRICT that the comment has been addressed in the next submittal by responding with **Incorporated or Not incorporated.**
 - Backcheck – reconciliation of open and incorporated comments by SANITATION DISTRICT with an **Open or Closed** response.
- A one-hour training session on the use of Bluebeam and custom status menu will be provided by SANITATION DISTRICT. All CONTRACTOR team members responsible for quality control and reconciliation of submittal comments shall attend.

5.1.3 Word Track Changes

Below are guidelines for the review and incorporation of MS-Word comments and revisions. Use MS-Word Track Changes to show edits to all project specifications, programming standards and other MS-Word files.

Submit the marked-up electronic files for SANITATION DISTRICT review, as required by the Scope of Work. SANITATION DISTRICT's review will consist of comments and (in-text) revisions. SANITATION DISTRICT comments and revisions shall remain visible in Track Changes throughout

design.

SANITATION DISTRICT will return the MS-Word files or host them in a central location.

- If the files are returned, CONTRACTOR will check the files back into their document management system (i.e., replace the old files with the returned files) and resume their design and review of SANITATION DISTRICT comments using the returned files. This insures that in-text revision by SANITATION DISTRICT are preserved.
- Hosting files in a central repository is preferred because it eliminates file transfer and the potential for multiple copies. Hosted files are also protected by version control.

SANITATION DISTRICT comments shall be addressed using MS-Word “Reply” and “Resolve.” The CONTRACTOR shall “Reply” to each SANITATION DISTRICT comment describing how the comment will be addressed and revise the specification, as needed, to address the comment.

“Resolve” will be used by the reviewer or designee to confirm their comment has been addressed. “Resolve” greys out the comment showing it is closed.

Revisions may be “Rejected” with the concurrence of the Engineer. Concurrence is necessary because once a revision is "rejected," it is removed from MS-Word Track Changes and no longer visible.

After final design, all MS-Word comments and revisions shall be Track Changes accepted, rejected, resolved, or deleted prior to bid. The MS-Word commands to “Accept All Changes” and “Delete All Comment in Document” shall be performed just prior to preparing the IFB set. No unaddressed comments or revisions shall remain in the Bid Documents.

EXHIBITS

- Exhibit 1 Sample Project Management Plan**
- Exhibit 2 Sample Risk Management Plan**
- Exhibit 3 Existing PLC Standards and Standards Reference Documentation**
- Exhibit 4 Existing HMI Standards**
- Exhibit 5 Sample PLC/Controller Standards Documentation**
- Exhibit 6 Sample HMI Standards Documentation**
- Exhibit 7 Specifications**
- Exhibit 8 Sample Bench Testing Documentation**
- Exhibit 9 J-120 Additional Scope Items**

APPENDIX – 1

- Appendix 1 – A: Not used
- Appendix 1 – B: CRISP HMI Graphics

- Appendix 1 – C: Not Used
- Appendix 1 – D: PLC & RIO Inventory Listing
- Appendix 1 – E: Not used
- Appendix 1 – F: Not used
- Appendix 1 – G: Not used
- Appendix 1 – H: Not used
- Appendix 1 – I: Not used
- Appendix 1 – J: Monthly Summary of Operations (MSO) Description
- Appendix 1 – K: Enterprise Reports Description
- Appendix 1 – L: Existing Enterprise Historian Tags
- Appendix 1 – M: Not Used
- Appendix 1 – N: PLC Replacement Logic and IO List
- Appendix 1 – O: Truck Loading System Description

NOTE: All exhibits and appendices are on file at the Clerk of Board Office.

EXHIBIT 3
Signed Non-disclosure Agreement

NON-DISCLOSURE AGREEMENT

This **NON-DISCLOSURE AGREEMENT** (“Non-disclosure Agreement”) is made and entered into as of this 16th day of October, 2019, by and between ABB, INC., a California corporation, having an address of 3055 Orchard Drive, San Jose, California 95134 (“ABB”) and ORANGE COUNTY SANITATION DISTRICT, a county sanitation district organized and existing under provisions of the County Sanitation District Act, California Health and Safety Code section 4700 et seq., (“SANITATION DISTRICT”), having an address of 10844 Ellis Avenue, Fountain Valley, California 92708. ABB and the SANITATION DISTRICT recognize that the careful protection and non-disclosure by the party receiving confidential or proprietary information (“Receiving Party”) from the party disclosing that information (“Disclosing Party”) is of importance to both parties. Disclosing Party and Receiving Party sometimes are collectively referred to herein as the “Parties” and individually as a “Party.” Delaware

WHEREAS, through a Request for Proposals (“RFP”), the SANITATION DISTRICT is actively soliciting proposals for standardized and unified control software, hardware, and services to replace its existing DEC VAX/VMS-based SCADA Platform running the CRISP SCADA software with a modern Windows-based SCADA Platform and continue to communicate with the existing Modicon PLCs, as more particularly specified in the Master Service Agreement for Process Control System to be attached to the RFP and to be executed by the successful proposer and the SANITATION DISTRICT after conclusion of the RFP process (“Master Service Agreement”); and

WHEREAS, ABB and the SANITATION DISTRICT will exchange “Confidential” or “Proprietary” Information for the purpose of such procurement of goods and services through Requests for Information (“RFIs”) prior to the release of the RFP and through the RFP process; and

WHEREAS, the Parties wish to protect such “Confidential” or “Proprietary” Information; and

WHEREAS, the SANITATION DISTRICT must perform a detailed and thorough evaluation of ABB to select the most qualified contractor through the RFP process and anticipates that portions of the information the SANITATION DISTRICT must evaluate during the selection process may be deemed “Confidential” or “Proprietary” to ABB; and

WHEREAS, the SANITATION DISTRICT needs to disclose “Confidential” or “Proprietary” Information to ABB for ABB to accurately and thoroughly respond to said RFP and the selection process; and

WHEREAS, the SANITATION DISTRICT’s detailed and thorough review is necessary to ultimately select a contractor that offers the best value to the SANITATION DISTRICT; and

WHEREAS, if, after the completion of the RFP process, ABB is selected to provide to the SANITATION DISTRICT the goods and services in the Master Service Agreement, ABB and the SANITATION DISTRICT will continue to share “Confidential” or “Proprietary” Information and as such, this Non-disclosure Agreement shall continue in full force and effect for the term of, and shall apply to, the Master Service Agreement; and

WHEREAS, capitalized terms used in this Non-disclosure Agreement and not defined herein shall have the same meanings assigned to them in the Master Service Agreement.

NOW, THEREFORE, in consideration of the mutual promises, covenants, and agreements set forth herein, the Parties agree as follows:

1. Confidential Information.

a. As used in this Non-disclosure Agreement, "Confidential Information" shall mean financial and/or proprietary information, including trade secrets and information considered confidential, privileged, or otherwise exempt from disclosure under the California Public Records Act ("CPRA") (California Government Code section 6250 et seq.).

b. Confidential Information shall also include all drafts, data, diagrams, specifications, correspondence, proposals, reports, and estimates compiled or composed by ABB, including any of ABB's consultants and subcontractors of any tier, while performing or providing services under the Master Service Agreement and which are for the sole use of the SANITATION DISTRICT, its agents, representatives, and employees.

c. Confidential Information shall specifically further include all information, knowledge, and data relating to the SANITATION DISTRICT's systems, computer data, and software and all information, knowledge, and data relating to the products, process, or operation of the SANITATION DISTRICT.

2. **Exceptions.** The term "Confidential Information" shall not include any information that (i) is, at the time of the disclosure, in the public domain or available to the public or enters the public domain at a later date by becoming available to the public through no fault of the Receiving Party; (ii) is in the possession or knowledge of the Receiving Party before disclosure under this Non-disclosure Agreement; (iii) is disclosed at any time to the Receiving Party by a third party who, to the actual knowledge of the Receiving Party, is under no obligation not to make such disclosure; or (iv) is developed by or for the Receiving Party independent of, and without reference to, the Confidential Information being disclosed under this Non-disclosure Agreement.

3. Confidentiality Obligation.

a. The Receiving Party shall restrict the possession, knowledge, development, and use of the Confidential Information to individuals as authorized under California law and this Non-disclosure Agreement. The Receiving Party shall restrict access to Confidential Information received from the Disclosing Party to those employees, officers, directors, consultants, contractors, and agents (collectively, "Personnel") with a need to know the Confidential Information for the purpose of performing the Master Services Agreement and shall, prior to disclosure of any Confidential Information to any Personnel, inform all such Personnel that the use and dissemination of any Confidential Information is subject to the terms and restrictions of this Non-disclosure Agreement and applicable state and federal laws. Except as expressly provided in this Non-disclosure Agreement or as required by the CPRA or a legal order, the Receiving Party shall not disclose the Disclosing Party's Confidential Information to anyone other than its own Personnel without first obtaining the Disclosing Party's prior written consent to the disclosure. The Receiving Party shall protect such Confidential Information from disclosure to others using the same degree of care used to protect its own confidential or proprietary information of like importance, but in any case, using no less than a reasonable degree of care.

b. ABB's contracts with its consultants and subcontractors shall expressly specify that by agreeing to perform Work under the Master Service Agreement, if such Work requires access to the SANITATION DISTRICT's Confidential Information, such consultants or subcontractors must agree to abide by and will abide by the terms of this Non-disclosure Agreement. Before disclosing any Confidential Information to consultants and subcontractors, ABB shall provide such consultants and subcontractors with a copy of this Non-disclosure Agreement and receive the

consultants' or subcontractors' consent that they will comply with its terms and restrictions. ABB shall be responsible for any violations of this Non-disclosure Agreement committed by any of ABB's consultants or subcontractors.

c. The Receiving Party shall ensure that use or access to the Confidential Information by the Receiving Party's Personnel, consultants, and subcontractors (i) shall be solely and exclusively for the performance of their assigned duties in connection with, and in furtherance of, the performance of the Receiving Party's obligations under the Maser Service Agreement and as expressly permitted hereunder and (ii) shall not be commercially exploited in any manner whatsoever.

4. Legal Disclosures. If, in the opinion of its counsel, the Receiving Party becomes legally obligated to disclose the Confidential Information, the Receiving Party shall, prior to the disclosure of such Confidential Information, give the Disclosing Party prompt written notice so that the Disclosing Party may seek a restraining order or other form of relief. The Receiving Party shall disclose only such Confidential Information as is required, in the opinion of its counsel.

5. Ownership of Confidential Information. All Confidential Information disclosed under this Non-disclosure Agreement shall remain the exclusive property of the Disclosing Party and the Receiving Party shall have no right, by license or otherwise, to use the Confidential Information except as expressly provided herein. No patent, copyright, trademark, or other proprietary right is licensed, granted, or otherwise conveyed by this Non-disclosure Agreement with respect to Confidential Information.

6. Return of Confidential Information. All Confidential Information shall be submitted pursuant to the explicit instructions contained in the RFIs and RFP or explicit instructions contained in the Receiving Party's request(s) for the Confidential Information. If the Disclosing Party transmits, or the Receiving Party is in possession of, the Disclosing Party's Confidential Information, specific instructions will be given in the transmittal of the Confidential Information. If ABB is successful in the procurement selection process, Confidential Information from ABB will be retained by the SANITATION DISTRICT for the term/duration of the Master Service Agreement. Unless otherwise authorized by the SANITATION DISTRICT, ABB shall return all of the SANITATION DISTRICT's Confidential Information upon receipt of notification that ABB has been selected to perform the Master Service Agreement. If ABB is unsuccessful in the procurement's selection process, Confidential Information shall be retained until such a time when award is complete and all protests, if any, are settled, at which point the Receiving Party shall promptly return or destroy, as directed by the Disclosing Party, all Confidential Information remaining in its possession.

7. Entire Agreement, Amendment, and Assignment. This Non-disclosure Agreement constitutes the entire agreement between the Parties relating to the matters discussed herein and may be amended or modified only with the written consent of both Parties. This Non-disclosure Agreement or any rights or obligations hereunder shall not be assigned without the express written consent of the other Party. This Non-disclosure Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns.

8. Duration. This Non-disclosure Agreement shall commence on the date first written above and shall continue indefinitely.

9. **Nonwaiver.** Any failure by either Party to enforce the other Party's strict performance of any provision of this Non-disclosure Agreement shall not constitute a waiver of its right to subsequently enforce such provision or any other provision of this Non-disclosure Agreement.

10. **Inadvertent Disclosure.** Neither Party shall be liable for the inadvertent or accidental disclosure of Confidential Information so long as the disclosing Party can demonstrate, to the reasonable satisfaction of the non-disclosing Party, that (i) the disclosure occurred despite the exercise of the degree of care provided for in Section 3 herein and (ii) upon learning of the inadvertent or accidental disclosure, the disclosing Party promptly notified the non-disclosing party of the inadvertent or accidental disclosure and promptly took all reasonable steps to try to remedy the unauthorized disclosure and preclude further disclosure by itself or unauthorized recipients.

11. **No Consequential Damages.** Under no circumstances shall either Party be liable to the other Party for any indirect, special, punitive, or consequential damages, including, but not limited to, loss of opportunity, loss of use, loss of profit, loss of revenue, loss of product, cost of replacement product, or claims of customers or other third parties, whether such claims arise in contract or tort, including, but not limited to, negligence, strict liability, or otherwise.

12. **Governing Law.** This Non-disclosure Agreement shall be governed by the laws of the State of California, with venue in Orange County, without regard to its choice of law provisions and may be executed in counterparts. If a provision of this Non-disclosure Agreement is held invalid under any applicable law, such invalidity shall not affect any other provision of this Non-disclosure Agreement that can be given effect without the invalid provision.


IN WITNESS WHEREOF, the Parties have executed this Non-disclosure Agreement on the date first written above.

ORANGE COUNTY SANITATION DISTRICT

By: 
James D. Herberg, General Manager

Date: 10-16-2019

ABB~~y~~ INC.

By: 
Printed Name: JEFF VENNETTI
Title: VP OPS AMR
Date: 5 OCT 19



**ABB INC.
CORPORATE SECRETARY CERTIFICATE**

The undersigned, W. David Smith, Jr., acting in my capacity as the duly-elected Chief Counsel and Assistant Secretary of ABB Inc., a corporation incorporated and in good standing under the laws of the State of Delaware, having its principal place of business at 305 Gregson Drive Cary, North Carolina, USA (hereinafter termed the "Company"), does hereby certify and confirm the following:

- that by Resolution adopted by the Board of Directors of the Company on February 10, 2005, and further amended on January 6, 2007, and further amended on August 1, 2006, and further amended on January 31, 2013, the Company granted to selected officers of the Company certain transactional signing authority according to which said selected officers were and continue to be authorized to legally bind the Company; and
- further, that Jeffrey Vennetti, HUB BU- Power Generation-Americas IAPG, is according to the Resolution of the Board of Directors, as amended, cited hereinabove, fully authorized to sign on behalf of the Company, contracts having a value of up to Twenty-Five Million U.S. Dollars (US \$25,000,000), such single signature creating a legally-binding obligation of the Company enforceable against the parties thereto in accordance with the terms and conditions of the particular signed contract.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Corporate Seal of the Company this 9th day of October 2019 at the Company's designated office at Memphis, Tennessee.



W. David Smith, Jr.

Subscribed and sworn to before me, a Notary Public, in and for the County of Shelby of the State of Tennessee and the City of Memphis, this 9th day of October 2019.

Notary Public: Norma J. Sultan
My Commission Expires 10-19-2022

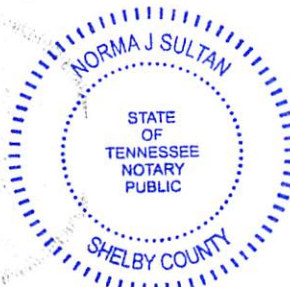


EXHIBIT 4
Unit Prices

Unit Price Schedule 1: Hardware Systems & Components



Item ID	Description	Requirements Reference	Notes	Product Cost	Non-Product Costs	Related Engineering & Documentation	Applicable Taxes.	Unit Price/ EA	List Price	Multiplier	
I/O Devices & Controller Parts											
1-001	Complete Controller assembly (includes controller, backplane, redundant ICS Ethernet communication modules, fiber optic RIO communication module, redundant power supply)	17406		\$ 19,933	N/A	N/A	\$ 1,744	\$ 21,677	\$ 26,577	0.75	
1-002	Complete Redundant Controller assembly (includes redundant controllers, backplanes, redundant ICS Ethernet communication modules, fiber optic RIO communication modules, redundant power supplies)			\$ 23,785	N/A	N/A	\$ 2,081	\$ 25,866	\$ 31,713	0.75	
1-003	Controller rack, non-redundant controller			\$ 8,986	N/A	N/A	\$ 786	\$ 9,772	\$ 11,981	0.75	
1-004	Controller rack, redundant controller			\$ 12,352	N/A	N/A	\$ 1,081	\$ 13,433	\$ 16,469	0.75	
1-005	Controller power supply, redundant			\$ 730	N/A	N/A	\$ 64	\$ 794	\$ 973	0.75	
1-006	Controller power supply, non-redundant			\$ 517	N/A	N/A	\$ 45	\$ 562	\$ 689	0.75	
1-007	Complete Remote RIO rack (minimum 12 slot, includes backplanes, redundant ICS Ethernet communication modules, redundant power supplies)			\$ 10,271	N/A	N/A	\$ 899	\$ 11,169	\$ 13,694	0.75	
1-008	Complete Remote RIO rack (minimum 12 slot, includes backplanes, redundant ICS Fiber communication modules, redundant power supplies)			\$ 10,871	N/A	N/A	\$ 951	\$ 11,822	\$ 14,494	0.75	
1-009	12 slot RIO rack			ABB Note 5	\$ -	N/A	N/A	\$ -	\$ -	\$ -	0.75
1-010	RIO rack power supply, redundant			\$ 730	N/A	N/A	\$ 64	\$ 794	\$ 973	0.75	
1-011	RIO rack power supply, non-redundant			\$ 517	N/A	N/A	\$ 45	\$ 562	\$ 689	0.75	
1-012	Controller to I/O communications module (single mode fiber)			\$ 8,963	N/A	N/A	\$ 784	\$ 9,747	\$ 11,950	0.75	
1-013	Controller to I/O communications module (ethernet)			\$ 8,363	N/A	N/A	\$ 732	\$ 9,094	\$ 11,150	0.75	
1-014	Controller to ICS network communications module			ABB Note 6	\$ -	N/A	N/A	\$ -	\$ -	\$ -	0.75
1-015	RIO to controller communications module (single mode fiber)			\$ 3,652	N/A	N/A	\$ 320	\$ 3,971	\$ 4,869	0.75	
1-016	RIO to controller communications module (ethernet)			\$ 3,052	N/A	N/A	\$ 267	\$ 3,319	\$ 4,069	0.75	
1-017	Analog Input Card - 16 Channel, Isolated, with HART			N/A	\$ -	N/A	N/A	\$ -	\$ -	\$ -	0.75
1-018	Analog Input Card - 16 Channel, Isolated, without HART			N/A	\$ -	N/A	N/A	\$ -	\$ -	\$ -	0.75
1-019	Analog Input Card - 8 Channel, Isolated with HART			\$ 1,250	N/A	N/A	\$ 109	\$ 1,359	\$ 1,666	0.75	
1-020	Analog Input Card - 8 Channel, Isolated without HART			\$ 1,048	N/A	N/A	\$ 92	\$ 1,139	\$ 1,397	0.75	
1-021	Analog Output Card - 8 Channel, Isolated, with HART			\$ 1,568	N/A	N/A	\$ 137	\$ 1,705	\$ 2,091	0.75	
1-022	Analog Output Card - 8 Channel, Isolated, without HART			\$ 1,412	N/A	N/A	\$ 124	\$ 1,536	\$ 1,883	0.75	
1-023	Analog Output Card - 4 Channel, Isolated with HART			N/A	\$ -	N/A	N/A	\$ -	\$ -	\$ -	0.75
1-024	Analog Output Card - 4 Channel, Isolated without HART			\$ 1,808	N/A	N/A	\$ 158	\$ 1,966	\$ 2,411	0.75	
1-025	Discrete Input Card - 32 Channel			\$ 1,461	N/A	N/A	\$ 128	\$ 1,589	\$ 1,948	0.75	
1-026	Discrete Input Card - 16 Channel Isolated 120 VAC			\$ 731	N/A	N/A	\$ 64	\$ 794	\$ 974	0.75	
1-027	Discrete Output Card - 32 Channel Form C Relays minimum 3A per channel			N/A	\$ -	N/A	N/A	\$ -	\$ -	\$ -	0.75
1-028	Discrete Output Card - 16 Channel Form C Relays minimum 3A per channel			\$ 844	N/A	N/A	\$ 74	\$ 918	\$ 1,125	0.75	
1-029	Discrete Output Card - 8 Channel Form C Relays minimum 3A per channel			\$ 512	N/A	N/A	\$ 45	\$ 557	\$ 683	0.75	
1-030	Network module for interface with smart I/O devices			\$ 2,000	N/A	N/A	\$ 175	\$ 2,175	\$ 2,667	0.75	
1-031	Redundant CPU Module			\$ 3,911	N/A	N/A	\$ 342	\$ 4,253	\$ 5,214	0.75	

Note: For all items in UP Schedule 1, Applicable Taxes confirmed by ABB on Teams Meeting 07/29/2020.

Control Panels (for DCS Proposers Only)													
1-200	PCM (Control Panel) (complete except for I/O) NEMA 1 enclosure			\$	50,301	\$	-	\$	4,401	\$	54,703		
1-201	PCM (Control Panel) (complete except for I/O) NEMA 4x SS enclosure			\$	58,643	\$	-	\$	5,131	\$	63,775		
1-202	PCM (Control Panel) (complete except for I/O) NEMA 12 painted enclosure			\$	50,391	\$	-	\$	4,409	\$	54,800		
1-203	PCM (Control Panel) (complete except for I/O) NEMA 4X SS, Refrigerated and Purged enclosure			\$	60,203	\$	-	\$	5,268	\$	65,471		
1-204	PCM (Control Panel) (complete except for I/O) NEMA 1 enclosure			\$	48,362	\$	-	\$	4,232	\$	52,594		
1-205	PCM (Control Panel) (complete except for I/O) NEMA 4x SS enclosure			\$	56,705	\$	-	\$	4,962	\$	61,666		
1-206	PCM (Control Panel) (complete except for I/O) NEMA 12 painted enclosure			\$	48,452	\$	-	\$	4,240	\$	52,692		
1-207	PCM (Control Panel) (complete except for I/O) NEMA 4X SS, Refrigerated and Purged enclosure			\$	51,379	\$	-	\$	4,496	\$	55,874		
1-208	Remote I/O (capable of supporting a minimum of 12 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 1 enclosure			\$	39,925	\$	-	\$	3,493	\$	43,419		
1-209	Remote I/O (capable of supporting a minimum of 12 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 4x SS enclosure			\$	48,267	\$	-	\$	4,223	\$	52,491		
1-210	Remote I/O (capable of supporting a minimum of 12 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 12 painted enclosure	17405	Note 1	\$	39,925	\$	-	\$	3,493	\$	43,419		
1-211	Remote I/O (capable of supporting a minimum of 12 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 4X, SS, Refrigerated and Purged enclosure			\$	48,267	\$	-	\$	4,223	\$	52,491		
1-212	Remote I/O (capable of supporting a minimum of 24 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 1 enclosure			\$	67,293	\$	-	\$	5,888	\$	73,181		
1-213	Remote I/O (capable of supporting a minimum of 24 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 4x SS enclosure			\$	77,195	\$	-	\$	6,755	\$	83,950		
1-214	Remote I/O (capable of supporting a minimum of 24 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 24 painted enclosure			\$	67,383	\$	-	\$	5,896	\$	73,279		
1-215	Remote I/O (capable of supporting a minimum of 24 I/O modules) including secondary termination/marshalling (complete except for I/O) NEMA 4X, SS, Refrigerated and Purged enclosure			\$	77,195	\$	-	\$	6,755	\$	83,950		
1-216	Windows Server Based Controller (This is a mechanism for 'headless' operation of RIO panels)			\$	32,413	\$	-	\$	2,836	\$	35,249		

	\$	67,068	0.75
	\$	78,191	0.75
	\$	67,188	0.75
	\$	80,271	0.75
	\$	64,483	0.75
	\$	75,606	0.75
	\$	64,603	0.75
	\$	68,505	0.75
	\$	53,234	0.75
	\$	64,356	0.75
	\$	53,234	0.75
	\$	64,356	0.75
	\$	89,724	0.75
	\$	102,927	0.75
	\$	89,844	0.75
	\$	102,927	0.75
	\$	43,217	0.75

Peripherals & Networking (for DCS Proposers Only)													
1-400	Vendor router required for interface with the existing ICS network	17430	ABB Note 7	\$	-	N/A	N/A	\$	-	\$	-		

	\$	-	0.00
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Licensing See Licensing Section from Agreement									
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1-600	Complete system license with all optional features as described in Specifications Section 17440 as the Base Requirement - through the completion of Project J-120			\$	2,377,500	N/A	N/A	\$	208,031	\$	2,585,531			
1-601	Complete system license with all optional features as described in Specifications Section 17440 as the Agreement Requirement - from the end of Project J-120 to the end of the initial term of the Agreement	17440	ABB Note 8	\$	4,632,565	N/A	N/A	\$	405,349	\$	5,037,914			
1-602	Complete system license with all optional features as described in Specifications Section 17440 as the Agreement Requirement - for the optional terms after the initial term of the Agreement		ABB Note 9	\$	3,772,494	N/A	N/A	\$	330,093	\$	4,102,587			
1-603	Complete system license for Enterprise Historian (MOM)			\$	968,049	\$	-	N/A	\$	84,704	\$	1,052,753		
1-604	Complete system license - Support Services for Enterprise Historian (MOM) (5-15 Years)			\$	1,058,417	\$	-	N/A	\$	92,611	\$	1,151,028		
1-605	Complete system license - Support Services for Enterprise Historian (MOM) (Optional Additional 10 Years)			\$	830,006	\$	-	N/A	\$	72,625	\$	902,631		
1-606	Complete system license for MSO Reports			\$	145,800	\$	-	N/A	\$	12,758	\$	158,558		
1-607	Complete system license - Support Services for MSO Reports (5-15 Years)			\$	42,082	\$	-	N/A	\$	3,682	\$	45,764		
1-608	Complete system license - Support Services for MSO Reports (Optional Additional 10 Years)			\$	33,003	\$	-	N/A	\$	2,888	\$	35,891		
1-609	Complete system license for Cyber Security software			\$	237,399	\$	-	N/A	\$	20,772	\$	258,171		
1-610	Complete system license - Support Services for Cyber Security software (5-15 Years)			\$	272,893	\$	-	N/A	\$	23,878	\$	296,771		
1-611	Complete system license - Support Services for Cyber Security software (Optional Additional 10 Years)			\$	213,997	\$	-	N/A	\$	18,725	\$	232,722		
1-612				\$	-	\$	-	N/A	\$	-	\$	-		

	\$	3,170,000	0.75	Note A: Price revised by ABB in its response to Technical Clarification Request No. 2.
	\$	4,876,384	0.95	
	\$	3,971,046	0.95	Note: Price revision from one-year to 10-year optional term. Confirmed by ABB on Teams Meeting 07/29/2020. See Note A, above.
	\$	1,290,732	0.75	
	\$	1,114,123	0.95	
	\$	873,690	0.95	
	\$	194,400	0.75	
	\$	44,296	0.95	
	\$	34,740	0.95	
	\$	316,532	0.75	
	\$	287,256	0.95	
	\$	225,260	0.95	
	\$	-	0.00	

Vendor Added Items										
1-700	Feature No 3: Control room solutions: Control Room design, Extended Operator Workplace EOX-x: Pricing from Fiona is included attachment.			\$ 118,695	\$ -	\$ -	\$ 10,386	\$ 129,081	\$ 118,695	1.00
1-701	Feature No 4: ABB Ability™ System 800xA Electrical Control System: Pricing for Interface Modules CI - IEC 61850 and Software Licensing price. Included the all the key modules model numbers as attachment.			\$ 2,088	\$ -	\$ -	\$ 183	\$ 2,270	\$ 2,784	0.75
1-702	Feature No 6: Fieldbus protocols & Field Information Manager: Pricing for All 800xa CI modules for communication protocols and field information manager system. Included the all the key modules model numbers as attachment.			\$ 65,399	\$ -	\$ -	\$ 5,722	\$ 71,122	\$ 87,199	0.75
1-703	Feature No 7: Select IO – Included the all the key modules model numbers as attachment.			\$ 1,608	\$ -	\$ -	\$ 141	\$ 1,749	\$ 2,144	0.75
1-704	24 VDC 16 point digital input card			\$ 470	\$ -	\$ -	\$ 41	\$ 511	\$ 626	0.75
1-705	CI867 - Modbus TCP Interface			\$ 3,808	\$ -	\$ -	\$ 333	\$ 4,141	\$ 5,077	0.75
1-706				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-707				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-708				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-709				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-710				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-711				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-712				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-713				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-714				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-715				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-716				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-717				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-718				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00
1-719				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00

Note: Added by ABB on Teams Meeting 07/29/2020.

Notes

Proposer supplied Field
Calculated Field

- 1 CONTRACTOR to provide all miscellaneous vendor specific hardware required for PCM and Remote I/O panels
- 2 Not Used
- 3 Refer to Unit Price definition. All unit prices are fully burdened with all overhead, profits etc.
- 4 All Hardware and Components are FOB Orange County Sanitation District, Address TBD
- 5 All Control hardware including IO modules are din rail mounted. Slot I/O Rack is not applicable.
- 6 Built into Controller
- 7 This is assumed to be not applicable to DCS bidder
- 8 Price includes J-120 HMI License Maintenance (ABB Energy Care Agreement) for J-120 Price for years 5 to 15 (Shown in 2020 pricing per Q&A No 2 Item 17). To be escalated per the Agreement terms
- 9 Price includes J-120 HMI License Maintenance (ABB Energy Care Agreement) for J-120 Price for the ten (10) year optional term (Shown in 2020 pricing per Q&A No 2 Item 17). To be escalated per the Agreement terms

Unit Price Schedule 3: Labor Rates



Item ID	Description	Notes	Raw Labor Rate	Fringe Costs	Profit	Unit Prices / EA
3-001	Project Manager, Hourly Rate		\$ 138	\$ -	\$ 74	\$ 212
3-002	Project Controls and Schedule Engineer, Hourly Rate		\$ 80	\$ -	\$ 43	\$ 123
3-003	Support and Admin Staff, Hourly Rate		\$ -	\$ -	\$ -	\$ -
3-004	Senior Engineer, Hourly Rate		\$ 114	\$ -	\$ 76	\$ 190
3-005	Engineer, Hourly Rate		\$ 90	\$ -	\$ 48	\$ 138
3-006	Engineer Associate or Assistant, Hourly Rate		\$ 90	\$ -	\$ 48	\$ 138
3-007	Staging Site Technician, Hourly Rate		\$ -	\$ -	\$ -	\$ -
3-008	Engineering Specialist, Hourly Rate		\$ 122	\$ -	\$ 81	\$ 203
3-009	HMI Graphics Developer / Programmer, Hourly Rate		\$ 90	\$ -	\$ 48	\$ 138
3-010	Junior HMI Graphics Developer / Programmer, Hourly Rate		\$ -	\$ -	\$ -	\$ -
3-011	Systems Integration Specialist, Hourly Rate		\$ 150	\$ -	\$ 81	\$ 231
3-012	Systems Architect Specialist, Hourly Rate		\$ -	\$ -	\$ -	\$ -
3-013	Testing and Simulation Specialist, Hourly Rate	ABB Note 5	\$ 139	\$ -	\$ 93	\$ 232
3-014	Enterprise Historian (5 trips = \$ 2100/Trip)		\$ 10,500	\$ -	\$ -	\$ 10,500
3-015	MSO Reports (6 trips = \$ 2100/Trip)		\$ 12,600	\$ -	\$ -	\$ 12,600
3-016	Cyber Security (2 trips = \$ 2100/Trip)		\$ 4,200	\$ -	\$ -	\$ 4,200
3-017	Control Room Solutions Study		\$ 50,000	\$ -	\$ -	\$ 50,000
3-018			\$ -	\$ -	\$ -	\$ -
3-019			\$ -	\$ -	\$ -	\$ -
3-020			\$ -	\$ -	\$ -	\$ -

Notes (All apply to all items in this schedule)

- 1 Hourly Rate for On-Site/Off-Site Labor
- 2 All required Work must be performed in the United States
- 3 Not Used
- 4 No labor shall be chargeable for company executives per this schedule
- 5 [ABB Field Service rate](#)

Unit Price Schedule 4: Training, Support & Other Costs



Item ID	Description	Requirements Reference	Notes	Engineering/ Design	Product Costs / Use Costs	Software/ Configuration	Installation/ Construction/ Testing	Documentation	Maintenance/ Upgrades/ Services	Labor/Other/ODCs	Sales Tax	Unit Price/EA
Training and Training Systems												
4-001	Classroom Training - 1 Week Users Training		1	\$ 6,117	\$ -	\$ -	N/A	\$ 400	N/A	\$ -	N/A	\$ 6,517.00
4-002	Classroom Training - 3 Days Overview Training		1	\$ 3,670	\$ -	\$ -	N/A	\$ 400	N/A	\$ -	\$ -	\$ 4,070.20
4-003	Classroom Training - 1 Week Maintenance Training		1	\$ 6,117	\$ -	\$ -	N/A	\$ 400	N/A	\$ -	\$ -	\$ 6,517.00
4-004	Classroom Training - 3 Weeks Programmer Training		1	\$ 18,351	\$ -	\$ -	N/A	\$ 400	N/A	\$ -	\$ -	\$ 18,751.00
4-005	Classroom Training - 1 Week Advanced/Specialty Training		1	\$ 6,117	\$ -	\$ -	N/A	\$ 400	N/A	\$ -	\$ -	\$ 6,517.00
4-006	Classroom Training - 1 Day Management Overview		1	\$ 1,223	\$ -	\$ -	N/A	\$ 400	N/A	\$ -	\$ -	\$ 1,623.40
4-007				\$ -	\$ -	\$ -	N/A	\$ -	N/A	\$ -	\$ -	\$ -
4-008				\$ -	\$ -	\$ -	N/A	\$ -	N/A	\$ -	\$ -	\$ -
4-009				\$ -	\$ -	\$ -	N/A	\$ -	N/A	\$ -	\$ -	\$ -
4-010				\$ -	\$ -	\$ -	N/A	\$ -	N/A	\$ -	\$ -	\$ -
4-011	CBT System Development and Delivery		4, ABB Note 9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4-012	CBT Training - 3 Days Overview Training	1820	5	\$ 3,500	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 3,500.00
4-013	CBT Training - 1 Week Maintenance Training		5	\$ 3,500	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 3,500.00
4-014	CBT Training - 3 Weeks Programmer Training		5	\$ 8,000	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 8,000.00
4-015	CBT Training - 1 Week Advanced/Specialty Training		5	\$ 3,500	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 3,500.00
4-016	CBT Training - 1 Week Users Training		5	\$ 3,500	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 3,500.00
4-017	CBT Training - Additional Topics per 1 week		5	\$ 3,500	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 3,500.00
4-018	CBT Content Updates (for 4-012 to 4-017)		5	\$ 25,440	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ 25,440.00
4-019				\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -
4-020				\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -
4-021				\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -
4-022				\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -
Support and Other Costs												
4-023	Support Services - 24-hour phone support (unlimited, direct access to the highest technical support level available) / email, unlimited access, through the completion of Project J-120		ABB Note 10	N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-024	Support Services - Web Based access, unlimited access, through the completion of Project J-120		ABB Note 10	N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-025	Mobilization		6, ABB Note 11	N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-026	Project J-120 Office and staging area equipment and furniture			N/A	\$ 50,000	N/A	N/A	N/A	N/A	\$ -	\$ 4,375	\$ 54,375.00
4-027	Bond costs through the completion of Project J-120			N/A	N/A	N/A	N/A	N/A	\$ 382,500	N/A	N/A	\$ 382,499.84
4-028	N/A			N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-029	Escrow costs for Items 1-604, 1-607 and 1-610 in Unit Price Schedule 1: Hardware Systems & Components, through the completion of Project J-120 (Allowance)		Note 15	N/A	N/A	N/A	N/A	N/A	\$ 103,576	N/A	N/A	\$ 103,576.00
4-030	Escrow costs for Items 1-604, 1-607 and 1-610 in Unit Price Schedule 1: Hardware Systems & Components, from the end of Project J-120 through the initial term of the Agreement (Allowance)		Note 15	N/A	N/A	N/A	N/A	N/A	\$ 119,822	N/A	N/A	\$ 119,822.00
4-031	Migration of Enterprise Wide Graphics to successive graphics version		7	\$ 543,616	\$ -	\$ -	\$ -	\$ -	N/A	\$ -	\$ -	\$ 543,616.00
4-032	Facility Historian System		8, ABB Note 12	\$ -	\$ -	\$ -	\$ -	\$ -	N/A	\$ -	\$ -	\$ -
4-033	Enterprise Historian System		8	\$ 181,680	\$ 968,050	\$ -	\$ -	\$ -	N/A	\$ -	\$ 84,704	\$ 1,234,433.83
4-034	Support Services - 24-hour phone support (unlimited, direct access to the highest technical support level available) / email, unlimited access, from the end of Project J-120 to the end of the initial term of the Agreement			N/A	N/A	N/A	N/A	N/A	\$ 107,525	N/A	N/A	\$ 107,525.00
4-035	Support Services - 24-hour phone support (unlimited, direct access to the highest technical support level available) / email, unlimited access, for the optional terms after the initial term of the Agreement		ABB Note 13	N/A	N/A	N/A	N/A	N/A	\$ 97,750	N/A	N/A	\$ 97,750.00
4-036	Support Services - Web Based access, unlimited access, from the end of Project J-120 to the end of the initial term of the Agreement		ABB Note 14	N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-037	Support Services - Web Based access, unlimited access, for the optional terms after the initial term of the Agreement		ABB Note 14	N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-038	Escrow costs for Items 1-605, 1-608 and 1-611 in Unit Price Schedule 1: Hardware Systems & Components, for the optional terms after the initial term of the Agreement (Allowance)		Note 15	N/A	N/A	N/A	N/A	N/A	\$ 119,822	N/A	N/A	\$ 119,822.00
4-039	N/A			N/A	N/A	N/A	N/A	N/A	\$ -	N/A	N/A	\$ -
4-040												\$ -
4-041												\$ -
4-042												\$ -
4-043												\$ -
4-044												\$ -

ABB confirmed that the license for CBT extends beyond J-120 Project and the price was included under Items 1-601 and 1-602. (Teams Meeting 07/29/2020)

ABB confirmed that this a Unit Price for 4 updates (delivered yearly) for the J-120 Project. In addition, ABB confirmed that this Unit Price will be in effect such that OCSD can procure future updates in 4-year increments. (Teams Meeting 07/29/2020)

ABB confirmed Taxes apply and provided the applicable amount. (Teams Meeting 07/29/2020)

ABB confirmed Taxes apply and provided the applicable amount. (Teams Meeting 07/29/2020)

Notes

- 1 All classroom training shall be performed within 60 miles of OCSD Plant 1
- 2 CBT is Computer Based Training
- 3 Not Used
- 4 Includes all software and licensing for the initial term of the Agreement
- 5 Content Development on CBT for that course
- 6 Office, staging area equipment and furniture
- 7 See RFP section 3.2.4 below in Comments Section
- 8 Work required per Specifications Section 17435
- 9 [All J-120 licensing included in UP Schedule 1, Item ID 1-600](#)
- 10 [No Charge through J-120 completion](#)
- 11 [See 4-026 Pricing for Office, staging area equipment and furniture. Mobilization labor provided in Project J-120 Buildup UP Schedule 3: Labor](#)
- 12 [Facility Historian Licenses included in UP Schedule 1, Item ID 1-600, Labor Costs included as part J120 Build up tab Unit Price Schedule 3: Labor](#)
- 13 [Price for 1 Year in 2020 pricing \(per Q&A No 2 Item 17\) To be escalated per the Agreement terms](#)
- 14 [No Additional charge for Web Services, unlimited access part of standard ABB Care Agreement, included in licenses pricing in UP Schedule 1](#)
- 15 Items 4-029, 4-030 and 4-038 are escrow costs for the additional items only that were added during negotiations. The escrow costs for all other items are included in ABB's Proposal Price. In response to Pricing Clarification Request dated July 17, 2020, ABB confirmed that it will provide the required escrows and that cost for such escrows is included in its proposal. The escrow costs for Items 4-029, 4-030 and 4-038 will be invoiced separately from the escrow costs associated with all other items in this Schedule. This is only for ABB's cost for maintenance of escrow items as an allowance.

Comments:

RFP Section 3.2.4 Migration Plan Implementation Pricing

A. Purpose

The purpose of the Migration Plan Implementation Pricing is to provide the SANITATION DISTRICT with an estimated cost for a major revision to a next generation graphical software package during the term of the Agreement. It is assumed that there will be at least one major revision to the graphical package during the term of the Agreement. The work is expected to be performed entirely by the Proposer and would be comprehensive. In addition to conversion of the SANITATION DISTRICT graphics templates, all of the graphics that will be delivered as a part of Task Order #1 – Project J-120 would be required to be converted to the new standard.

B. Instructions to Proposers

1. The "UP Schedule 4" tab of the Unit Price Schedule includes a single line item for this activity. Proposers are required to provide a lump sum price for the activity.
2. If Proposer proposes forward and backward compatibility of graphic application programming such that no effort is required to port graphics to a newer version for the term of the Agreement, Proposer may enter zero dollars (\$0) for this item. However, the SANITATION DISTRICT will require forward and backward compatibility of graphics application programming as part of the Agreement.

Hardware Replacement Unit Price Buildup

Unit Price Schedule 1: Hardware Systems & Components

Item Number	Description	Quantity Required (For Work Segment)	Unit Price (From Unit Price Schedule 1)	Total Price
I/O Devices & Controller Parts				
1-001	Complete Controller assembly (includes controller, backplane, redundant ICS Ethernet communication modules, fiber optic RIO communication module, redundant power supply)	100	\$ 21,677	\$ 2,167,687
1-002	Complete Redundant Controller assembly (includes redundant controllers, backplanes, redundant ICS Ethernet communication modules, fiber optic RIO communication modules, redundant power supplies)	50	\$ 25,866	\$ 1,293,296
1-007	Complete Remote RIO rack (minimum 12 slot, includes backplanes, redundant ICS Ethernet communication modules, redundant power supplies)	520	\$ 11,169	\$ 5,807,968
1-008	Complete Remote RIO rack (minimum 12 slot, includes backplanes, redundant ICS Fiber communication modules, redundant power supplies)	520	\$ 11,822	\$ 6,147,268
1-012	Controller to I/O communications module (single mode fiber)	520	\$ 9,747	\$ 5,068,294
1-016	RIO to controller communications module (ethernet)	1040	\$ 3,319	\$ 3,451,529
1-020	Analog Input Card - 8 Channel, Isolated without HART	520	\$ 1,139	\$ 592,503
1-022	Analog Output Card - 8 Channel, Isolated, without HART	2080	\$ 1,536	\$ 3,194,510
1-025	Discrete Input Card - 32 Channel	1560	\$ 1,589	\$ 2,478,587
Unit Price Schedule 1: Components TOTAL:				\$ 30,201,639
			PROJECT TOTAL	\$ 30,201,639

J 120 Project - Unit Price Buildup

Unit Price Schedule 1: Hardware Systems & Components

Item Number	Description	Quantity Required Mobilization	Quantity Required Enterprise Submittals	Quantity Required - Plant 1 (Programming, Testing and Commissioning and Installation)	Quantity Required - Plant 2 (Programming, Testing and Commissioning and Installation)	Quantity Required - Collections (Programming, Testing and Commissioning and Installation)	PLC Replacement/Interface & System Configuration and Programming Services	Quantity Required Facility Historians	Quantity Required Demobilization	Quantity Required Additional Base Scope	Quantity Required Enterprise Historian	Quantity Required MSO Reports	Quantity Required MES Enhancement Reports	Quantity Required Cyber-Security	Quantity Required Control Room Solutions Study	Unit Price (From Unit Price Schedule 1)	Total Price		
I/O Devices & Controller Parts																			
1-001	Complete Controller assembly (includes controller, backplane, redundant ICS Ethernet communication modules, fiber optic RIO communication module, redundant power supply)			2												\$ 21,677	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price.	
1-002	Complete Redundant Controller assembly (includes redundant controllers, backplanes, redundant ICS Ethernet communication modules, fiber optic RIO communication modules, redundant power supplies)			5												\$ 25,866	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-003	Controller rack, non-redundant controller			2												\$ 9,772	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-004	Controller rack, redundant controller															\$ 13,433	\$ -		
1-005	Controller power supply, redundant															\$ 794	\$ -		
1-006	Controller power supply, non-redundant			2												\$ 562	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-007	Complete Remote RIO rack (minimum 12 slot, includes backplanes, redundant ICS Ethernet communication modules, redundant power supplies)			1												\$ 11,169	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-008	Complete Remote RIO rack (minimum 12 slot, includes backplanes, redundant ICS Fiber communication modules, redundant power supplies)															\$ 11,822	\$ -		
1-009	12 slot RIO rack			2												\$ -	\$ -		
1-010	RIO rack power supply, redundant															\$ 794	\$ -		
1-011	RIO rack power supply, non-redundant			2												\$ 562	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-012	Controller to I/O communications module (single mode fiber)															\$ 9,747	\$ -		
1-013	Controller to I/O communications module (ethernet)															\$ 9,094	\$ -		
1-014	Controller to ICS network communications module															\$ -	\$ -		
1-015	RIO to controller communications module (single mode fiber)															\$ 3,971	\$ -		
1-016	RIO to controller communications module (ethernet)															\$ 3,319	\$ -		
1-017	Analog Input Card - 16 Channel, Isolated, with HART															\$ -	\$ -		
1-018	Analog Input Card - 16 Channel, Isolated, without HART															\$ -	\$ -		
1-019	Analog Input Card - 8 Channel, Isolated with HART			2												\$ 1,359	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-020	Analog Input Card - 8 Channel, Isolated without HART			2												\$ 1,139	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-021	Analog Output Card - 8 Channel, Isolated, with HART			2												\$ 1,705	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-022	Analog Output Card - 8 Channel, Isolated, without HART															\$ 1,536	\$ -		
1-023	Analog Output Card - 4 Channel, Isolated with HART															\$ -	\$ -		
1-024	Analog Output Card - 4 Channel, Isolated without HART															\$ 1,966	\$ -		
1-025	Discrete Input Card - 32 Channel															\$ 1,589	\$ -		
1-026	Discrete Input Card - 16 Channel Isolated 120 VAC			2												\$ 794	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-027	Discrete Output Card - 32 Channel Form C Relays minimum 3A per channel															\$ -	\$ -		
1-028	Discrete Output Card - 16 Channel Form C Relays minimum 3A per channel			3												\$ 918	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-029	Discrete Output Card - 8 Channel Form C Relays minimum 3A per channel															\$ 557	\$ -		
1-030	Network module for interface with smart I/O devices															\$ 2,175	\$ -		
1-031	Redundant CPU Module															\$ 4,253	\$ -		
Peripherals & Networking																			
1-400	Vendor router required for interface with the existing ICS network															\$ -	\$ -		
Licensing See Licensing Section from Agreement																			
1-600	Complete system license with all optional features as described in Specifications Section 17440 as the Base Requirement - through the completion of Project J-120		1													\$ 2,585,531	\$ 2,585,531		
1-601	N/A															\$ 5,037,514	\$ -		
1-602	N/A															\$ 4,102,587	\$ -		
1-603	Complete system license for Enterprise Historian (MOM)									1						\$ 1,052,753	\$ 1,052,753		
1-604	N/A															\$ 1,151,028	\$ -		
1-605	N/A															\$ 902,631	\$ -		
1-606	Complete system license for MSO Reports										1					\$ 156,558	\$ 156,558		
1-607	N/A															\$ 45,754	\$ -		
1-608	N/A															\$ 35,891	\$ -		
1-609	Complete system license for Cyber Security software													1		\$ 258,171	\$ 258,171		
1-610	N/A															\$ 296,771	\$ -		
1-611	N/A															\$ 232,722	\$ -		
1-612	N/A															\$ -	\$ -		
Vendor Added Items																			
1-700	Feature No 3: Control room solutions: Control Room design, Extended Operator Workplace EOX-x: Pricing from Fionia is included attachment.															\$ 129,081	\$ -		
1-701	Feature No 4: ABB Ability™ System 800xA Electrical Control System: Pricing for Interface Modules CI - IEC 61850 and Software Licensing price. Included the all the key modules model numbers as attachment.			2												\$ 2,270	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-702	Feature No 6: Fieldbus protocols & Field Information Manager: Pricing for All 800xA CI modules for communication protocols and field information manager system. Included the all the key modules model numbers as attachment.															\$ 71,122	\$ -		
1-703	Feature No 7: Select IO - Included the all the key modules model numbers as attachment.															\$ 1,749	\$ -		
1-704	24 VDC 16 point digital input card			2												\$ 511	\$0 - See Note in Column "S".	Note: ABB confirmed quantities and price is included in J-120 Buildup Price. Confirmed by ABB on Teams Meeting 07/29/2020.	
1-705	CI867 - Modbus TCP Interface															\$ 4,141	\$ -		
1-706																\$ -	\$ -		
1-707																\$ -	\$ -		
1-708																\$ -	\$ -		
1-709																\$ -	\$ -		
1-710																\$ -	\$ -		
1-711																\$ -	\$ -		
1-712																\$ -	\$ -		
1-713																\$ -	\$ -		
1-714																\$ -	\$ -		
1-715																\$ -	\$ -		
1-716																\$ -	\$ -		
1-717																\$ -	\$ -		
1-718																\$ -	\$ -		
1-719																\$ -	\$ -		
Unit Price Schedule 1: Components TOTAL:																	\$	4,055,013	

Unit Price Schedule 3: Labor

Item Number	Description (Notes)	Quantity Required Mobilization	Quantity Required Enterprise Submittals	Quantity Required - Plant 1 (Programming, Testing and Commissioning and Installation)	Quantity Required - Plant 2 (Programming, Testing and Commissioning and Installation)	Quantity Required - Collections (Programming, Testing and Commissioning and Installation)	Quantity Required - PLC Replacement/Interface & System Configuration and Programming Services	Quantity Required Facility Historians	Quantity Required Demobilization	Quantity Required Additional Base Scope	Quantity Required Enterprise Historian	Quantity Required MSO Reports	Quantity Required MES Enhancement Reports	Quantity Required Cyber-Security	Quantity Required Control Room Solutions Study	Unit Price (From Unit Price Schedule 3)	Total Price
3-001	Project Manager, Hourly Rate	320	1330	1190	1020	560		8	24	120	80	120	240	120	72	\$ 212	\$ 1,104,849
3-002	Project Controls and Schedule Engineer, Hourly Rate	128	192	192	192	96			16			80	160	60	40	\$ 123	\$ 142,277
3-003	Support and Admin Staff, Hourly Rate															\$ -	\$ -
3-004	Senior Engineer, Hourly Rate	320	1330	1600	1600	560		80	80	100	632	480	1400			\$ 190	\$ 1,554,580
3-005	Engineer, Hourly Rate	160	1330	1500	1500	280		120	320			400	1350			\$ 138	\$ 963,692
3-006	Engineer Associate or Assistant, Hourly Rate	160	665	1200	1150				160							\$ 138	\$ 461,769
3-007	Staging Site Technician, Hourly Rate															\$ -	\$ -
3-008	Engineering Specialist, Hourly Rate												1200	480	400	\$ 203	\$ 422,933
3-009	HMI Graphics Developer / Programmer, Hourly Rate		360	1600	1120	120										\$ 198	\$ 443,077
3-010	Junior HMI Graphics Developer / Programmer, Hourly Rate															\$ -	\$ -
3-011	Systems Integration Specialist, Hourly Rate	160	1330	1300	1300	280		24	120				900	730	600	\$ 231	\$ 1,556,308
3-012	Systems Architect Specialist, Hourly Rate															\$ -	\$ -
3-013	Testing and Simulation Specialist, Hourly Rate															\$ 232	\$ -
3-014	Enterprise Historian (5 trips = \$ 2100/Trip)										1					\$ 10,500	\$ 10,500

Pricing Summary

Item Number	Description	Total Price	
1	Project J-120	\$ 11,818,480	
2	Hardware Replacement	\$ 30,201,639	
3	Migration of Enterprise Wide Graphics to successive graphics version	\$ 543,616	see RFP section 3.2.4 below in Comments Section
4	All licenses and support services from the end of Project J-120 to the end of the initial term of the Agreement	\$ 6,639,003	
5	All licenses and support services for the optional terms after the initial term of the Agreement	\$ 5,371,580	
6	Escrow Costs from the end of Project J-120 through the initial term of the Agreement (Note 2)	\$ 119,822	
7	Escrow Costs for the optional terms of the Agreement (Note 2)	\$ 119,822	
TOTAL		\$ 54,813,963	
6	Enterprise Historian System (Optional, not evaluated)	N/A	

Notes

- 1 See Project J-120 SOW, Specifications Section 17440 licensing for required license types and quantities, see section entitled "Term of Agreement" in the Agreement
- 2 Items 4-029, 4-030 and 4-038 are escrow costs for the additional items only that were added during negotiations. The escrow costs for all other items are included in ABB's Proposal Price. In response to Pricing Clarification Request dated July 17, 2020, ABB confirmed that it will provide the required escrows and that cost for such escrows is included in its proposal. The escrow costs for Items 4-029, 4-030 and 4-038 will be invoiced separately from the escrow costs associated with all other items in this Schedule.

Item Number 1 Summary		
Unit Price Schedule 1: Components TOTAL:	\$ 4,055,013	Hardware and Licensing
Unit Price Schedule 3: Labor TOTAL:	\$ 6,726,786	Labor
Unit Price Schedule 4: Support and other costs TOTAL:	\$ 1,036,681	Training, J-120 Staging & Office, Bonds, Phone and Web Services
Item #1 Project J-120 Total		\$ 11,818,480

Task Order J120 Proposal Price \$ 11,487,840
 Sales Tax on Products \$ 330,640

Comments:

RFP Section 3.2.4 Migration Plan Implementation Pricing

A. Purpose

The purpose of the Migration Plan Implementation Pricing is to provide the SANITATION DISTRICT with an estimated cost for a major revision to a next generation graphical software package during the term of the Agreement. It is assumed that there will be at least one major revision to the graphical package during the term of the Agreement. The work is expected to be performed entirely by the Proposer and would be comprehensive. In addition to conversion of the SANITATION DISTRICT graphics templates, all of the graphics that will be delivered as a part of Task Order #1 – Project J-120 would be required to be converted to the new standard.

B. Instructions to Proposers

1. The “UP Schedule 4” tab of the Unit Price Schedule includes a single line item for this activity. Proposers are required to provide a lump sum price for the activity.
2. If Proposer proposes forward and backward compatibility of graphic application programming such that no effort is required to port graphics to a newer version for the term of the Agreement, Proposer may enter zero dollars (\$0) for this item. However, the SANITATION DISTRICT will require forward and backward compatibility of graphics application programming as part of the Agreement.

Notes

1. Gray Tabs are the actual Unit Prices Schedules, Blue are Pricing buildups
2. Blue Tabs will be corrected AFTER the Gray (Unit Price Schedule) is complete.
3. On the Unit Price Schedules the light blue fields are to filled out by proposer
4. On the Buildup tabs the light yellow fields are to be filled out by proposer

EXHIBIT 5
Contractor Safety Standards

This exhibit is on file at the Clerk of Board Office.

EXHIBIT 6
Escrow Agreement

ESCROW INTELLECTUAL PROPERTY AGREEMENT

This Escrow Intellectual Property Agreement (“Escrow Agreement”) is entered into among ORANGE COUNTY SANITATION DISTRICT, a county sanitation district organized and existing under provisions of the County Sanitation District Act, California Health and Safety Code section 4700 et seq. (“SANITATION DISTRICT”), having an address of 10844 Ellis Avenue, Fountain Valley, California 92708; ABB Inc., a Delaware corporation (“CONTRACTOR”), having an address of 3055 Orchard Drive, San Jose, California 95134; and _____ (“ESCROW AGENT”) having a place of business at _____.

This Escrow Agreement is part of the Agreement for the Design, Installation, Implementation, and Maintenance of a Process Control System between the SANITATION DISTRICT and CONTRACTOR (“Prime Agreement”).

RECITALS

1. Concurrent with the execution of this Escrow Agreement, the SANITATION DISTRICT and CONTRACTOR are entering into the Prime Agreement under which CONTRACTOR shall replace the SANITATION DISTRICT’s existing DEC VAX/VMS-based SCADA Platform running the CRISP SCADA software with a modern Windows-based SCADA Platform that will continue to communicate with the existing Modicon PLCs, as more particularly specified in the Prime Agreement.
2. Under the terms of the Prime Agreement, CONTRACTOR shall grant the SANITATION DISTRICT a license to use certain intellectual property and related documentation necessary to operate and maintain the Work performed under the Prime Agreement. The Prime Agreement requires CONTRACTOR and the SANITATION DISTRICT to enter into this Escrow Agreement which provides for CONTRACTOR’s deposit of certain Escrow Materials with ESCROW AGENT and, under certain circumstances, for the release of such Escrow Materials to the SANITATION DISTRICT.
3. The Escrow Agreement procedure is intended to guarantee the SANITATION DISTRICT access to CONTRACTOR’s intellectual property in the event that CONTRACTOR is unable, unwilling, unavailable, or otherwise prevented from performing its obligations under the Prime Agreement, or if CONTRACTOR is in material breach thereof.
4. Capitalized terms used in this Escrow Agreement and not defined herein shall have the same meanings assigned to them in the Prime Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

AGREEMENT

1. DEFINITION OF ESCROW MATERIALS.

The Escrow Materials shall enable the SANITATION DISTRICT to fully use and benefit from the Intellectual Property in the event CONTRACTOR is unable or unwilling to perform under the terms of the Prime Agreement. At a minimum, the Escrow Materials shall include the following:

- A. All files and source codes required to build and maintain executable object code of all software and firmware for all SCADA Platform software product lines, including, but not limited to, graphics builders, trending packages, network communications drivers, controller algorithms, controller operating systems, and historian and archive systems. This shall include any and all tools (compilers, make files, debuggers, etc.) required to build or maintain said software whether or not provided by a third party. Files shall be organized, annotated, and saved such that a programmer reasonably skilled in the language used in such materials could maintain and support the software without further assistance or references to other materials.
- B. All hardware configurations, circuit board designs, bills of material, specifications, and current manufactures for all components or devices of the SCADA Platform hardware product-line, including, but not limited to, I/O boards, network/communications boards, backplanes, wiring, hardware specifications, and power supplies. Should any of the Escrow Materials described herein require specialized software/hardware tools to render and manifest the designs, CONTRACTOR shall provide such hardware/software, including any necessary licenses, to the SANITATION DISTRICT as part of this Escrow Agreement. All such materials shall be organized, annotated, and saved in such a manner or format that the material may be readily used by a professional who can build, maintain, and support the hardware without further assistance or references to other materials to effectuate the intent of this Escrow Agreement.
- C. All configuration files, application notes, model numbers, manufactures and custom configuration requirements of any VAR/OEM equipment, and third-party software or hardware devices upon which the SCADA Platform product-line depends, including, but not limited to, routers, network interface modules, operating systems, computers, word processors, spreadsheets, and drafting tools. Material shall be organized, annotated, and saved in such a manner or format that the material may be readily used by a trained professional who can build, maintain, and support the hardware without further assistance or references to other materials to effectuate the intent of this Escrow Agreement.
- D. All tools, devices, software, and hardware required for the repair and reproduction of any Escrow Materials shall be provided such that a reasonably skilled professional can effectively and efficiently effectuate the intent of this Escrow Agreement. CONTRACTOR shall provide a list of these tools and devices and their associated licenses.

- E. The Escrow Materials also include all necessary documents demonstrating that the SANITATION DISTRICT possesses necessary licenses and consent to maintain and operate any equipment, software, or procedures installed by CONTRACTOR or relied upon by the SANITATION DISTRICT. For the term of the Prime Agreement, CONTRACTOR agrees to periodically update the Escrow Materials to reflect upgrades to the SCADA Platform as described in the Escrow Agreement.
- F. All software and software-related features provided as part of the Prime Agreement and described in Section 17440, Performance, Growth, and Licensing.

Such Escrow Materials shall also include any updates to materials made available to the SANITATION DISTRICT pursuant to the Prime Agreement.

2. DEPOSIT.

- A. Within thirty (30) days of the SANITATION DISTRICT's approval of the Prime Agreement, CONTRACTOR shall deliver to ESCROW AGENT a sealed package certified by an authorized officer of CONTRACTOR that contains a complete set of the Escrow Materials, as defined in PARAGRAPH 1 ("DEFINITION OF ESCROW MATERIALS") herein (a "Deposit"). In addition to the foregoing, within thirty (30) days of any updates to the Work of the Prime Agreement, CONTRACTOR shall deliver the updated Escrow Materials (a "Maintenance Deposit") to ESCROW AGENT.
- B. CONTRACTOR shall submit the Escrow Materials to the SANITATION DISTRICT in the prevailing industry standard formats. The Escrow Materials shall be in English.
- C. CONTRACTOR hereby agrees that all deposits of Escrow Materials are irrevocably made and CONTRACTOR shall assert no property right to or into the copy of the Escrow Materials deposited.
- D. CONTRACTOR hereby agrees that this is a divisible contract, performance of each Deposit is discrete and independent, and therefore the obligation to deposit Escrow Materials each time is fully performed upon acceptance of the Deposit by ESCROW AGENT.
- E. CONTRACTOR shall perform Maintenance Deposits for all Escrow Materials such that Escrow Materials are, at all times, current with the Work of the Prime Agreement.
- F. CONTRACTOR shall identify the Maintenance Deposit activity in each Task Order's Work schedule and update the Work schedule as required by the Prime Agreement.

3. **RECEIPT BY ESCROW AGENT.** CONTRACTOR shall furnish to ESCROW AGENT a packing list in triplicate describing each Deposit made hereunder. ESCROW AGENT shall issue a receipt for all Escrow Materials received and forward copies of such receipts and packing lists to both the SANITATION DISTRICT and CONTRACTOR.

4. **STORAGE OF MATERIALS; INSPECTION.** ESCROW AGENT shall establish a receptacle under its control for the purpose of storing the Escrow Materials in safekeeping in an appropriate physical facility. ESCROW AGENT shall allow the SANITATION DISTRICT to

inspect the Escrow Materials to confirm that the Deposit is complete and will compile the Escrow Materials into the same version of the Escrow Materials accepted by the SANITATION DISTRICT. Any such inspection shall be in the presence of an authorized representative of ESCROW AGENT. The SANITATION DISTRICT shall provide CONTRACTOR with ten (10) days' notice of any requested inspection and CONTRACTOR, at its option, shall have the right to attend such inspection. Access to the Escrow Materials shall be permitted to authorized representatives of ESCROW AGENT to the extent necessary for ESCROW AGENT to perform its obligations pursuant to this Escrow Agreement.

5. **RECORDS.** ESCROW AGENT agrees to keep complete written records of the activities undertaken and Escrow Materials delivered to ESCROW AGENT pursuant to this Escrow Agreement. During the term of this Escrow Agreement, CONTRACTOR and the SANITATION DISTRICT shall be entitled to inspect the records of ESCROW AGENT with respect to the Escrow Materials at reasonable times, during normal business hours, and upon reasonable notice to ESCROW AGENT.
6. **TERM.** Except as otherwise provided in PARAGRAPH 23 ("SURVIVAL"), this Escrow Agreement shall not terminate upon the termination of the Prime Agreement.
7. **DEFAULT BY CONTRACTOR.** Any of the following events shall constitute events of default by CONTRACTOR which would give the SANITATION DISTRICT the right to receive a single copy of the Escrow Materials from ESCROW AGENT pursuant to PARAGRAPH 8 ("DELIVERY OF ESCROW MATERIALS TO THE SANITATION DISTRICT") hereof:
 - A. CONTRACTOR materially breaches any term of, or fails to meet its obligations under, the Prime Agreement for more than thirty (30) calendar days where such breach negatively affects the operations of the treatment facilities and collection systems.
 - B. CONTRACTOR becomes insolvent or becomes a petitioner or debtor, voluntarily or involuntarily, in any bankruptcy or insolvency proceeding in a U.S. Bankruptcy Court or foreign court; has any receiver appointed for, or makes any assignment for the benefit, of its creditors for a substantial part of CONTRACTOR's assets or business; or enters into any other proceeding for debt relief.
 - C. CONTRACTOR ceases to do business or institutes any proceeding for the liquidation or winding up of its business; dissolution of corporation, joint venture, or partnership; or termination of corporate charter.
 - D. CONTRACTOR ceases to be actively engaged in its usual line of business.
8. **DELIVERY OF ESCROW MATERIALS TO THE SANITATION DISTRICT.** ESCROW AGENT agrees, and is hereby specifically authorized, to provide the Escrow Materials to the SANITATION DISTRICT immediately upon written notice by the SANITATION DISTRICT (a "Default Notice") that one or more of the default events defined in PARAGRAPH 7 ("DEFAULT BY CONTRACTOR") has occurred.
9. **BANKRUPTCY.** CONTRACTOR and the SANITATION DISTRICT acknowledge that this Escrow Agreement is an "agreement supplementary to" the Prime Agreement as provided

in Section 365(n) of Title 11, United States Code (the "Bankruptcy Code"). CONTRACTOR acknowledges that if CONTRACTOR, as a debtor in possession or a trustee in bankruptcy in a case under the Bankruptcy Code, rejects the Prime Agreement or this Escrow Agreement, the SANITATION DISTRICT may elect to retain its rights under the Prime Agreement and this Escrow Agreement as provided in Section 365(n) of the Bankruptcy Code. Upon written request of the SANITATION DISTRICT to CONTRACTOR or the Bankruptcy Trustee, CONTRACTOR or such Bankruptcy Trustee shall not interfere with the rights of the SANITATION DISTRICT as provided in the Prime Agreement and this Escrow Agreement, including the right to obtain the Escrow Materials. CONTRACTOR and the SANITATION DISTRICT agree that this Escrow Agreement stands alone, by itself, and is a divisible contract subject to individual performance of each Deposit.

10. **USE OF ESCROW MATERIALS, CONFIDENTIALITY, LIABILITY FOR DISCLOSURE.** In the event that the SANITATION DISTRICT obtains the Escrow Materials pursuant to the terms hereof, the SANITATION DISTRICT agrees that it will disclose the Escrow Materials only to employees and consultants of the SANITATION DISTRICT who have a need-to-know and need access to the Escrow Materials to perform their duties. The SANITATION DISTRICT may also make a reasonable number of copies of the Escrow Materials for backup and archival purposes. Such Escrow Materials shall be considered Pre-Existing Intellectual Property for the purposes of this Escrow Agreement. The SANITATION DISTRICT agrees not to sell or use the information in the Escrow Materials for any reason other than the purpose stated above and agrees to reasonably handle the Escrow Materials. However, CONTRACTOR agrees that any inadvertent disclosure of Escrow Materials by the SANITATION DISTRICT to unintended persons or parties is not remediable and under no circumstances shall the SANITATION DISTRICT be liable for such inadvertent action or omission.
11. **DELIVERY SITE.** Delivery of the Escrow Materials to the SANITATION DISTRICT or return of the Escrow Materials to CONTRACTOR shall be at the offices of ESCROW AGENT specified above, unless special delivery instructions concerning delivery elsewhere are furnished to ESCROW AGENT by the party authorized hereunder to receive the Escrow Materials.
12. **OBLIGATIONS OF ESCROW AGENT.**
 - A. ESCROW AGENT (a) shall be responsible only for the acceptance, storage, and delivery of the Escrow Materials in accordance with the terms of this Escrow Agreement and for the exercise of due diligence in accordance with the high level of care accorded by fiduciary obligations; (b) shall have no obligation or responsibility to verify or determine that the Escrow Materials deposited with ESCROW AGENT by CONTRACTOR do, in fact, consist of those items which CONTRACTOR is obligated to deliver under this Escrow Agreement; (c) shall bear no responsibility whatsoever to determine the existence, relevance, completeness, currency, or accuracy of the Escrow Materials; and (d) shall be entitled to act in good faith reliance upon any written instruction, instrument, or signature believed in good faith to be genuine and to assume in good faith that any person purporting to give any writing, notice, advice, or written instruction in connection with, or relating to, this Escrow Agreement has been duly authorized to do so.

- B. In the event that ESCROW AGENT is, for any reason, uncertain of its obligation to deliver the Escrow Materials to the SANITATION DISTRICT pursuant to PARAGRAPH 8 (“DELIVERY OF ESCROW MATERIALS TO THE SANITATION DISTRICT”), it shall deliver such materials and it shall initiate an arbitration pursuant to PARAGRAPH 13 (“ARBITRATION”) to resolve such uncertainty. In the event the arbitrator determines that the Escrow Materials should not have been delivered to the SANITATION DISTRICT, the SANITATION DISTRICT shall return the original Escrow Materials to ESCROW AGENT and certify in writing that it has destroyed any copies of such Escrow Materials. Except as expressly provided in this Escrow Agreement, ESCROW AGENT agrees that it will not divulge, disclose, or otherwise make available to third parties whatsoever or make any use whatsoever of the Escrow Materials or any information deposited with it by CONTRACTOR in connection with this Escrow Agreement without the express prior written consent of CONTRACTOR.
13. **ARBITRATION.** Subsequent to ESCROW AGENT’s delivery of the Escrow Materials to the SANITATION DISTRICT pursuant to PARAGRAPH 8 (“DELIVERY OF ESCROW MATERIALS TO THE SANITATION DISTRICT”), if any dispute arises concerning the delivery of the Escrow Materials to the SANITATION DISTRICT by ESCROW AGENT, such dispute shall be settled by arbitration before a single arbitrator selected in accordance with the rules of the American Arbitration Association. Such arbitration shall take place in Orange County, California, within thirty (30) days following the SANITATION DISTRICT’s delivery of a Default Notice to ESCROW AGENT pursuant to PARAGRAPH 8 (“DELIVERY OF ESCROW MATERIALS TO THE SANITATION DISTRICT”), in accordance with the then-prevailing rules of the American Arbitration Association. The arbitrator shall be instructed to render his or her award in writing within fifteen (15) days after the end of the hearing and judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. CONTRACTOR and the SANITATION DISTRICT shall share the cost of the arbitrator and fees equally. However, CONTRACTOR and the SANITATION DISTRICT shall bear their own respective attorneys’ and experts’ fees related to the arbitration.
14. **SUCCESSION OF INTEREST.** This Escrow Agreement is binding on all of CONTRACTOR’s successors-in-interest and all benefits of this agreement inure to the SANITATION DISTRICT.
15. **COMPENSATION.** All costs and expenses for establishing and maintaining the escrow, including, but not limited to, ESCROW AGENT’s compensation and expenses shall be shared equally between the SANITATION DISTRICT and CONTRACTOR. In the event ESCROW AGENT is required to perform any additional or extraordinary services as a result of being escrow holder, including intervention in any litigation or proceeding, ESCROW AGENT shall receive, upon prior written approval of the parties responsible for payment of ESCROW AGENT’s expenses, reasonable compensation for such services and be reimbursed for such reasonable costs incurred, including reasonable attorneys’ fees.
16. **DISCHARGE OF ESCROW AGENT.** ESCROW AGENT may resign and be discharged from its duties or obligations hereunder by giving notice in writing of such resignation to CONTRACTOR and the SANITATION DISTRICT specifying a date when such resignation shall take effect, which date shall be at least sixty (60) days after the date of receipt of

such notice. Prior to the effective date of such resignation, with the prior written consent of the SANITATION DISTRICT, which shall not be unreasonably withheld, CONTRACTOR shall arrange for the services of a new escrow agent and CONTRACTOR and the SANITATION DISTRICT agree to execute and deliver another escrow agreement with such new escrow agent having substantially the same terms as this Escrow Agreement. Upon CONTRACTOR notifying ESCROW AGENT of the name and address of the new escrow agent, ESCROW AGENT agrees to forward the Escrow Materials to such new escrow agent provided that ESCROW AGENT has received payment for its fees and costs pursuant to PARAGRAPH 15 ("COMPENSATION").

17. **MODIFICATION.** These escrow instructions are irrevocable except as they may be revoked or modified by joint written consent of the SANITATION DISTRICT, CONTRACTOR, and ESCROW AGENT.
18. **GOVERNING LAW; VENUE.** This Escrow Agreement shall be construed, governed, and interpreted in accordance with the laws of the United States, State of California, and Orange County without any regard to the conflict-of-laws principles. CONTRACTOR hereby consents to said jurisdiction and venue in Orange County.
19. **NOTICES.** All notices required by this Escrow Agreement shall be sufficiently given:
 - A. upon delivery, if given in person with a signed receipt;
 - B. upon acknowledgment of receipt of electronic transmission, if given by facsimile transmission; or
 - C. five days after deposit in the mail in accordance with the provisions hereof, if given by registered or certified mail (air mail if international), postage prepaid, return receipt requested. All such notices shall be addressed as follows:

If to the SANITATION DISTRICT:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

Attention: Contracts Administration

And

Project Manager,
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

Attention: Donald Cutler

With a Copy To:

Bradley R. Hogin, Esq.
Woodruff, Spradlin & Smart
555 Anton Boulevard, Suite 1200

Costa Mesa, CA 92626

If to CONTRACTOR:

ABB Inc.
3055 Orchard Drive
San Jose, CA 95134

If to ESCROW AGENT:

or to such other person or address as the parties may from time to time designate in a writing delivered pursuant to this PARAGRAPH 19 ("NOTICES").

- 20. **SEVERABILITY.** In the event that any provision of this Escrow Agreement shall be unenforceable or invalid under any applicable law or be so held by applicable court or arbitration decision, such unenforceability or invalidity shall not render this Escrow Agreement unenforceable or invalid as a whole and, in such event, such provision shall be changed and interpreted so as to best accomplish the objectives of such unenforceable or invalid provision within the limits of applicable law or applicable court decisions.
- 21. **WAIVER.** The failure of any party hereto to require performance by another party of any provision hereof shall not affect the full right to require such performance at any time thereafter nor shall the waiver by any party of a breach of any provision hereof by any other party be taken or held to be a waiver of the provision itself.
- 22. **COUNTERPARTS.** This Escrow Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.
- 23. **SURVIVAL.** The following provisions shall survive any (a) termination of this Escrow Agreement or (b) partial termination of this Escrow Agreement with respect to a portion of the Escrow Materials delivered pursuant to PARAGRAPH 8 ("DELIVERY OF ESCROW MATERIALS TO THE SANITATION DISTRICT"); PARAGRAPH 10 ("USE OF ESCROW MATERIALS, CONFIDENTIALITY, LIABILITY FOR DISCLOSURE"), PARAGRAPH 13 ("ARBITRATION"), PARAGRAPH 14 ("SUCCESSION OF INTEREST"), PARAGRAPH 18 ("GOVERNING LAW; VENUE"), PARAGRAPH 19 ("NOTICES"), PARAGRAPH 20 ("SEVERABILITY"), PARAGRAPH 21 ("WAIVER"), PARAGRAPH 22 ("COUNTERPARTS"), and PARAGRAPH 24 ("ENTIRE AGREEMENT").
- 24. **ENTIRE AGREEMENT.** This Escrow Agreement, together with any schedule hereto and the Prime Agreement, constitute the entire agreement between the parties with respect to the subject matter hereof. This Escrow Agreement supersedes all oral, written, or other communications concerning the subject matter of this Escrow Agreement and shall not be altered, amended, or modified except in a writing signed by the duly authorized officers of each party hereto.

25. **PRIORITY OF DOCUMENTS.** For the purposes of resolving inconsistencies and ambiguities of this document and the Prime Agreement, the document highest in precedence per the Prime Agreement shall control.

[Intentionally left blank. Signatures follow on next page.]

DRAFT

IN WITNESS WHEREOF, the parties hereto have caused this Escrow Agreement to be executed as of the last date and year hereinafter written.

ORANGE COUNTY SANITATION DISTRICT

ABB INC.

By: _____
John B. Withers, Chair of the Board

By: _____

Printed Name: _____

Date: _____

Date: _____

ATTEST

ESCROW AGENT

By: _____
Kelly A. Lore, Clerk of the Board

By: _____

Printed Name: _____

Date: _____

Date: _____

APPROVED AS TO FORM

By: _____
Bradley R. Hogin, General Counsel

Date: _____

EXHIBIT 7
General Conditions

GENERAL CONDITIONS



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GENERAL CONDITIONS

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GENERAL CONDITIONS

DEFINITIONS

GC-1 DEFINITIONS

The following definitions are used in the Specifications or other Contract Documents. Their intent and meaning shall be as follows:

Accepted Proposal – A Proposal Accepted by the SANITATION DISTRICT.

Agreement – Agreement for the Design, Installation, Implementation, and Maintenance of a Process Control System or Contract. Agreement, Master Service Agreement, MSA, and Contract may be used interchangeably throughout the Contract Documents.

Amendment – A written order by the SANITATION DISTRICT, made bilaterally by the SANITATION DISTRICT and CONTRACTOR, which covers alterations, changes, additions, or deletions to the Agreement, including, but not limited to, alterations, changes, additions, or deletions necessary for the Work in any manner which are necessary for the proper completion of the Work and which may result in adjustments to the Work, period of performance, or both.

As Built Drawings – A copy of the Plans used by CONTRACTOR to record changes to the Work as specified in the General Requirements.

Beneficial Use – Intended use of a system or sub-system by the SANITATION DISTRICT prior to Final Completion and as dictated by the Task Order.

Board – Board of Directors

Board of Directors – The Board of Directors of the Orange County Sanitation District, which is authorized to award the Contract.

Bond – Performance Bond, Payment Bond, or other instrument of security

Business Day – A day on which the SANITATION DISTRICT offices are open for regular business: Monday through Thursday between the hours of 7:30 A.M. to 5:00 P.M. and Friday between the hours of 7:30 A.M. to 4:00 P.M., (Pacific Time Zone), unless otherwise specified, and excluding the SANITATION DISTRICT Holidays.

Change Order – A written order by the ENGINEER, made bilaterally by the SANITATION DISTRICT and CONTRACTOR or unilaterally by the SANITATION DISTRICT, which covers alterations, changes, additions, or deletions to the Task Order for the Work in any manner which are necessary for the proper completion of the Work and which may result in adjustments to the Contract Price, period of performance, or both.

Claim – A written statement by CONTRACTOR requesting additional time and/or money from the SANITATION DISTRICT arising out of acts or omissions of the SANITATION DISTRICT and/or differing conditions during the performance of the Task Order, which

CONTRACTOR could not have reasonably anticipated at the time of entering into the Task Order, and which is submitted in response to the SANITATION DISTRICT's rejection of, or failure to approve, CONTRACTOR's Request for Change, or otherwise issue a Change Order modifying the Task Order, adjusting the Task Order Price and/or period of performance in a manner consistent with that which CONTRACTOR believes is appropriate. The Claim shall be submitted in the manner and in the time consistent with the requirements set forth in detail herein.

Code – Codes of the State of California as well as any other federal or local law, statute, ordinance, rule, or regulation.

CONSULTANT – Any CONSULTANT retained by the SANITATION DISTRICT or its (sub)consultant(s) who provides design or consulting services in support of the Agreement.

Contract / Contract Documents – The following documents constitute a part of and comprise the Contract Documents: Agreement; Amendment(s); Request for Proposals; CONTRACTOR's Proposal; Task Order Proposals and Task Orders; Performance Bonds; Payment Bonds; insurance certificates and endorsements; Special Provisions, if any; General Conditions; General Requirements; federal, state, and local requirements; Orange County Sanitation District Board of Directors' Ordinance No. OCSD-52 and any amendments thereto; the Policies and Practices of the SANITATION DISTRICT in effect at the time of award of the Agreement through Final Acceptance of individual Task Orders and the Agreement itself (and as applicable to contractors, including CONTRACTOR); Standard Drawings and Typical Details (if any); Plans and Specifications; addenda and notices to Proposers issued prior to the opening of Proposals; plan clarifications; and Supplemental Agreements, including Change Orders issued after award of the Agreement. The precedence of these documents is specified in the Agreement.

Contract Duration – The period of performance provided for in the Agreement and as amended by Amendment.

Contract Price – The cost to perform the Agreement, inclusive of all Task Orders.

Contract/Task Order Milestone / Milestone – A significant performance point in the Work, as provided for in the Contract Documents.

CONTRACTOR – The individual, partnership, joint venture, corporation, or other combination thereof, identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number, who directly contracts with the SANITATION DISTRICT. The term "CONTRACTOR" means ABB Inc.

Critical Path – A continuous sequence of schedule network activities with the least amount of total float, ending at a Contract/Task Order Milestone.

Days – Unless otherwise specifically stated, the term "days" will be understood to mean consecutive calendar days.

DISTRICT – Orange County Sanitation District

DISTRICT Holidays – The SANITATION DISTRICT recognizes the following holidays on which its offices are closed for regular business: New Year’s Day, Lincoln’s Birthday, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, the day after Thanksgiving Day, Christmas Eve, and Christmas Day. Holidays that occur on Saturdays and Sundays will be observed on the preceding Fridays and the following Mondays, respectively. The SANITATION DISTRICT reserves the right to recognize additional holidays without prior notice.

Drawings – See Plans.

ENGINEER – SANITATION DISTRICT’s Director of Engineering or designee

Extra Work – New or unforeseen Work or added Work of a different character or function and for which no basis for payment is prescribed in the Contract Documents or that involves revisions of the details of the Work in such manner as to render inequitable payment under items in CONTRACTOR’s Task Order Proposal.

Final Acceptance for Agreement – Action taken by the SANITATION DISTRICT Board of Directors or as delegated pursuant to the SANITATION DISTRICT Board of Directors’ Ordinance No. OCSD-52, and any amendments thereto, accepting the Work as fully completed.

Final Acceptance for Task Order – Action taken by the ENGINEER, or designee, accepting the Work as fully completed.

Final Completion / Contract Completion / Completion / Completion Date – The Agreement or Task Order Milestone recognized through action taken by the ENGINEER certifying that the Work is fully completed under the Contract Documents for the Agreement or Task Order, as applicable, prior to the SANITATION DISTRICT’s acceptance of the Work as fully completed.

Float – The flexibility that an activity has against the Critical Path.

Fragnet – A fragment of the schedule network that typically illustrates a particular sequence of activities for thorough analysis.

General Conditions – Legal and contractual instructions to CONTRACTOR setting forth both CONTRACTOR and the SANITATION DISTRICT responsibilities for business-related activities pertaining to the Contract. The term “General Conditions” used in the Specifications shall be interpreted to refer to the General Conditions of the Agreement and Contract Documents.

General Manager – The individual designated by the SANITATION DISTRICT as its Chief Executive Officer and agent.

General Requirements – Legal and contractual instructions to CONTRACTOR setting forth both CONTRACTOR and the SANITATION DISTRICT responsibilities for technical aspects of the Work indicated under the Contract. The term “General Requirements” used in the Specifications shall be interpreted to refer to the General Requirements of the Contract Documents.

INSPECTOR – The individual(s) designated by the ENGINEER as the field Project representative with delegated authority to enforce the requirements of the Contract Documents, subject to approval of the General Manager.

Laboratory – The materials testing laboratory authorized by the SANITATION DISTRICT to test material and Work involved in the Agreement or Task Order.

Law – Any federal, state, or local law, statute, ordinance, rule, regulation, or code.

Legal Address of CONTRACTOR – The address given on CONTRACTOR’s Proposal shall be the legal address of CONTRACTOR and is the designated place to which all notices, letters, or other communications to CONTRACTOR shall be mailed or delivered.

Liquidated Damages – The amount CONTRACTOR shall pay to the SANITATION DISTRICT, as determined by rates and amounts as fixed and agreed in the Agreement and/or Task Order, due to CONTRACTOR’s failure to complete the Work as scheduled in the Agreement and/or Task Order, or to submit and/or update the schedule within the time specified, or for non-compliance with other specified requirements.

Master Service Agreement (MSA) – See Agreement

Notice to Proceed for a Task Order (Task Order NTP) - A written notice given by the SANITATION DISTRICT to CONTRACTOR fixing the date on which the time for performance under the Task Order will commence.

OCSD – Orange County Sanitation District

Operational Acceptance – Written notification by the ENGINEER accepting the Work as operationally complete. Used for the purpose of placing equipment or systems in service before all of the Work is completed in the Agreement or Task Order.

OWNER – Orange County Sanitation District

Payment Bond– A bond required from CONTRACTOR to secure payment to Subcontractors, laborers, mechanics, and Suppliers employed on the Work of the Task Order.

Performance Bond– A bond required from CONTRACTOR at the time of execution of a Task Order which guarantees faithful performance of the Task Order by CONTRACTOR.

Performance Schedule –CONTRACTOR’s accepted Task Order Baseline Schedule as it evolves through periodic updates that record actual progress of the Work to completion, when it shall show the “as-built” record of CONTRACTOR’s work plan as executed.

Plans – The part of the Contract Documents consisting of the plans, profiles, typical and general cross-sections, working drawings, or exact reproductions thereof, which show the location, character, dimensions, and details of the Work to be done.

Project – The entire scope of Work covered by all Contract Documents.

Proposal – A form, or forms, completed in its (their) entirety, submitted in response to the SANITATION DISTRICT’s Request for Proposals, stating the Proposer’s offer to both furnish all materials and to perform all Work required under the Agreement.

Proposal Withdrawal – A signed written request by a Proposer delivered any time prior to the time fixed for receiving Proposals as published in the Request for Proposals. The request for withdrawal shall be executed by the Proposer or its duly authorized agent and must be filed with the Secretary of the Board prior to said Proposal time.

Proposer – Any individual, firm, corporation, partnership, joint venture, or other combination thereof submitting a Proposal for Work contemplated under the Agreement. A Proposer may act directly or through a duly authorized representative.

Proposing Period – The time period allowed to a Proposer for preparation of a Proposal.

Record Drawings – Construction drawings from completed projects maintained by the SANITATION DISTRICT as a record of how facilities were actually constructed. These are generally created from the original Request for Proposals plans, addendum and Change Order drawings, and CONTRACTOR’s as-built copy of the construction plans.

Request for Change – A written request by CONTRACTOR to the SANITATION DISTRICT for the issuance of a Change Order.

Request for Proposals Documents – All documents provided by the SANITATION DISTRICT or otherwise identified by the SANITATION DISTRICT for performance of the Work on which Proposers base their Proposal, consisting of the Contract Documents; Request for Proposals; Performance Bond; Payment Bond; Special Provisions, if any; General Conditions; General Requirements; federal, state, and local requirements; the SANITATION DISTRICT Board of Directors’ Ordinance No. OCSD-52 and any amendments thereto; the Policies and Practices of the SANITATION DISTRICT in effect at the time of Proposal; Specifications; Standard Drawings and Typical Details (if any); Plans and Specifications; and geotechnical reports and subsurface investigation reports provided by the SANITATION DISTRICT, if any, and identified and/or made available to Proposers prior to opening of Proposals.

Request for Proposals – A public notice, published as prescribed by law, fixing the date for the receipt of Proposals.

SANITATION DISTRICT – Orange County Sanitation District

Specifications – Elements of the Contract Documents and revisions which describe the commercial, legal, technical, and non-technical requirements of the Project. Specifications include, but are not limited to, Project Requirements, Provisions, General Conditions, General Requirements, Supplementary Conditions, Technical Specifications, and all revisions made to the Specifications, including Addenda, Change Orders, and Amendments signed by the ENGINEER and authorized by the Board.

Standard Plans / Standard Drawings – Details of standard structures, devices, or instructions referred to on the Plans or in the Specifications by title or number and issued by the SANITATION DISTRICT.

Subconsultant – One appropriately licensed pursuant to the State of California and who contracts directly with CONTRACTOR or with another Subconsultant or Subcontractor of any tier to perform some part of the Work. A Subconsultant does not have any direct contract with the SANITATION DISTRICT related to the Work.

Subcontractor – One who is licensed pursuant to California Business and Professions Code, section 7000 et seq., and who contracts directly with CONTRACTOR or with Subconsultant or another Subcontractor of any tier to perform some part of the Work. A Subcontractor does not have any direct contract with the SANITATION DISTRICT related to the Work.

Supplemental Agreements – Written agreements between the SANITATION DISTRICT and CONTRACTOR covering schedules, drawings, instructions, alterations, amendments, or extensions to the Agreement or Task Order and including Amendments and/or Change Orders.

Supplier – An individual, organization, or firm who is not required for the purposes of the Work to be licensed pursuant to California Business and Professions Code as a contractor or Subcontractor, within the meanings of those terms as defined hereinabove, who provides equipment and/or materials for the Work to CONTRACTOR or a Subcontractor, including that fabricated to a special design, but who does not perform labor at the site except for labor or labor supervision required by some manufacturers as part of their equipment installation for warranty or other purposes or for operation of rented equipment, and only to the extent such labor or labor supervision is excepted from licensing requirements under the California Business and Professions Code, including, but not limited to, section 7040 et seq. The term “Supplier” also includes fabricator, manufacturer, or vendor. For this Agreement, CONTRACTOR is not a Supplier.

Surety or Sureties – The bondsmen or party or parties who guarantee the fulfillment of the Agreement, a portion of the Agreement, or Task Order by Bond and whose signatures are affixed to the Bond.

Task Order Price – The total amount of money for which the Task Order is awarded, as modified by any Change Orders.

Terms – The terms “Approved”, “Directed”, “Satisfactory”, “Accepted”, “Acceptable”, “Proper”, “Required, and “Necessary”, mean as approved, directed, satisfactory, accepted, acceptable, proper, required, and necessary in the opinion of the ENGINEER.

Time of Completion – The period of performance provided for in the Task Order and as amended by Change Order.

Total Float – The amount of time that the actual start and finish of an activity can be delayed along a given network path without delaying the Contract Completion date.

Trade Names – Where a certain product is called by its Trade Name, it is intended as a guide for type and quality.

Typical Details – Details of standard structures, devices, or instructions referred to on the Plans and Specifications by title or number and developed by the SANITATION DISTRICT or designee.

Unavoidable Delay – An interruption of the Work beyond the control of CONTRACTOR and which interruption CONTRACTOR could not have avoided by the exercise of care, prudence, foresight, diligence, and mitigation.

Unit Price – The amount stated in CONTRACTOR's Unit Price Schedule in CONTRACTOR's Proposal for a single unit of an element of the Work.

Work – All the Work specified in the Contract Documents necessary to complete the requirements of the Agreement, (including all Task Orders) requiring CONTRACTOR to furnish equipment, systems, materials, and labor. Also, the completed systems or parts thereof required to be provided under the Contract Documents, including all materials, equipment, and supplies incorporated or to be incorporated in the Project.

EXECUTION OF CONTRACT

GC-2 NOTICE TO PROCEED

After an approval to award a Contract is granted by the SANITATION DISTRICT's Board of Directors (or as delegated pursuant to the SANITATION DISTRICT Board of Directors' Ordinance No. OCSD-52 and any amendments thereto), the SANITATION DISTRICT will forward a Contract to CONTRACTOR for the Work for execution. CONTRACTOR shall deliver an executed Contract, along with the specified Bonds and insurance documents, to the SANITATION DISTRICT within fifteen (15) calendar days from the date of award. Upon receipt of all properly executed documents, the SANITATION DISTRICT shall execute all documents as necessary, establish the effective date of the Contract, and issue a Notice to Proceed for the Agreement, unless the ENGINEER determines that good cause exists to delay the issuance. In such case, the SANITATION DISTRICT may delay issuance of the Notice to Proceed for the Agreement. Said Notice to Proceed for the Agreement shall be forwarded to CONTRACTOR by mail or by any other means which shall provide confirmation of a date and time receipt acknowledgment, including, but not limited to, electronic telecommunication. The time required for completion of the Contract shall begin upon the effective date of the Notice to Proceed for the Agreement. In the event CONTRACTOR does not return the executed Contract, Bonds, and insurance within the specified fifteen (15) day period, the SANITATION DISTRICT reserves the right to commence negotiations with the second-ranked Proposer to pursue the Agreement with such Proposer.

No Proposal shall be considered legally binding upon the SANITATION DISTRICT until the SANITATION DISTRICT, through its Board of Directors, approves the Contract award and CONTRACTOR shall not commence Work prior to the Notice to Proceed. Failure of CONTRACTOR to properly execute the awarded Contract, file acceptable Bonds as provided in the General Conditions, and provide documents evidencing proper insurance

shall be just and sufficient cause for the annulment of the award. CONTRACTOR shall be liable to the SANITATION DISTRICT for any damages resulting therefrom, including reasonable attorney's fees.

GC-3 CONTRACT BONDS

Refer to Agreement

GC-4 INSURANCE

Refer to Agreement

GC-5 CONTRACTOR'S LIABILITY NOT LIMITED BY INSURANCE

Refer to Agreement

CONTROL OF THE WORK

GC-6 AUTHORITY OF THE ENGINEER

The ENGINEER serves as the agent of the SANITATION DISTRICT and will observe the accomplishment of the Work in accordance with the provisions of the Contract. The ENGINEER will decide any and all questions which may arise as to the interpretations of the Contract Documents, the quality and acceptability of materials furnished, and Work performed, the manner of performance, and the rate of progress of the Work. All questions as to the acceptable performance of the Contract on the part of CONTRACTOR shall be decided by the ENGINEER.

It shall be the duty of CONTRACTOR to call the ENGINEER's attention to apparent errors and omissions in the Task Order, Plans, and Specifications. The ENGINEER may, by appropriate written instructions, correct errors and omissions, which instructions shall be as binding upon CONTRACTOR as though contained in the original Contract Documents. The ENGINEER shall have authority to make minor changes in the Work not involving extra or lesser cost, and not inconsistent with the intent of the Contract Documents.

All instructions, rulings, and decisions of the ENGINEER shall be in writing and shall be final and binding on CONTRACTOR unless formal written objection is made as specified herein.

It is expressly agreed that the ENGINEER shall not have the power to waive any of the obligations of the Contract Documents for the furnishing by CONTRACTOR of good and suitable material and for performing the Work as herein described. Failure or omission on the part of the ENGINEER to reject defective or inferior Work or materials or the ENGINEER's release of CONTRACTOR from obligations to remedy the defective or inferior Work shall not imply acceptance of the Work. Upon discovery of said defective Work, CONTRACTOR shall immediately tear out, remove, and properly replace the defective Work without additional compensation. Neither shall such failure or omission, nor any acceptance by the ENGINEER or by the Board, be construed as relieving the responsibilities of CONTRACTOR or its Sureties for a sum of money as may be needed to remove and

replace or to repair any or all Work or materials which is found to be defective or inferior. In such instance, in lieu of the recovery of said sum of money, the Board may permit CONTRACTOR to perform, at CONTRACTOR's own expense, the work of removing and replacing or repairing Work or materials found to be defective or inferior.

The Board shall have the final authority in all matters affecting the Work. Within the scope of the Contract Documents, the ENGINEER shall have the authority to enforce compliance with the Contract Documents. CONTRACTOR shall promptly comply with all instructions from the ENGINEER which are made in accordance with the Contract Documents.

In all matters relating to acceptability of all matters regarding the Work, including, but not limited to, materials and equipment, execution and progress of Work, percentage of completion, the interpretation of Contract Documents, and delays and Claims by CONTRACTOR, the decision of the ENGINEER shall be final and binding unless CONTRACTOR timely follows the appropriate procedures to object to the same as set forth herein under Claims and Disputes, or unless otherwise ordered by the Board.

GC-7 SUPERVISION BY CONTRACTOR

CONTRACTOR is required to give personal attention to the fulfillment of this Contract and to keep the Work under control. CONTRACTOR shall have a copy of the Contract Documents available at the worksite at all times. During CONTRACTOR's absence from the worksite, CONTRACTOR shall provide Key Personnel, as described in the Agreement, with full authority to receive and execute such instructions, orders, or directions as the ENGINEER may issue in connection with the provisions of the Contract Documents. The Key Personnel shall be available on site at all times during progress of the Work.

CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto, and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures, but CONTRACTOR shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure which is indicated in and required by the Contract Documents, except as otherwise provided in the General Conditions, entitled Errors and Omissions.

CONTRACTOR shall be responsible to see that the completed Work complies with the Contract Documents.

Before any Work is done at the worksite, CONTRACTOR shall give written notice to the ENGINEER stating the name, home address, and telephone number of CONTRACTOR's Key Personnel. The ENGINEER shall be informed in writing prior to any change of Key Personnel. A statement naming more than one representative at a time to be in charge, depending upon which is present at the time, will not be acceptable.

CONTRACTOR shall file with the ENGINEER the names, addresses, and telephone numbers of Key Personnel who can be contacted at any time in case of emergency. This Key Personnel must be fully authorized and equipped to correct unsafe or excessively inconvenient conditions on short notice.

If Key Personnel or CONTRACTOR are not present at a particular location of the worksite, the ENGINEER may inform the CONTRACTOR's other personnel or CONTRACTOR's other representatives in charge, regarding an interpretation of the Contract Documents or of any disapproval or rejection of materials or Work performed. Information so given shall be as binding as if given to the CONTRACTOR or Key Personnel.

GC-8 CONTRACTING AND ASSIGNMENT

Subcontractors and Subconsultants not specifically listed in the Proposal will not be recognized as such and will not be allowed to work on the Project. All persons engaged in the Work will be considered as employees of CONTRACTOR and not as independent contractors. No assignment of any portion of the Work or of any obligation or duty under the Contract is permitted without the express prior written consent of the SANITATION DISTRICT and as otherwise authorized by the Contract Documents.

LEGAL RELATIONS AND RESPONSIBILITIES

GC-9 LAWS TO BE OBSERVED

CONTRACTOR shall, at its own cost and expense, observe and keep fully informed regarding all existing and future federal, state, city, county, local agency or special district laws and regulations which may in any manner affect those engaged or employed on the Project or the materials to be used or furnished, or which may in any respect govern, control, or otherwise affect the conduct of the Project or any part thereof. CONTRACTOR shall, at its own cost and expense, furnish all materials required to comply with such laws and regulations. CONTRACTOR shall furnish copies of all valid licenses and certifications required of Suppliers, Subcontractors, or employees for the Work upon the request of the ENGINEER.

If any discrepancy or inconsistency is discovered on the Plans, Specifications, permits, or in the Contract Documents for the Project in relation to any such law, regulation, order, or decree, CONTRACTOR shall forthwith report the same to the SANITATION DISTRICT, in writing, and shall cease operations on that part of the Work until the SANITATION DISTRICT has given CONTRACTOR appropriate instructions as provided for in General Conditions and Errors and Omissions.

CONTRACTOR shall defend and indemnify the SANITATION DISTRICT, the Board of Directors, the ENGINEER, the CONSULTANT, and its subconsultants, each of their directors, officers, employees or agents against any claim or liability arising from or based on the violation of any such law or regulation whether by CONTRACTOR or any of CONTRACTOR's employees or agents, including its Subcontractors, Subconsultants, and Suppliers.

Attention is directed to the following specific regulations and requirements. This list of regulations is not warranted to be complete and the burden of ascertaining legal requirements that must be satisfied shall rest solely with CONTRACTOR.

- A. Alien Labor
- B. Domestic Materials

- C. Employment of Apprentices. CONTRACTOR and any Subcontractor shall comply with the requirements of sections 1777.5 and 1777.6 of the California Labor Code in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Labor Relations, c/o the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

A CONTRACTOR or Subcontractor that is determined by the chief of the Division of Apprenticeship Standards to have knowingly violated Labor Code section 1777.5 shall forfeit as a civil penalty an amount not exceeding One Hundred Dollars (\$100) for each full calendar day of noncompliance. (California Labor Code section 1777.7)

- D. Certified Electricians. Workers performing work for an electrical contractor installing, constructing, or maintaining any electrical system covered by the National Electric Code shall be certified as a General Electrician per California Labor Code section 3099.
- E. Travel and Subsistence Payments. Each worker needed to execute the Work must be paid travel and subsistence payments as defined in the applicable collective bargaining agreements filed in accordance with California Labor Code section 1773.1.
- F. Hours of Labor. CONTRACTOR shall forfeit, as a penalty to the SANITATION DISTRICT, twenty-five dollars (\$25) for each worker employed in the execution of the Contract by CONTRACTOR or any Subcontractor, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) calendar week in violation of the provisions of the Labor Code and, in particular, section 1810 to section 1815 thereof, inclusive, except that work performed by employees of CONTRACTOR in excess of eight (8) hours per day and forty (40) hours during any one (1) week shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than 1-1/2 times the basic rate of pay as provided in said section 1815.
- G. Nondiscrimination in Employment. CONTRACTOR must submit a signed statement pursuant to Government Code section 12940. Projects under this Contract will obligate CONTRACTOR and Subcontractors not to discriminate in employment practices. Proposers must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of Contract. CONTRACTOR must be prepared to comply in all respects with the requirements regarding nondiscrimination including but not limited to California Labor Code section 1735.
- H. Prevailing Wage Rates. CONTRACTOR shall comply with California Labor Code section 1771 by the payment of prevailing wages as established by the Director of the State Department of Industrial Relations. In accordance with Labor Code section 1775, CONTRACTOR and any Subcontractor shall forfeit, as a penalty to the SANITATION DISTRICT, not more than Two Hundred Dollars (\$200) for each calendar day or portion thereof for each worker paid less than the established prevailing rates for such work or craft in which such worker is employed for any Work done under the Contract in violation

of the provisions of the California Labor Code sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to said section 1775, for each day or portion thereof in which each worker was paid less than the prevailing wage rate, the difference between such established prevailing wage rates and the amount paid to each worker shall be paid to each worker by CONTRACTOR. Per California Labor Code section 1773.2, the SANITATION DISTRICT will have on file copies of the prevailing rate of per diem wages at its principal office and at each job site, which shall be made available to any interested party upon request.

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

1. CONTRACTOR shall comply with the registration requirements of Labor Code section 1725.5.
2. CONTRACTOR shall maintain accurate payroll records, shall comply with all of the provisions of Labor Code section 1776, and shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Penalties for non-compliance with the requirements of section 1776 may be deducted from progress payments per section 1776.
3. Pursuant to Labor Code section 1776, CONTRACTOR shall furnish a copy of all certified payroll records to the SANITATION DISTRICT and/or the general public upon request, provided the public request is made through the SANITATION DISTRICT, the Division of Apprenticeship Standards, or the Division of Labor Enforcement of the Department of Industrial Relations.
4. CONTRACTOR shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e).

J. Public Records Act.

1. Ownership and Disclosure

Except as otherwise provided herein, the Agreement, or the Non-disclosure Agreement signed by CONTRACTOR and the SANITATION DISTRICT, all records, documents, Drawings, Plans, Specifications, and all other information relating to the conduct of the SANITATION DISTRICT's business, including information submitted by CONTRACTOR ("Records"), shall become the exclusive property of the SANITATION DISTRICT and shall be deemed public records. Said Records are subject to the provisions of the California Public Records Act (Government Code § 6250 et seq.). The SANITATION DISTRICT's use and disclosure of its records are governed by this Act. The SANITATION DISTRICT will use its best efforts to inform CONTRACTOR of any request for any financial records or documents marked "Trade Secret", "Confidential" or "Proprietary" provided by CONTRACTOR to the SANITATION DISTRICT. The SANITATION DISTRICT will not advise as to the nature or content of documents entitled to protection from disclosure under the California Public Records Act.

2. Litigation Related to Disclosure

In the event of litigation concerning the disclosure of any Records, the SANITATION DISTRICT's sole involvement will be as a stakeholder, retaining the Records until otherwise ordered by a court. The submitting party, at its sole expense and risk, shall be fully responsible for any and all fees for prosecuting or defending any action concerning the Records and shall indemnify and hold the SANITATION DISTRICT harmless from all costs and expenses including attorney's fees in connection with any such action.

- K. Workers' Compensation. Pursuant to the requirements of California Labor Code section 1860, CONTRACTOR shall secure the payment of compensation to CONTRACTOR's employees in accordance with the provisions of section 3700 of the California Labor Code. Prior to the commencement of Work, CONTRACTOR shall sign and file with the SANITATION DISTRICT a certification in the following form:

"I am aware of the provisions of California Labor Code section 3700 which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

- L. Federal Regulations. All requirements applicable, as established by the EPA, OSHA, or other federal regulatory agencies.

GC-10 SAFETY AND ACCIDENT PREVENTION

Refer to General Requirements.

GC-11 GENERAL INDEMNIFICATION

Refer to Agreement

GC-12 JOINT AND SEVERAL LIABILITY

Refer to Agreement

GC-13 PATENTS

Refer to Agreement

GC-14 RESPONSIBILITY FOR LOSS, DAMAGE OR INJURY

Refer to Agreement

GC-15 OWNERSHIP OF PLANS, SPECIFICATIONS, SHOP DRAWINGS IN PROJECT

All Plans, Specifications, shop drawings, other drawings, permits, reports, licenses, etc., used for this Project are the property of the SANITATION DISTRICT and shall not be used for any other work. Nothing in the Contract shall be construed to vest in CONTRACTOR any property right in any Plans, Specifications, shop drawings, other drawings, permits, reports, licenses, or other Project-related documents, nor shall CONTRACTOR obtain any property right in any material, article or structure within the Project area which is in existence

at the time the Contract is awarded or subsequently is furnished by CONTRACTOR to the SANITATION DISTRICT and becomes a part of the Project.

GC-16 PRESERVATION OF PROPERTY

CONTRACTOR shall exercise reasonable care to avoid injury to existing improvements or facilities, utility facilities, any private or public property wherever located, trees, shrubbery, and other landscaping which are not to be removed. CONTRACTOR is required to familiarize itself with the worksite.

All trees, shrubbery, landscaping which are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings, structures and improvements, conduits, pipelines (under or aboveground), sewers, waterlines, highway or street facilities, and any other improvements or facilities with respect to any private or public property wherever located shall be protected from injury or damage. CONTRACTOR shall provide and install suitable safeguards to protect such objects from injury or damage.

If such objects are injured or damaged by reason of CONTRACTOR's operation, they shall be replaced or restored at CONTRACTOR's expense to a condition equivalent to their condition prior to such injury or damage or as required by the Contract Documents.

CONTRACTOR is obligated to respond to a notification of damages to any private or public property wherever located caused by CONTRACTOR's operations by beginning Work on emergency repairs/restorations immediately, and in no event later than 4 hours from said notification, and on non-emergency repairs/restorations within 72 hours of said notification. Within these required timeframes, CONTRACTOR must begin efforts to resolve issues of responsibility for any damages or losses for any asserted claim. CONTRACTOR shall supervise any repairs/restorations or other Work that, at the SANITATION DISTRICT direction, must be performed by parties not employed by CONTRACTOR. For any claims CONTRACTOR asserts are not related to its operations, CONTRACTOR must provide the SANITATION DISTRICT with written notice stating its position and all documentation supporting the same, as well as written proof of referral to its insurance carrier and its determination, along with detailed rationale for any denial of coverage or denial of the claim. Said proof shall be submitted to the SANITATION DISTRICT within 30 days of the date of notification to CONTRACTOR of the damages or losses.

In the event that CONTRACTOR does not respond in the manner required herein and within the required timeframes, the SANITATION DISTRICT may determine the validity of the claim and perform the Work itself or have another contractor or qualified entity perform the Work, and CONTRACTOR's next progress payment shall be reduced in amount commensurate with the cost of the Work and/or resulting damages as a Contract deduction. If the cost of the Work and/or resulting damages exceeds the amounts remaining due under the Contract, CONTRACTOR shall reimburse the SANITATION DISTRICT for all remaining costs and/or damages immediately.

The fact that any pipe or other underground facility is not shown on the Contract Documents, or is shown in a different location, shall not relieve CONTRACTOR of responsibility under this section. CONTRACTOR shall be responsible for avoiding all injury or damage to any type of underground utility facility.

In an emergency affecting the safety of life or property, including adjoining property, CONTRACTOR, without special instructions or authorizations, is authorized to act with discretion to prevent such threatened loss or injury.

GC-17 PERSONAL LIABILITY

Refer to Agreement

GC-18 WARRANTY OF TITLE

No materials, supplies, or equipment for the Work under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest therein or any part thereof is retained by the seller or Supplier. CONTRACTOR warrants clear and good title to all materials, supplies, and equipment installed and incorporated in the Work and agrees, upon completion of all Work, to deliver the Work together with all improvements and appurtenances constructed or placed thereon to the SANITATION DISTRICT free from any claims, liens, encumbrances, or charges and further agrees that neither CONTRACTOR, nor any person, firm, or corporation furnishing any material or labor for any Work covered by the Contract shall have any right to a lien upon the premises or any improvement or appurtenance thereon.

Nothing contained in this section shall defeat or impair the right of such persons furnishing materials or labor, under any bond given by CONTRACTOR for their protection, or any right under any law permitting such persons to look to unpaid funds due CONTRACTOR in possession of the SANITATION DISTRICT. The provisions of this section shall be inserted in all subcontracts and material contracts and notices of its provisions shall be given to all persons furnishing materials for the Work when no formal contract is entered into for such materials.

CONTRACTOR is responsible for, and shall be obligated to pay, all stop payment notice claims asserted and proved to be an obligation of CONTRACTOR.

GC-19 PROPERTY RIGHTS IN MATERIAL

Nothing in these Contract Documents shall be construed as vesting in CONTRACTOR any right of property in the materials used after they have been attached or affixed to the Work or after payment has been made for materials delivered to the worksite or stored subject to or under the control of the SANITATION DISTRICT.

All such materials shall become the property of, and title shall pass to, the SANITATION DISTRICT upon being so attached or affixed or upon payment for materials delivered to the worksite or stored subject to or under the control of the SANITATION DISTRICT. CONTRACTOR shall promptly execute, acknowledge, and deliver to the SANITATION DISTRICT proper bills of sale or other written instruments of title in a form as required by the SANITATION DISTRICT. The written instrument of title shall convey to the SANITATION DISTRICT title to material, goods, and/or equipment for the Work free and clear of debts, claims, liens, mortgages, taxes and/or encumbrances. If title has not been vested in the SANITATION DISTRICT previously, title shall pass to the SANITATION DISTRICT upon Final Acceptance for Agreement and/or Final Acceptance for Task Order.

CONTRACTOR, at its own expense, shall conspicuously mark such material, goods, and equipment necessary for the Work as the property of the SANITATION DISTRICT and shall not permit such material, goods, and equipment necessary for the Work to become commingled with non-SANITATION DISTRICT owned materials, equipment, or goods, and shall take such other steps the SANITATION DISTRICT may require or regard as necessary to vest title to such material, goods, and equipment necessary for the Work to the SANITATION DISTRICT free and clear of debts, claims, liens, mortgages, taxes, and/or encumbrances.

Transfer of title of Work to the SANITATION DISTRICT shall not constitute or imply the SANITATION DISTRICT's acceptance of the Work. Notwithstanding the transfer of title, CONTRACTOR shall continue to be liable and responsible to the SANITATION DISTRICT for any damage to or loss of Work until the Work achieves Final Acceptance for Agreement and/or Final Acceptance for Task Order, as defined herein.

GC-20 RIGHTS IN DATA

Refer to Agreement

GC-21 TERMINATION FOR DEFAULT

Refer to Agreement

GC-22 TERMINATION FOR CONVENIENCE

Refer to Agreement

GC-23 NOTICE AND SERVICE THEREOF

Refer to Agreement

GC-24 PARTIAL INVALIDITY

Refer to Agreement

GC-25 WAIVER OF RIGHTS

Refer to Agreement

GC-26 TAXES

CONTRACTOR shall pay all sales, consumer, use, and other taxes.

GC-27 ASSIGNMENT OF ANTITRUST ACTIONS

In entering into a contract or subcontract to supply goods, services, or materials, CONTRACTOR or Subcontractor offers and agrees to assign to the SANITATION DISTRICT all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C.A. Section 15), or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Par 2 of Division 7 of the California Business and

Professions Code), arising from purchases of goods, services, or materials pursuant to the contract or subcontract. This assignment shall be made and become effective at the time the SANITATION DISTRICT tenders Final Payment to CONTRACTOR, without further acknowledgment by the parties.

GC-28 NOT USED

GC-29 SUBCONTRACTING OR SUBCONSULTING

Refer to the Agreement

GC-30 FLOW-DOWN REQUIREMENTS

Each Subcontract, Subconsultant, and Supplier agreement shall preserve and protect the rights of the SANITATION DISTRICT, its directors, officers, agents, and employees under the Contract Documents with respect to the Work to be performed by the Subcontractor or Subconsultant so that subcontracting or subconsulting thereof will not prejudice such rights and shall allow to the Subcontractor, Subconsultant, or Supplier, unless specifically provided otherwise in the subcontract/subconsultant agreement, the benefits of all rights, remedies, and redress against CONTRACTOR that CONTRACTOR, by the Contract Documents, has against the SANITATION DISTRICT. Where appropriate, CONTRACTOR shall require each Subcontractor, Subconsultant, and Supplier to enter into similar agreements with its sub-Subcontractors or sub-Subconsultants. CONTRACTOR shall make available to each proposed Subcontractor, Subconsultant, or Supplier, prior to the execution of the subcontract, copies of the Contract Documents. In addition, upon the request of the SANITATION DISTRICT, CONTRACTOR shall make available to the SANITATION DISTRICT any and all Subcontract, Subconsultant, and Supplier agreements pertaining to the Project and the Work thereunder. By appropriate agreement, written where legally required for validity, CONTRACTOR shall require:

1. Each Subcontractor, Subconsultant, and Supplier to be bound to CONTRACTOR by the terms of the Contract Documents;
2. Each Subcontractor, Subconsultant, and Supplier to assume toward CONTRACTOR all obligations and requirements and responsibilities, including the responsibility for safety of the Subcontractor's/ Subconsultant's Work, which CONTRACTOR, by the Contract Documents, assumes toward the SANITATION DISTRICT;
3. Each Subcontractor, Subconsultant, and Supplier to require all subcontracted Work to be performed in accordance with the Contract Documents and that with respect to the Work the Subcontractor, Subconsultant, or Supplier performs that the Subcontractor, Subconsultant or Supplier assume toward CONTRACTOR all the obligations and responsibilities which CONTRACTOR assumes toward the SANITATION DISTRICT.
4. Each of its Subcontractors, Subconsultants, or Suppliers to include in their contracts with lower-tier Subcontractors, Subconsultants, or Suppliers these same requirements and to require each Subcontractor, Subconsultant, or Supplier to make copies of the Contract Documents available to the Sub-Subcontractors, Sub- Subconsultant, or sub-Suppliers.

This section does not and shall not operate to relieve CONTRACTOR of any duty or liability under the Contract Documents nor does it create any duty or liability on the part of the SANITATION DISTRICT. CONTRACTOR shall have sole responsibility for promptly settling any disputes between its Subcontractors/Subconsultants and between the Subcontractors/Subconsultants and any of their lower-tier Subcontractors/Subconsultants.

GC-31 SOFTWARE LICENSING AGREEMENT AND PROVISIONS FOR USE

Refer to Agreement

GC-32 ASSIGNMENT

Refer to Agreement

GC-33 WARRANTY (CONTRACTOR'S GUARANTEE)

Refer to Agreement

SCOPE OF WORK

GC-34 GENERAL

The intent of the Request for Proposals Documents, Agreement, General Conditions, General Requirements, Special Provisions, if any, Plans, and the Specifications as they apply to the Project is to prescribe and provide for the complete and finished performance and accomplishment, in every respect, of the entire contemplated Work indicated in the Contract Documents, relating directly to the Project. It shall be understood that CONTRACTOR undertaking the execution of all or any part of such Work shall be required to perform in a craftsman-like manner and in strict compliance with Contract Documents and to furnish and provide in connection therewith all transportation, labor, tools implements, equipment, materials, supplies, services, and other items which are necessary or appurtenant to complete the entire Project, including, but not limited to, all applicable codes, permits, ordinances, regulations, and laws.

GC-35 ERRORS AND OMISSIONS

CONTRACTOR, as part of this Contract, shall agree not to take advantage of errors or omissions in the Contract Documents. It is the duty of CONTRACTOR to promptly notify the ENGINEER in writing of any design, materials, or specified method that CONTRACTOR believes may prove defective or insufficient. If CONTRACTOR believes that a defect or insufficiency exists in design, materials, or specified method and fails to promptly notify the ENGINEER in writing of this belief, CONTRACTOR thereby waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the SANITATION DISTRICT or in any subsequent arbitration or settlement conference between the SANITATION DISTRICT and CONTRACTOR. The ENGINEER, upon receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to CONTRACTOR. Until such instructions are given, any Work done by CONTRACTOR after CONTRACTOR becomes

aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at CONTRACTOR's own risk and CONTRACTOR shall bear all costs arising therefrom. In the event CONTRACTOR believes that the ENGINEER's instruction results in a change to the Contract Documents or Work requiring a change to the period of Contract performance or Contract Price, CONTRACTOR must submit a Request for Change in the time and manner set forth in the section herein entitled Request for Change (Changes at CONTRACTOR's Request).

If CONTRACTOR, either before commencing Work or in the course of the Work, finds any discrepancy between the Contract Documents, or the physical conditions at the worksite, or finds an error or omission on the Plans or in any survey, CONTRACTOR shall promptly notify the ENGINEER in writing of such discrepancy, error, or omission. If CONTRACTOR observes that the Contract Documents are at variance with any applicable law, regulation, order, or decree, CONTRACTOR shall promptly notify the ENGINEER in writing of such conflict. The ENGINEER, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to CONTRACTOR. Until such instructions are given, Work done by CONTRACTOR after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at CONTRACTOR's own risk and CONTRACTOR shall bear all costs arising therefrom. In the event CONTRACTOR believes that the ENGINEER's instruction results in a change to the Contract Documents or Work requiring a change to the period of Contract performance or Contract Price, CONTRACTOR must submit a Request for Change in the time and manner set forth in the section herein entitled Request for Change (Changes at CONTRACTOR's Request).

Any Work or material not herein specified or shown on the Contract Documents, but which by fair implication in the judgment of the ENGINEER should be included therein, shall be accomplished or furnished by CONTRACTOR as part of the Contract requirements.

GC-36 REQUEST FOR CHANGE (CHANGES AT CONTRACTOR'S REQUEST)

A. General

CONTRACTOR may request an equitable adjustment if it considers any Work which is demanded by the ENGINEER in writing to be "Extra Work" and outside the requirements of the Contract Documents or in variance to the same, or otherwise causes CONTRACTOR to accelerate or decelerate the Work or causes a delay to the Work. Equitable adjustments may also be requested if CONTRACTOR identifies what it believes to be errors or omissions of any kind, including design errors or omissions, in the Contract Documents or encounters a differing site condition that could not reasonably have been foreseen and any such occurrence or direction materially changes the Contract Documents or Work and/or which may require a change to the period of performance or Contract Price/Task Order Price (either additive or deductive). CONTRACTOR shall within fifteen (15) days after any such demand, instruction, ruling, occurrence, discovery, or decision is made, notify the ENGINEER in writing by way of a document entitled "Request for Change" (RFC). The RFC shall set out in specific detail all objections such as why the requested Work is not in the scope of the Contract Documents and the reasons therefore and/or the reason why the required Work is outside the scope of the Contract Documents; the identification of the Contract Document, term, condition, or specification

proposed to be altered, changed, added, or deleted; and why CONTRACTOR believes additional compensation or time will or may be due as a result thereof.

Except for RFCs which are made in the manner and within the time stated above, CONTRACTOR shall be deemed to have waived, and does by execution of the Contract knowingly waive, all Claims for Extra Work, damages, and extensions of time resulting from demand, instructions, rulings, and decisions of the ENGINEER. Except for requests for equitable adjustment based on defective Specifications, no requests for equitable adjustment hereunder shall be allowed for any costs incurred more than 15 days before CONTRACTOR gives written notice as required herein. In the case of defective Specifications for which the SANITATION DISTRICT is responsible, if there are any increased direct costs reasonably incurred by CONTRACTOR in attempting to comply with those defective Specifications, CONTRACTOR will be entitled to recovery of any such increased direct costs if the RFC is made in accordance with the procedures set forth herein, Request for Change (Changes At CONTRACTOR's Request) and/or OWNER Initiated Changes. CONTRACTOR, however, is not relieved of its obligation at time of Proposal to have reviewed the Contract Documents and identified any patent errors or omissions in the same and in accordance with the Contract Documents it shall bear all costs arising from any such failure.

B. Request for Change Submissions; Cost and Schedule Proposals

All RFCs shall be dated, numbered sequentially, and shall describe the action or event which CONTRACTOR believes may require equitable adjustment. CONTRACTOR shall also provide a description of possible CONTRACTOR actions or solutions to minimize the cost of the RFC, shall provide a cost and schedule proposal for said Work based upon an estimate of the cost for the anticipated changed Work, and shall submit said price and time impact to the ENGINEER whose approval shall be secured before Work is started. The cost and schedule proposal shall include, at a minimum, the following:

1. A detailed cost breakdown of the changed Work organized and subtitled by specification section in a spreadsheet format specified by the ENGINEER itemizing all costs associated with the Extra Work, deletion, or revision, including Unit Prices, material, labor, equipment, etc. in a manner evidencing the logical computation and allocation of costs. CONTRACTOR must also include all necessary back-up documentation including quantities, labor man-hours, Unit Prices, and Supplier and Subcontractor/Subconsultant quotations to support said estimate and any other data, information, and/or documentation required by the ENGINEER. Costs for preparing cost or schedule proposals are not compensable.
2. If an adjustment to the Contract period of performance is requested, the delay must be substantiated and documented by CONTRACTOR. Unless otherwise directed in writing by the ENGINEER, in accordance with the schedule requirements in the Specifications, an accurately updated Project schedule proving time impacts and actual delay to critical path activity is required and shall be accompanied by any and all documentation as more particularly specified herein, General Conditions, Extension of Time for Delay. CONTRACTOR shall also include the identification of Unit Prices, labor, materials, and/or other cost items including overhead and Subcontractor/Subconsultant costs, which have been or may be added, deleted, or

wasted by such delay and a statement that CONTRACTOR is maintaining records which allow the separately identifiable direct costs due to the delay, and those not incurred as a result of the delay, to be readily identifiable and segregated.

3. In addition, CONTRACTOR shall include with its cost and/or schedule proposal a certification, executed by a duly authorized representative of CONTRACTOR, stating the following:

"I certify that (1) the Request for Change is made in good faith; (2) I have reviewed all supporting documentation and data, which is included herewith, and it is accurate and complete; (3) I have determined from my independent review of the Request for Change that the same is meritorious and that the amount and/or time extension requested accurately reflects the Contract adjustment for which I believe the SANITATION DISTRICT is liable; and (4) I am duly authorized to certify the Request for Change on behalf of CONTRACTOR."

If the Request for Change does not include the statement above, it shall be considered incomplete and shall not be accepted by the SANITATION DISTRICT.

4. CONTRACTOR shall submit three printed copies of the complete proposal along with an electronic copy of the proposal on a compact disc in a file format acceptable to the SANITATION DISTRICT.

Extra Work shall be priced by CONTRACTOR and paid by the SANITATION DISTRICT consistent with the allowable costs set forth in the Unit Price Schedule.

Upon receipt of CONTRACTOR's RFC, the ENGINEER shall review the same and shall promptly advise CONTRACTOR in writing of the final decision. The final decision shall be binding, subject however to the approval of the appropriate delegated authority per the SANITATION DISTRICT Board of Directors' Ordinance No. OCSD-52 and any amendments thereto, to the extent the final decision changes the Contract Documents and a Change Order is required. If additional information is needed to evaluate the Request for Change, the ENGINEER may at its sole discretion request that CONTRACTOR submit such additional information or documentation as may be needed to evaluate the RFC. By issuing any request for additional information, the ENGINEER shall not be deemed to have made a determination as to the merit of CONTRACTOR's Request for Change or as to the nature of the Work in question, and in no event shall it be deemed a direction to proceed with said Work. CONTRACTOR shall submit any further information or documentation requested by the ENGINEER, whose approval shall be secured before Work is started. In the event negotiations are necessary to determine an appropriate cost and/or schedule adjustment to the Contract, CONTRACTOR shall negotiate in good faith with the SANITATION DISTRICT.

C. Authority to Direct Extra Work

The ENGINEER may, when in the best interest of the SANITATION DISTRICT, issue a Change Order to CONTRACTOR to proceed with the Extra Work including the Work identified in the RFC in advance of its cost and schedule proposal submission. The SANITATION DISTRICT reserves the right to reject any requests for equitable adjustment for Extra Work or for additional payment requested as a result of extending

the Work under the Unit Prices which has not been approved by the ENGINEER in the manner herein provided.

When the price for Extra Work, deletions, or other revisions cannot be agreed upon, or CONTRACTOR fails or refuses to negotiate in good faith with respect to the same, the SANITATION DISTRICT may issue a unilateral change using its independent estimate and time impact analysis, as more particularly specified in these General Conditions, Contract Price Adjustments and Payments. The SANITATION DISTRICT may also direct such Work on a time and materials or force account basis.

To the extent the ENGINEER directs Extra Work to be performed on a time and materials or force account basis, such Extra Work shall be performed by CONTRACTOR, and compensated by the SANITATION DISTRICT, in the time and manner set forth in General Conditions section entitled, "Contract Price Adjustments and Payments," Sub-section D thereto, "Time & Material and Force Account Work."

In the event CONTRACTOR disagrees with any findings made by the ENGINEER as it concerns entitlement to a Change Order, or any portion thereof, additional compensation under the Contract, or adjustment to period of performance, CONTRACTOR shall proceed with the Claims procedures set forth herein. CONTRACTOR also agrees to diligently proceed with the performance of the Contract, including the delivery of goods or providing of services in accordance with ENGINEER's instructions. CONTRACTOR's failure to diligently proceed in accordance with ENGINEER's instructions shall be considered a material breach of the Contract.

D. Minor Changes

Changes in the Work not materially affecting the efficiency or usability of the Work, which do not involve extra or lesser cost, and are not inconsistent with the intent of the Contract Documents or detrimental to the Project or to the interests of the SANITATION DISTRICT, may be granted by the ENGINEER to facilitate the Work of CONTRACTOR when such changes are requested, in writing, and submitted to the ENGINEER for approval. In the event such changes are granted in writing by the ENGINEER, the changes shall be made without additional cost to the SANITATION DISTRICT. CONTRACTOR will be responsible for all costs associated with future changes or conflicts that are caused by CONTRACTOR's requested change. It shall be understood that nothing herein shall be construed as granting permissive rights to CONTRACTOR to demand acceptance of such requested changes.

GC-37 OWNER INITIATED CHANGES

A. General

The SANITATION DISTRICT reserves and shall have the right, without invalidating the Contract and without notice to the Surety(ies), to have changes made within the general scope of the Contract Documents consisting of Extra Work, deletions, or other revisions. The signing of the Contract Documents by CONTRACTOR will be deemed to be an agreement on its part to perform Extra Work, as and when ordered by the ENGINEER.

Upon decision of the SANITATION DISTRICT to have Extra Work performed, the ENGINEER will so inform CONTRACTOR, acquainting CONTRACTOR with the essential details of the Extra Work and issue a Request for Proposal. CONTRACTOR shall thereupon, and within fifteen (15) days, prepare a proposal for said Work based upon an estimate of cost and submit said price and time impact analysis to the SANITATION DISTRICT whose approval shall be secured before Work is started. The ENGINEER may, when in the best interests of the SANITATION DISTRICT, order CONTRACTOR to proceed with the Extra Work in advance of proposal submission. The SANITATION DISTRICT reserves the right to reject any Claims for Extra Work or for additional payment claimed as a result of extending the Work under the Proposal prices which have not been approved by the ENGINEER in the manner herein provided.

B. Cost and Schedule Proposal

CONTRACTOR's proposal must include, at a minimum, the items identified in the section entitled "Request for Change (Changes at CONTRACTOR's Request)," sub-section B.1 through B.4.

Extra Work shall be priced by CONTRACTOR and paid by the SANITATION DISTRICT consistent with the allowable costs set forth in the section herein entitled "Contract Price Adjustments and Payment."

The ENGINEER shall review CONTRACTOR's Request for Proposal submission of costs and/or delays and shall promptly advise CONTRACTOR in writing of the final decision as to the adjustment to the Contract Price and/or period of performance, if any, to be made in the Contract Documents. CONTRACTOR shall submit any further information or documentation requested by the ENGINEER, whose approval shall be secured before Work is started. In the event negotiations are necessary to determine an appropriate cost and/or schedule adjustment to the Contract, CONTRACTOR shall negotiate in good faith with the SANITATION DISTRICT. The ENGINEER's final decision shall be binding, subject however to the approval of the appropriate delegated authority per the SANITATION DISTRICT Board of Directors' Ordinance No. OCSD-52 and any amendments thereto, to the extent the final decision changes the Contract Documents and a Change Order is required.

C. Authority to Direct Extra Work

The ENGINEER may, when in the best interests of the SANITATION DISTRICT, order CONTRACTOR to proceed with the Extra Work in advance of its cost and schedule proposal submission. reserves the right to reject any Claims for Extra Work or for additional payment claimed as a result of extending the Work under the Proposal prices which has not been approved by the ENGINEER in the manner herein provided.

When the price for Extra Work, deletions, or other revisions cannot be agreed upon or CONTRACTOR fails or refuses to negotiate in good faith with respect to the same, the SANITATION DISTRICT may issue a unilateral change using its independent estimate and time impact analysis, as more particularly specified in these General Conditions, Contract Price Adjustments and Payments. The SANITATION DISTRICT may also direct such Work on a time and materials or force account basis.

To the extent the ENGINEER directs Extra Work to be performed on a time and materials or force account basis, such Extra Work shall be performed by CONTRACTOR, and compensated by the SANITATION DISTRICT, in the time and manner set forth in General Conditions section entitled, "Contract Price Adjustments and Payments," Sub-section D thereto, "Time & Material and Force Account Work."

In the event CONTRACTOR disagrees with any findings made by the SANITATION DISTRICT as it concerns adjustment to Contract Price or period of performance, CONTRACTOR shall proceed with the Claims procedures set forth herein. CONTRACTOR also agrees to diligently proceed with the performance of the Contract, including the delivery of goods or providing of services in accordance with the SANITATION DISTRICT's instructions. CONTRACTOR's failure to diligently proceed in accordance with the SANITATION DISTRICT's instructions shall be considered a material breach of the Contract.

D. Minor Changes

The ENGINEER may order, in writing, minor changes in the Work not involving an increase or decrease in the Contract Price, not involving a change in the time for completion, and not inconsistent with the Contract Documents or the purposes for which the Work is being constructed. If CONTRACTOR believes that any order for minor changes in the Project involves changes in the Contract Price or time for completion, CONTRACTOR shall not proceed with the minor changes so ordered and shall within fifteen (15) days of the receipt of such order notify ENGINEER in writing of the estimate of the changes in the Contract Price and period of performance believed to be appropriate, and in the manner more particularly set forth herein at Request for Change (Changes At CONTRACTOR's Request).

GC-38 CLAIMS

Refer to Agreement

GC-39 DISPUTES

Refer to Agreement

PROSECUTION AND PROGRESS OF THE WORK

GC-40 PROGRESS OF THE WORK

CONTRACTOR shall not commence Work until a Notice to Proceed for the Agreement and/or Notice to Proceed for a Task Order from the SANITATION DISTRICT has been received. After receipt of the Notice to Proceed, CONTRACTOR shall commence Work and shall thereafter diligently prosecute the same in accordance with the Performance Schedule to complete the Work within the specified time limits of the Contract.

GC-41 TEMPORARY SUSPENSION OF WORK

Refer to Agreement

GC-42 EXTENSION OF TIME FOR DELAY

If the Work should be delayed at any time by Extra Work, by reason of a suspension ordered by the SANITATION DISTRICT, or because of any other act of the SANITATION DISTRICT or its officers or employees without contributory fault or neglect on the part of CONTRACTOR or its agents, employees, Subcontractors/Subconsultants, and/or Suppliers or if the Work should be delayed by reason of strikes or abnormal force or violence of the elements or for any other unforeseeable cause beyond the control and without the fault or negligence of CONTRACTOR, then CONTRACTOR may be entitled to an extension of time for completion of the Work equivalent to the time actually lost by such delay. Requests to extend the Schedule due to inclement weather shall be justified and evaluated consistent with Special Provisions – “Delays Caused by Inclement Weather.”

When any such delays are experienced by CONTRACTOR and a time extension is requested, CONTRACTOR shall submit to the ENGINEER, a written time impact analysis illustrating the effects of the change or delay on the current Contract completion date utilizing the Performance Schedule that is current at the time the change or delay is encountered within the time and manner specified herein and in accordance with Request for Change (Changes At CONTRACTOR’s Request) and OWNER Initiated Changes.

CONTRACTOR shall, within fifteen (15) days from the beginning of any such delay, or within a period of time otherwise agreed upon in writing by the ENGINEER, file a written request with the SANITATION DISTRICT for extension of time which if initiated by CONTRACTOR shall be submitted in the form of a Request for Change, as specified herein, Request for Change (Changes At CONTRACTOR’s Request) or if the change is initiated by the SANITATION DISTRICT by the issuance of a Request for Proposal. Failure to do so shall constitute a waiver thereof. Requests for extensions failing to include the information specified in this section or within the time specified above shall result in the forfeiture of CONTRACTOR’s right to receive any extensions of time requested. The SANITATION DISTRICT will ascertain the facts and the extent of the delay and its findings of the facts thereon shall be final and conclusive.

Each time impact analysis shall include a Fragnet demonstrating how CONTRACTOR proposes to incorporate the change or delay into the current Performance Schedule. The Fragnet shall include the sequence of new and/or existing activity revisions that are proposed to be added to the accepted Performance Schedule that is current at the time the change or delay is encountered.

Each time impact analysis shall demonstrate the estimated time impact based on the events of the delay, the anticipated or actual date of the changed Work performance, the status of Work at that point in time, and the event time computation of all activities affected by the change or delay. The event times used in analysis shall be those included in the latest update of the current Performance Schedule in effect at the time the change or delay was encountered. Time extensions will be granted only to the extent that demonstrated time adjustments for the activity or activities affected exceed the total or remaining float along the critical path of activities at the time of actual delay or changed Work performance. Pursuant to the float sharing requirements as described elsewhere in the Contract Documents, time extensions shall not be granted nor delay damages paid until a delay occurs which:

1. Is beyond the control and without the fault or negligence of CONTRACTOR and its Subcontractors/Subconsultants or Suppliers, at any tier; and
2. Extends actual performance of the Work beyond the current Contract completion date and the most recent date predicted for completion of the Work on the accepted Performance Schedule update that is current as of the time of the delay.

A written request for an extension of time or the granting of an extension of time shall not in itself constitute a basis for any Claim against the SANITATION DISTRICT for additional compensation, or a waiver of the SANITATION DISTRICT's right to strictly enforce the time provisions contained in the Contract Documents. Additionally, granting of an extension of time shall not in itself constitute a basis for any Claim against the SANITATION DISTRICT for additional compensation. CONTRACTOR hereby waives any Claim for additional compensation unless a Claim for additional compensation on account of such delay is filed at the time the request for extension of time is made.

The determination as to whether an extension of time will be granted will be made within sixty (60) days after receipt of a request from CONTRACTOR as provided above. In the event CONTRACTOR disagrees with any findings made by the SANITATION DISTRICT as it concerns adjustment to the period of performance, CONTRACTOR shall proceed with the Claims procedures set forth herein.

No revision to the accepted baseline schedule or updates shall be made without prior written approval from the ENGINEER.

Schedule revisions illustrating the influence of Change Orders and delays shall be incorporated into the Performance Schedule during the first update after agreement is reached.

Any extension of time shall not release the Sureties upon any Bond required under the Contract.

GC-43 LABOR COMPETENCY

If any Subcontractor, Subconsultant, Key Personnel, or person(s) employed by CONTRACTOR shall fail or refuse to carry out the directions of the ENGINEER or, shall appear to the ENGINEER to be incompetent or to act in a disorderly or improper manner, that person(s) shall be discharged immediately on demand of the SANITATION DISTRICT and such person(s) shall not again be employed on the Project.

CONTRACTOR shall bear all costs associated with such discharge of any Subcontractor, Subconsultant, Key Personnel, or person(s) employed by CONTRACTOR and such discharge shall not constitute a basis for any Claim against the SANITATION DISTRICT.

GC-44 USE PRIOR TO FINAL COMPLETION (BENEFICIAL OCCUPANCY)

- A. The SANITATION DISTRICT shall have the right to Beneficially Occupy all or a portion of the Work at no additional cost to the SANITATION DISTRICT.

- B. If the SANITATION DISTRICT elects to Beneficially Occupy any completed or partially completed portions of the Work, the ENGINEER shall so document in writing the scope of Work of which it elects to take possession and an inspection shall be made by CONTRACTOR and ENGINEER of said scope of Work. Based on such inspection, the ENGINEER will attempt to list all incomplete and/or deficient items of Work observed and provide CONTRACTOR with such a list. However, the absence of an item from the list shall not relieve CONTRACTOR of responsibility to perform all of the Work in accordance with the Contract Documents and any and all areas so occupied will be subject to Final Inspection after CONTRACTOR completes all punchlist items before Final Completion. If such prior use by the SANITATION DISTRICT delays the progress of the Work or causes additional expense to CONTRACTOR, CONTRACTOR shall file a written request for extension of time and/or Extra Work as specified elsewhere in the Contract Documents.
- C. Until Final Acceptance of the Work, CONTRACTOR shall guarantee, through the provision and maintenance of sufficient warranties, the following: that the portions of the Work Beneficially Occupied shall perform at all times as part of a fully integrated system consisting of all elements which are being Beneficially Occupied; that the portions of the Work Beneficially Occupied are free from all defects due to faulty materials, equipment, or workmanship; and that CONTRACTOR shall promptly make whatever adjustments or corrections which may be necessary to cure any defects, including repairs of any damage to other parts of the system resulting from such defects. The SANITATION DISTRICT shall promptly give notice to CONTRACTOR of observed defects. In the event that CONTRACTOR fails to make adjustments, repairs, corrections, or other work made necessary by such defects, the SANITATION DISTRICT may do so and charge CONTRACTOR the cost incurred. CONTRACTOR's warranty shall continue as to any corrected deficiency until the latter of (1) the remainder of the original warranty period or (2) one year after acceptance by the SANITATION DISTRICT of the corrected Work. The Performance Bond and Payment Bond shall each remain in full force and effect through the warranty period.
- D. If the SANITATION DISTRICT's need to occupy the Work, or any portions thereof, prior to such time as the Work is complete is caused by CONTRACTOR's failure to complete the Work within the period of performance, including due allowance for extensions of time made in accordance with the Contract Documents, if any, CONTRACTOR shall bear any and all additional costs associated with completing the Work.

GC-45 SUBSTANTIAL COMPLETION

Substantial Completion of the Work means the Work has progressed to the point that the SANITATION DISTRICT can beneficially occupy or utilize the Work as a whole for the purpose for which it is intended and the Work complies with applicable codes and regulations, including, if required, issuance of certificates of occupancy or certificate of suitability for use from the appropriate governmental agencies, as determined by the ENGINEER at his/her sole discretion.

When CONTRACTOR considers that Substantial Completion has been achieved, CONTRACTOR shall notify the ENGINEER that the Work is substantially complete to the required stage and is ready for inspection and shall include with its Notice of Substantial

Completion of the Work a list of minor items, (including CONTRACTOR's punchlist) to be completed or corrected that would not affect Beneficial Occupancy or suitability for use.

After receipt of CONTRACTOR's Notice of Substantial Completion of Work, the ENGINEER and CONTRACTOR, and any other representative as the ENGINEER deems appropriate, shall make an inspection of the Work to determine whether the Work has been completed in accordance with the Contract Documents and to review CONTRACTOR's punchlist. If, in the ENGINEER's sole opinion, the Work has not achieved Substantial Completion, the parties shall cease the inspection and all costs incurred by the SANITATION DISTRICT as a result of the premature inspection shall be deducted from the payments due CONTRACTOR. CONTRACTOR shall thereafter perform all remaining Work to reach Substantial Completion and re-submit its Notice of Substantial Completion of Work. The inspection of the Work will re-commence as set forth above. If the Work has achieved Substantial Completion, a punchlist shall be prepared by the ENGINEER and consist of those items listed by CONTRACTOR to be completed or corrected as supplemented by those items observed during the inspection. Failure to include any items on the punchlist shall not alter the responsibility of CONTRACTOR to complete all Work in accordance with the Contract Documents, nor shall the punchlist amend the Contract Documents. All deficiencies and/or items identified on the punchlist must be corrected within 30 days of said initial inspection conducted at the Substantial Completion phase, unless otherwise specified in writing by the ENGINEER.

CONTRACTOR's property rights as it pertains to Project documentation, including, but not limited to, Plans, Specifications, shop drawings, permits, reports, licenses, etc. is governed by the within section entitled Ownership of Plans, Specifications, Shop Drawings in Project.

GC-46 FINAL COMPLETION AND FINAL ACCEPTANCE

Refer to Agreement

GC-47 TIME OF COMPLETION AND LIQUIDATED DAMAGES

Refer to Agreement

PAYMENT FOR WORK

GC-48 PAYMENT – GENERAL

Refer to Agreement

GC-49 PAYMENT – APPLICATIONS FOR PAYMENT

Refer to Agreement

GC-50 PAYMENT – MOBILIZATION PAYMENT REQUIREMENTS

Refer to Agreement

GC-51 PAYMENT – ITEMIZED BREAKDOWN OF CONTRACT LUMP SUM PRICES

Refer to Agreement

GC-52 CONTRACT PRICE ADJUSTMENTS AND PAYMENTS

A. General

1. Basis of Contract Price Adjustment – General

The basis of a Contract Price adjustment for any change to the Contract Documents consisting of Extra Work, deletion, or other revision shall be determined as specified herein.

For all changes to the Contract Documents that result in a Contract Price adjustment, CONTRACTOR shall submit a cost and schedule proposal in the time and manner specified in the Contract Documents, including General Conditions sections Request for Change (Changes at CONTRACTOR's Request) and OWNER Initiated Changes. CONTRACTOR's proposal must include a detailed cost breakdown itemizing all costs and schedule impacts associated with the Work, including material, labor, equipment, etc., all necessary back-up documentation to support said estimate, and any other data required by the ENGINEER. Delay by CONTRACTOR in submitting any pricing information required herein or negotiating in good faith with the SANITATION DISTRICT with regard to costs proposals for Extra Work, deletions, or other revisions will result in delays in Contract Price adjustment and/or payment to CONTRACTOR and the SANITATION DISTRICT shall not be responsible for any such delays or damages incurred by CONTRACTOR as a result thereof. Also, the failure of CONTRACTOR to submit any pricing information required herein or the failure to negotiate in good faith will prevent the Contract Price adjustment and/or payment to CONTRACTOR, and the SANITATION DISTRICT shall not be responsible for any such damages incurred by CONTRACTOR as a result thereof.

Delays in negotiating an adjustment or in providing substantiating documentation may result in the issuance of a unilateral Change Order using the SANITATION DISTRICT's cost and schedule estimate.

Bilateral Change Order Execution. The execution of a bilateral Change Order is without reservation of right. The execution by the SANITATION DISTRICT and CONTRACTOR shall be deemed to be an unconditional agreement to all Extra Work and adjustments to the Contract Price and Contract Duration related to the change.

No adjustments for Extra Work shall be valid unless submitted in writing by CONTRACTOR and approved in writing by the SANITATION DISTRICT.

2. Allowable Costs for Extra Work – General

a. Credit Items.

Where CONTRACTOR or any tier Subcontractor's portion

of a change involves credit items or deductive changes, CONTRACTOR shall utilize the same markups utilized for additive changes in computing the value of the credit. Contract Duration savings/impacts may also be addressed as appropriate to accurately reflect the nature and impact of the credit item or deductive change on the Work.

b. Performance and Payment Bond Costs.

Performance and Payment Bond costs associated with an adjustment shall be limited to the actual increase arising directly out of the Extra Work and will be paid upon receipt of surety premium invoice that is immediately due and payable by CONTRACTOR. A copy of the Surety's invoice must be provided to document the change in cost of the Bonds.

c. Proposal Costs.

The SANITATION DISTRICT does not compensate for Proposal preparation or cost and schedule proposal preparation costs.

B. Payment

1. Negotiated Price for Extra Work

a. General

The SANITATION DISTRICT will issue a Request for Proposal requesting a cost and schedule proposal for the Extra Work in accordance with these General Conditions, OWNER Initiated Changes. CONTRACTOR's substantiated cost and schedule proposal, which shall conform to the requirements herein and the section herein entitled OWNER Initiated Changes, must be provided within fifteen (15) days from issuance of a Request for Proposal in order to expedite negotiations. Alternatively, if CONTRACTOR requests the change, CONTRACTOR will submit a Request for Change which includes its substantiated cost and schedule proposal conforming to the requirements of the section herein entitled Request for Change (Changes at CONTRACTOR's Request). The SANITATION DISTRICT may request that CONTRACTOR certify the cost and schedule proposal. If warranted, the SANITATION DISTRICT may accept CONTRACTOR's Proposal price for lump sum or unit price amounts in the original or amended form and direct CONTRACTOR to proceed with the Work. No costs for Extra Work shall be valid unless submitted in writing by CONTRACTOR and approved in writing by the SANITATION DISTRICT.

b. Allowable Markup for Extra Work

The allowable markup for Extra Work performed by CONTRACTOR and/or Subcontractor/Subconsultant shall be determined in accordance with the provisions of Sub-section B.4, "Markup" herein, unless otherwise agreed to by the SANITATION DISTRICT.

2. Price for Extra Work on T&M Basis

When the price for the Extra Work cannot be agreed upon, the SANITATION DISTRICT may issue a unilateral change using its independent estimate and time impact analysis. The SANITATION DISTRICT may also direct such Work on a time and materials or force account basis.

Regarding allowable costs, the SANITATION DISTRICT will use those identified above in section A. The SANITATION DISTRICT will pay for the Extra Work based on the accumulation of allowable costs as provided herein.

3. Basis for Establishing Costs

a. Labor

The costs of labor will be the actual cost for wages of workers performing the Extra Work at the time the Extra Work is done, plus employer payments of payroll taxes, Worker's Compensation Insurance, liability insurance, health and welfare, pension, vacation, holiday, training, apprenticeship funds, and other direct costs resulting from federal, state, or local laws as well as assessments or benefits required by lawful collective bargaining agreements. Payroll taxes shall be calculated on base wage only and not on fringe benefits. Fringe benefits shall be applied only to the straight-time component of cost and shall not apply to the premium-time component unless otherwise required by the California Labor Code.

The SANITATION DISTRICT will reimburse Worker's Compensation Insurance costs for Extra Work labor at the pure premium rate approved by the California State Insurance Commissioner at the time the Extra Work is completed.

The use of a labor classification that would increase the Extra Work cost will not be permitted unless CONTRACTOR establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be submitted only when such costs are not included in the invoice for equipment rental. The labor cost for Key Personnel shall be proportioned to all of their assigned Work and only that applicable to Extra Work will be paid.

Non-direct labor costs, including management personnel; office personnel (including clerical and other administrative staff); cost estimating; maintenance mechanics; incidental engineering, and all other indirect costs of the Extra Work and any other costs captured by CONTRACTOR's overhead costs, shall be considered part of markup specified in subsection below and therefore are not recoverable as direct labor costs, unless CONTRACTOR can demonstrate both that the costs (1) are not within CONTRACTOR's overhead costs and (2) occurred as part of or a direct result of the Extra Work.

Incidental engineering costs, referred to in the preceding paragraph, are considered non-direct labor costs and include, but are not limited to, all time spent by engineers for RFI and RFC preparation, Change Order administration, preparation and coordination of shop drawings, attendance at meetings, inspections scheduling, estimating, drawing or manual preparation and revision, Claim preparation, submittal preparation and review, and mix and shoring design.

b. Materials

Unless otherwise specified in the Contract, the cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the quantities involved, plus sales tax, freight, and delivery.

The SANITATION DISTRICT reserves the right to approve materials and sources of supply or to supply materials to CONTRACTOR, if necessary, for the progress of the Work. No markup shall be applied to any material provided by the SANITATION DISTRICT.

1) Transportation Vehicles

No payment will be made for use of CONTRACTOR-owned or rented transportation vehicles (including job trucks) unless the vehicle is utilized (1) by personnel at or below the foreman level; and (2) exclusively in connection with performing Extra Work. In such event, CONTRACTOR will only be entitled to payment for the pro-rata time the vehicle was actually used in connection with the Extra Work, as properly documented and demonstrated by CONTRACTOR. All other use of CONTRACTOR-owned or rented transportation vehicles shall be considered part of CONTRACTOR's markup specified in subsection below.

c. Other Items

The SANITATION DISTRICT may authorize other items that may be required on the Extra Work, including labor, services, material, and equipment. These items must be different in their nature from those required for the Work and be of a type not ordinarily available for CONTRACTOR or Subcontractors.

Invoices describing all such items in detail shall be submitted with the request for payment.

d. Invoices

Suppliers' invoices for material and other expenditures shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the SANITATION DISTRICT may establish the cost of the item involved at the lowest price which was current at the time of the report.

e. General Conditions Costs

No increase in the General Conditions costs shall be allowed for Extra Work unless:

- i. such change extends the Contract Duration; or
- ii. CONTRACTOR demonstrates that an increase in actual General Conditions costs were incurred directly and solely as a result of the Extra Work.

4. Markup

a. Work by CONTRACTOR

The following percentages shall be added to CONTRACTOR's costs and shall constitute the markup for all overhead and profits:

i.	Labor.....	20%
ii.	Materials.....	15%
iii.	Equipment	15%
iv.	Other Items and Expenditures.....	15%

b. Work by Subcontractor/Subconsultant

Subcontractors/Subconsultants performing all or any part of the Extra Work shall apply the same percentages identified in Subsection B.4.a. above, "Work by CONTRACTOR," which shall be added to the Subcontractor's/Subconsultant's costs and shall constitute the markup for all overhead and profits.

c. Contract Unit Prices

The SANITATION DISTRICT will not pay a markup for units with Unit Prices established in the Contract.

d. Other Costs Not Specifically Designated

The specified markups shall be deemed to include all items of expense not specifically designated and as substantiated as direct cost or indirect cost in the Labor, Materials, Other Items, and Invoices.

C. Daily Report by CONTRACTOR

When the price for the Extra Work cannot be agreed upon, CONTRACTOR shall submit a daily report to the ENGINEER on forms approved by the ENGINEER. Include all applicable delivery tickets listing all labor, materials, and equipment involved for the day and other services and expenditures when authorized. Failure to submit the daily report by the close of the next working day may waive any rights for that day. An attempt shall be made to reconcile the report daily and it shall be signed by the ENGINEER and CONTRACTOR. In the event of disagreement, pertinent notes shall be entered by each party to explain points that cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors/Subconsultants or others shall be submitted through CONTRACTOR. The SANITATION DISTRICT will complete its final review of related costs after receipt of all records. The SANITATION DISTRICT reserves its right to correct any errors in said records pertaining to Extra Work, including, but not limited to, cost found as a result of any such review.

The report shall:

1. Show names of workers, classifications, and hours worked.

2. Describe and list quantities of materials used.
3. Show type of equipment, size, identification number, and hours of operation, including loading, transportation, and stand-by time, if applicable.
4. Describe other services and expenditures in such detail as the ENGINEER may require.

D. Time & Material and Force Account Work

Work performed on a time and materials or force account basis will be subject to a Not to Exceed (NTE) amount. CONTRACTOR is to provide written notification to the ENGINEER when it has expended seventy-five percent (75%) of the NTE amount. The notification must contain a cost and schedule proposal for the remaining Extra Work or an estimate to complete with an explanation as to why the remaining Extra Work cannot be priced. The SANITATION DISTRICT may negotiate a fixed price for the remaining Extra Work or if the remaining Extra Work cannot be priced, it may increase the NTE amount. If there is disagreement as to whether the remaining Extra Work can be priced, the SANITATION DISTRICT may issue a unilateral Change Order based on its independent estimate. In addition to the daily records CONTRACTOR is required to submit in accordance with Subsection C "Daily Report by CONTRACTOR" above. If CONTRACTOR seeks additional time arising from the Extra Work, CONTRACTOR shall also submit all documents supporting any alleged time impacts and associated costs in the time and manner required by General Conditions section entitled, "Extension of Time for Delay" and in no event later than fifteen (15) days of completion of the Extra Work.

GC-53 INCREASE OR DECREASE IN UNIT QUANTITIES

Unless otherwise specified in the Agreement or its attachments, increases or decreases in the quantity of a Unit (as defined herein as "a single item or group of items constituting a single unit which is identified as a Unit or Unit priced item in the Unit Price Schedule), will be determined by comparing, at the time of Final Completion, the actual or measured quantity of the Unit used to complete the Work with the estimated quantity of that Unit shown in the Schedule of Prices. If the actual or measured quantity of a Unit varies more than twenty-five percent (25%) above or below the estimated quantity of the Unit, an adjustment may be made upon demand of either party, and such adjustment will be made in accordance with these General Conditions, "Contract Price Adjustments and Payments." In determining the adjustment to the Contract Price, CONTRACTOR must, at a minimum, demonstrate its actual price of the Units, supported by documentation of Supplier/Subcontractor invoiced cost (not including overhead and profit). Said demand shall be made pursuant to these General Conditions, "OWNER Initiated Changes" and/or "Request for Change (Changes at CONTRACTOR's Request)."

The adjustment shall be based upon any increase or decrease in costs due solely to the variations in quantity of the Unit as provided herein. This section shall not apply to variations in quantity due to a Change Order. Furthermore, when the actual or measured quantity of a Unit required to complete the Work is more than a twenty-five percent (25%) increase from the estimated quantity of the Unit, as shown in the Schedule of Prices, the actual or measured quantity of Units up to one hundred twenty-five percent (125%) of the estimated quantity will be paid at the Contract Unit Price shown in the Schedule of Prices.

If neither party makes a demand for an adjustment in Contract Unit Price for actual or measured quantities above one hundred twenty-five percent (125%) or less than seventy-five percent (75%) of the estimated quantity, the SANITATION DISTRICT will pay CONTRACTOR the Contract Unit Price shown in the Schedule of Prices for each such Unit.

GC-54 SUSPENSION OF PAYMENTS

Refer to Agreement

GC-55 SANITATION DISTRICT'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

Refer to Agreement

GC-56 STOP PAYMENT NOTICES

The SANITATION DISTRICT will, at its option and at any time, retain out of any amounts due CONTRACTOR sums sufficient to cover claims plus twenty-five percent (25%) filed pursuant to section 9350 et seq. of the Civil Code of the State of California. CONTRACTOR shall pay to the SANITATION DISTRICT, or the SANITATION DISTRICT may deduct from any such payments made by the SANITATION DISTRICT to CONTRACTOR, all costs and expenses including, but not limited to, administrative and legal expenses incurred by the SANITATION DISTRICT in processing and/or defending against stop payment notices. CONTRACTOR will use the SANITATION DISTRICT's current forms for release of stop payment notices.

GC-57 AUDIT ACCESS TO RECORDS

- A. CONTRACTOR shall maintain all books, records, documents, and other evidence directly pertinent to the performance of the Work under this Contract in accordance with generally accepted accounting principles and practices consistently applied and consistent with those principles set forth in Part 31 of Federal Acquisition Regulation, Contract Cost Principles and Procedures. CONTRACTOR shall also maintain all financial information and data used by CONTRACTOR in the preparation or support of any cost submissions, including CONTRACTOR's original Proposal, required for this Contract or any Change Order, Claim, or other request for equitable adjustment and a copy of the cost summary or information submitted to the SANITATION DISTRICT. The SANITATION DISTRICT authorized representatives shall have access, upon twenty-four (24) hours advanced, written notice at all times during normal business hours, to all such books, records, documents, financial information, and all other evidence for the purpose of inspection, audit, and copying. CONTRACTOR shall, at no cost to the SANITATION DISTRICT, provide proper facilities for such access, inspection, and copying purposes. In the event it is determined, by way of an audit or other means, that CONTRACTOR has been previously overpaid, the SANITATION DISTRICT shall have the right to deduct any such overpayment from CONTRACTOR's next progress payment or the Final Payment, or CONTRACTOR shall within 10 days after receiving notice from the SANITATION DISTRICT of any such overpayment reimburse the SANITATION DISTRICT in an amount equal to the overpayment, plus any applicable interest to which the SANITATION DISTRICT is entitled.

- B. CONTRACTOR shall maintain cost accounting records, cost and pricing data, and any other accounting evidence sufficient to properly reflect all direct and indirect costs of whatever nature CONTRACTOR has incurred, claims to have incurred, or anticipates it will incur in connection with the Contract Work and any and all Change Orders, Requests for Change, and/or Claims, including but not limited to:
1. Direct costs of Contract item Work;
 2. Direct costs of changes and/or Extra Work in conformance with the provisions herein entitled Request for Changes (Changes at CONTRACTOR's Request), whether performed by CONTRACTOR or others;
 3. Direct costs of changes and/or Extra Work in conformance with the provisions herein entitled or OWNER Initiated Changes, whether performed by CONTRACTOR or others; and
 4. Indirect costs of overhead.
- C. CONTRACTOR agrees to make all items (A) through (H) of this section applicable to this Contract and all Change Orders, Claims, or other requests for equitable adjustments affecting the period of performance or price. CONTRACTOR agrees to include items (A) through (H) of this section in all of the associated subcontracts and make these items applicable to all subcontracts, at any tier, in excess of \$10,000 and to make items (A) through (H) of this section applicable to all Change Orders, Claims, and other requests for equitable adjustment related to completion of the Work.
- D. Audits conducted under this section shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing or audit agency.
- E. CONTRACTOR agrees to the disclosure of all information and reports resulting from access to records under items (A) through (H) of this section to the SANITATION DISTRICT and other affected agencies.
- F. Records under Items (A) through (H) of this section shall be maintained and made available during the performance of the Work under this Contract until three (3) years past Final Payment and until final settlement of all disputes, Claims, or litigation, whichever occurs later. In addition, those records which relate to any portion of this Contract, Change Order, dispute, litigation, settlement of any Claims arising out of such performance, or costs or items to which an audit exception has been taken shall be maintained and made available until Final Payment or final resolution of such dispute, litigation, Claim, or exception, whichever occurs later.
- G. This right of access article applies to all financial records pertaining to the Contract and all Change Orders. In addition, this right of access applies to all records pertaining to all contracts, Change Orders, and Contract amendments:
1. To the extent the records pertain directly to Contract performance;

2. If there is any indication that fraud, gross abuse, or corrupt practices may be involved; or
3. If CONTRACTOR's performance under the Contract is terminated for default or convenience.

H. Access to records is not limited to the required retention periods. The authorized representatives of the SANITATION DISTRICT shall have access to records at any reasonable time for as long as the records are maintained.

GC-58 RETAINED FUNDS; SUBSTITUTION OF SECURITIES

Refer to Agreement

GC-59 FINAL PAYMENT

Refer to Agreement

MISCELLANEOUS

GC-60 GOVERNING LAW

Refer to Agreement

GC-61 NOT USED

EXHIBIT 8
General Requirements

GENERAL REQUIREMENTS

GENERAL REQUIREMENTS

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GENERAL

GR-1 ABBREVIATIONS

The following abbreviations are used in the Specifications and other Contract Documents. The words represented by the abbreviations are as follows:

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA.....	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACGIH.....	American Conference of Governmental Industrial Hygienists
AEIC.....	Association of Edison Illuminating Companies
AF&PA	American Forest & Paper Association
ABMA.....	American Bearing Manufacturers Association
AGA	American Gas Association
AGMA.....	American Gear Manufacturers Association
AI.....	Asphalt Institute
AIHA.....	American Industrial Hygiene Association

AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standard Committee
AMCA	Air Moving and Conditioning Association
ANLA	American Nursery & Landscape Association
ANSI	American National Standards Institute
APA	APA - The Engineered Wood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Safety Engineers
ASTM	ASTM International
AWI	Architectural Woodwork Institute
AWC	American Wood Council
AWPA	American Wood Protection Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BICSI	Building Industry Consulting Service International
BLS	U.S. Bureau of Labor Statistics
Caltrans	California Department of Transportation
Cal/OSHA	CA occupational safety and health regulations administered by DOSH
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CCC	California Coastal Commission
CDFG	CA Dept. of Fish and Game
CEQA	California Environmental Quality Act
CHSP	Chino Hills State Park
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CMAA	Crane Manufacturers Association of America
CPUC	California Public Utilities Commission
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Association
CSI	Construction Specifications Institute
CTIOA	Ceramic Tile Institute of America
DHI	Door and Hardware Institute
DIPRA	Ductile Iron Pipe Research Association
DOGGR	CA Dept. of Conservation, Div. of Oil, Gas, and Geothermal Resources
DOSH	CA Dept. of Industrial Relations, Div. of Occupational Safety and Health
DOT	U.S. Department of Transportation
EIA	Electronic Industries Alliance
EPA	U.S. Environmental Protection Agency

ETL Intertek ETL SEMKO
 FAA Federal Aviation Administration
 FCCCHR Foundation of Cross-Connection Control and Hydraulic Research, USC
 FCI Fluid Controls Institute
 FM FM Approvals
 GA Gypsum Association
 GANA Glass Association of North America
 HI Hydraulic Institute
 IAPMO International Association of Plumbing and Mechanical Officials
 ICBO International Conference of Building Officials
 ICC International Code Council
 ICEA Insulated Cable Engineers Association
 IEEE Institute of Electrical and Electronics Engineers
 IESNA Illuminating Engineering Society of North America
 IGMA Insulating Glass Manufacturers Alliance
 ITI Information Technology Industry Council
 ISA Instrument Society of America
 ISEA International Safety Equipment Association
 MCCA Measurement, Control & Automation Association
 MHI Material Handling Institute
 MSS Manufacturers Standardization Society of The Valve and Fittings Industry
 NASSCO National Association of Sewer Service Companies
 NAAMM National Association of Architectural Metal Manufacturers
 NACE NACE International
 NAICS North American Industry Classification System
 NAPF National Association of Pipe Fabricators
 NCPI National Clay Pipe Institute
 NEIS National Electrical Installation Standards
 NEBB National Environmental Balancing Bureau
 NEC National Electrical Code
 NECA National Electrical Contractors Association
 NEMA National Electrical Manufacturers Association
 NETA InterNational Electrical Testing Association
 NFPA National Fire Protection Association
 NHLA National Hardwood Lumber Association
 NIST National Institute of Standards and Technology
 NOAA .. National Oceanic and Atmospheric Administration (U.S. Dept. of Commerce)
 NPDES National Pollutant Discharge Elimination System
 NRCA National Roofing Contractors Association
 NSF NSF International
 OCIP OCSD Owner Controlled Insurance Program
 OCHCA Orange County Health Care Agency
 OCSD Orange County Sanitation District, California
 OCFA Orange County Fire Authority, California
 OCTA Orange County Transportation Authority, California
 OSHA U.S. Occupational Safety and Health Administration
 PCA Portland Cement Association
 PCI Precast / Prestressed Concrete Institute
 PPI Plastics Pipe Institute

RCRA	Resource Conservation and Recovery Act
RCSC	Research Council on Structural Connections
RIS	Redwood Inspection Service, a division of CRA
RWQCB	Regional Water Quality Control Board
SAE	SAE International
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SGCC	Safety Glazing Certification Council
SLC	CA, State Lands Commission
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPIB	Southern Pine Inspection Bureau
SSPC	Society for Protective Coatings
SPPWC	Standard Plans for Public Works Construction
SSPWC	Standard Specifications for Public Works Construction
SWPA	Submersible Wastewater Pumps Association
SWRCB	State Water Resources Control Board
TIA	Telecommunications Industry Association
TCNA	Tile Council of North America
ULC	Underwriters Laboratories of Canada
UL	Underwriters Laboratories
USA	Underground Service Alert of Southern California
USACE	U.S. Army Corps of Engineers
USCC	US Composting Council
USDC	U. S. Department of Commerce
U.S. EPA	U.S. Environmental Protection Agency
U.S. FWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WATCH	Work Area Traffic Control Handbook
WCLIB	West Coast Lumber Inspection Bureau
WDMA	Window and Door Manufacturers Association
WI	Woodwork Institute
WRI	Wire Reinforcement Institute
WWCCA	Western Wall & Ceiling Contractors Association
WWPA	Western Wood Products Association

GR-2 REFERENCES

The Plans and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests, and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this section or identified in individual product specification sections. Such references are incorporated into and made a part of the Plans and Specifications to the extent applicable to the Work.

CONTRACTOR shall obtain and maintain at the worksite copies of reference standards identified on the Plans and in the Specifications to properly execute the Work.

At a minimum, the following shall be readily available at the site, as applicable to the Work:

1. Local and state building codes.
2. Safety Codes: State of California Industrial Safety Codes and regulations and Occupational Safety and Health Act (OSHA) regulations
3. Research Reports: ICC Evaluation Service (ICC-ES) Reports, ICBO Evaluation Service (ICBO-ES) Research Reports and CABO National Evaluation Service Reports (NER), for products not in conformance to prescribed requirements stated in building codes.
4. Product Listings: Approval documentation, indicating approval of authorities having jurisdiction for use of product within the applicable jurisdiction.
5. "Greenbook", Standard Specifications for Public Works Construction and the Supplements, the latest editions at the time of the Bid.

CONTRACT DOCUMENTS

GR-3 ISSUANCE OF PLANS AND SPECIFICATIONS

The ENGINEER will furnish to the CONTRACTOR, free of charge, up to fifteen (15) sets each of the Plans and Specifications for distribution and use on the worksite. The CONTRACTOR shall keep a copy of the Plans and Specifications at the worksite, and shall at all times provide the ENGINEER with access thereto. Any plans or drawings listed in the Contract Documents shall be regarded as part thereof, and the ENGINEER will furnish as required, such additional plans, drawings, profiles and information as may be considered necessary for the CONTRACTOR's guidance.

GR-4 DIVISIONS OF SPECIFICATIONS

The Technical Specifications are a part of the Specifications, and consist of Divisions 01 through 17, as defined in the General Conditions. The format of the Specification sections is similar to that of the Construction Specifications Institute (CSI) specification sections.

The organization of the Specifications into divisions, sections, parts, and paragraphs shall not control or limit the CONTRACTOR in dividing Work among Subcontractors of any tier, except where contractor licensure is required. The CONTRACTOR shall be solely responsible for all subcontract arrangements of Work regardless of the organization of the Specifications.

CONTRACTOR'S RESPONSIBILITIES

GR-5 GENERAL

Until the Final Acceptance of the Work by OCSD, the CONTRACTOR shall have full legal responsibility for the charge, care, and protection for the Work, the worksite, and of the materials to be used therein, including materials for which the CONTRACTOR has received full or partial payment and/or materials which have been furnished by OCSD. The CONTRACTOR shall bear the risk of injury, loss or damage to any part thereof by the action of the natural elements or from any other cause, whether arising from the execution or from the non-execution of the Work. The CONTRACTOR shall rebuild, repair, restore, and be responsible for all injuries, losses or damages to any portion of the Work or to the materials occasioned by any

cause before its completion, Final Acceptance and warranty, and shall bear the expense thereof.

Where necessary to protect the Work or materials from damage, the CONTRACTOR shall (at the risk and expense of the CONTRACTOR) provide suitable drainage and erect such temporary structures as are necessary to protect the Work or materials from damage. The suspension of the Work or the granting of an extension of time for any cause shall not relieve the CONTRACTOR of responsibility for the time and materials as herein specified.

Upon request by the CONTRACTOR, OCSD may, but is not obligated to, relieve the CONTRACTOR of the duty of maintaining and protecting certain portions of the Work which have been completed in all respects in accordance with the requirements of the Contract and to the satisfaction of OCSD, and thereafter, the CONTRACTOR shall not be required to do further maintenance or take protective action. Such action by OCSD will relieve the CONTRACTOR of responsibility for injury or damage to said completed portions of the Work resulting from use by or from the action of the elements or from any other cause, but not from injury or damage resulting from the CONTRACTOR's own operations or negligence.

Nothing in this section providing for relief from maintenance and responsibility shall be construed as relieving the CONTRACTOR of full responsibility for correcting defective Work or materials found at any time before the end of the one-year guarantee period and/or special extended warranty.

GR-6 ENVIRONMENTAL CONTROL

A. General

The CONTRACTOR shall comply with all environmental regulations and the environmental requirements set forth in these Specifications, whichever is more stringent. Additional requirements may be found in other sections.

The CONTRACTOR shall be responsible for costs incurred as a result of job delays due to CONTRACTOR violations of federal, state, and local environmental regulatory requirements. The CONTRACTOR shall be solely responsible for any Notices of Violations, penalties or actions by SCAQMD, RWQCB, CARB, EPA, or other agency alleging violation of federal, state, and local air quality or other regulatory requirements issued with respect to any activity of CONTRACTOR, whether the same is issued to CONTRACTOR, Subcontractor or OCSD.

B. Noise Control

Work hours are as stated in the General Requirements under the section entitled "Length of Workday and Workweek / Prevailing Wage". Changes to work hours may require the use of noise control measures.

All equipment used during construction shall be muffled and maintained in good operating condition. All internal combustion engine driven equipment shall be fitted with intake and exhaust mufflers that are in good condition.

Back up bells on equipment may only be operated between 7:00 a.m. and 5:00 p.m. Air compressors and diesel engine operation will not be permitted between 5:30 p.m.

and 7:00 a.m. Unless otherwise directed by the ENGINEER, temporary generators will be permitted to operate between 7:00 a.m. and 5:00 p.m. providing that the generator noise level shall not exceed 85 dB at 3 feet. For projects not located on OCSD property, noise control shall comply with ordinances for the city where the Work is being performed.

C. Environmental Compliance

The 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 Project, including, but not limited to, all applicable federal, state, and local air pollution control laws and regulations.

Air Quality Statement of Compliance

1. The CONTRACTOR shall confirm that all work that extends 12 months or longer by the CONTRACTOR or its Subcontractors at the worksite complies with all applicable air quality regulatory requirements by submitting to OCSD by February 1 of each year or when requested by the ENGINEER a company letterhead letter signed by the CONTRACTOR's responsible officer containing the following certification statement:
2. "I certify that all equipment owned or operated by {name of company} or its subcontractors, and all work performed by {name of company} or its subcontractors at the OCSD facilities has been in compliance with the air quality rules, regulations, permit conditions, and laws of the SCAQMD, CARB, and EPA with the exception of any non-compliance events for which {name of company} has taken immediate actions to regain compliance and has provided the necessary reports, as required by the abovementioned regulatory organizations. I, the undersigned, have personally examined the necessary relevant information and have undertaken positive efforts to assure the above statement is true."
3. Some regulations which may be pertinent are:
 - a. For uses of coatings, solvents, and adhesives
 - (1) SCAQMD Rule 109 – Recordkeeping for Volatile Organic Compound Emissions
 - (2) SCAQMD Rule 442 – Usage of Solvents
 - (3) SCAQMD Rule 1107 – Coating of Metal Parts and Products
 - (4) SCAQMD Rule 1113 – Architectural Coatings
 - (5) SCAQMD Rule 1122 – Solvent Degreasers
 - (6) SCAQMD Rule 1168 – Adhesive and Sealant Applications
 - (7) SCAQMD Rule 1171 – Solvent Cleaning Operations
 - (8) Title 17, California Code of Regulations, Sections 94520-94528 – Reducing Volatile Organic Compound Emissions from Aerosol Coating Products
 - b. For general construction

- (1) SCAQMD Rule 203 – Permit to Operate
 - (2) SCAQMD Rule 206 – Posting of Permit to Operate
 - (3) SCAQMD Rule 301 – Permitting and Associated Fees
 - (4) SCAQMD Rule 401 – Visible Emissions
 - (5) SCAQMD Rule 402 – Nuisance
 - (6) SCAQMD Rule 403 – Fugitive Dust
 - (7) SCAQMD Rule 431.2 – Sulfur Content of Liquid Fuels
 - (8) SCAQMD Rule 461 – Gasoline Transfer and Dispensing
 - (9) Title 13, California Code of Regulations, Sections 2450-2465 – Statewide Portable Equipment Registration
 - (10) Title 13, California Code of Regulations, Section 2485 – Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
 - (11) Title 13, California Code of Regulations, Sections 93116-93116.5 – Airborne Toxic Control Measure for Portable Diesel-Fueled Engines
- c. For special cases
- (1) SCAQMD Rule 1140 – Abrasive Blasting
 - (2) SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
 - (3) SCAQMD Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil

D. Engine Emissions

During construction, trucks and vehicles in loading or unloading queues shall be kept with their engines off, when not in use, to reduce vehicle emissions. Polluting construction activities shall be phased and scheduled to avoid emissions peaks, and discontinued during second-stage, or greater, smog alerts.

The CONTRACTOR shall maintain equipment engines in proper tune and operate construction equipment so as to minimize exhaust emissions. The CONTRACTOR shall not discharge air pollutants (dust, smoke, or other air contaminants) into the atmosphere in such quantities that they will cause a violation of the regulations of any legally constituted authority.

Visible emissions from any engine shall not be as dark as or darker than No. 1 in the Ringleman Chart for a period or periods aggregating more than three (3) minutes per hour per SCAQMD Rule 401 – Visible Emissions.

E. Portable Engine-Driven Equipment

The CONTRACTOR shall comply with the air quality regulations pertaining to portable engines with rated horsepower of 50 bhp or greater and other applicable portable equipment by meeting the following minimum requirements:

1. The engines or other applicable portable equipment shall have an SCAQMD permit or be registered with CARB.
2. The engines furnished shall satisfy the latest applicable emissions standards, as set forth in Title 13 of the California Code of Regulations (Article 5, Sections 2450-2466) and Title 40 of the Code of Federal Regulations, Part 89.

The engines shall be equipped with a non-resettable elapsed operating time meter. Activity reports shall be submitted to regulators as required.

Portable engines and other portable equipment that are permitted with SCAQMD shall meet the following minimum requirements:

If any of the CONTRACTOR's or Subcontractor's engines or equipment is to be located at OCSD facilities for more than twelve (12) consecutive months, the CONTRACTOR shall provide the ENGINEER with all information necessary for OCSD to revise its Title V operating permit. This information shall include, but is not limited to, detailed equipment description, specifications, emissions information, dispersion modeling, permits, registrations, monitoring records, and source tests reports required by the permit for the subject equipment. The CONTRACTOR shall submit this information to the ENGINEER no later than the end of the sixth month that the equipment is located at OCSD facilities. If the CONTRACTOR fails to provide the specified information in the specified time frame, the CONTRACTOR shall bear all fees, costs, and penalties including, but not limited to, filing fees, attorney fees, fees associated to acquire necessary offsets, fees for excessive emissions, etc. associated with OCSD obtaining necessary variances from SCAQMD.

F. Fueling of Engine-Driven Equipment

During fueling of all vehicles and equipment, the CONTRACTOR shall have personnel in direct control of the fueling operation at all times to prevent fuel spills. All fueling shall be continually monitored at all times and shall comply with SCAQMD Rule 461, Gasoline Transfer and Dispensing.

G. Records of Volatile Organic Compounds

The CONTRACTOR shall maintain usage records of volatile organic compound (VOC) materials according to SCAQMD Rule 109 and pay annual fees according to Rule 301. CONTRACTOR shall submit the usage records to ENGINEER on a monthly basis. The usage records shall contain, at the minimum, the following information:

1. Manufacturer's Name
2. Product Name/Number
3. Quantity (in gallons)
4. VOC Content (in lb/gal)
5. SCAQMD Rule Number or California Code section

H. Abrasive Blasting

The CONTRACTOR shall, besides complying with SCAQMD Rule 1140 – Abrasive Blasting, maintain records of abrasive materials used and the material's CARB certification.

I. Fugitive Dust

The CONTRACTOR shall not allow fugitive dust to be visible beyond OCSD facilities' property lines.

The CONTRACTOR shall use reasonable and typical watering techniques to reduce fugitive dust emissions. The CONTRACTOR shall furnish all labor, equipment, and means required (including watering or soil binders) and shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts that are damaging to property, cultivated vegetation, or domestic animals; or that are causing a nuisance as determined by the ENGINEER. All unpaved demolition and construction areas shall be wetted as necessary during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403.

Soil binders shall be spread on site, unpaved roads, and parking areas when needed to control dust and wind-blown particles from causing a nuisance or violating air quality standards.

The CONTRACTOR shall submit a dust control plan and obtain the ENGINEER's acceptance before beginning Work off paved roads or any activity that could stir up dust.

J. Odor Control

The CONTRACTOR shall furnish all labor, materials, and equipment required and shall carry out effective measures wherever and as often as necessary to prevent the discharge of a nuisance odor from its operation into the atmosphere in such quantity as will violate the regulations of any legally constituted authority or that will cause public complaints. During construction, the CONTRACTOR shall notify the ENGINEER and the INSPECTOR at least forty-eight (48) hours in advance when potential odor-causing activities are scheduled for construction.

K. Housekeeping and Rubbish Control

Through all phases of construction, including suspension of Work and until Final Acceptance of the Work by OCSD, the CONTRACTOR shall keep the worksite and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish and debris. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the Work site and shall establish regular intervals of collection and disposal of such materials and waste. Rubbish and debris slated for disposal or recycle shall be located in rubbish or recycle containers at the completion of each work day. The CONTRACTOR shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Care shall be taken to prevent spillage and/or tracking of soils on haul routes. Any such

spillage shall be immediately contained and removed and the area cleaned. Equipment and material storage shall be confined to areas accepted by the ENGINEER. Disposal of all rubbish and surplus materials shall be off the site of construction, at the CONTRACTOR's expense, all in accordance with local, state, and federal codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and the requirements of the Code of Federal Regulations, Title 29, Part 1910, U.S. Occupational Safety and Health Standards (OSHA), and Part 1926, U.S. Safety and Health Regulations for Construction (OSHA). All cleanup cost shall be included in the CONTRACTOR's Bid.

L. Sanitation

The CONTRACTOR shall not use any OCSD sanitation facilities. The CONTRACTOR shall provide fixed and/or portable chemical toilets for the use of the CONTRACTOR's employees. These accommodations shall be maintained in a neat and sanitary condition. Toilets at construction job sites shall conform to the requirements of California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4, Article 3, Section 1526, Toilets at Construction Jobsites.

The CONTRACTOR shall provide hand washing facilities with hot and cold water in accordance Title 8, Division 1, Chapter 4, Subchapter 4, Article 3, Section 1527, Washing Facilities, Food Handling, and Temporary Sleeping Quarters.

Wastewater conveyance and disposal shall not be interrupted. Should the CONTRACTOR disrupt existing sewer facilities, sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. The CONTRACTOR shall submit a proposed bypass system for OCSD review. Sewage shall not be permitted to flow in trenches or be covered by backfill.

The CONTRACTOR shall establish a regular schedule for collection and disposal of all sanitary and organic waste. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the ENGINEER and in accordance with all laws and regulations pertaining thereto. Disposal of all such wastes shall be at the CONTRACTOR's expense.

M. Drinking Water

The CONTRACTOR shall provide an adequate supply of bottled clean, potable drinking water for employees at the worksite.

WARNING: The CONTRACTOR shall not use any OCSD pipeline for supplying potable water to CONTRACTOR employee drinking water.

N. Chemicals

The following paragraph does not relieve the CONTRACTOR from its responsibility for obtaining prior ENGINEER's acceptance for chemical usage when otherwise required.

The CONTRACTOR shall provide four (4) copies of the MSDS to the ENGINEER for all chemicals used during construction or operational activities, prior to bringing them on site, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, which shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

The CONTRACTOR shall comply with the provisions of the General Requirements sections entitled "Safety - General".

O. Lead Paint Notification

The CONTRACTOR is hereby notified that the facility under this Contract may contain Lead (Pb), Chromium (Cr) and Molybdenum (Mo).

If any paints containing Lead or Chromium are to be physically disturbed or made airborne during the progress of the Work by activities such as abrasive blasting, welding, cutting or torch burning; the CONTRACTOR shall provide appropriate worker protection in accordance with applicable OSHA and Cal/OSHA requirements. The CONTRACTOR shall comply with the provisions the General Requirements section entitled "Safety - General" and with all California Hazardous Waste storage and disposal regulations. Refer to the General Requirements section entitled "Hazardous Waste".

P. Soils, Soil borings and Soil-Related Waste Disposal

The CONTRACTOR shall submit for ENGINEER's acceptance a management plan for staging, storage and disposal of all soil-related waste material. The analytical results will determine hazardous or non-hazardous status of the soil samples and appropriate disposal methods. If any soil material is to be transported off the construction site, soil analytical results included in the Contract Documents shall be submitted to the ENGINEER to certify hazard status for each load at least five (5) work days prior to transport. For loads certified as non-hazardous, the CONTRACTOR shall obtain a signature by OCSD for non-hazardous waste manifests. The CONTRACTOR shall provide a 48-hour advance notice of when the signature is needed.

For loads certified as hazardous, OCSD will work with the CONTRACTOR on the disposal of the waste in accordance with the General Requirements section entitled "Hazardous Waste".

Q. Asbestos

It is the specific intent of the Contract Documents to exclude from the Work all new products and/or materials containing asbestos. No products containing asbestos shall be incorporated in the Work. CONTRACTOR shall immediately notify the ENGINEER upon discovery of such materials in the construction area that may contain asbestos not already identified in the Contract Documents.

If any asbestos-containing materials are to be physically disturbed or made airborne during the progress of the Work by activities such as demolition, remodel or

remediation, the CONTRACTOR shall provide appropriate worker protection in accordance with applicable OSHA and Cal/OSHA requirements, and shall remove asbestos materials from the construction area. Removal shall be performed by a Subcontractor specifically certified and licensed in asbestos handling per the California Code of Regulations, Title 8, Sections 1529 and 5205.

The OCSD will work with the CONTRACTOR on the disposal of any Asbestos-Containing Materials waste in accordance with the General Requirements section entitled "Hazardous Waste".

The CONTRACTOR shall request any asbestos storage containers from OCSD five (5) work days in advance of the remediation of asbestos material. The CONTRACTOR shall make arrangements with OCSD on the storage of the asbestos waste before remediation begins. The CONTRACTOR shall comply with the provisions the General Requirements section entitled "Safety - General" and with all California Hazardous Waste storage and disposal regulations.

R. Hazardous Waste

The CONTRACTOR shall possess a valid EPA generator number for hazardous waste prior to any waste being brought and/or generated on the Project site.

The CONTRACTOR shall submit and, upon ENGINEER's acceptance, implement a Project-wide hazardous waste management plan, and shall maintain and update it for the duration of the Contract based upon initial geotechnical report sampling analytical results and other test reports included in the Contract Documents and/or undisclosed OCSD-generated hazardous waste discovered during the Project. The hazardous waste management plan shall ensure compliance with all applicable federal and state regulations for storage, management, transport, and disposal.

The CONTRACTOR shall designate a Hazardous Waste On-Site Project Manager, and shall provide proof of the person's current certification in the following: DOT hazardous material training per 49 CFR, Part 172, Subpart H, and management of hazardous waste in California per the Resource Conservation and Recovery Act (RCRA) and California Code of Regulations, Title 22.

The CONTRACTOR shall provide proof of the current certification of the hazardous waste transporter per 49 CFR, Part 172, Subpart H.

Hazardous waste owned by OCSD prior to the Notice to Proceed (e.g., lead-based paint, asbestos, contaminated soil) will be considered OCSD-generated waste, which requires OCSD to sign and receive copies of manifested paperwork. The OCSD will work with the CONTRACTOR on the disposal of the OCSD-generated waste using the OCSD-approved hazardous waste transportation and disposal vendor. OCSD will pay for the transportation and disposal of the OCSD-generated waste. The CONTRACTOR shall make arrangements with OCSD on the storage of the OCSD-generated waste while waiting for disposal.

Hazardous waste brought and/or generated on site by the CONTRACTOR shall be considered CONTRACTOR-generated waste and shall be the financial and legal responsibility of the CONTRACTOR.

S. Explosives for Blasting

The use of explosives on the Work shall not be permitted.

T. Protection of Wildlife

If any Work in this Contract might disturb wildlife, even in urban areas, a Biological Monitor shall be hired by the CONTRACTOR to provide assistance in the field to assure that biological resources are protected and that Project-specific mitigation measures are implemented. The Biological Monitor shall be qualified for the tasks to be performed. If endangered or threatened species are present in the Project area and require removal or relocation, the Biological Monitor shall hold the appropriate permits and approvals for access and capture or marking of the species of concern. Specific activities of the Biological Monitor may include the following:

1. Marking areas to be protected from construction activity.
2. Observing construction activities and their impacts on biota.
3. Capturing and relocating biota as necessary to protect them from construction activities.

Prior to the removal of healthy trees at a worksite, a Biological Monitor shall survey the trees to determine if active bird nests are present. If nests of sensitive species are present, tree removal will be scheduled to avoid the nesting season. CONTRACTOR shall provide a written record of whether tree removal is required and, as needed, hire a biologist or provide documentation that nesting birds (listed species of special interest of those as threatened or endangered) are not present in the trees to be removed. Refer to the Specification section(s) regarding detailed landscaping requirements.

U. Groundwater Dewatering

CONTRACTOR shall comply with OCSD's dewatering requirements. Water from dewatering operations shall be disposed of in a suitable manner in conformance with the OCSD Wastewater Discharge Regulations and the National Pollutant Discharge Elimination System (NPDES) Permit, as approved by the Regional Water Quality Control Board, Santa Ana Region (RWQCB), and OCSD.

V. Construction Site Storm Water Management

Unless the Contract Documents include a dedicated Specifications section(s) with detailed stormwater pollution management requirements, the following shall apply.

The Orange County Sanitation District (OCSD) is regulated by the National Pollutant Discharge Elimination System (NPDES) permit CA0110604 and SWRCB Order No. R8-2012-0035.

To prevent impairment to surface water quality from construction site discharges to surface waters, the CONTRACTOR including CONTRACTOR's and Subcontractors' personnel shall comply with the OCSD On-Site Stormwater Management Plan (OSSWMP) which outlines requirements for on-site compliance with applicable stormwater regulations, and with ENGINEER's directions, if any. Prior to mobilization completion, the CONTRACTOR and the ENGINEER shall discuss the stormwater

requirements of the Contract in a formal meeting to obtain additional directions, if any, from the ENGINEER.

Comply with the latest applicable editions of the stormwater management-related laws and regulations of the applicable federal, state, county, city, and special district jurisdictions.

All flows from this Project's construction and the associated activities shall be collected within the construction site and returned to the OCSD treatment process, and no water and/or sedimentation shall leave this Project's construction site and/or OCSD property, or hinder OCSD plant roadways.

As a minimum, the CONTRACTOR shall use Best Management Practices (BMPs) per CASQA Construction Stormwater Best Management Practice (internet portal) to protect the staging area, construction activity areas, and temporary power equipment locations, except: the use of Best Management Practice SE-8 "Sandbag Barrier" shall be deemed unacceptable.

CONTRACTOR's vehicles shall access the construction site through the facility gate designated by the ENGINEER.

The CONTRACTOR shall be aware that compliance with the requirements in the OSSWMP may require the use of erosion and sedimentation control procedures outside the limits of immediate construction activity as determined by the CONTRACTOR and/or directed by the ENGINEER. The CONTRACTOR's compliance shall also include the installation, maintenance, and removal of temporary Best Management Practices as necessary until and through the completion of the Project and/or as directed by the ENGINEER.

Unless a stormwater control or prevention plan is required elsewhere in the Contract Documents, the CONTRACTOR shall provide the following:

1. Submit a brief description of the Project that also indicates the Project's timeline and states whether any Best Management Practices (BMPs) are intended for the Project. If BMPs are to be used, the CONTRACTOR shall also submit the following:
 - a. A list of the Best Management Practices (BMPs) intended for the Project and their periodicity;
 - b. A map indicating the BMP deployment locations (a markup of the maps attached to OCSD On-Site Stormwater Management Plan shall be acceptable).
2. Keep the submitted stormwater documentation at the Project site at all times, fully updated, and make it available upon request for audit by the ENGINEER and/or inspectors of regulatory authorities having jurisdiction.

The CONTRACTOR shall take all steps to minimize and prevent any pollutants from leaving the OCSD's property and prevent any violations. Non-adherence with the conditions specified in the OSSWMP may constitute a violation of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and may be grounds for enforcement action by the RWQCB and/or local regulators. OCSD shall be reimbursed by the CONTRACTOR for the fines and other associated costs incurred by OCSD due to the CONTRACTOR's lack of compliance with the OSSWMP. Lack

of compliance as determined by OCSD and/or ENGINEER will cause the ENGINEER to issue a written Notice of Non-Compliance to the CONTRACTOR.

If the CONTRACTOR determines that it cannot comply with the OSSWMP, the CONTRACTOR shall notify the ENGINEER immediately. The notification shall identify the type of non-compliance, describe the actions necessary to achieve compliance, and include a time schedule when compliance will be achieved. A written non-compliance notification for each such event shall be submitted within fifteen (15) days of identification of the event by the CONTRACTOR.

W. Waterway Protection

The CONTRACTOR shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters. The rules will include measures to:

1. Store all reserve fuel supplies only within the confines of a designated construction staging area.
2. Refuel equipment only within designated construction staging area.
3. Regularly inspect all construction vehicles for leaks. Place drip pans or similar under leaking vehicles.

The CONTRACTOR, for Work outside the treatment plants, shall prepare a Spill Prevention, Control, and Countermeasure Plan (SPCCP). The plan shall include measures to be taken in the event of an accidental wastewater spill. Refer to the respective Specification section(s) regarding detailed requirements for temporary handling of sewage flow.

The construction and staging areas as shown on the Plans shall be clearly marked and staked on the ground. Heavy equipment use outside this area shall be prohibited. The construction staging areas shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets. If heavy-duty construction equipment is stored overnight adjacent to a potential receiving water, drip pans will be placed beneath the machinery engine block and hydraulic systems.

A silt fence or similar BMP, shall be constructed around the disturbed soil areas and all measures shall be taken to prevent erosion and transport of sediment into a waterway. Stockpiles shall be covered with plastic sheets to prevent erosion.

Excavated material shall be stockpiled within the construction staging area and installed with appropriate BMPs to prevent erosion and sediment from reaching the drain system.

The CONTRACTOR shall prepare an Erosion Control Plan (ECP) and submit for review by the ENGINEER.

X. Field Monitoring, Documentation and Restoration

For construction outside the treatment plants, the CONTRACTOR shall videotape the site, including staging and storage areas, prior to commencing Work.

All existing vegetation, except for common grass, shall be inventoried and shown and labeled on a scaled drawing.

After completing the Work, the CONTRACTOR shall restore the disturbed vegetation to a level substantially similar to the existing condition prior to performing any construction-related activity.

All re-vegetation shall be done in accordance with the Re-Vegetation Plan provided by the CONTRACTOR and prepared by a landscape architect. All Work shall be done in accordance with the approved plan which may include incorporation of certain native or drought-tolerant plants to comply with permit conditions of various environmental agencies or in conformity with local landscaping ordinances.

Y. Protecting Archaeological and Cultural Resources

If cultural resources are encountered at any time during Project excavation, construction personnel shall avoid altering these materials and their context until a qualified archaeologist has evaluated the situation. Project personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, and pestles; and dark, friable soil containing shell and bone, dietary debris, heat-affected rock, or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies.

Records of site inspections shall be maintained in OCSD's administrative records. Following construction, a post-construction site inspection shall be made to determine the degree to which the final site modifications have impact site descriptions and future access.

Z. Discovery of Human Remains

In the event of accidental discovery or recognition of any human remains, the County Coroner would be notified immediately and construction activities shall be halted. If the remains are found to be Native American, the Native American Heritage Commission would be notified within twenty-four (24) hours. Guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

AA. Recycling of Materials for Collection System Projects

For Collection System Projects - Recycling of demolition and construction materials is encouraged by OCSD. Recycled materials shall comply with the requirements for the city where the Work is being performed. The local contractors are encouraged to provide for the recycling of demolition materials where the quantities are sufficient to make it cost-effective.

A Recycling Feasibility Evaluation may be required for certain projects which have large amounts (more than 100 tons) of asphalt or concrete that are potentially recyclable and are 20 percent more than the cost of disposal.

GR-7 LENGTH OF WORKDAY AND WORK WEEK / PREVAILING WAGE

Eight (8) hours of labor shall constitute a calendar day's labor for employees of the CONTRACTOR under this Contract. Employees shall be paid the prevailing wage rate for the first eight (8) hours labor each day.

A working day shall be Monday through Friday, and shall be between 7:00 a.m. and 3:30 p.m., unless otherwise accepted by the ENGINEER in writing. The written request for an alternative work schedule is required at least forty-five (45) days in advance. Any granted alternative work schedule may be revoked, should it become problematic for the Public/OCSD to continue to accommodate. On occasion, but without guarantee, OCSD may grant the CONTRACTOR's request for a temporary alternative work schedule.

For collection system projects not located on OCSD property, work hours are based on permit requirements for the jurisdiction where the Work is being performed. Work hours for the respective locations shall be presented by the CONTRACTOR and documented as part of the Pre-Construction Meeting

When labor in excess of eight (8) hours per day, or forty (40) hours during any one (1) week is performed, wages for all hours over eight (8) hours in any day or over forty (40) hours during any one (1) week shall be paid one and one-half (1-1/2) times the prevailing wage rate, as provided in the California Labor Code.

GR-8 PERMITS

Refer to the respective Specification section(s) regarding detailed requirements for permits.

GR-9 PUBLIC CONVENIENCE AND ACCESS

The CONTRACTOR shall conduct operations so as to cause the minimum obstruction and inconveniences to traffic and to places of business and residences adjacent to the worksite. No greater quantity of Work shall be under construction at any one time than can be properly conducted with due regard for the rights and safety of the public. Where existing streets are not available for detours, all traffic shall be permitted to pass through the worksite with as little inconvenience and delay as possible, unless otherwise provided or authorized. If only half the street is under construction, the other half shall be conditioned and maintained as a detour. CONTRACTOR shall submit for ENGINEER's acceptance a traffic control plan stamped and signed by a Traffic Engineer registered in the State of California.

The CONTRACTOR shall provide unobstructed access to all fire hydrants at all times unless otherwise approved by the Fire Authority having jurisdiction.

Safe, adequate pedestrian access to all residences, places of business, and other establishments affected by the Work shall be provided and maintained by the CONTRACTOR at all times.

The CONTRACTOR shall provide safe, adequate crossings for pedestrians at each street intersection, cross street, pedestrian crossing and at bus and other forms of public transportation stops.

In streets or roadways where street intersections, cross streets, pedestrian crosswalks or overpasses are limited or do not exist, the CONTRACTOR shall

provide for safe, adequate pedestrian crossing at intervals of not more than 300 feet as directed by the city.

Where the worksite is in a right-of-way, the CONTRACTOR shall provide adequate pedestrian crossings at street crossings or at intervals not exceeding 350 feet as required, unless otherwise directed by the ENGINEER and the city.

Unobstructed vehicular access shall be provided and maintained by the CONTRACTOR at all times to fire stations, police stations, hospitals, or other similar establishments engaged in work of an emergency nature or in work directly connected with the public safety.

The CONTRACTOR shall coordinate with officials of these establishments to ensure that 24-hour emergency access is available. The CONTRACTOR shall provide a copy of the accepted Traffic Control Plan to the local police and fire departments and public transit facilities, seventy-two (72) hours prior to construction.

The CONTRACTOR shall be required to provide and maintain safe and adequate vehicular access to driveways for residences only when, in the opinion of the ENGINEER, unusual conditions or emergencies make such access necessary. If, however, backfill has been completed to the extent that safe access may be provided and the street, by the Contract Documents, is open to local traffic, the CONTRACTOR shall immediately clear the street and driveways so that access may be provided and maintained.

Unless the CONTRACTOR makes other arrangements satisfactory to the owners, when the CONTRACTOR's Work interferes with vehicular access to places of business and public gathering, the CONTRACTOR shall provide and maintain safe and adequate vehicular access to such places of business and public gathering to allow for the continuation of the ordinary conduct of business. If an establishment has direct vehicular access to a street, the CONTRACTOR shall take all steps which are required to maintain at least one route for direct vehicular access to and from such street to the establishment.

The CONTRACTOR shall make every reasonable effort to provide maximum access to churches on their Sabbath days. In addition, the CONTRACTOR shall not park or store equipment at the site of a church on its Sabbath day.

In addition, the CONTRACTOR shall cooperate with the various public and private agencies involved in street sweeping and/or collection and removal of trash and garbage from residences and businesses adjacent to the worksite, to maintain existing schedules for such collection and removal of trash and garbage.

At locations where traffic is being routed through grading operations, excavations and embankments shall be constructed in a manner to ensure that a surface reasonably satisfactory for traffic is provided at all times. Substructure installation or construction shall be conducted on only one-half the width of the traveled way at a time, and that portion of the traveled way being used by traffic shall be kept open and unobstructed until the opposite side of the traveled way is ready for use. Upon completion of the rough grading, the surface of the roadbed shall be brought to a smooth, even condition, free from humps and depressions, and made satisfactory for traffic.

The CONTRACTOR shall provide and maintain such fences, barriers, directional signs, lights, and flagmen as are necessary to give adequate warning to the public at all times of any dangerous condition to be encountered as a result of the construction Work and to give directions to the public as appropriate.

The CONTRACTOR shall employ, for the duration of the Project, a qualified Subcontractor that shall be responsible for the supply, maintenance, set-up, takedown and daily movement of all traffic signage, arrowboards, delineators, etc. The CONTRACTOR shall submit to the ENGINEER documentation to prove that the Subcontractor has at least five (5) years of experience in the specialty of traffic control. The CONTRACTOR shall submit to the ENGINEER resumes of proposed Subcontractor personnel that will document appropriate training in the field of traffic control, such as attendance at "Traffic Safety Through the Maintenance and Construction Zones" offered by the Office of Traffic Safety. Acceptance of the Subcontractor and personnel shall be at the discretion of the ENGINEER.

All costs of complying with requirements of this section shall be included in the Bid prices for the various items of Work.

Prior to taking the primary route out of service, the CONTRACTOR shall ensure that all detours are approved by the applicable city.

Notwithstanding the general requirements for traffic and access set forth above, if OCSD or the CONTRACTOR pursuant to the terms of the Contract are to develop an accepted traffic control plan, the Special Provisions of said Plans shall control over the general requirements and the CONTRACTOR shall comply with all details of the accepted traffic plan at all times.

GR-10 ADVANCE NOTIFICATION FOR PLANT SHUTDOWN

The existing treatment plant facilities must be maintained in full operation during the execution of the Work. The CONTRACTOR shall coordinate the Work to avoid any interference with normal operations of plant equipment and processes. If downtime of utilities or equipment occurs due to lack of schedule, CONTRACTOR's error, or other items which are the CONTRACTOR's fault, CONTRACTOR shall work continuously (24 hours per day) until the utility or equipment is returned to operational condition acceptable to OCSD. All costs for such Work shall be the responsibility of the CONTRACTOR.

Downtime for piping, power interruptions and other utility services requiring taps or connections shall be kept at a minimum. Shutdown requests shall be submitted to the ENGINEER. Request shall include a drawing identifying the system or equipment included in the shutdown request. ENGINEER's written acceptance of shutdown requests shall be obtained fourteen (14) days in advance. Maximum shut down for any facility is four (4) hours, unless otherwise detailed in the Contract Documents. The CONTRACTOR shall provide diesel generators, temporary power feeds, or other measures, deemed necessary by OCSD to maintain the operation of existing facilities. The CONTRACTOR shall submit a written schedule and work sequence proposed to keep process equipment operational, detailing all Work to existing facilities, and the measures to be taken to eliminate or minimize facility downtime.

Any Work which blocks roadways, access to buildings and parking lots shall require written acceptance following the requirements above for notification and acceptance.

The CONTRACTOR shall follow OCSD's lockout/tagout procedures for isolation of equipment. OCSD will provide tags and the CONTRACTOR shall provide lockout devices.

If Work on energized electrical systems is required, refer to the section entitled "Working on Energized Systems" of the OCSD Safety Standards.

GR-11 ADVANCE NOTIFICATION TO AGENCIES

It shall be the CONTRACTOR's responsibility to determine and notify those agencies requiring advance notification for inspection or other purposes before beginning construction in any jurisdictional area of an agency. A minimum two (2) weeks advance notice shall be given to the various agencies before beginning construction in the area unless specific advance times and requirements are stated in these Specifications or in permit conditions. CONTRACTOR shall inform OCSD's Public Information Officer (PIO) of construction activities impacting residents, businesses, schools, and general public a minimum of two (2) weeks prior to performing any Work. These requirements are in addition to any other requirements set forth by the local jurisdiction. It is the responsibility of the CONTRACTOR to provide a description of the construction Work taking place and the impacted area. If unexpected work arises and a two (2) week notification is not possible, the CONTRACTOR shall be required to notify the Public Information Officer (PIO) as soon as possible of Work and assist (if needed) with the distribution of notices.

GR-12 REMOVAL OF OBSTRUCTIONS

The CONTRACTOR shall remove, at CONTRACTOR's expense, all obstructive rock, stones, debris, structures or other such items, whether natural or artificial, encountered in the construction of the Work.

Material that is removed as herein specified, and is not to be incorporated in the improvement being constructed or to be salvaged for OCSD's use shall be removed from the site and legally disposed of by the CONTRACTOR at CONTRACTOR's expense unless otherwise specified.

Unless otherwise specified or directed by the ENGINEER, the CONTRACTOR shall replace all existing fences, walls and other structures to their original condition and location at the completion of the Work, whether or not replacement is specifically called out on the Contract Documents.

GR-13 SALVAGE AND REMOVAL OF EXISTING EQUIPMENT

All existing equipment and appurtenances designated to be demolished or removed, and not to be salvaged, shall be the property of the CONTRACTOR and shall be removed from the site and legally disposed of at CONTRACTOR's expense.

Salvaged items shall be cleaned and relocated by the CONTRACTOR to the plant area designated by OCSD. During construction, the ENGINEER may designate more items to be salvaged whether the items are indicated to be salvaged or not in the Contract Documents.

The CONTRACTOR shall furnish all tools, equipment, material, and supplies, and perform all labor required to remove from service, prepare for storage, inventory, package, mark, and deliver to OCSD any equipment and/or materials designated as

salvage in the Plans or Specifications. The CONTRACTOR shall prepare and submit a listing of all equipment identified for salvage. After the equipment is removed, revise and resubmit the list to include the date removed, estimated weight, description, and condition of each item.

The CONTRACTOR shall disassemble and remove equipment carefully to prevent damage, empty all fluids from equipment, and plug all openings. Bubble wrap or double box delicate equipment. Box sizes shall be suitable for the item to be packed with cushioning material but without bulge and shall be minimum 200-pound test weight, taped on all unmade seams using 2 inch minimum clear 2 mil minimum industrial tape. Provide 48 x 48 inch pallets with minimum 2 x 4 inch main rails and 1 inch cross stiles nailed on both sides of the main rails. Bolt larger equipment to wooden pallets. Wrap equipment with waterproof plastic. Prepare individual manifests for each equipment container. Insert manifest into a clear cover envelope and tape to the side of the container.

The CONTRACTOR shall use care in loading and delivering material to prevent damage, splitting and breakage of the material. The ENGINEER will designate the OCSD receiving party for all salvage material at either Plant No. 1 or No. 2.

GR-14 MAINTENANCE OF EXISTING IMPROVEMENTS

Unless otherwise indicated in the Contract Documents, OCSD's facilities, public and private utilities and other surface or subsurface structures of any nature that may be affected by the Work shall be maintained by the CONTRACTOR during the course of the Work. If the CONTRACTOR, in the performance of the Work, damages any of the above, all expenses related to repair of the damages and loss of service shall be borne by the CONTRACTOR. The CONTRACTOR shall not operate any wastewater piping and/or equipment currently in service.

GR-15 TEMPORARY FACILITIES

The CONTRACTOR shall provide temporary facilities to comply with requirements of all applicable Federal, State and local safety rules and regulations. CONTRACTOR shall be solely responsible for worksite safety. The CONTRACTOR shall provide adequate barriers, guardrails and enclosures around all worksites and adjacent to embankments and excavations for protection of workers and the public, as required by governing authorities having jurisdiction.

CONTRACTOR's staging area(s) and storage facility(ies) located on the OCSD premises shall have full-perimeter chain-link fencing with full-height full-perimeter vision screening on the outward facing side of the fence. The chain-link fence shall be made and installed in accordance with SSPWC sections 206-6 and 304-3, except: it shall be portable, installed without making holes or otherwise disturbing the underlying surfaces. The fence shall be galvanized steel; six (6) feet in height minimum unless specified otherwise elsewhere in the Contract Documents. Barbed wire shall not be required for locations at OCSD Plants No. 1 and No. 2 unless specified otherwise elsewhere in the Contract Documents. The vision screening shall be clean green material in good condition, ninety (90) percent visibility blockage minimum, double-thick folded edge, securely attached to the fencing using grommets on all four sides.

The CONTRACTOR shall provide and maintain construction facilities and temporary controls in proper and safe condition throughout the progress of the Work. In the event of loss or damage, the CONTRACTOR shall promptly restore temporary construction facilities and controls by repair or replacement at no change in the Contract Price or time of completion.

The CONTRACTOR shall provide and maintain temporary sanitary facilities and enclosures for use by construction personnel. The CONTRACTOR shall not use permanent sanitary facilities unless accepted by OCSD. Immediately prior to the Substantial Completion review(s), thoroughly clean and sanitize permanent sanitary facilities used during construction.

The CONTRACTOR shall provide temporary lighting as necessary for proper performance of construction activities and for inspection of the Work.

1. Provide branch wiring from power source to distribution boxes with lighting conductors, GFI breakers, pigtails, and lamps as required.
2. Maintain lighting and provide routine repairs.

GR-16 SEISMIC DESIGN AND CONSTRUCTION

The installation of all equipment and appurtenances shall comply with the requirements of the applicable edition of the California Building Code (California Code of Regulations, Title 24, Part 2). Supports and connections shall be designed to prevent sliding or overturning, in accordance with the Code and these Specifications. Brackets and anchors shall be of ductile materials so that they can absorb energy and continue to carry load. Any changes to the design affecting structural components shall be documented on drawings stamped and signed by a Structural Engineer registered in the State of California and shall be submitted for ENGINEER's acceptance.

GR-17 EQUIPMENT START-UP REQUIREMENTS

The CONTRACTOR shall:

1. Provide qualified and experienced personnel to verify the proper installation; including alignment, mounting, adjustment, lubrication, and setup; of all equipment, such as engines, motors, pumps, VFDs, blowers, control systems, instrumentation, computers, and all miscellaneous electrical items, etc. These personnel shall supervise the start-up and the initial checkout and operation of the equipment.
2. Submit to the ENGINEER for prior acceptance a start-up time schedule and checkout procedure documents.
3. Participate in Commissioning Coordination meetings.
4. Coordinate with all equipment manufacturers to ensure that their personnel are available until the equipment performance tests specified are completed.

If the CONTRACTOR fails to comply with the start-up requirements, the ENGINEER shall notify the CONTRACTOR by letter of the noncompliance. If the CONTRACTOR has still not complied within the time specified, the ENGINEER may take the responsibility for start-up and deduct all the costs thereof from the Contract.

GR-18 MEETINGS

CONTRACTOR shall attend the following meetings at a minimum:

1. Pre-Construction
2. Schedule
3. Submittal
4. Weekly Progress
5. Safety
6. Commissioning
7. Job Hazard Analysis, as required
8. Other meetings as required by the ENGINEER.

GR-19 TRAINING

CONTRACTOR shall comply with the requirements of Specifications section 01820, Training of OCSD Personnel.

GR-20 DIFFERING SITE CONDITIONS

A. Notice Requirements

If any Work required by this Contract includes digging trenches or other excavations, the CONTRACTOR shall promptly, and before any of the following earth conditions are excavated, moved or otherwise disturbed, notify OCSD, in writing, of its findings, including, but not limited to:

1. Material that the CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the California Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law;
2. Subsurface or latent physical conditions at the Project site differing from those indicated by written information about the site made available to Bidders prior to the deadline for submitting Bids; and/or
3. Unknown physical conditions at the site of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

B. Resolving Differing Site Conditions

Upon receipt of the CONTRACTOR's written notice of encountering any or a combination of the conditions outlined in Section A(1) through (3) above, the ENGINEER shall promptly investigate the conditions. If the ENGINEER determines that hazardous waste exists and/or that differing site conditions exist which the CONTRACTOR could not have discovered through reasonable investigations, the ENGINEER shall notify the CONTRACTOR. To the extent the differing site conditions or existence of hazardous waste cause a decrease or increase in the

Contractor's cost of, or the time required for, performance of any part of the Work, as substantiated in the time and manner by the CONTRACTOR per the General Conditions, OCSD will issue a Change Order in accordance with the Contract Documents.

Nothing in this section is intended to relieve the CONTRACTOR of the responsibility to fully examine the Contract Documents and the site where the Work is to be performed in accordance with the Contract Documents; to be familiar with all local conditions and federal, state, and local laws, rules and regulations that may affect the performance of any Work; to study all surveys and investigative reports about subsurface and latent physical conditions pertaining to the worksite; to perform such additional surveys and investigations as the CONTRACTOR deems necessary to complete the Work at the Bid price; and to correlate the results of all such data with the requirements of the Contract Documents. Execution of the Contract by the CONTRACTOR is a representation that the CONTRACTOR has visited the site, became familiar with local conditions under which the Work is to be performed, and correlated personal observation and knowledge of the site with requirements of the Contract Documents. Further, nothing in this section shall relieve the CONTRACTOR of the obligation to pay all fees and costs associated with removal and cleanup of any hazardous waste used at, or brought to, the worksite by the CONTRACTOR.

The CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract time if:

1. CONTRACTOR knew of the existence of such differing conditions at the time of Contract execution.
2. The existence of such condition could reasonably have been discovered or revealed as a result of any investigation, examination, visit, exploration, or study of the site conducted by the CONTRACTOR or for the CONTRACTOR prior to CONTRACTOR's executing the Contract.
3. CONTRACTOR failed to give OCSD written notice immediately after becoming aware of any of the conditions described in this clause.

In the event that a dispute arises between OCSD and the CONTRACTOR whether site conditions differ materially from those the CONTRACTOR could or should have discovered by the investigations required by these Contract Documents, involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the CONTRACTOR shall not be excused from the scheduled completion date provided in the Contract Documents and shall proceed with all Work in the manner and in the time required by the Contract Documents. The CONTRACTOR shall retain any and all rights provided either by Contract or by law which pertain to the resolution of Claims and Disputes between OCSD and the CONTRACTOR.

GR-21 PROJECT INFORMATION SIGNS

Furnish and install Project information signs and the related framing, supports and foundations at the location(s) acceptable to the ENGINEER within 30 days of the Notice to Proceed. Prior to fabrication of the signs, submit a "mock-up" sample of the proposed signs, information and graphics for review and acceptance by the ENGINEER. Allow no other signs to be displayed.

The structure and framing shall be allowed to be new or used, wood or metal, in sound condition, structurally adequate to work and suitable for specified finish. The sign surfaces shall be exterior softwood plywood with medium density overlay, standard large sizes to minimize joints; the thickness shall be as required by standards to span framing members and to provide even, smooth surface without waves or buckles. The rough hardware shall be galvanized.

The size of the signs and lettering shall be as required by applicable regulatory agencies, or as appropriate for usage. The sign colors for structure, framing, sign surfaces and graphics shall be uniform colors throughout the Project, shall comply with the requirements of applicable regulatory agencies, and shall be as selected by the ENGINEER.

The signs shall be painted signs, with painted lettering. Finishes and painting shall be exterior quality, adequate to resist weathering and fading for the duration of the construction. Use bulletin colors for graphics.

Maintain the signs and the related framing, supports and foundations in a neat, clean condition; repair damages to structure, framing and/or signs. Remove the signs, framing, supports and foundations at completion of Project.

CONTROL OF MATERIALS

GR-22 MATERIAL AND EQUIPMENT

All equipment, materials and supplies to be incorporated in the Work shall be new, unless otherwise specified. All equipment, materials and supplies shall be produced in a workmanlike manner. Fabricated materials or equipment to be incorporated in the Work shall be subject to acceptance by the ENGINEER.

The Specifications list manufacturers that are likely to provide the specified equipment. Provide products by same manufacturer when products are of similar nature, unless otherwise specified. Provide identical products when products are required in quantity. Provide products with interchangeable parts whenever possible.

All listed manufacturers may not provide a standard model that meets the Specification requirements and may not be willing to provide equipment that meets the requirements. Listed model designations may require modification to meet the Specification requirements.

Materials, equipment, or processes noted in the Contract Documents by a trade or manufacturer's name, specified by grade, patent or property name, are so designated primarily to establish standards of quality, finish, appearance, ruggedness or constructability and performance. It is not the intent to limit the choice of materials and equipment to the specific product designated. Similar articles of other origin, if accepted by the ENGINEER as equal to the designated product in quality, finish, appearance and performance, shall be deemed to be included in the Contract Documents. However, requests relative to substitutions for materials or equipment specifically designated in the Contract Documents will not be considered until after award of the Contract. In the event that the CONTRACTOR furnishes material, processes, or articles more expensive than that specified, the difference in cost of such material, processes or articles so furnished shall be borne by the CONTRACTOR.

The CONTRACTOR shall submit to the ENGINEER all the requests with data substantiating the proposed substitute of “an equal” items identified in these Specifications in the time specified in the applicable Task Order. In the event the CONTRACTOR does not timely submit a proposed substitute of “an equal” item, the CONTRACTOR shall comply with the Specifications calling for a designated material, product, thing or service by specific brand or trade name. The time specified in the applicable Task Order is included in the number of days allowed for the completion of the Work.

Such requests shall be made in writing by the CONTRACTOR to the ENGINEER, stating in detail how the proposed product differs in composition and performance from the designated product and shall be accompanied by complete data on which the ENGINEER may make a determination on the merits of the proposed substitution.

The CONTRACTOR shall be responsible to provide only those materials, equipment and supplies that fully conform with all applicable state and federal safety laws, rules, regulations and orders, without additional charge to OCSD, notwithstanding any omissions in the Contract Documents therefor or that a particular material, equipment or supply was specified.

GR-23 STANDARDS

The various standards referred to throughout the Specifications are indexed by number (i.e., AWWA C 104 or ASTM A 276). In each case, it is expected that the material or methods specified shall conform to the latest current standard or specification of the designated index number. Tentative standards shall be construed as current unless otherwise noted. Where obsolete federal specifications have been shown as standards, they shall be superseded by the latest federal specifications covering the same subject.

Abbreviations used for various standards are noted in section entitled “Abbreviations” of these General Requirements.

GR-24 MATERIAL SAMPLES AND TESTS

At the option of the ENGINEER, ENGINEER’s acceptance of the source of supply for each of the materials shall be required prior to delivery and before such material is used in the Work.

Representative preliminary samples of materials conforming to the quality prescribed in the Contract Documents shall be submitted by the CONTRACTOR for testing or examination, as required by the ENGINEER.

All tests or materials furnished by the CONTRACTOR shall be made in accordance with the commonly recognized standards of national technical organizations, and such special methods and tests as prescribed in the Specifications.

The CONTRACTOR, at the CONTRACTOR’s sole expense, shall furnish OCSD, in triplicate, certified copies of all required factory, laboratory, and mill test reports to verify material quality and composition. Any materials shipped to the CONTRACTOR from a factory or mill prior to having satisfactorily passed such

testing and inspection by a representative of OCSD shall not be incorporated in the Work, unless the ENGINEER has notified the CONTRACTOR in writing that such testing and inspection will not be required. The cost of performing all factory and mill tests shall be paid by the CONTRACTOR unless otherwise required by the Contract Documents.

The CONTRACTOR shall furnish such samples of materials as are requested by the ENGINEER without charge. No material shall be used until accepted by the ENGINEER. Samples will be secured and tested whenever necessary to determine the quality of the material. Cost for testing not specifically required by the Contract Documents will be paid by OCSD.

GR-25 EQUIPMENT TESTING

The CONTRACTOR shall test all equipment to show conformance with the Contract Documents as specified herein. Material testing and other specific factory and field testing requirements for particular equipment may be specified in the equipment Specification sections. Detailed system acceptance test requirements are specified in Specification section 01810, Commissioning, and other sections of these Specifications (e.g., section 16080, Electrical Testing, and section 17405, Instrumentation and Control) where applicable. Testing shall be performed as follows:

1. All equipment shall be tested to verify its specified functionality.
2. All specified equipment parameters are subject to verification during all tests.
3. Where possible, devices and systems shall be run through their entire range of operation to verify performance and required limit settings – switches, gate stops, etc.
4. All equipment, piping, etc. which may contain fluid shall be tested for leakage at full system operating pressure unless specified otherwise. Fluids for testing plant processes will initially be clean water, if available. The reliability acceptance testing will utilize actual process fluids unless specified otherwise.
5. Electrical and instrumentation systems shall be tested for proper connections.
6. All equipment shall be subject to a complete functional acceptance test (FAT) and a reliability acceptance test (RAT) as required in these Contract Documents. OCSD operations personnel are typically involved in these tests as part of their training. The equipment will be operated at all achievable operating conditions.
7. Equipment exhibiting unusual or unacceptable operating characteristics shall be disassembled and inspected and defective components replaced by the CONTRACTOR.
8. After the successful completion of FAT, all equipment shall be inspected for loose connections, leaking fluids, and any irregularities. All field-aligned equipment shall be checked for required alignment and, if necessary, re-aligned by the CONTRACTOR after the equipment has reached operating temperature.

9. Failure to meet specified requirements shall be cause for retesting at the CONTRACTOR's expense until the requirements are met. Interruption of a continuous operation test due to equipment malfunction shall be cause to restart the test after repairs.
10. SCADA system programming will be provided by OCSD when so specified in Specification section 17405, Instrumentation and Control. The CONTRACTOR shall accommodate testing of programming by OCSD as necessary in both the FAT and RAT. Equipment may be progressively operated and monitored by the SCADA system as programming is tested.
11. All testing instrumentation that can be calibrated shall have been calibrated within one year of testing operations.
12. The CONTRACTOR shall furnish all power, ventilation, consumables, utilities, and temporary facilities necessary for tests if permanent systems are not available at the time of testing.
13. Qualified technicians, Electricians, and calibrated test instruments shall be provided by the CONTRACTOR as necessary to perform tests. Certifications for test instruments and technical personnel shall be provided to prove the performance of tested equipment beyond reasonable doubt. In addition, the CONTRACTOR shall furnish its own personnel, as needed, to make adjustments or alterations recommended by the equipment manufacturer's representative(s).

The CONTRACTOR shall be responsible for coordinating testing of equipment and training sessions of OCSD staff. The CONTRACTOR shall join the Project Commissioning Team as defined in Specification section 01810, Commissioning. The CONTRACTOR'S Training Representative shall have equivalent experience in similar projects. The Commissioning Team will meet as needed, but at least monthly, until the facility Beneficial Occupancy occurs.

The CONTRACTOR shall propose a schedule for required testing and training for each piece of equipment or system at least two months prior to any event and the Commissioning Team will ensure that it is workable and effective. The CONTRACTOR shall submit to OCSD for their review and acceptance the complete testing procedures for each system, including the forms to be used for recording the test results, prior to the FAT as defined in Specification section 01810, Commissioning. The schedule shall be updated weekly. Facility documentation and training shall be completed and accepted by OCSD prior to the RAT as defined in Specification section 01810, Commissioning.

The CONTRACTOR shall document the results of all testing with standard forms that were previously submitted and accepted, containing the equipment name, manufacturer, model, and serial number; equipment tag number; a diagram showing bearing locations; operating parameters; test equipment, witness signatures; and date. Include the motor and driven device on the same document. Submit the original and three copies of all records produced during the testing program. Submit documentation of all test equipment and its calibration prior to testing. A complete set of all original testing documentation shall be maintained by the CONTRACTOR and submitted prior to Beneficial Occupancy. The testing documentation shall be

organized in binders by equipment number and have an index of included equipment listing the name and number of the tested equipment.

GR-26 SHIPPING, STORAGE AND HANDLING OF MATERIALS AND EQUIPMENT

CONTRACTOR shall provide sufficient delivery location information (contact name and phone number) to shippers for proper delivery to the CONTRACTOR's office or Work site. Deliveries without proper information will not be allowed access to the site.

The CONTRACTOR shall store all work materials and equipment to ensure the preservation of their quality and fitness. Storage conditions shall be in accordance with the manufacturer's requirements and shall be acceptable to the ENGINEER for all materials and equipment not yet incorporated into the Work. When considered necessary by the ENGINEER, said material and equipment shall be placed on platforms, covered and provided with an internal and external moisture protection system. Stored materials or equipment shall be so located as to facilitate prompt inspection. Any material or equipment which has not been effectively stored or protected shall be considered defective and subject to rejection.

Off-site storage facilities shall be accessible to the ENGINEER and shall be insured for full value. Certification of bonded warehouse or other insured storage facility shall be submitted to and accepted by the ENGINEER prior to any request for payment by the CONTRACTOR. All arrangements and costs for storage facilities shall be paid by the CONTRACTOR, unless specifically designated in the Contract Documents. The CONTRACTOR shall maintain an inspection log verifying stored conditions on a monthly basis, available for ENGINEER's inspection upon request.

Equipment and materials stored within the treatment plants shall not be stored outside of the Work and Staging Areas identified in the Contract Documents or otherwise assigned by the ENGINEER.

GR-27 DEFECTIVE MATERIALS AND EQUIPMENT

All materials and equipment not conforming to the Contract Documents shall be considered defective even though the ENGINEER may have previously overlooked and accepted them. All such materials and equipment, whether in place or not, shall be rejected and be removed immediately from the worksite unless otherwise permitted by the ENGINEER. No rejected material or equipment, the defects of which have been subsequently corrected, shall be used until accepted in writing by the ENGINEER.

Upon failure on the part of the CONTRACTOR to comply with any order of the ENGINEER made under the provisions of this section, the ENGINEER shall have authority to remove or replace defective material and equipment and to deduct the cost of removal and replacement from any monies due or to become due the CONTRACTOR.

GR-28 EQUIPMENT SERVICE MANUALS

For the equipment service manual requirements, refer to the respective Specifications section.

CONTROL OF WORK

GR-29 INSPECTION

The ENGINEER and other OCSD Agents shall at all times have access to the entire worksite during construction, and shall be furnished with every reasonable facility for ascertaining that the stock and materials used and employed, and the workmanship, are in accordance with the requirements and intentions of the Specifications. All Work done and all materials furnished shall be subject to inspection and acceptance. The CONTRACTOR shall give twenty-four (24) hour notice to the ENGINEER in advance of backfilling or otherwise covering any part of the Work so that the ENGINEER may, if desired, observe such part of the Work, before it is concealed. The CONTRACTOR shall give twenty-four (24) hour written notice for all required inspections. (Whenever the CONTRACTOR varies the period during which work is carried on each day, the CONTRACTOR shall give due notice to the ENGINEER so that proper inspection may be provided.)

The CONTRACTOR shall prosecute and schedule the Work per the Contract Documents with the full knowledge of the ENGINEER or agent(s), and any Work done without the knowledge of the ENGINEER or agent(s) shall be subject to rejection.

The inspection of the Work or payment therefore shall not relieve the CONTRACTOR of any obligations to fulfill the Contract as prescribed. Defective Work shall be made good. Unsuitable materials may be rejected, notwithstanding that such defective Work and materials have been previously overlooked by the ENGINEER and accepted or estimated for payment. When the ENGINEER indicates in writing to the CONTRACTOR that any part of the Work does not comply with the Contract Documents, it shall be considered to be rejected.

Requests from the CONTRACTOR to perform Work on Saturdays, Sundays, OCSD-recognized holidays, and/or outside the regular established eight (8) hour working day, require written notification to ENGINEER seven (7) days prior to commencing such "overtime" work. CONTRACTOR shall reimburse OCSD by a credit Change Order for all additional expenses to OCSD for inspection, testing services, and other incidental expenses caused by such overtime work elected by the CONTRACTOR. The CONTRACTOR shall complete and provide an "Overtime Request Form" to initiate the overtime request. Requested overtime work shall commence only upon approval by the ENGINEER. OCSD recognizes the following holidays for the purposes of this General Requirement: New Year's Day, Lincoln's Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Day after Thanksgiving, Christmas Eve, and Christmas Day. Reimbursement to OCSD for inspection overtime and expenses shall not be required for extra work or Work specifically required by the Contract to be performed outside the regular work day or on recognized holidays. Holidays that occur on Saturdays and Sundays will be observed on preceding Fridays and following Mondays, respectively.

Discontinuance of overtime work schedules elected by the CONTRACTOR may be necessary, should OCSD determine that Public/OCSD interests are no longer served.

Projects financed in whole or in part with federal or state funds will be subject to inspection and audit by the federal and state agency involved.

GR-30 SUBMITTAL PROCEDURES

A. General

The CONTRACTOR shall comply with the following general methods and requirements of submissions applicable to the Work-related submittals and related documentation including CONTRACTOR-generated drawings, manufacturer's test procedures, test results, samples and product data, equipment service manuals, OCSD personnel training plans, requests for substitutions, mobilization plan and all miscellaneous Work-related submittals.

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

All submittals by Subcontractors for ENGINEER's review and acceptance shall be sent directly to the CONTRACTOR for review prior to submittal to the ENGINEER. No submittals shall be forwarded directly to the ENGINEER by Subcontractors and/or the manufacturers. The CONTRACTOR shall be responsible for Subcontractors' submissions at the proper time to prevent delays in delivery of materials.

Project Work, materials, fabrication, and installation shall conform to the accepted shop drawings, applicable samples, product data, and Contract Documents. Submittals found to be inaccurate, incomplete, or otherwise in error shall be returned to the CONTRACTOR for correction before submission thereof.

Resubmittals shall be required on all submittals until they are accepted by the ENGINEER, in accordance with the General Requirements article entitled "Shop Drawing Submittals." A resubmittal must be submitted complete; a partial resubmittal shall not be accepted. For example, if a submittal contains thirty (30) pages but only five (5) pages have corrections, CONTRACTOR shall resubmit the entire thirty (30) pages inclusive of the corrected pages.

Shop drawings and other submittals will be reviewed no more than twice at OCSD's expense. All subsequent reviews will be performed at times convenient to the ENGINEER and at the CONTRACTOR's expense, based on the ENGINEER's prevailing rates. The CONTRACTOR shall reimburse OCSD for all such fees invoiced by the ENGINEER.

Any need for more than one resubmission, or any other delay in obtaining ENGINEER's review of submittals, will not entitle CONTRACTOR to extension of the Contract Time.

The CONTRACTOR shall submit for ENGINEER's review and acceptance of the shop drawings and/or other Work-related submittals that result from an approved Change Order as defined in the General Conditions.

Submittals including product data for information only will not be subject to submittal review procedures. Such submittals shall be provided as part of the Work under this

Contract and its acceptability shall be determined under normal inspection procedures.

B. Electronic Format/Submittal Identification System

The CONTRACTOR shall submit all submittals electronically for review. Electronic submittals shall be in PDF format unless otherwise specified under individual specifications with security restrictions set to enable commenting so that ENGINEER's comments can be added to the document 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.

The CONTRACTOR shall utilize a nine (9) character submittal identification number preceded by the Project or Contract number and followed by a submittal title in the following manner:

1. Project number: The Project or Contract number.
2. Specifications section number: The first five (5) digits shall be the applicable Specifications section number.
3. Sequence number: The next three (3) digits shall be the numbers 001-999 to sequentially number each individual submittal that makes up the complete submittal for the Specifications section number.
4. Revision letter: This character shall be a letter, A-Z, indicating the submission of that submittal, i.e., "A" for 1st submission, "B" for 2nd submission (first resubmission), "C" for 3rd submission (second resubmission), etc.
5. Title: Submittal title or subject designated on the Submittal Transmittal Form. See "Submittal Transmittal" later in this General Requirements section.

Filename example, "P1-101_03300-008-B_Concrete_Mix_Design.pdf," where:

1. "P1-101" indicates the Project or Contract number;
2. "03300" indicates the related Specifications section number;
3. "008" indicates this is the eighth (8) submittal under the related Specifications section; this also indicates that seven (7) other unique submittals have been provided for Specifications section 03300;
4. "B" indicates the second submission (first resubmission) of that submittal;
5. "Concrete_Mix_Design" indicates the submittal title. Capitalize each word in the submittal title and separate each word with an underscore "_" character.

C. Uploading Submittals

The CONTRACTOR shall upload all electronic submittals for transfer to location designated by OCSD staff. CONTRACTOR shall provide notification to OCSD that electronic submittal has been provided.

D. Hard Copy Format

Unless otherwise specified, the CONTRACTOR shall provide one (1) hard copy for each finalized submittal with a "Resubmittal Not Required" status. Some submittals, for example Specifications section 02270, Stormwater Pollution Prevention Plan and OCSD Safety Standards, may require additional hard copies during their submittal process which will be detailed in those Specifications.

Shop drawings and product data sheets 11 inch x 17 inch and smaller shall be bound together in an orderly fashion. Submittals shall be assembled using screw post binding/Chicago screws.

Each submittal assembly shall include tabbed sheets to separate each product and system, with typed description of product and major component parts. When multiple binders are used, correlate data into related groupings.

E. Submittal Transmittal

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

GR-31 SHOP DRAWING SUBMITTALS

A. General

Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data that are prepared by the CONTRACTOR, Subcontractors, manufacturers, Suppliers, and/or distributors, and which illustrate some portion of the Work. Additional examples of shop drawings include custom-prepared data such as fabrication and erection/installation (working) drawings, detailed design calculations, lists, graphs, scheduled information, setting diagrams, actual shopwork manufacturing instructions, operating instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications as applicable to the Work.

B. Shop Drawing Review

Shop drawing submittals shall contain sufficient storage, installation, operation and maintenance information to allow the ENGINEER to confirm compliance with the manufacturer's recommendations during the storage, installation, startup and testing of the equipment. Such information shall also be sufficient for review of the equipment regarding operation and maintenance requirements for the equipment after it is in service.

The CONTRACTOR shall review, mark with CONTRACTOR's approval, and submit for ENGINEER's review and acceptance, the shop drawings as called for in the Contract Documents, and as requested by the ENGINEER. Shop drawings shall show the name of the Project, the CONTRACTOR, and, if any, the names of

Suppliers, manufacturers and Subcontractors. Shop drawings shall be submitted in a prompt and orderly sequence to not cause any delay in prosecution of the Work.

Each shop drawing submittal shall include the submitted Specifications section, with addendum updates included, and all referenced and applicable sections, with each paragraph check marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. Check marks shall denote full compliance with a paragraph as a whole. If deviations from the Specifications are indicated, and therefore requested by the CONTRACTOR, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph, referenced to a detailed written explanation of the reasons for requesting the deviation. The ENGINEER shall be the final authority for determining acceptability of requested deviations. The remaining portions of the paragraph not underlined will signify compliance on the part of the CONTRACTOR with the Specifications. Failure to include the marked-up Specifications section, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.

C. Shop Drawing Review Period

Within twenty-five (25) calendar days after receipt of a shop drawing submittal, the ENGINEER will return comments, if any, to the CONTRACTOR to include an electronically signed transmittal with submittal stamp. When a submittal is of a complete system, complex piece of equipment, or deemed necessary by the ENGINEER, the ENGINEER shall extend the shop drawing review period to thirty-five (35) calendar days. OCSD will notify CONTRACTOR on the occasions where the longer review time is required. The ENGINEER will work with the CONTRACTOR to define those submittals that would require the extended return date. For shop drawing submittals that are of a complete system or a complex piece of equipment, the CONTRACTOR shall provide a meeting, prior to submitting the shop drawings, to review the requirements and a second meeting to discuss ENGINEER's comments to submitted shop drawings. CONTRACTOR's Supplier's / manufacturer's engineer or staff involved in developing the shop drawings shall participate in the meetings. Examples of complete systems and complex pieces of equipment include:

1. Packaged odor control systems
2. Packaged HVAC systems
3. Electrical/I&C Control Panels
4. Switchgear
5. Engineered mechanical equipment - pumps, grinders, bar screens, blowers, clarifier drives, etc.

Submittals received after 3 pm Monday through Thursday shall be processed the next business day. Submittals received on Friday shall be processed the following Monday or the next business day.

D. Shop Drawing Submittal Return Status

Along with submittal comments, a submittal shall be returned with a status as defined below:

1. ACCEPTED
2. ACCEPTED AS NOTED
3. REVISE AND RESUBMIT

If the submittal is returned to the CONTRACTOR marked "ACCEPTED," the submittal is in general conformance with the design concept of the Project and general compliance with the Contract Documents. Prior to receiving an "ACCEPTED" response for equipment and material drawings, any Work which the CONTRACTOR may do on fabrications covered by the same shall be at CONTRACTOR's own risk, as OCSD will not be responsible for any expense incurred by the CONTRACTOR for changes needed to make the same conform to all Contract requirements.

If the submittal is returned to the CONTRACTOR marked "ACCEPTED AS NOTED," the CONTRACTOR shall incorporate all comments and, within thirty (30) days from the return of the submittal, resubmit the complete shop drawing(s). 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 designated with the next revision letter in accordance with the General Requirements section entitled "Submittal Procedures." If the thirty (30) day turnaround timeline is not met, ENGINEER will change the status of the submittal to "REVISE AND RESUBMIT." No payment for facilities constructed and/or installed will be made until the final submittal has received an "ACCEPTED" response.

A submittal returned to the CONTRACTOR marked "REVISE AND RESUBMIT" implies the submittal contained some of the required information and generally meets specified requirements; however, there was a significant amount of missing or illegible information, errors on multiple documents, or a 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.

A submittal returned to the CONTRACTOR without status implies the 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 within the submittal.

If the submittal is returned to the CONTRACTOR marked with no status or "REVISE AND RESUBMIT," the CONTRACTOR shall correct the shop drawings to conform to ENGINEER'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, designated with the next revision letter in accordance with the General Requirements section entitled "Submittal Procedures."

The review by the ENGINEER is only to determine general conformance with the design concept of the Project and general compliance with the Contract Documents. The review shall not be construed as relieving the CONTRACTOR of the full responsibility for the following: providing materials, equipment, and Work required by the Contract; proper fitting and construction of the Work; accuracy and completeness

of the shop drawings; selection of fabrication processes and techniques of construction; and performance of the Work in a safe manner.

No portion of the Work requiring a shop drawing submittal shall be commenced until the submittal has been reviewed by the ENGINEER and returned to the CONTRACTOR with a notation indicating “ACCEPTED” or “ACCEPTED AS NOTED” where the noted comments do not affect the Work for which CONTRACTOR is commencing.

If the CONTRACTOR believes that any shop drawing 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 ENGINEER and request a Change Order in accordance with the General Conditions and General Requirements.

E. 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 ENGINEER 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 the Contract Documents and the CONTRACTOR's approval. The CONTRACTOR shall submit all shop drawings and pertinent data for all equipment and material to the ENGINEER for acceptance no later than at fifty (50) percent completion of the Contract.

F. Field Measurements and Data Sheets

All details on shop drawings submitted for review and acceptance shall show clearly the relation of the various parts to the main members and lines of the structure, and, where correct fabrication of the Work depends on field measurements, such measurements shall be made and noted on the drawings before being submitted for ENGINEER's review and acceptance.

Shop drawings for all equipment and materials proposed for the Work shall be submitted with a data sheet(s). Specific model numbers of equipment submitted shall be identified on all data sheets. If the data sheet(s) format is not acceptable to the ENGINEER, the ENGINEER will provide the required sheet format to the CONTRACTOR. Data sheet(s) should include as a minimum the following:

For Material:

1. Brand names
2. Manufacturer
3. I.D. Plate – Product No., etc.
4. Specifications section
5. Intended use of product, locations where the submitted materials will be used, etc.

For Equipment:

1. Brand name and manufacturer
2. I.D. Plate – Product No., etc.
3. Packager, assembler or Supplier
4. Specifications section
5. Intended use of product, locations where the submitted equipment will be used, OCSD equipment numbers, etc.
6. Electrical or fuel-driven equipment:
 - a. Motor or driver nameplate data
 - b. Equipment designation, size, capacities, etc.
 - c. Accessories
7. Non-powered equipment:
 - a. Size
 - b. Special features
8. Control, metering and electrical:
 - a. Material list
 - b. Special features

Refer to the individual Specifications sections regarding applicable licensing, certifications and/or Professional Engineer's signed stamps to be included with each respective item submittal.

Refer to the section entitled "Material and Equipment" of these General Requirements regarding proposed substitutions.

G. Spare Parts

Shop drawing submittals for all equipment requiring maintenance or consumables shall include a manufacturer's recommended spare parts list. Unless specifically indicated otherwise, spare parts shall not be provided by the CONTRACTOR. Spare parts will be purchased by OCSD as necessary based on the lists provided by the equipment Suppliers. The list shall include the part manufacturer's name and part number. All equipment in the Contract supported by each part shall be identified.

GR-32 SUPPLEMENTAL DRAWINGS AND INSTRUCTIONS

After the award or during the progress of the Work, if it appears that the Work to be done or any matter relative thereto requires additional explanation, the CONTRACTOR shall request further explanation from the ENGINEER. The ENGINEER will furnish, by means of drawings or written clarification, such additional instructions as are required for clarification or proper execution of the Work. All such instructions shall be consistent with the Contract and reasonably inferable therefrom. All drawings and revisions issued by the ENGINEER and delivered to the CONTRACTOR after execution of the Contract shall be deemed written instructions

to the CONTRACTOR. The CONTRACTOR shall comply with such written instructions as part of the Contract.

All authorized alterations affecting the requirements and information given on the approved Plans shall be in writing. No changes shall be made on any plan or drawing after the same has been issued by the ENGINEER, except by direction of the ENGINEER in writing.

Working drawings or plans submitted by the CONTRACTOR for any structure not included in the Contract Documents shall be subject to ENGINEER's acceptance in writing before any work involving such plans shall be performed.

If the CONTRACTOR believes that any supplemental drawings call for changes in the Work for which the Contract Amount or time for completion should be changed, the CONTRACTOR shall not proceed with those changes in the Work and shall, within fifteen (15) days of the receipt of the supplemental drawings, notify OCSD in writing of the estimated changes in the Contract Price, time for completion, or both.

No payment or extension of time for changes in the Work will be made unless the changes are issued in a fully executed Change Order in advance of the CONTRACTOR's proceeding with the changed Work.

GR-33 EQUIPMENT AND INSTRUMENT DATABASE

For the Equipment and Instrument Database (EID) requirements, refer to the respective Specification section.

GR-34 AS-BUILT DRAWINGS

A. General

The CONTRACTOR shall track changes from the original Plans by marking a set of Plans to show deviations made during construction. This full-size set of As-Built Drawings, including Subcontractor sections, shall be maintained in the CONTRACTOR's office, clean and dry, shall be legibly marked up and labeled, and shall be available for inspection during normal working hours.

OCSD reserves the right to withhold all progress payments, or any portion thereof, until all As-Built Drawings are brought up to date and accepted.

B. Required markings

1. All changes to the facilities depicted on the Plans.
 - a. Formal changes resulting from Field Change Orders (FCO), Requests for Information (RFI), and/or Bulletins.
 - b. Informal, no cost changes and corrections requested or accepted by the ENGINEER.
 - c. CONTRACTOR survey results correcting or enhancing data shown on the plans such as for underground piping, curb, gutter and road surfaces.
 - d. Changed and/or corrected dimensions, structural members, pipe sizes, designations, etc.

- e. Changed and/or corrected tag, circuit, location numbers, and text; and all other designations and codes.
- f. Details not in the original Contract Documents.
- 2. Final locations of all facilities installed in the Work.
 - a. Revised pipeline alignment and invert elevations.
 - b. Revised manhole invert elevations including all laterals.
- 3. Actual locations of all existing underground facilities shown on the Plans and/or discovered in work excavations.
 - a. Underground or embedded piping, conduit, and structures shown without dimensions.
 - b. Pipe and conduit fittings and changes of direction, size, embedment, or material.
 - c. Depths of various elements of foundation in relation to finished first floor datum.
 - d. Horizontal and vertical locations of underground and underslab utilities and appurtenances, referenced to permanent surface improvements.
 - e. Location of internal utilities and appurtenances referenced to visible and accessible features of the structure.
- 4. References to related FCO, RFI, and/or Bulletin at affected details.
- 5. Explanatory comments at informal changes where the cause is significant but not obvious.

C. Marking content and format

- 1. As-built markings shall be legible, accurate, and explicit in presenting all changes from what is shown on the Plans. A draftsman should be able to revise the Plans from the markings and supporting drawings.
 - a. Mark all changes, corrections and new data in red erasable pencil. Notes describing changes, such as indicating the relocation of a component on a schematic drawing with an arrow from the initial and final locations and “move”, should also be in red erasable pencil.
 - b. All explanatory notes and comments shall be clearly printed in black ink. Cross out ink errors.
 - c. Changes and corrections to dimensions and other text shall consist of lining out the original data and adding the revised data adjacent to it in red pencil.
 - d. The location of underground facilities shall be precisely dimensioned regardless of whether dimensions were included on the original Plans.
 - (1) Survey data shall use Project grid and datum.
 - (2) Existing underground features shall be dimensioned to nearest inch or surveyed.

- (3) Show actual measured dimensions, not calculated values.
 - (4) Angle points and surfaces shall be dimensioned relative to substantial aboveground structures in the vertical and two horizontal planes.
 - (5) Existing piping crossing an excavation shall be location dimensioned at both ends of its crossing and at angle points.
2. Major changes to the As-Built Drawings may be rendered by inserting new drawings or sketches into the As-Built Drawing set. New drawings are generally created through a FCO or in response to a RFI or Bulletin.
- a. Insert each revised plan drawing into the As-Built Drawing set in front of the superseded drawing, including all relevant RFIs, Bulletins and FCOs.
 - b. Sketches or revised details shall be attached to the parent drawing over or next to the original detail or to the back of the preceding sheet in the As-Built Drawing set.
 - (1) Reduce details by no more than 50 percent. All writing shall be legible.
 - (2) Where marked changes are crowded, attach small sheets to add more detail.
 - (3) Do not obscure valid details with attached sheets
 - (a) Attach at top edge with tape so sheet may be lifted to see covered details.
 - (b) Use a small amount of tape at the bottom edge to control flapping if necessary.
 - c. Every attached drawing shall reference its affected detail(s)
 - d. Every affected detail shall reference all drawings modifying it. (e.g. – “See CO #3, SK-2”)
3. Draw new, relocated, and realigned facilities approximately to scale unless location can be indicated by modifying existing dimensions.
- a. Use a straightedge and circle template or compass to draw facility outlines.
 - b. Show relative size and locations of all installed panels.
 - c. Cloud the affected area on the drawings with a red pencil and note the RFI, FCO, or Bulletin number.

D. Update and Review of As-Built Drawings

- 1. Update drawings within two (2) weeks of the completion of changed Work. For example, for concrete placed different from that indicated on the Plans, the As-Built Drawings shall be marked with the actual sizes and locations within two (2) weeks after removing the forms.
- 2. As-Built Drawings will be inspected monthly. The CONTRACTOR shall request in writing a recurring monthly meeting with the ENGINEER and Project INSPECTOR to initial all informal changes. All other changes will be

referenced to a FCO, RFI, and/or Bulletin. The ENGINEER will review the CONTRACTOR's As-Built Drawings prior to progress payment submittal.

3. At the completion of the Work, the CONTRACTOR shall request in writing a meeting with the ENGINEER to inspect the CONTRACTOR's As-Built Drawings prior to their final submittal. The As-Built Drawings will be inspected by the ENGINEER and comments, if any, will be provided to CONTRACTOR. After all comments have been addressed, the As-Built Drawings shall be turned over to OCSD. Acceptance of As-Built Drawings shall be required before release of final payment.

GR-35 METHODS AND APPLIANCES

The methods, equipment, appliances and working force employed by the CONTRACTOR shall be such as will secure Work of acceptable quality and sufficient to complete the Work in the time agreed upon.

The ENGINEER may order, in writing, the CONTRACTOR to improve, change or increase such methods, equipment, appliances or force, which the ENGINEER deems to be inadequate or insufficient. Failure of the ENGINEER to make such an order shall not relieve the CONTRACTOR from the obligation to perform the Work in accordance with the Contract Documents and within the required time.

GR-36 SURVEY

A. General

All Work under this Contract shall be built in accordance with the lines, grades, tolerances and materials and equipment requirements as shown on the Contract Documents. Distances and measurements, except elevations and structural dimensions are given and made on horizontal planes. Although measurement, sampling, and testing may be considered evidence as to conformity, the ENGINEER shall be the sole judge as to whether the Work or materials deviate from the Contract Documents and the decision as to any allowable deviations therefrom shall be final. If specific lines, grades and dimensions are not shown on the Contract Documents, those furnished by the ENGINEER shall govern.

CONTRACTOR shall notify ENGINEER, in writing, a minimum of forty-eight (48) hours prior to needing OCSD provided survey work described herein.

B. Treatment Plant Work.

All controls, lines and grades necessary for the accurate construction of the Work under this Contract, except the basic reference line and bench mark, shall be furnished by the CONTRACTOR at CONTRACTOR's expense. Only a land surveyor licensed in the State of California shall be employed for this Work. Monuments for principal control points shall be set by the CONTRACTOR and shall be protected by the CONTRACTOR from disturbance. If the monuments are disturbed, any Work that is governed by these monuments shall be held in abeyance until the monuments are reestablished by the CONTRACTOR and accepted by the ENGINEER. The accuracy of all the CONTRACTOR's stakes, alignments and grades is the responsibility of the CONTRACTOR. However, the ENGINEER has

the discretionary right to check the CONTRACTOR's stakes, alignments, and grades at any time. Where such discretion is to be exercised by the ENGINEER, the ENGINEER will notify the CONTRACTOR of CONTRACTOR's intention, stating the time at which the checking will commence. Any part of the Work in progress, the results of which are predicated directly upon the CONTRACTOR's stakes, alignments or grades to be checked, shall be held in abeyance until the ENGINEER has notified the CONTRACTOR that the checking has been completed and the Work has been found to be in accordance with the Contract Documents.

C. Trunk line Work, Outside Treatment Plant Boundaries.

OCSD will provide offset line and grade stakes at ground level and will furnish cut sheets therefor. The CONTRACTOR shall be responsible for transfer of such offset line and grade into the trench for construction of the Work and for the accuracy of such transfer. Cost of such transfer shall be included in the unit prices Bid for the Work and no extra compensation will be made. The CONTRACTOR shall survey the pipeline alignment and invert elevation daily to verify installed tolerances. If the installed pipeline does not meet the tolerances specified in the applicable pipeline Specifications section controlling the Work, CONTRACTOR shall notify the ENGINEER immediately.

D. Preservation of Survey Work.

The CONTRACTOR shall preserve bench marks, survey stakes, and points set for lines, grades or measurement of the Work in their proper places until authorized by the ENGINEER to remove them. In the case of their destruction or removal by the CONTRACTOR, employees or agents, they shall be replaced by the ENGINEER at the CONTRACTOR's expense. The CONTRACTOR and the sureties shall be liable therefor.

GR-37 CONSTRUCTION ACCESS AND COORDINATION

A. Access

During the construction period, the CONTRACTOR will have use of the premises as directed by the ENGINEER. OCSD reserves the right and may undertake or award other contracts for additional Work on or near the Worksite. The CONTRACTOR warrants that it has carefully reviewed the Contract Documents and all other pertinent information made available by OCSD that relate to the nature and scheduling of other contracts that may be awarded and to constraints related to OCSD operations, and in submitting its Bid and executing this Contract has taken into account the need to coordinate its Work with that of other CONTRACTOR's and/or OCSD Operations. It is the express obligation and duty of the CONTRACTOR under the Contract to coordinate its Work with the work of others. The following shall apply:

1. The CONTRACTOR shall not have exclusive access to or use of Work areas or the Work site. OCSD may require that CONTRACTOR use certain facilities and areas concurrently with others.

2. OCSD will endeavor to advise the CONTRACTOR of the known others, including OCSD Operations.
3. CONTRACTOR shall cooperate and communicate with any other contractor performing work that may connect, complement, and/or interfere with the CONTRACTOR's Work and resolve any disputes or coordination problems with such CONTRACTOR.

B. General Coordination

The CONTRACTOR shall be responsible for coordinating any work carried on in the construction worksite by other parties or by OCSD simultaneously with the construction Work for this Project. The CONTRACTOR shall include as part of its Bid any costs that might be incurred as a result of coordinating the Work for this Project with such other work. In no case shall the CONTRACTOR be entitled to additional compensation from OCSD for damages suffered as a result of work being carried on in the construction worksite by other parties or by OCSD simultaneously with the construction Work for this Project. However, if such work results in a delay to the CONTRACTOR's Work, the CONTRACTOR may be entitled to an extension of time as specified in the General Conditions, Extension of Time for Delay.

C. Coordination Between OCSD Contractors

When two or more OCSD contractors are employed in related or adjacent work, each shall conduct work operation in such a manner as not to cause any delay or hindrance to the other. OCSD will not be responsible for damage caused by such delays, but where such a delay, in the opinion of the ENGINEER, is of such a nature that it could not have been prevented by a reasonable amount of cooperation on the part of the CONTRACTOR, then the CONTRACTOR may be entitled to an extension of time for completion of the Work as specified in the General Conditions, Extension of Time for Delay. The CONTRACTOR shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly coordinate its Work with theirs.

Nothing in this section shall be construed as relieving the CONTRACTOR of the full responsibility for completing the Work in its entirety, for making good defective Work and materials, for protecting the Work from damage, for being responsible for damage, or for the Project as set forth in the General Conditions and General Requirements and other Contract Documents. No action undertaken by OCSD under this section shall be deemed complete and acceptable, and such action shall not relieve the CONTRACTOR, sureties, or insurers of the provisions of the Contract Documents relating to CONTRACTOR's insurance, indemnity, or guarantees.

D. Coordination Between OCSD Contractor and Others or their Contractors

The CONTRACTOR shall coordinate the Work and cooperate with others, their contractors or workers operating on or adjacent to the worksite. In this respect, other parties, their contractors or workers shall have the right to enter upon the streets or rights-of-way for the purpose of performing their operations.

Where contractors or workers employed by other agencies are employed in related or adjacent work in, or in the vicinity of, the construction areas for this Project, and

where such work on the part of said parties results in a delay of the CONTRACTOR's Work, and where such a delay in the opinion of the ENGINEER, is of such a nature that it could not have reasonably been foreseen or anticipated by the CONTRACTOR in time to take steps to prevent same, then the CONTRACTOR may be entitled to an extension of time for completion of the Work as specified in the General Conditions, Extension of Time for Delay.

E. Coordination Between OCSD Contractor and OCSD Employees

When OCSD employees are engaged in work on or adjacent to the CONTRACTOR's worksite, the CONTRACTOR shall cooperate with OCSD in coordinating Project Work with the work being performed by OCSD employees and shall conduct operations in such a manner as not to cause any delay or hindrance to the work being performed by said OCSD employees. In instances such as this, OCSD will cooperate fully with the CONTRACTOR to prevent any delay or hindrance in the CONTRACTOR's Work. Should the work being performed by OCSD employees result in a delay to the CONTRACTOR's Work, and should the delay, in the opinion of the ENGINEER, be of such a nature that it could not have been prevented by a reasonable amount of cooperation on the part of the CONTRACTOR, then the CONTRACTOR may be entitled to an extension of time as specified in the General Conditions, Extension of Time for Delay.

F. Reports to OCSD

If any part of the CONTRACTOR's Work depends on the work of any other contractor or OCSD for proper execution or results, prior to proceeding with its own Work, CONTRACTOR shall promptly inspect and immediately, and in no event later than forty-eight (48) hours from when such work was made available to CONTRACTOR, notify the ENGINEER of any discrepancies, or defects or failures to perform or complete said other work that would preclude or hinder the proper execution or achievement of the CONTRACTOR's Work. Failure to inspect and report such defects shall constitute an acceptance of the other contractor's work as fit and proper for the reception of the work, except as to latent defects in the other contractor's work. Further, any delays by the CONTRACTOR in inspecting and/or reporting any defects in such work that results in delays to the CONTRACTOR's Work shall be the sole responsibility of the CONTRACTOR and OCSD will not be liable for any resulting delays and/or damages.

Where CONTRACTOR's Work depends on access to any premises or right of ways that are (a) outside the construction areas for the Project, or (b) otherwise in use by other CONTRACTORS or workers employed by other agencies, CONTRACTOR shall provide written notice to OCSD of its need for such access, the date when such access is needed and the expected duration of access needed to prosecute its Work. Such written notice shall be provided to OCSD no later than thirty (30) days prior to CONTRACTOR's expected access date.

G. Coordination Meetings

The CONTRACTOR shall attend such meetings and conferences, including a pre-construction meeting, arranged by OCSD for the purpose of coordinating the Work.

GR-38 PLANT ACCESS ROADS

The CONTRACTOR shall not block any access roads or entrances unless otherwise accepted by the ENGINEER. Under all circumstances, at least one-way traffic shall be maintained. The CONTRACTOR shall provide all signs, traffic cones, flagman and other barriers for traffic detours.

Plant emergency access routes as shown on the Contract Documents shall remain open at all times. CONTRACTOR shall not excavate, store equipment, or otherwise restrict access for emergency vehicles on emergency routes. When Work is required in emergency routes, CONTRACTOR shall provide necessary traffic control, including flagmen, to provide emergency access. Emergency routes shall be immediately restored and paved when Work is finished.

CONTRACTOR shall submit a plan to the ENGINEER within thirty (30) days of the Notice to Proceed to maintain emergency access and operator access to all operating facilities during construction for review. As circumstances and conditions change, the CONTRACTOR shall submit revised access plans to the ENGINEER.

GR-39 RIGHT-OF-WAY

The right-of-way for the facility to be constructed will be provided by OCSD as shown on the Contract Documents. The CONTRACTOR shall make arrangements and pay all expenses for additional area required by the CONTRACTOR outside the limits of the right-of-way unless otherwise specified in the Contract Documents.

Where rights-of-way are on public property, they shall be subject to the work permits to be issued by the proper public agencies. Work permits are to be obtained by the CONTRACTOR at the CONTRACTOR's expense except as provided herein.

In case of serious interference to the Work due to OCSD delay in furnishing rights-of-way or easements necessary for the construction, the CONTRACTOR will be allowed an extension of time to complete the Contract which is equal to the time lost by OCSD delay. OCSD shall not be liable for any damages, including but not limited to damage for expenses, overhead or extended overhead, resulting from such delay.

GR-40 CONCURRENT WORK UNDER SEPARATE CONTRACT

OCSD may award separate contracts for products and installation for other work as may be indicated on the Drawings and in the Specifications as "Not in Contract", "NIC", "Future" or "Under Separate Contract

OCSD will make available, in a timely manner, drawings and specifications of work under separate contracts for coordination and further description of that work. If available, such information will include drawings, specifications, product data, lists and construction schedules for such work. Information concerning work under separate contracts or to be done directly by OCSD will be provided for convenience only and shall not be considered Contract Documents even if included with Contract Documents.

GR-41 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Defective Work or unsuitable materials and/or equipment may be rejected, even though such defective items may have been previously overlooked by the

ENGINEER. All Work which does not conform to the requirements of the Contract Documents shall be remedied or removed and replaced by the CONTRACTOR in a manner acceptable to the ENGINEER. No compensation will be allowed the CONTRACTOR for such removal or replacement. Any Work done beyond the lines and grades shown on the Plans, or any extra work done without written authority of the ENGINEER will be considered as unauthorized and no compensation shall be made therefor. All nonconforming materials shall be immediately removed from the site.

Any defective or imperfect material or workmanship which may be discovered within one (1) year after Final Acceptance shall be corrected immediately by CONTRACTOR upon receipt of notice thereof from OCSD. All such corrections of defective or imperfect material or workmanship shall be made by the CONTRACTOR without extra charge, notwithstanding that it may have been overlooked in previous inspections and estimates and the Work finally accepted by OCSD.

If the CONTRACTOR fails to comply with any order of the ENGINEER made under the provisions of this section, OCSD shall have the authority to cause defective Work to be remedied, or removed and replaced, and any unauthorized work to be removed by OCSD forces, or otherwise, and to deduct the costs thereof from any monies due or to become due the CONTRACTOR, or to bring suit against the CONTRACTOR and the CONTRACTOR's sureties for money damages sustained by OCSD or for specific performance of the contractual obligations of the CONTRACTOR.

GR-42 RESTORATION OF SURFACES

All curbs, gutters, driveways, paving, sidewalks, and similar structures which are broken or damaged by the installation of the Work shall be reconstructed by the CONTRACTOR. Reconstruction shall be of the same kind of material with the same finish, and in not less than the same dimensions as the original Work.

Repairs shall be made by removing and replacing entire portions between joints or scores and not merely refinishing the damaged part. All Work shall match the appearance of the existing improvements as nearly as possible. Where asphalt pavement is disturbed and replaced, edges of existing pavement shall be saw cut back far enough to provide clean solid vertical surfaces before resurfacing material is placed.

GR-43 FINAL CLEANUP

Unless otherwise specified in the applicable Task Order, before Final Completion, the CONTRACTOR shall remove all rubbish, excess materials, and concrete forms, and shall dismantle and remove the following:

1. CONTRACTOR's equipment.
2. Temporary construction power and other utilities, communications facilities, lighting, work and storage yard, and site offices.
3. On-site sanitary facilities and potable water facilities.
4. CONTRACTOR's work and storage yard, and site offices, furnishings and office equipment, parking, demarcation fencing in the staging area, plants, temporary buildings and structures, and other construction facilities.

5. Temporary facilities used during construction, and access and security features including, but not limited to, site fencing, construction access gate and access security systems, security guards, guard stations and traffic guards.
6. Posted OSHA-required notices and Project signs.

All parts of the Work shall be left in a neat and presentable condition. Excess mounds of earth shall be removed from the site. Ruts and depressions shall be filled and graded to drain in a manner to make the appearance of the completed Work acceptable to the ENGINEER.

The CONTRACTOR shall maintain all interiors of buildings and structures in broom-sweep clean condition at all times during construction of buildings and structures. Upon enclosing the buildings and/or structures and installation of process equipment, interior finishes and/or fixtures, the CONTRACTOR shall maintain the buildings and structures in mop-clean or vacuum-clean condition.

Refer also to the section entitled "Final Completion and Final Acceptance" of the General Conditions.

All temporary (construction) rights-of-way provided by OCSD shall be redelivered to OCSD in such condition as to permit the use of said land for the purposes utilized prior to entry thereon by the CONTRACTOR.

GR-44 CLOSEOUT PROCEDURES

A. Final Submittal

The CONTRACTOR, within thirty (30) days after Notice of Substantial Completion date, shall submit the following items to the ENGINEER:

1. A final updated master schedule indicating actual completion dates, schedule of values and cash flow curves.
2. Written warranties, guarantees and information for each mechanical, electrical, process equipment, architectural and other materials, products or equipment specified in the Contract Documents.
3. Equipment Service Manuals, both in hard copy and electronic forms.
4. New permanent cylinders and key blanks for all locks.
5. Maintenance stock items; spare parts; special tools and record of missing items.
6. Final completed and verified As-Built Drawings in accordance with the section entitled "As-Built Drawings" of the General Requirements.
7. Final photographs and all progress photographs in both electronic and hard copy formats. Hard copies shall be included in photo-album binders.
8. Warranties and/or Guarantees, such as for roofing, landscape maintenance, etc., as required.
9. Certificates of inspection and acceptance by local governing agencies having jurisdiction.

10. Certified Payroll Records, if requested.
11. Affidavit of Payment of All Taxes.
12. Consent of Surety for Final Payment.
13. Final completed punchlist.

B. Final Completion

After receipt and acceptance by the ENGINEER of the Final Submittal and after completion of Commissioning, as specified in the respective Specifications section, the CONTRACTOR may request Final Inspection in accordance with the section entitled "Final Completion and Final Acceptance" of the General Conditions.

SAFETY

GR-45 GENERAL

A. General

In connection with the performance of this Contract, OCSD shall have the authority to enter the worksite at any time for the purpose of identifying the existence of conditions, either actual or threatened, that may present a danger or hazard to any and all employees.

CONTRACTOR acknowledges that provisions of Section 6400 of the California Labor Code, which requires that employers shall furnish employment and a place of employment that is safe and healthful for all employees working therein. In the event OCSD identifies the existence of any condition that presents an actual or threatened danger or hazard to any or all employees at the worksite, OCSD is hereby authorized to order the immediate abatement of that actual or threatened condition pursuant to this Section. OCSD may also, at its sole authority and discretion, issue an immediate stop work order to CONTRACTOR to ensure that no employee working at the worksite is exposed to a dangerous or hazardous condition. Any stop work order issued by OCSD to CONTRACTOR in accordance with the provisions of this section, shall not give rise to any claim or cause of action for delay damages by CONTRACTOR or CONTRACTOR's agents or Subcontractors against OCSD.

The CONTRACTOR shall meet or exceed the minimum standards set in the Contract Agreement, Exhibit B "OCSD Safety Standards."

GEOTECHNICAL CONSIDERATIONS

GR-46 GENERAL

The CONTRACTOR shall abide by the recommendations of the detailed geotechnical studies specific to the Project. Soil and geotechnical studies have been conducted to evaluate foundation resistance to uplift pressures, soil corrosion potential, liquefaction, potential effects of vibrating equipment, trench wall stability, and special construction considerations that may be needed.

GR-47 GEOTECHNICAL REPORT

The Geotechnical Report for the proposed site has been issued and is included in Attachment B at the end of the General Requirements.

This information is made available to the CONTRACTOR for such use as the CONTRACTOR may choose to make of it in the preparation of CONTRACTOR's Bid, but OCSD gives no guarantee, either expressed or implied, that it represents a true or complete cross section of all of the material to be encountered in performing the excavation and earthwork on this Project. The CONTRACTOR shall make additional boring holes or use whatever other means necessary to determine the conditions that exist.

DEWATERING

GR-48 GENERAL

No excavation shall take place below any standing water level regardless of water source until the area has been dewatered. Dewatering shall be accomplished by filtered well points or gravel-packed deep wells and shall be in conformance with the Specifications. Dewatering shall be done in such a manner as to protect adjacent structures.

Dewatering shall consist of furnishing all approved Plans, labor, equipment and materials, performing all Work to design, construct, and operate dewatering systems, maintaining in a safe and dewatered condition the areas on which the construction Work will be performed, and removing the dewatering system upon completion of the Work.

GR-49 GROUNDWATER LEVEL

The geotechnical report for this Project can indicate various groundwater levels. OCSD's long term monitoring of the groundwater also shows the groundwater level to vary daily due to tidal action.

GR-50 SUBMISSIONS FOR REVIEW

The CONTRACTOR shall submit for the ENGINEER's review, drawings and data showing CONTRACTOR's proposed plan for dewatering of all Work areas, which shall include the planned method of dewatering, excavation and shoring plan, location and capacity of such facilities as dewatering wells, well points, pumps, sumps, collection and discharge lines, standby units proposed, and protective fills and ditches required for control of groundwater and surface water. The plan for dewatering shall be submitted to the ENGINEER no later than fifteen (15) days after the Notice To Proceed. The CONTRACTOR shall furnish such other information as may be required for the complete understanding and analysis of the dewatering and excavation plan by the ENGINEER.

In addition to the dewatering plan, CONTRACTOR shall submit to the ENGINEER an application for and obtain Authorization to Discharge to the OCSD sewer system before any dewatering discharges may commence as required by the Specifications section 02220, Dewatering. The CONTRACTOR shall at no time discharge water into OCSD's sewer system without prior approval from the ENGINEER.

Review by the ENGINEER will not relieve the CONTRACTOR of the responsibility for the adequacy of the dewatering and excavation plan or for furnishing all equipment, labor and materials necessary for performing the various parts of the Work. If, during the progress of the Work, it is determined by the ENGINEER that the dewatering system and excavation plan are inadequate or the CONTRACTOR's plan of construction is inoperative, the CONTRACTOR shall, at CONTRACTOR's expense, furnish, install, and operate such additional dewatering equipment and make such changes in other features of the plan or operation as may be necessary to perform the Work in a manner acceptable to the ENGINEER.

The CONTRACTOR shall monitor settlement and groundwater levels around existing structures during dewatering. Records of settlement and groundwater levels shall be kept and evaluated on a daily basis. The CONTRACTOR shall notify the ENGINEER immediately if excessive settlement or a significant drop in groundwater level is recorded.

GR-51 DEWATERING AREAS

All permanent improvements shall be constructed in areas free from water. The CONTRACTOR shall construct and maintain all permanent or temporary slopes, dikes, levees, drainage ditches, and sumps necessary for removal of water from Work areas. The CONTRACTOR shall design, furnish, install, maintain, and operate all necessary pumping and other dewatering equipment required for dewatering the various Work areas and for maintaining the foundation and other Work areas free from water from any and all sources whatsoever.

The dewatering shall be accomplished in a manner that will prevent loss of fines from the foundation, will maintain stability of all excavated slopes and bottoms of excavations, and will permit all construction operations to be performed in the dry conditions. Dewatering of excavations shall be performed to the extent required to ensure placement of compacted fill materials in the dry conditions and to prevent sloughing of the excavation side slopes. The CONTRACTOR shall lower the groundwater level a minimum of three (3) feet below foundation grade prior to foundation preparation and placement of structural foundations. During the placement and compaction of fill or bedding materials, the water level at every point within the limits of fills being placed shall be maintained a minimum of three (3) feet below fill placement level.

GR-52 PROTECTION OF FOUNDATIONS AND EXISTING FACILITIES

The CONTRACTOR shall furnish standby equipment of sufficient size and capacity to insure continuous operation of the dewatering system as designed. Any damage or settlement to the foundation or other Work or any existing structures caused by temporary or permanent failure or operation of the dewatering system shall be repaired to the satisfaction of the ENGINEER by the CONTRACTOR at the CONTRACTOR's expense. The CONTRACTOR should consider the use of recharge systems or other methods of protection of existing facilities. The CONTRACTOR will be required to perform the dewatering and to maintain the permanent Work areas for the length of time as required by Specifications section 02220, Dewatering, or for such additional time as necessary for the Work under this Contract. Upon completion of the dewatering and control of water operation, all

temporary works and dewatering facilities shall be removed in a manner satisfactory to the ENGINEER.

GR-53 DISPOSAL OF GROUNDWATER

Water from the dewatering and control of water operation may be disposed of in the plant and collection system at a location designated by OCSD in accordance with the Authorization to Discharge obtained by the CONTRACTOR. The water shall be desilted in strict accordance with the Specifications. The desilting equipment and groundwater extraction wells shall be secured with covers that will prevent odor emissions, and shall have a sample port on the discharge line from the desilting tank or filter system to allow inspection and monitoring by the ENGINEER.

Disposal point and maximum flow rate for dewatering waste shall be subject to the ENGINEER's review and acceptance. OCSD reserves the right to limit the maximum flow rate per disposal point and may direct the CONTRACTOR to provide additional disposal points at no change in the Contract Price.

PROTECTION AND/OR RELOCATION OF UTILITIES

GR-54 GENERAL

For the purpose of the Contract Documents, utilities shall be considered as including but not limited to, and irrespective of ownership: pipelines (including irrigation lines), conduits, transmission lines, and appurtenances of "Public Utilities" (as defined in the Public Utilities Act of the State of California), and those of private industry, business, or individuals solely for their own use or their tenants; and storm drains, sanitary sewers, street lighting, traffic signal systems, duct banks, telephone cables, transmission cables, and completely buried structures, hereafter referred to as utilities.

OCSD has endeavored to locate and indicate on the Contract Documents, utilities that exist within the limits of the Project, as derived from information provided by the owners of such utilities. However, the accuracy or completeness of the utilities indicated on the Contract Documents is not guaranteed. No attempt has been made to show service connections on the Contract Documents. It shall be the CONTRACTOR's responsibility to make CONTRACTOR's own investigations, including exploratory excavations to determine exact location of utilities shown on the Contract Documents and locations of service connections prior to earthwork operations and to notify the ENGINEER of any utility which has been incorrectly shown or omitted from the Contract Documents.

The CONTRACTOR shall protect in place, at no additional cost to OCSD, all existing utilities running parallel to proposed pipelines or sewers. This includes protection in place of all backfill above the utility and pipe bedding.

Work required in connection with utilities, because of interference with Contract Work, will be performed and paid for as specified in this section. However, when directed or accepted by the ENGINEER, changes in line or grade of any structure being built may be made in order to avoid utilities. Any additional costs because of such changes will be paid for as Extra Work.

The right is reserved to governmental agencies and to owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes in their facilities and for the purpose of maintaining and making repairs.

The Contract Documents provide guidance regarding disclosure of utilities. This section provides guidance as to payment for protection relocation, or disposal of utilities shown and not shown on the Plans.

On all Contract and permit inspection assignments, the CONTRACTOR shall not begin any trench Work until the CONTRACTOR has contacted a regional notification center as defined in California Government Code Section 4215 and the location of all utilities within the Project limits has been identified. If a CONTRACTOR hits a utility, the CONTRACTOR shall take prompt action to make sure that employees and the public are not endangered. If a water line is hit, the trench shall be evacuated immediately. If an oil or gas line is hit, all employees and the public shall be evacuated from the immediate vicinity. All conduits shall be treated as though they are high-voltage or high-current electrical conduits. Do not tamper with any conduit until the owner is called and power shut off. In all cases, call the Fire Department and utility owner immediately.

GR-55 BY OCSD (AS SPECIFIED)

When it is stated in the Contract Documents that a utility is to be relocated, altered, or reconstructed by other than the CONTRACTOR, OCSD will conduct all negotiations in respect to such work and the work will be done at no cost to the CONTRACTOR. No additional compensation will be given for delays or inconvenience by others to finish their work on schedule due to unforeseen difficulties.

GR-56 BY CONTRACTOR (AS SPECIFIED)

When Work on a utility is specified on the Contract Documents to be done by the CONTRACTOR, but is not included as a separate Bid item, the CONTRACTOR shall make all arrangements and coordinate with the owner of the utility as to when the Work is to be done. Any costs for such Work shall be included in the unit prices or included in the lump sum amounts Bid for the various Contract items. The CONTRACTOR shall submit a proposed method of relocation or protection of the utility for review. Review by the ENGINEER will not relieve the CONTRACTOR of any responsibility.

GR-57 BY CONTRACTOR – SERVICE CONNECTIONS – TRUNK SEWER CONTRACTS ONLY

Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, or cable television are shown on the Plans, the CONTRACTOR, for the purpose of preparing the Bid, shall assume that every property parcel will be served by a service connection for each type of utility.

At least two (2) working days before entering the Work, the CONTRACTOR shall request the utility owners identified in the Bid Documents to mark or otherwise indicate the approximate location of their subsurface facilities including, but not limited to, structures, main conduits, and service connections.

The alteration or temporary relocation of all service connections (including but not limited to: water, irrigation water, sewer, natural or manufactured gas, underground and/or overhead telephone and electrical) to adjacent property shall be the responsibility of the CONTRACTOR. No attempt has been made to show service connections on the Contract Documents.

GR-58 BY CONTRACTOR FOR ITS CONVENIENCE

The temporary relocation or the alteration of any utility, desired by the CONTRACTOR solely for convenience in the performance of the Work, to a position or condition other than that provided for on the Contract Documents shall be the CONTRACTOR's own responsibility. The CONTRACTOR shall make all arrangements with the property owners regarding such work. Any costs of such work for the CONTRACTOR's own convenience shall be absorbed in the unit prices or included in the lump sum amounts Bid for the various Contract items.

GR-59 BY CONTRACTOR OR OTHERS – UNKNOWN UTILITIES DURING CONTRACT WORK

In the event that a utility is disclosed or installed subsequent to the award of Contract, such utility not being indicated on the Contract Documents, with reasonable accuracy, and when said utility is found to occupy the space required to be occupied by a part of the permanent works, that, in the judgment of the ENGINEER, such utility requires location, relocation, removal, repair of damages, alteration, support or protection, OCSD will determine the method and manner of accomplishing such work and may order the CONTRACTOR to do so pursuant to a Change Order issued by OCSD. The Work shall be performed in accordance with Contract Documents provided by OCSD and in accordance with the following:

1. When said utility is found to occupy the space required to be occupied by a part of the permanent works to be constructed under the Contract or parallel to the permanent works and within vertical planes on each side at a distance away equal to the maximum allowable trench width measured at a point 12 inches above the top of the pipe, exclusive of branches or other facilities, as specified in Specifications section 02200, Earthwork, or to be within the specified excavation pay lines (when such are specified in the Contract Documents); OCSD will arrange for the relocation or alteration of said utility or require the CONTRACTOR to do the same.
2. Utilities found to cross the excavation but not intercepting the permanent works to be constructed or interfering with the construction will be maintained in place at the CONTRACTOR's expense. Utilities which interfere with the construction technique in use will be protected or relocated.
3. When said utility is more or less parallel with, and any portion of it does not lie within the vertical planes specified herein above, or does not lie within the excavation pay lines (when such are specified or shown on the Contract Documents); the CONTRACTOR shall advise OCSD and owner thereof, and in cooperation with the owner of the utility, provide and place the necessary support for proper protection to guarantee continuous and safe operation of the utility.

4. Continuous sanitary sewer service shall be maintained at all times. Should any existing sanitary sewer or manhole extend within the proposed sewer pipe trench excavation, the CONTRACTOR shall submit a method of construction or support for acceptance by the ENGINEER and shall assume all responsibilities therefor. All costs for such Work shall be borne by the CONTRACTOR.
5. If the work is done by others, the CONTRACTOR shall provide time and working space for protection and relocation as required.
6. Where undisclosed utilities are discovered and located by the CONTRACTOR when performing this Contract, CONTRACTOR shall immediately notify OCSD in writing.
7. OCSD will compensate the CONTRACTOR for its direct costs of locating, relocating, removal, repair, support or protection of the undisclosed utilities, together with the cost of equipment used for the Work necessarily idled during such work. The CONTRACTOR will be granted an extension of time for the completion of the Contract equal to the time determined by OCSD, to be reasonably necessary to perform the Extra Work and OCSD will not assess liquidated damages against the CONTRACTOR for delay in completion of the Work when such delay was caused by the failure of OCSD to provide for the removal or relocation of such utility facilities.
8. The CONTRACTOR will not be entitled to extra compensation or an extension of time when Extra Work is required to repair damage to undisclosed utilities caused by the failure of the CONTRACTOR to exercise reasonable care. The CONTRACTOR will not be entitled to any compensation for indirect or consequential costs or damages incurred as a result of the Extra Work required.

GR-60 ADVANCE NOTIFICATION AND EXPOSURE OF UTILITIES – IN ADVANCE OF WORK

It shall be the CONTRACTOR's responsibility to determine and notify those agencies requiring advance notification for inspection or other purposes before beginning construction in any jurisdictional area of any agency. A minimum of forty-eight (48) hours advance notice shall be given to the various agencies before beginning construction in the area unless specified advance times and other requirements are stated in the Contract Documents or in permit requirements.

It shall be the CONTRACTOR's responsibility to make exploratory excavations to determine the true location and depth of all utilities shown on the Contract Documents. The CONTRACTOR shall also determine the type of material and condition of any utility which may be affected by or affect the Work. The CONTRACTOR shall conduct exploratory excavations at least 1,300 feet ahead of a pipe trench heading a minimum of five (5) days in advance of the planned pipeline construction to provide sufficient lead-time to resolve utility conflicts.

All costs incurred in exposing utilities shall be included in the various Bid items and no additional allowance will be made therefor.

GR-61 CONTRACTOR RESPONSIBILITY

The CONTRACTOR shall be held responsible for all costs for the repair of any and all damage to the Contract Work or to any utility (whether previously known or disclosed during the Work), as may be caused by the CONTRACTOR's operations. Utilities not shown on the Contract Documents to be relocated or altered by others shall be maintained in place by the CONTRACTOR.

At the completion of the Work, the CONTRACTOR will leave all utilities and appurtenances in a condition satisfactory to the owners and OCSD.

MISCELLANEOUS

GR-62 OCSD-FURNISHED POWER AND WATER AT PLANTS NO. 1 AND NO. 2

When the Work is located on the site of Plant 1 or Plant 2, OCSD will provide the CONTRACTOR and Subcontractors, free of charge during the course of the Contract, 480-volt, 3-phase, 60-hertz, 100-ampere (maximum) electrical service at an existing motor control center indicated by the ENGINEER. CONTRACTOR shall make provisions with separate utility service for electrical services larger than 100 amperes. OCSD reserves the right to withdraw power at any time to perform operational or maintenance activities; all standby power required to support the Work shall be provided by the CONTRACTOR. ENGINEER will notify CONTRACTOR of power shutdown. No power from OCSD standby power generation systems shall be used by the CONTRACTOR.

The CONTRACTOR shall submit a written estimate of power needs to the ENGINEER for acceptance and shall list the estimated connections that require power. The CONTRACTOR shall not connect welding machines or other high-power-use loads to the supply. If dewatering well pumps are to be connected to the power supply, this shall be a separate item in the estimate. OCSD shall have the right to disallow any item included in the estimate. The CONTRACTOR shall submit a drawing showing the method of connection to OCSD's source. The method of connection shall include main circuit breakers on the CONTRACTOR's side of the load. All electrical Work shall be in accordance with the National Electric Code and the applicable provisions of the California Administrative Code and California Electrical Code (California Code of Regulations, Title 24). All temporary wiring shall be done with Type SO/portable cable. No construction shall begin until acceptance of the CONTRACTOR's proposed method of takeoff from OCSD's power supply has been obtained in writing.

The CONTRACTOR shall pull conductors to the point of termination to OCSD supplied service. OCSD will terminate the conductors at the motor control center for the temporary service. Convenience outlets may be used with acceptance by the ENGINEER, but GFCIs shall be utilized between CONTRACTOR's equipment and OCSD power supply. Temporary power supplied by the CONTRACTOR from outside utilities shall be buried within the treatment plant and not routed overhead.

OCSD will furnish to the CONTRACTOR, free of charge during the course of the Contract, reasonable quantities of water (potable, industrial, recycled, and plant) from within the treatment plant. The conveyance systems shall be the responsibility of the CONTRACTOR and shall be provided at the CONTRACTOR's expense.

The CONTRACTOR shall submit a written request of water needs including a description, volume, location, and duration of use to the ENGINEER for acceptance. A backflow device and flow totalizer shall be required at all connections. The CONTRACTOR shall be responsible for providing, installing, and testing the backflow protection at the CONTRACTOR's expense. If plant operations necessitate changing the connection locations, the CONTRACTOR shall do so at OCSD's request and at the sole expense of the CONTRACTOR.

The CONTRACTOR shall be responsible for all temporary connections to water and power, disconnections, removal, and cleanup after use.

When the Work site is not located on a plant site, the CONTRACTOR is responsible for supplying its own electricity and water necessary to perform the Work.

GR-63 OCSD-FURNISHED, CONTRACTOR-INSTALLED PRODUCTS

OCSD will furnish, for installation by CONTRACTOR, products which are identified on the Drawings and in the Specifications as "OCSD-Furnished/CONTRACTOR-Installed)", "installed by CONTRACTOR," or similar terminology.

Work under the Contract shall include all provisions necessary to fully incorporate such products into the Work, including, as necessary, fasteners, backing, supports, piping, conduit, conductors and other such provisions from point of service to point of connection, and field finishing, as shown on Plans and specified in the Contract Documents. CONTRACTOR shall include loading, transportation, and unloading of OCSD furnished products from the storage location on the Plant 1 site to the location where the products will be installed.

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EXHIBIT 9
Standard Specifications

This exhibit is on file at the Clerk of Board Office.

EXHIBIT 10
Reference Specifications
(Not Used)

EXHIBIT 11
Reference Plans
(Not Used)

EXHIBIT 12
Allowable Direct Costs

EXHIBIT 12

Allowable Direct Costs

TELEPHONE CHARGES	No telephone charges incurred will be reimbursed.
REPRODUCTION AND PRINTING CHARGES	In-house reproduction of records and documents will not be reimbursed by the SANITATION DISTRICT. Use of an outside copy service for specialty items and volume reproduction will be reimbursed at direct cost. Use of a professional printing service will be reimbursed at actual cost.
OVERNIGHT MAIL DELIVER AND MESSENGER SERVICE	Use of Federal Express, Express Mail, UPS, or such similarly-related service, as well as a messenger service, will be reimbursed at direct cost only when approved by the SANITATION DISTRICT.
POSTAGE	Incidental postage will not be reimbursed by the SANITATION DISTRICT.
COMPUTER USAGE	Computer use by CONTRACTOR and/or support staff will not be reimbursed.
MILEAGE	Per mile reimbursement will be at the current rate set by the Internal Revenue Service.
OFFICE SUPPLIES	The purchase of office supplies by CONTRACTOR will not be reimbursed.
LODGING	<p>The cost of lodging including room and all applicable taxes will be reimbursed on a per diem basis as an allowable maximum as established by U.S. General Service Administration. Lodging incidentals as defined by IRS are included in the per diem rates. Lodging personal incidentals including movies, internet, laundry service, valet service, room service, etc., will not be reimbursed. Receipts must be provided for the actual incurred cost.</p> <p>Cancellations of the hotel reservations by the CONTRACTOR must be per the hotel policy. Late cancellations, early or late departure will not be reimbursed by the SANITATION DISTRICT.</p>
GROUND TRANSPORTATION	The cost of ground transportation for taxi, shuttle, train, etc., will be reimbursed. Limousine service will not be reimbursed. The Consultant shall use the most economic and practical mode of transportation that is reasonably available.

AIRFARE	Airline ticket cost including one bag will be reimbursed only if pre-approved by the SANITATION DISTRICT. First class and business class tickets will not be reimbursed. Membership dues for corporate card frequent user programs or the cost of airline club membership will not be reimbursed.
AUTO RENTAL	Rental car cost for intermediate or standard model, mid-size car (Class "C") or the smaller car compatible with the specific need and rental car gas will be reimbursed. Receipts must be provided to substantiate requested reimbursements.
PARKING FEE	Parking fees for hotel, airport, rail station, etc. will be reimbursed. CONTRACTOR shall use the most economic and practical parking location as reasonably available. Excessive parking fees that are deemed unreasonable by the SANITATION DISTRICT will not be reimbursed.
TRAVEL MEALS	Travel meals will be reimbursed on a per diem basis as established by U.S. General Service Administration. Per diem rates include gratuities (tips) and will not be separately reimbursed by the SANITATION DISTRICT. Personal expenses such as cost of alcoholic beverages will not be reimbursed. The daily total reimbursement for meals shall not exceed the SANITATION DISTRICT per diem rate which is available upon request.
PER DIEM DAILY RATE FOR LODGING AND MEALS	The SANITATION DISTRICT may utilize per diem daily rate that includes lodging, meals and incidentals (M&IE) as established by IRS and U.S. General Service Administration for pre-approved travel when reasonable.
RENTAL EQUIPMENT	CONTRACTOR will be reimbursed at actual cost, no mark-up.
OTHER DIRECT COSTS	OCSD may authorize other items that may be necessitated due to modifications in scope of work resulting from field investigations and field work required by Agreement. These items may include special equipment, test equipment and tooling and other materials and services not previously identified. These items will be reimbursed based on actual cost incurred. A one-time mark-up of 15% for additional equipment rentals, materials and outside services required for field work and investigations may be allowed, as applicable, if justified. No additional markup is allowed by CONTRACTOR on other direct costs resulting from work performed by its Contractors, Subcontractors, Consultants, and Subconsultants.
MISCELLANEOUS	Cost of miscellaneous personal items such as, but not limited to, newspapers, toiletries, shoeshine, tobacco products, pay TV, movies, valet services, health club charges, in-room mini bars, clothing, and footwear will not be reimbursed. ATM/bank fees incurred by CONTRACTOR while traveling will not be reimbursed.