

EAST BAY MUNICIPAL UTILITY DISTRICT

REQUEST FOR QUOTATION (RFQ) No. 2012 for Sobranite WTP Maintenance and Safety Improvements Project Slide Gates

Contact Person: Najme Jalali, Assistant Engineer
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For complete information regarding this project, see RFQ posted at <https://www.ebmud.com/business-center/materials-and-supplies-bids/current-requests-quotation-rfqs/> or contact the EBMUD representative listed above. Please note that prospective bidders are responsible for reviewing this site during the RFQ process, for any published addenda regarding this RFQ.

RESPONSE DUE

by

1:30 p.m.

on

June 24, 2020

at

**EBMUD, Purchasing Division
375 Eleventh St., First Floor
Oakland, CA 94607**

EAST BAY MUNICIPAL UTILITY DISTRICT

RFQ No. 2012

for

SOBRANTE WTP MAINTENANCE AND SAFETY IMPROVEMENTS SLIDE GATES

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I. STATEMENT OF WORK**A. SCOPE**

It is the intent of these specifications, terms, and conditions to provide two (2) 72-inch x 72-inch 316 stainless steel slide gates that meet the requirements of this proposal.

East Bay Municipal Utility District (District) intends to award a contract to the lowest cost bidder whose response meets the District's requirements.

B. BIDDER QUALIFICATIONS**1. Bidder Minimum Qualifications**

- a. Bidder, bidder's principal, or bidder's staff shall have been regularly engaged in the business of providing slide gates for at least five (5) years.
- b. Bidder shall possess all permits, licenses, and professional credentials necessary to supply product and perform services as specified under this RFQ.

C. SPECIFIC REQUIREMENTS**1. Fabrication**

- a. All metal fabrication of the slide gates shall be of 316 stainless steel.
- b. The anchor bolts on the existing sluice gates will not be reused. Prior to installation of the new slide gates the existing anchor bolts will be cut off flush with the concrete and abandoned-in-place. The anchor bolt pattern on the new stainless steel slide gates shall be positioned to avoid the existing abandoned-in-place bolt locations.

2. Technical Requirements

- a. The products supplied and services provided shall comply with the requirements of the following specifications, drawings and forms:
 - Specification Section 01 33 00 – Submittal Procedures
 - Specification Section 01 42 19 – Reference Standards
 - Specification Section 01 45 27 – Shop Inspections
 - Specification Section 01 75 17 – Field Testing and Startup
 - Specification Section 01 81 02 – Seismic Design Criteria
 - Specification Section 33 12 16.08 – Slide Gates
 - Drawing: 505.11-S-033.21 – Rapid Mix Plan and Sections

- Drawing: 72 x 72 Model S-5000 Sluice Gate Drafting Manual (existing cast-iron gates)
- Form: Slide Gate Technical Submittal Checklist
- Form: Field Functional Test Data
- Form: Manufacture's Certification of Proper Installation
- Form: O & M Manual Review Checklist
- Form: Maintenance Summary Form

3. Materials in Contact with Drinking Water.

- a. All materials, equipment, or products that will be in contact with drinking water (potable water) shall be tested and certified as meeting the specifications of NSF/ANSI 61 Standard in accordance with California Code of Regulations, Title 22, Section 64591. Examples include, but are not limited to, valves, pumps, flow meters, protective materials (coatings, linings, liners), joining and sealing materials, pipes, tanks, pipe fittings, filters, cleaning chemicals, and lubricants.
- b. All materials, equipment, or products that will be in contact with drinking water (potable water) shall be tested and certified as "lead-free" per California Health and Safety Code Section 116875 and NSF 61 Annex G or NSF 372.
- c. All chemicals that will be in contact with drinking water shall be certified by NSF to NSF/ANSI Standard 60.
- d. For materials:
 - i. Documentation which demonstrates current NSF/ANSI Standard 61 certification shall be submitted by the bidder in their bid package.
 - ii. If awarded, contractor is responsible for informing the District within 5 days, if and when their certification lapses or expires. Failure to inform the District within the allotted time will be sufficient grounds for immediate termination of the contract.

D. SUBMITTALS

See Specification 01 33 00 and Specification 33 12 16.08 for additional submittal requirements.

E. DELIVERY

The equipment shall be delivered to the following location:

Sobranite Water Treatment Plant
5500 Amend Rd.
El Sobranite, CA 94803

Delivery shall be made to Sobranite Water Treatment Plant in El Sobranite, CA. The District shall schedule all equipment deliveries by means of written notification of a minimum of fourteen (14) work days in advance of delivery. Schedule deliveries only between the hours of 8:00 a.m. and 3:00 p.m., Monday through Friday. No deliveries will be accepted on Saturdays, Sundays or District Holidays. The Supplier shall coordinate delivery times and dates with District staff. Najme Jalali at 510-287-1029 prior to delivery. The District shall be responsible for unloading the equipment from the truck and the supplier shall be responsible for delivery to the site.

F. INSPECTION

The District will inspect material after its arrival at the delivery point. If the rejection rate of a sample of components is 10% or higher, all components will be rejected. Contractor is solely responsible for ensuring the material arrives at the District's ship-to location free of defects and manufactured in strict conformance with the specifications.

In the case that an item or lot is rejected, District Inspectors will provide Contractor and the EBMUD Purchasing Division with an Inspectors Job Report which will itemize the product deficiencies and required corrective action.

The District reserves the right-of-access to the Contractor's facility to verify conformance to this specification at the District's expense.

G. FAILURE TO MEET SPECIFICATIONS

In the event any shipment or shipments of a Contractor's product do not meet the specification or delivery requirements, the District may reject the shipment or shipments and, at its option, may purchase this material from any supplier on the open market who can meet the District's specification requirements or the District may demand immediate replacement by Contractor of the non-conforming product. Any costs over and above the original contract price will be charged back to the Contractor. In addition, Contractor shall bear the costs of removal and disposition for any delivery which fails to conform to the specifications.

II. CALENDAR OF EVENTS

EVENT	DATE/LOCATION
RFQ Issued	June 5, 2020
Deadline For Submission of Questions or Request for Substitution (Pre-approved equal)	June 12, 2020 by 4:30 p.m.
Addendum to Announce Pre-Approved Equivalents (if necessary)	June 17, 2020
Response Due	June 24, 2020 by 1:30 p.m.
Anticipated Contract Start Date	July 31, 2020
Delivery Date	No later than December 1, 2020

Note: All dates are subject to change by the District.

Bidders are responsible for reviewing <https://www.ebmud.com/business-center/materials-and-supplies-bids/current-requests-quotation-rfqs/> for any published addenda. Hard copies of addenda will not be mailed out.

III. DISTRICT PROCEDURES, TERMS, AND CONDITIONS

A. RFQ ACCEPTANCE AND AWARD

1. RFQ responses will be evaluated to determine that they are responsive, responsible, and that they meet the specifications as stated in this RFQ.
2. The District has the right to decline to award this contract or any part of it for any reason.
3. Any specifications, terms or conditions, issued by the District, or those included in the bidder's submission, in relation to this RFQ, may be incorporated into any purchase order or contract that may be awarded as a result of this RFQ.
4. Award of contract. The District reserves the right to reject any or all proposals, to accept one part of a proposal and reject the other, unless the bidder stipulates to the contrary, and to waive minor technical defects and administrative errors, as the interest of the District may require. Award will be made or proposals rejected by the District as soon as possible after bids have been opened.

B. BRAND NAMES, APPROVED EQUIVALENTS, DEVIATIONS, AND EXCEPTIONS

Any references to manufacturers, trade names, brand names, and/or catalog numbers are intended to be descriptive, but not restrictive, unless otherwise stated, and are intended to indicate the quality level desired. Bidders may offer an equivalent product that meets or exceeds the specifications.

The District reserves the right to be the sole judge of what shall be considered equal and/or acceptable, and may require the bidder to provide additional information and/or samples. If the bidder does not specify otherwise, it is understood that the brand and/or product referenced in this RFQ will be supplied.

Taking exception to the RFQ, or failure on the part of the bidder to comply with all requirements and conditions of this RFQ, may subject the RFQ response to rejection. If no deviations are shown, the bidder will be required to furnish the material exactly as specified. The burden of proof of compliance with the specifications will be the responsibility of the bidder.

This RFQ is subject to acceptance only on the terms and conditions stated in this RFQ. Any additional or different terms and conditions proposed by the bidder are hereby rejected, and shall be of no force or effect unless expressly assented to in writing by the District.

Proposals for “pre-approved or equal” substitutions requested during the bidding period shall be furnished in writing **NO LATER THAN 05/29/20 @ 4:30 p.m.** to:

Purchasing Division, Becky Sharpe (MS#102)
ofc (510) 287-0644, becky.sharpe@ebmud.com
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA 94623-1055

Proposals shall be accompanied by complete technical and descriptive data necessary to determine equality of the material, product, thing, or service. Samples shall be provided when requested. The burden of proof as to availability, comparative quality, suitability, and performance of the proposed substitution shall be upon the bidder. The bidder will not be reimbursed for any work and costs necessary for making the substitution workable. Proposals will be evaluated and deemed accepted, rejected, or incomplete by the District; the District will be the sole judge as to such matters. **If the substitution is accepted, bidders will be notified by addenda.**

RFQ responses based on equivalent products must use Exhibit A "Exceptions, Clarification and Amendments" to:

- a. Clearly describe the alternate offered and indicate specifically how it differs from the product specified in this RFQ
- b. Include complete descriptive literature and/or specifications as proof that the proposed alternate will be equal to or better than the product named in this RFQ

C. PRICING

1. All prices are to be F.O.B. destination. Any freight/delivery charges are to be included.
2. All prices quoted shall be in United States dollars.
3. Price quotes shall include any and all payment incentives available to the District.

Bidders are advised that in the evaluation of cost, if applicable, it will be assumed that the unit price quoted is correct in the case of a discrepancy between the unit price and extended price.

D. NOTICE OF INTENT TO AWARD AND PROTESTS

At the conclusion of the RFQ response evaluation process, all entities who submitted a bid package will be notified in writing by e-mail or USPS mail with the name of the Bidder being recommended for contract award. The document providing this notification is the Notice of Intent to Award.

Protests must be in writing and must be received no later than seven (7) work days after the District issues the Notice of Intent to Award. The District will reject the protest as untimely if it is received after this specified time frame. Protests will be accepted from bidders or potential bidders only.

If the protest is mailed and not received by the District, the protesting party bears the burden of proof to submit evidence (e.g., certified mail receipt) that the protest was sent in a timely manner so that it would be received by the District within the RFQ protest period.

Bid protests must contain a detailed and complete written statement describing the reason(s) for protest. The protest must include the name and/or number of the bid, the name of the firm protesting, and include a name, telephone number, email address and

physical address of the protester. If a firm is representing the protester, they shall include their contact information in addition to that of the protesting firm.

Protests must be mailed, hand delivered, or emailed to the Manager of Purchasing, Mailstop 102, East Bay Municipal Utility District, 375 Eleventh Street, Oakland, CA 94607 or P.O. Box 24055, Oakland, California 94623. Facsimile and electronic mail protests must be followed by a mailed or hand delivered identical copy of the protest and must arrive within the seven work day time limit. Any bid protest filed with any other District office shall be forwarded immediately to the Manager of Purchasing.

The bid protester can appeal the determination to the requesting organization's Department Director. The appeal must be submitted to the Department Director no later than five work days from the date which the protest determination was transmitted by the District, to the protesting party. The appeal shall focus on the points raised in the original protest, and no new points shall be raised in the appeal.

Such an appeal must be made in writing and must include all grounds for the appeal and copies of the original protest and the District's response. The bid protester must also send the Purchasing Division a copy of all materials sent to the Department Director. The Department Director will make a determination of the appeal and respond to the protester by certified mail in a timely manner. If the appeal is denied, the letter will include the date, time, and location of the Board of Directors meeting at which staff will make a recommendation for award and inform the protester it may request to address the Board of Directors at that meeting.

The District may transmit copies of the protest and any attached documentation to all other parties who may be affected by the outcome of the protest. The decision of the District as to the validity of any protest is final. This District's final decision will be transmitted to all affected parties in a timely manner.

E. METHOD OF ORDERING

1. POs and payments for products and/or services will be issued only in the name of Contractor.
2. Any and all change orders shall be in writing and agreed upon, in advance, by Contractor and the District.

F. TERM / TERMINATION / RENEWAL

1. The term of the contract, which may be awarded pursuant to this RFQ, will be 2 years.

2. This Agreement may be terminated for convenience by the District provided the Contractor is given written notice of not less than 30 calendar days. Upon such termination, the District shall pay the Contractor the amount owing for the products ordered and satisfactorily received by the District. This shall be the sole and exclusive remedy to which the Contractor is properly entitled in the event of termination by the District.
3. This Agreement may be terminated for cause at any time, provided that the District notifies Contractor of impending action.

G. WARRANTY

1. For any contract awarded pursuant to this RFQ, Contractor expressly warrants that all goods furnished will conform strictly with the specifications and requirements contained herein and with all approved submittals, samples and/or models and information contained or referenced therein, all affirmations of fact or promises, and will be new, of merchantable quality, free from defects in materials and workmanship, including but not limited to leaks, breaks, penetrations, imperfections, corrosion, deterioration, or other kinds of product deficiencies. Contractor expressly warrants that all goods to be furnished will be fit and sufficient for the purpose(s) intended. Contractor expressly warrants that all goods shall be delivered free from any security interest, lien or encumbrance of any kind, and free from any claim of infringement, copyright or other intellectual property violation, or other violation of laws, statutes, regulations, ordinances, rules, treaties, import restrictions, embargoes or other legal requirements. Contractor guarantees all products and services against faulty or inadequate design, manufacture, negligent or improper transport, handling, assembly, installation or testing, and further guaranties that there shall be strict compliance with all manufacturer guidelines, recommendations, and requirements, and that Contractor guaranties that it will conform to all requirements necessary to keep all manufacturer warranties and guarantees in full force and effect. These warranties and guarantees are inclusive of all parts, labor and equipment necessary to achieve strict conformance, and shall take precedence over any conflicting warranty or guarantee. These warranties and guaranties shall not be affected, limited, discharged or waived by any examination, inspection, delivery, acceptance, payment, course of dealing, course of performance, usage of trade, or termination for any reason and to any extent. In the absence of any conflicting language as to duration, which conflicting language will take precedence as being more specific, Contractor's aforesaid warranties and guarantees shall be in full force and effect for a period of one year from the date of acceptance by the District, but shall continue in full force and effect following notice from District of any warranty or guarantee issue, until such issue has been fully resolved to the satisfaction of District.

H. INVOICING

1. Payment will be made within thirty (30) days following receipt of a correct invoice and upon complete satisfactory receipt of product and/or performance of services. The payment shall be made according to the following schedule:
 - a. Ten (10) percent upon approval of design submittals as outlined in Specification Section 33 12 16.08;
 - b. Seventy Five (75) percent upon successful factory observed testing of the equipment as outlined in Specification Section 33 12 16.08;
 - c. Ten (10) percent upon delivery of equipment and acceptance by the District;
 - d. Five (5) percent upon receipt and District acceptance of all delivery O&M submittals and field assistance as outlined in as outlined in Specification Section 33 12 16.08;
2. The District shall notify Contractor of any invoice adjustments required.
3. Invoices shall contain, at a minimum, District PO number, invoice number, remit to address, and itemized products and/or services description.
4. The District will pay Contractor in an amount not to exceed the total amount quoted in the RFQ response.

I. LIQUIDATED DAMAGES

1. A deduction for liquidated damages will be assessed for not meeting District-specified performance requirements as prescribed in this RFQ as follows:
 - a. Liquidated damages of \$500/ calendar-day after December 1, 2020 until the entire equipment scheduled in this RFQ has met the requirements of the factory inspection testing and has been delivered to the District's Sobrante Water Treatment Plant
 - b. Liquidated damages shall be a maximum of 10 percent of the total bid price.
2. It being impracticable or extremely difficult to fix the actual damage, the amount set forth above is hereby agreed upon as liquidated damages and will be deducted from any money due under the agreement arising from this RFQ.

3. In the event performance and/or deliverables have been deemed unsatisfactory, the District reserves the right to withhold future payments until the performance and/or deliverables are deemed satisfactory.

IV. RFQ RESPONSE SUBMITTAL INSTRUCTIONS AND INFORMATION

A. DISTRICT CONTACTS

All contact during the competitive process is to be through the contact listed on the first page of this RFQ. The following persons are to be contacted only for the purposes specified below.

TECHNICAL SPECIFICATIONS:

Attn: Matthew Guihan, Associate Civil Engineer

EBMUD- Design Division

E-Mail: Matthew.Guihan@ebmud.com

PHONE: (510) 287-1179

CONTRACT EQUITY PROGRAM (CEP):

Attn: Contract Equity Office

PHONE: (510) 287-0114

AFTER AWARD:

Attn: Najme Jalali, Assistant Engineer

EBMUD – Design Division

E-Mail: Najme.Jalali@ebmud.com

PHONE: (510) 287-1029

B. SUBMITTAL OF RFQ RESPONSE

1. Responses must be submitted in accordance with Exhibit A – RFQ Response Packet, including all additional documentation stated in the “Required Documentation and Submittals” section of Exhibit A.
2. Late and/or unsealed responses will not be accepted.
3. RFQ responses submitted via electronic transmissions will not be accepted. Electronic transmissions include faxed RFQ responses or those sent by electronic mail (“e-mail”).
4. RFQ responses will be received only at the address shown below, must be SEALED, and must be received at the District Purchasing Division by 1:30 p.m. on the due date specified in the Calendar of Events. Any RFQ response received after

that time or date, or at a place other than the stated address cannot be considered and will be returned to the bidder unopened.

All RFQ responses must be received and time stamped at the stated address by the time designated. The Purchasing Division's timestamp shall be considered the official timepiece for the purpose of establishing the actual receipt of RFQ responses.

5. RFQ responses are to be addressed/delivered as follows:

Mailed:

Kelley Smith, Manager of Purchasing
East Bay Municipal Utility District
RFQ TITLE - Sobrante WTP Stainless Steel Slide Gates
RFQ No. 2012
EBMUD–Purchasing Division
P.O. Box 24055
Oakland, CA 94623

Hand Delivered or delivered by courier or package delivery service:

Kelley Smith, Manager of Purchasing
East Bay Municipal Utility District
RFQ TITLE - Sobrante WTP Stainless Steel Slide Gates
RFQ No. 2012
EBMUD–Purchasing Division
375 Eleventh Street, First Floor
Oakland, CA 94607

Bidder's name, return address, and the RFQ number and title must also appear on the mailing package.

6. All costs required for the preparation and submission of an RFQ response shall be borne by the bidder.
7. California Government Code Section 4552: In submitting an RFQ response to a public purchasing body, the bidder offers and agrees that if the RFQ response is accepted, it will assign to the purchasing body 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. Sec. 15) or under the Cartwright Act (Chapter 2, commencing with Section 16700, of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the RFQ response. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

8. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms “claim” and “knowingly” are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the District will be entitled to civil remedies set forth in the California False Claim Act.
9. The RFQ response shall remain open to acceptance and is irrevocable for a period of one hundred eighty (180) days, unless otherwise specified in the RFQ documents.
10. It is understood that the District reserves the right to reject any or all RFQ responses.
11. RFQ responses, in whole or in part, are NOT to be marked confidential or proprietary. The District may refuse to consider any RFQ response or part thereof so marked. RFQ responses submitted in response to this RFQ may be subject to public disclosure. The District shall not be liable in any way for disclosure of any such records.



EXHIBIT A
RFQ RESPONSE PACKET
RFQ No. 2012 – SOBRANTE WTP SLIDE GATES

To: The EAST BAY MUNICIPAL UTILITY District (“District”)

From: _____

(Official Name of Bidder)

RFQ RESPONSE PACKET GUIDELINES

- **BIDDERS ARE TO SUBMIT ONE (1) ORIGINAL HARDCOPY RFQ RESPONSE WITH ORIGINAL INK SIGNATURES, ONE COPY, AND ONE (1) ELECTRONIC COPY (in PDF format on a CD or flash drive) CONTAINING THE FOLLOWING, IN THEIR ENTIRETY:**
 - **EXHIBIT A – RFQ RESPONSE PACKET**
 - **INCLUDING ALL REQUIRED DOCUMENTATION AS DESCRIBED IN “EXHIBIT A-REQUIRED DOCUMENTATION AND SUBMITTALS”**
- **ALL PRICES AND NOTATIONS MUST BE PRINTED IN INK OR TYPEWRITTEN; NO ERASURES ARE PERMITTED; ERRORS MAY BE CROSSED OUT AND CORRECTIONS PRINTED IN INK OR TYPEWRITTEN ADJACENT, AND MUST BE INITIALED IN INK BY PERSON SIGNING THE RFQ RESPONSE.**
- **BIDDERS THAT DO NOT COMPLY WITH THE REQUIREMENTS, AND/OR SUBMIT AN INCOMPLETE RFQ RESPONSE MAY BE SUBJECT TO DISQUALIFICATION AND THEIR RFQ RESPONSE REJECTED IN TOTAL.**
- **IF BIDDERS ARE MAKING ANY CLARIFICATIONS AND/OR AMENDMENTS, OR TAKING EXCEPTION TO ANY PART OF THIS RFQ, THESE MUST BE SUBMITTED IN THE EXCEPTIONS, CLARIFICATIONS, AND AMENDMENTS SECTION OF THIS EXHIBIT A – RFQ RESPONSE PACKET. THE DISTRICT, AT ITS SOLE DISCRETION, MAY ACCEPT AMENDMENTS/EXCEPTIONS, OR MAY DEEM THEM TO BE UNACCEPTABLE, THEREBY RENDERING THE RFQ RESPONSE DISQUALIFIED.**
- **BIDDERS SHALL NOT MODIFY DISTRICT LANGUAGE IN ANY PART OF THIS RFQ OR ITS EXHIBITS, NOR SHALL THEY QUALIFY THEIR RFQ RESPONSE BY INSERTING THEIR OWN LANGUAGE OR FALSE CLAIMS IN THEIR RESPONSE. ANY EXCEPTIONS AND CLARIFICATIONS MUST BE PLACED IN THE “EXCEPTIONS/ CLARIFICATIONS” PAGE, NOT BURIED IN THE PROPOSAL ITSELF.”**



BIDDER INFORMATION AND ACCEPTANCE

1. The undersigned declares that all RFQ documents, including, without limitation, the RFQ, Addenda, and Exhibits, have been read and that the terms, conditions, certifications, and requirements are agreed to.
2. The undersigned is authorized to offer, and agrees to furnish, the articles and services specified in accordance with the RFQ documents.
3. The undersigned acknowledges acceptance of all addenda related to this RFQ.
4. The undersigned hereby certifies to the District that all representations, certifications, and statements made by the bidder, as set forth in this RFQ Response Packet and attachments, are true and correct and are made under penalty of perjury pursuant to the laws of California.
5. The undersigned acknowledges that the bidder is, and will be, in good standing in the State of California, with all the necessary licenses, permits, certifications, approvals, and authorizations necessary to perform all obligations in connection with this RFQ and associated RFQ documents.
6. It is the responsibility of each bidder to be familiar with all of the specifications, terms, and conditions and, if applicable, the site condition. By the submission of an RFQ response, the bidder certifies that if awarded a contract it will make no claim against the District based upon ignorance of conditions or misunderstanding of the specifications.
7. Patent indemnity: Contractors who do business with the District shall hold the District, its Directors, officers, agents, and employees, harmless from liability of any nature or kind, including cost and expenses, for infringement or use of any patent, copyright, or other proprietary right, secret process, patented or unpatented invention, article, or appliance furnished or used in connection with the contract or purchase order.
8. Insurance certificates are not required at the time of submission. However, by signing Exhibit A – RFQ Response Packet, the bidder agrees to meet the minimum insurance requirements stated in the RFQ. This documentation must be provided to the District prior to execution of an agreement by the District, and shall include an insurance certificate which meets the minimum insurance requirements, as stated in the RFQ.
9. The undersigned acknowledges that RFQ responses, in whole or in part, are NOT to be marked confidential or proprietary. The District may refuse to consider any RFQ response or part thereof so marked. RFQ responses submitted in response to this RFQ may be subject to public disclosure. The District shall not be liable in any way for disclosure of any such records.
10. The undersigned bidder hereby submits this RFQ response and binds itself on award to the District under this RFQ to execute in accordance with such award a contract and to furnish the bond or bonds and insurance required by the RFQ. The RFQ, subsequent Addenda, bidder's Response Packet, and any attachments, shall constitute the Contract, and all provisions thereof are hereby accepted.

11. The undersigned acknowledges **ONE** of the following (please check only one box)*:

- ☐ Bidder is not an SBE and is ineligible for any bid preference; **OR**
- ☐ Bidder is an SBE or DVBE as described in the Contract Equity Program (CEP) and Equal Employment Opportunity (EEO) Guidelines, is requesting a 7% bid preference, and has completed the CEP and EEO forms at the hyperlink contained in the CEP and EEO section of this Exhibit A.

*If no box is checked, it will be assumed that the bidder is ineligible for bid preference and none will be given. For additional information on SBE bid preference, please refer to the Contract Equity Program and Equal Employment Opportunity Guidelines at the above referenced hyperlink.

Official Name of Bidder (exactly as it appears on Bidder's corporate seal and invoice): _____

Street Address Line 1: _____

Street Address Line 2: _____

City: _____ State: _____ Zip Code: _____

Webpage: _____

Type of Entity / Organizational Structure (check one):

- | | |
|--|--|
| <input type="checkbox"/> Corporation | <input type="checkbox"/> Joint Venture |
| <input type="checkbox"/> Limited Liability Partnership | <input type="checkbox"/> Partnership |
| <input type="checkbox"/> Limited Liability Corporation | <input type="checkbox"/> Non-Profit / Church |
| <input type="checkbox"/> Other: _____ | |

Jurisdiction of Organization Structure: _____

Date of Organization Structure: _____

Federal Tax Identification Number: _____

Department of Industrial Relations (DIR) Registration Number: _____

Primary Contact Information:

Name / Title: _____

Telephone Number: _____ Fax Number: _____

E-mail Address: _____

Street Address Line 1: _____

City: _____ State: _____ Zip Code: _____

SIGNATURE: _____

Name and Title of Signer (printed): _____

Dated this _____ day of _____ 20_____



BID FORM(S)

Cost shall be submitted on this Bid Form as is. The prices quoted shall not include Sales Tax or Use Tax; said tax, wherever applicable, will be paid by the District to the contractor, if licensed to collect, or otherwise directly to the State.

No alterations or changes of any kind to the Bid Form(s) are permitted. RFQ responses that do not comply may be subject to rejection in total. The cost quoted below shall be the cost the District will pay for the term of any contract that is a result of this RFQ process.

Item #	Description	Manufacturer or Supplier	Unit of Measure	Quantity	Unit Cost	Extended Cost
1	72-inch x 72 inch Stainless Steel Slide Gate with Manual Actuator		EA	2	\$	\$
2	Travel Costs, Factory Inspection, and Testing of Slide Gates		LS	1	\$	\$
3	Factory Representative Inspection and Commissioning of Slide Gates		LS	1	\$	\$
TOTAL COST						\$



REQUIRED DOCUMENTATION AND SUBMITTALS

All of the specific documentation listed below is required to be submitted with the Exhibit A – RFQ Response Packet. Bidders shall submit all documentation, in the order listed below, and clearly label each section of the RFQ response with the appropriate title (i.e. Table of Contents, Letter of Transmittal, Key Personnel, etc.).

1. **Description of the Proposed Equipment/System:** RFQ response shall include a description of the proposed equipment/system, as it will be finally configured during the term of the contract. The description shall specify how the proposed equipment/system will meet or exceed the requirements of the District and shall explain any advantages that this proposed equipment/system would have over other possible equipment/systems. The description shall include any disadvantages or limitations that the District should be aware of in evaluating the RFQ response. Finally, the description shall describe all product warranties provided by bidder.
2. **Implementation Plan and Schedule:** The RFQ response shall include an implementation plan and schedule. The plan for implementing the proposed equipment/system and services shall include an Acceptance Test Plan. In addition, the plan shall include a detailed schedule indicating how the bidder will ensure adherence to the timetables for the final equipment/system and/or services.
3. **Evidence of Qualification Testing:** RFQ response provides evidence that the proposed equipment/system has successfully completed the qualification test standard requirements defined in this RFQ. Evidence shall include a statement from an Independent Testing Authority (ITA) that both the hardware elements and the software elements of the proposed equipment/system comply with the requirements of the qualification standard. If the equipment/system specified requires the addition of components or features not previously tested by the ITA, the District will determine, in its sole discretion, whether qualification testing of such components or features will be required prior to the award of a contract.
4. **Sustainability Statement:** Contractors shall submit a statement regarding any sustainable or environmental initiatives or practices that they or their suppliers engage in. This information can be in relation to the specific products procured under this RFQ or in relation to the manufacture, delivery, or office practices of your firm.

If applicable, please also provide any information you have available on the below:

- a. Has your firm taken steps to enhance its ability to assess, track and address issues regarding Greenhouse Gas (GHG) Emissions in answer to recent legislations such as the [Buy Clean California Act](#)? If so, please attach any data you can on the embedded

greenhouse gas emissions in the production and transport of the products and/or services which will be provided via this RFQ. If this is not available, please describe the approach you plan to take in order to gather and report this information in the future. For further information in this topic, please see: <http://www.ghgprotocol.org/scope-3-technical-calculation-guidance>

5. **Evidence of current NSF 60 and/or 61 certification:**

6. **References:**

- (a) Bidders must use the templates in the “References” section of this Exhibit A – RFQ Response Packet to provide references.
- (b) References should have similar scope, volume, and requirements to those outlined in these specifications, terms, and conditions.
 - Bidders must verify the contact information for all references provided is current and valid.
 - Bidders are strongly encouraged to notify all references that the District may be contacting them to obtain a reference.
- (c) The District may contact some or all of the references provided in order to determine Bidder’s performance record on work similar to that described in this RFQ. The District reserves the right to contact references other than those provided in the RFQ response.

7. **Exceptions, Clarifications, Amendments:**

- (a) The RFQ response shall include a separate section calling out all clarifications, exceptions, and amendments, if any, to the RFQ and associated RFQ documents, which shall be submitted with Bidder’s RFQ response using the template in the “Exceptions, Clarifications, Amendments” section of this Exhibit A – RFQ Response Packet.
- (b) **THE DISTRICT IS UNDER NO OBLIGATION TO ACCEPT ANY EXCEPTIONS, AND SUCH EXCEPTIONS MAY BE A BASIS FOR RFQ RESPONSE DISQUALIFICATION.**

8. **Contract Equity Program:**

- (a) Every bidder must fill out, sign, and submit the appropriate sections of the Contract Equity Program and Equal Employment Opportunity documents located at the hyperlink contained in the last page of this Exhibit A. Special attention should be given to completing Form P-25, “Contractor Employment Data and Certification”. Any bidder needing assistance in completing these forms should contact the District's Contract Equity Office at (510) 287-0114 prior to submitting an RFQ response.



REFERENCES

RFQ No. 2012 – SOBRANTE WTP SLIDE GATES

Bidder Name: _____

Bidder must provide a minimum of five references.

Company Name:	Contact Person:
Address:	Telephone Number:
City, State, Zip:	E-mail Address:
Services Provided / Date(s) of Service:	

Company Name:	Contact Person:
Address:	Telephone Number:
City, State, Zip:	E-mail Address:
Services Provided / Date(s) of Service:	

Company Name:	Contact Person:
Address:	Telephone Number:
City, State, Zip:	E-mail Address:
Services Provided / Date(s) of Service:	

Company Name:	Contact Person:
Address:	Telephone Number:
City, State, Zip:	E-mail Address:
Services Provided / Date(s) of Service:	

Company Name:	Contact Person:
Address:	Telephone Number:
City, State, Zip:	E-mail Address:
Services Provided / Date(s) of Service:	



EXCEPTIONS, CLARIFICATIONS, AMENDMENTS

RFQ No. 2012 - Sobrante WTP Slide Gates

Bidder Name: _____

List below requests for clarifications, exceptions, and amendments, if any, to the RFQ and associated RFQ Documents, and submit with bidder's RFQ response. **The District is under no obligation to accept any exceptions and such exceptions may be a basis for RFQ response disqualification.**

Reference to:			Description
Page No.	Section	Item No.	
p. 23	D	1.c.	<i>Bidder takes exception to...</i>

*Print additional pages as necessary



CONTRACT EQUITY PROGRAM & EQUAL EMPLOYMENT OPPORTUNITY

The District's Board of Directors adopted the Contract Equity Program (CEP) to enhance equal opportunities for business owners of all races, ethnicities, and genders who are interested in doing business with the District. The program has contracting objectives, serving as the minimum level of expected contract participation for the three availability groups: white-men owned businesses, white-women owned businesses, and ethnic minority owned businesses. The contracting objectives apply to all contracts that are determined to have subcontracting opportunities, and to all contractors regardless of their race, gender or ethnicity.

All Contractors and their subcontractors performing work for the District must be Equal Employment Opportunity (EEO) employers, and shall be bound by all laws prohibiting discrimination in employment. There shall be no discrimination against any person, or group of persons, on account of race, color, religion, creed, national origin, ancestry, gender including gender identity or expression, age, marital or domestic partnership status, mental disability, physical disability (including HIV and AIDS), medical condition (including genetic characteristics or cancer), genetic information, or sexual orientation.

Contractor and its subcontractors shall abide by the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, or national origin in the performance of this contract. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

All Contractors shall include the nondiscrimination provisions above in all subcontracts.

Please include the required completed forms with your bid.

Non-compliance with the Guidelines may deem a bid non-responsive, and therefore, ineligible for contract award. Your firm is responsible for:

- 1) Reading and understanding the CEP guidelines.
- 2) Filling out and submitting with your bid the appropriate forms.

The CEP guidelines and forms can be found at the following direct link:

[Contract Equity Guidelines and Forms](#)

The CEP guidelines and forms can also be downloaded from the District website at the following link:

<http://ebmud.com/business-center/contract-equity-program/>

If you have questions regarding the Contract Equity Program please call (510) 287-0114.



EXHIBIT B

INSURANCE REQUIREMENTS

Insurance certificates are not required at the time of submission; however, by signing Exhibit A – RFQ Response Packet, the bidder agrees to meet the minimum insurance requirements stated in the RFQ. This documentation must be provided to the District, prior to award.

For any coverage that is provided on a claims-made coverage form (which type of form is permitted only where specified) the retroactive date must be shown and must be before the date of this Agreement, and before the beginning of any Services related to this Agreement.

The insurance requirements under this Agreement shall be the greater of (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policies or proceeds available to the Named Insured. It is agreed that these insurance requirements shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums required herein. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of the CONTRACTOR.

The following are the minimum insurance limits, required by the District, to be held by the Contractor performing on this RFQ:

INSURANCE

A. Insurance Requirements

CONTRACTOR shall take out and maintain during the life of the Agreement all the insurance required in this section, and if requested shall submit certificates for review and approval by the District. The Notice to Proceed shall not be issued, and CONTRACTOR shall not commence work until such insurance has been approved by the District. The certificates shall be on forms approved by the District. Acceptance of the certificates shall not relieve CONTRACTOR of any of the insurance requirements, nor decrease the liability of CONTRACTOR. The District reserves the right to require CONTRACTOR to provide insurance policies for review by the District.

B. Workers Compensation Insurance

CONTRACTOR shall take out and maintain during the life of the Agreement Workers Compensation Insurance for all of its employees on the project. In lieu of evidence of Workers Compensation Insurance, the District will accept a Self-Insured Certificate from the State of California. CONTRACTOR shall require any subcontractor to provide it with evidence of Workers Compensation Insurance.

Waiver of Subrogation. Workers' Compensation insurance must contain a waiver of subrogation endorsement providing that each insurer waives any rights of recovery by subrogation, or otherwise, against the DISTRICT, its directors, officers, officials, agents, volunteers, and employees. CONSULTANT shall defend and pay any damages as a result of failure to provide the waiver of subrogation from the insurance carrier.

C. Commercial General Liability Insurance

CONTRACTOR shall take out and maintain during the life of the Agreement Automobile and General Liability Insurance that provides protection from claims which may arise from operations or performance under this Agreement. If CONTRACTOR elects to self-insure (self-fund) any liability exposure during the contract period above \$50,000, CONTRACTOR is required to notify the District immediately. Any request to self-insure must first be approved by the District before the changed terms are accepted. CONTRACTOR shall require any subcontractor to provide evidence of liability insurance coverages.

The amounts of insurance shall be not less than the following:

\$2,000,000/Occurrence, Bodily Injury, Property Damage -- Automobile.

\$2,000,000/Occurrence, Bodily Injury, Property Damage -- General Liability.

The following coverages or endorsements must be included in the policy(ies):

1. The District, its Directors, officers, and employees are Additional Insureds in the policy(ies) as to the work being performed under the contract.
2. The coverage is *Primary and non-contributory* to any other applicable insurance carried by the District.
3. The policy(ies) covers *contractual liability*.
4. The policy(ies) is written on an *occurrence* basis.
5. The policy(ies) covers the District's Property in Consultant's care, custody, and control.
6. The policy(ies) covers *personal injury* (libel, slander, and wrongful entry and eviction) liability.
7. The policy(ies) covers *products and completed operations*.
8. The policy(ies) covers the use of *owned, non-owned* and hired automobiles.
9. The policy(ies) and/or a separate pollution liability policy(ies) shall cover pollution liability for claims related to the release or the threatened release of pollutants into the environment arising out of or resulting from Consultant's performance under this agreement.
10. The policy(ies) will not be canceled nor the above coverages/endorsements reduced without 30 days written notice to East Bay Municipal Utility District at the address above.

GENERAL REQUIREMENTS**CONTENTS**

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2. BOND
3. CONTRACTOR'S FINANCIAL OBLIGATION
4. SAMPLES OR SPECIMENS
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26. RIGHTS AND REMEDIES OF THE DISTRICT
27. WAIVER OF RIGHTS
28. CONFIDENTIALITY

1. DEFINITIONS

The following terms shall be given the meaning shown, unless context requires otherwise or a unique meaning is otherwise specified.

- a. **"Change Order"** A Change Order is a written instrument used for modifying the contract with regards to the scope of Work, contract sum, and/or Contract Time. An approved Change Order is a Change Order signed by the District. An executed Change Order is a Change Order signed by both the District and the Contractor.

- b. **“Contract”** means the agreement between the District and Contractor as memorialized in the Contract Documents.
- c. **“Business Entity”** means any individual, business, partnership, joint venture, corporation, sole proprietorship, or other private legal entity recognized by statute.
- d. **“Buyer”** means the District’s authorized contracting official.
- e. **“Contract Documents”** comprise the entire agreement between the District and the Contractor and can include the District’s contract form if used, any purchase order, RFP, RFQ or Contractor response packet, and any addenda, appendices and District approved changes or amendments. The Contract Documents are intended to be complementary and include all items necessary for the Contractor’s proper execution and completion of the Work. Any part of the Work not shown or mentioned in the Contract Documents that is reasonably implied, or is necessary or usual for proper performance of the Work, shall be provided by the Contractor at its expense.
- f. **“Contractor”** means the Business Entity with whom the District enters into a contractual agreement. Contractor shall be synonymous with “supplier”, “vendor”, “consultant” or other similar term.
- g. **“Day”** unless otherwise specified, days are calendar days, measured from midnight to the next midnight.
- h. **“District”** means the East Bay Municipal Utility District, its employees acting within the scope of their authority, and its authorized representatives.
- i. **“Goods”** means off the shelf software and all types of tangible personal property, including but not limited to materials, supplies, and equipment.
- j. **“Project Manager”** shall be the District designated individual responsible for administering and interpreting the terms and conditions of the Contract Documents, for matters relating to the Contractor’s performance under the Contract with the District, and for liaison and coordination between the District and Contractor.
- k. **“Work”** means all labor, tasks, materials, supplies, and equipment required to properly fulfill the Contractor’s obligations as required in the Contract Documents.
- l. **“Work Day”** Unless otherwise specified, work day includes all days of the year except Saturdays, Sundays and District holidays.

2. BOND

- a. When required in the District’s bid or proposal solicitation documents, the Contractor to whom award is made shall furnish a good and approved faithful performance bond and/or payment bond within ten business days after receiving the forms for execution.
- b. The bonds shall be executed by a sufficient, admitted surety insurer (i.e.: as listed on website [http://interactive.web.insurance.ca.gov/webuser/idb_co_list\\$.startup](http://interactive.web.insurance.ca.gov/webuser/idb_co_list$.startup)) admitted to transact such business in California by the California Department of Insurance. After acceptance of the bond(s) by the District, a copy of the bond(s) will be

returned to the Contractor.

- c. If, during the continuance of the Contract, any of the sureties, in the opinion of the District, are or become irresponsible, the District may require other or additional sureties, which the Contractor shall furnish to the satisfaction of the District within ten days after notice. If the Contractor fails to provide satisfactory sureties within the ten-day period, the Contract may be terminated for cause under Article 18.

3. CONTRACTOR'S FINANCIAL OBLIGATION

The Contractor shall promptly make payments to all persons supplying labor and materials used in the execution of the contract.

4. SAMPLES OR SPECIMENS

The Contractor shall submit samples or prepare test specimens of such materials to be furnished or used in the work as the Project Manager may require.

5. MATERIAL AND WORKMANSHIP

- a. All goods and materials must be new and of the specified quality and equal to approved sample, if samples have been required. In the event any goods or materials furnished or services provided by the Contractor in the performance of the Contract fail to conform to the requirements, or to the sample submitted by the Contractor, the District may reject the same, and it shall become the duty of the Contractor to reclaim and remove the item promptly or to correct the performance of services, without expense to the District, and immediately replace all such rejected items with others conforming to the Contract. All work shall be done and completed in a thorough, workmanlike manner, notwithstanding any omission from these specifications or the drawings, and it shall be the duty of the Contractor to call attention to apparent errors or omissions and request instructions before proceeding with the work. The Project Manager may, by appropriate instructions, correct errors and supply omissions, which instructions shall be binding upon the Contractor as though contained in the original Contract Documents.
- b. All materials furnished and all Work must be satisfactory to the Project Manager. Work, material, or machinery not in accordance with the Contract Documents, in the opinion of the Project Manager, shall be made to conform.

6. DEFECTIVE WORK

The Contractor shall replace at its own expense any part of the work that has been improperly executed, as determined by the Project Manager. If Contractor refuses or neglects to replace such defective work, it may be replaced by the District at the expense of the Contractor, and its sureties shall be liable therefor.

7. WARRANTY

Contractor expressly warrants that all goods furnished will conform strictly with the specifications and requirements contained herein and with all approved submittals, samples and/or models and information contained or referenced therein, all affirmations of fact or promises, and will be new, of merchantable quality, free from defects in materials and

workmanship, including but not limited to leaks, breaks, penetrations, imperfections, corrosion, deterioration, or other kinds of product deficiencies. Contractor expressly warrants that all goods to be furnished will be fit and sufficient for the purpose(s) intended. Contractor expressly warrants that all goods shall be delivered free from any security interest, lien or encumbrance of any kind, and free from any claim of infringement, copyright or other intellectual property violation, or other violation of laws, statutes, regulations, ordinances, rules, treaties, import restrictions, embargoes or other legal requirements. Contractor guarantees all products and services against faulty or inadequate design, manufacture, negligent or improper transport, handling, assembly, installation or testing, and further guaranties that there shall be strict compliance with all manufacturer guidelines, recommendations, and requirements, and that Contractor guaranties that it will conform to all requirements necessary to keep all manufacturer warranties and guarantees in full force and effect. These warranties and guarantees are inclusive of all parts, labor and equipment necessary to achieve strict conformance, and shall take precedence over any conflicting warranty or guarantee. These warranties and guarantees shall not be affected, limited, discharged or waived by any examination, inspection, delivery, acceptance, payment, course of dealing, course of performance, usage of trade, or termination for any reason and to any extent. In the absence of any conflicting language as to duration, which conflicting language will take precedence as being more specific, Contractor's aforesaid warranties and guarantees shall be in full force and effect for a period of **one** year from the date of acceptance by the District, but shall continue in full force and effect following notice from District of any warranty or guarantee issue, until such issue has been fully resolved to the satisfaction of District.

8. NOT USED

9. SAFETY AND ACCIDENT PREVENTION

In performing work under the Contract on District premises, Contractor shall conform to any specific safety requirements contained in the Contract or as required by law or regulation. Contractor shall take any additional precautions as the District may reasonably require for safety and accident prevention purposes. Any violation of such rules and requirements, unless promptly corrected, shall be grounds for termination of this Contract or Contractor's right to precede in accordance with the default provisions of the Contract Documents.

10. CHARACTER OF WORKFORCE

The Contractor shall employ none but skilled competent qualified personnel to perform the Work, and shall maintain discipline and order in the conduct of the Work at all times.

11. PREVAILING WAGES & DIR REGISTRATION

- a. Please see www.dir.ca.gov for further information regarding the below.
- b. All Contractors and Subcontractors of any tier bidding on, or offering to perform work on a public works project shall first be registered with the State Department of Industrial Relations (DIR) pursuant to Section 1725.5 of the Labor Code. No bid will be accepted nor any contract entered into without proof of the Contractor and Subcontractors' current registration with the DIR (LC § 1771.1).
- c. All public works projects awarded after January 1, 2015, are subject to compliance monitoring and enforcement by the DIR (LC § 1771.4) and all Contractors are required

to post job site notices, "as prescribed by regulation" (LC § 1771.4).

- d. To the extent applicable, pursuant to Section 1773 of the Labor Code, the District has obtained from the Director of Industrial Relations of the State of California, the general prevailing rates of per diem wages and the general prevailing rates for holiday and overtime work in the locality in which the Work is to be performed, for each craft, classification, or type of worker needed to execute the contract. Pursuant to Section 1773.2 of the Labor Code, a copy of the prevailing wage rates is on file with the District and available for inspection by any interested party at www.dir.ca.gov.
- e. The holidays upon which such rates shall be paid shall be all holidays recognized in the collective bargaining agreement applicable to the particular craft, classification, or type of worker employed on the Work.
- f. The Contractor shall post a copy of the general prevailing rate of per diem wages at the jobsite pursuant to Section 1773.2 of the Labor Code.
- g. Pursuant to Section 1774 of the Labor Code, the Contractor and any of its Subcontractors shall not pay less than the specified prevailing rate of wages to all workers employed in the execution of the contract.
- h. As set forth with more specificity in Section 1773.1 of the Labor Code, "per diem" wages include employer payments for health and welfare, pension, vacation, travel, subsistence and, in certain instances, apprenticeship or other training programs, and shall be paid at the rate and in the amount spelled out in the pertinent prevailing wage determinations issued by the Director of Industrial Relations.
- i. The Contractor shall, as a penalty to the State or the District, forfeit not more than the maximum set forth in Section 1775 of the Labor Code for each calendar day, or portion thereof, for each worker paid less than the prevailing rates for the work or craft in which the worker is employed under the contract by the Contractor or by any Subcontractor under him. The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which such worker was paid less than the stipulated prevailing wage rate shall be paid to such worker by the Contractor.
- j. The specified wage rates are minimum rates only and the District will not consider and shall not be liable for any claims for additional compensation made by the Contractor because of its payment of any wage rate in excess of the general prevailing rates. All disputes in regard to the payment of wages in excess of those specified herein shall be adjusted by the Contractor at its own expense.
- k. General prevailing wage determinations have expiration dates with either a single asterisk or a double asterisk. Pursuant to California Code of Regulations, Title 8, Section 16204, the single asterisk means that the general prevailing wage determination shall be in effect for the specified contract duration. The double asterisk means that the predetermined wage modification shall be paid after the expiration date. No adjustment in the Contract Sum will be made for the Contractor's payment of these predetermined wage modifications.

12. PAYROLL RECORDS & ELECTRONIC SUBMISSION

- a. The Contractor and each Subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed in connection with the Work. The payroll records shall be certified and shall be available for inspection in accordance with the provisions of Section 1776 of the Labor Code. Certified payroll records shall be on the forms provided by the DIR or contain the same information required on the Department's form.
- b. The Contractor shall submit for each week in which any contract Work is performed a copy of all payroll records to the Project Manager. The Contractor shall be responsible for submission of copies of payroll records of all Subcontractors.
- c. The Contractor or Subcontractor shall certify the payroll records as shown on the DIR form. In addition, the records shall be accompanied by a statement signed by the Contractor or Subcontractor certifying that the classifications truly reflect the Work performed and that the wage rates are not less than those required to be paid.
- d. For public works projects awarded on or after April 1, 2015, or that are still ongoing after April 1, 2016, no matter when awarded, each Contractor and Subcontractor shall furnish the certified payroll related records as more specifically described above and in Labor Code section 1776 directly to the Labor Commissioner (see LC § 1771.4). These records shall be provided to the Labor Commissioner at least monthly or more frequently if required by the terms of the Contract. For exception on projects covered by collective bargaining agreements like a PLA, please see Labor Code section 1771.4.
- e. In the event of noncompliance with the requirements of Section 1776 of the Labor Code, the Contractor shall have 10 days in which to comply subsequent to receipt of written notice specifying in what respects such Contractor must comply with said Section. Should noncompliance still be evident after such 10-day period, the Contractor shall, as a penalty to the State or the District, forfeit the amount set forth in Section 1776 of the Labor Code for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payments then due.
- f. The Contractor and every Subcontractor shall post at the workplace and comply with all required wage related workplace postings. Copies of the required postings may be downloaded or ordered electronically from the Department of Industrial Relations website at <http://www.dir.ca.gov/wpnodb.html>.

13. HOURS OF LABOR

Pursuant to the provisions of Sections 1810, et seq. of the Labor Code and any amendments thereof:

- a. Eight hours of labor constitutes a legal day's Work under the contract.

- b. The time of service of any worker employed upon the work shall be limited and restricted to eight hours during any one calendar day, and forty hours during any one calendar week except as provided in Article 13.iv below.
- c. The Contractor shall, as a penalty to the State or the District, forfeit the amount set forth in Section 1813 of the Labor Code for each worker employed in the execution of the contract by the Contractor or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any calendar day and forty hours in any one calendar week in violation of this Article and the provisions of Labor Code, Sections 1810, et seq.
- d. Work performed by employees of the Contractor in excess of eight hours per day, and forty hours during any one calendar week, shall be permitted upon compensation for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay.
- e. The Contractor and every Subcontractor shall keep an accurate record showing the name of and the actual hours worked each calendar day and each calendar week by each worker employed by him in connection with the Work; the record shall be kept open at all reasonable hours to the inspection of the District and to the Division of Labor Standards Enforcement of the State of California.

14. EMPLOYMENT OF APPRENTICES

- a. In the performance of the contract, the Contractor and any Subcontractor shall comply with the provisions concerning the employment of apprentices in Section 1777.5 of the Labor Code and any amendments thereof.
- b. In the event the Contractor or any Subcontractor willfully fails to comply with the aforesaid section, such Contractor or Subcontractor shall be subject to the penalties for noncompliance in Labor Code, Section 1777.7.

15. CHANGES

- a. Changes in the Work can only be made in writing signed by an authorized employee of the District. If the change causes an increase or decrease in the contract sum, or a change in the time for performance under the Contract, an adjustment may be made as determined by the Project Manager.
- b. The District reserves the right to make changes in the design of materials, equipment, or machinery, to make alterations or additions to or deviations or subtractions from the Contract and any specifications and drawings, to increase or decrease the required quantity of any item or portion of the Work or to omit any item or portion of the Work, as may be deemed by the Project Manager to be necessary or advisable and to order such extra work as may be determined by the Project Manager to be required for the proper execution and completion of the whole Work contemplated. Any such changes will be ordered in writing by the Project Manager. The determination of the Project Manager on all questions relating to changes, including extra work, shall be conclusive and binding.

- c. Prior to issuing an amendment or change to the Contract, the Project Manager may request that the Contractor submit a proposal covering the changes. Within 10 business days of receiving the request, the Contractor shall submit its proposal to the Project Manager of all costs associated with the proposed amendment or change and any request for an extension of Contract time. Contractor's proposal shall include detailed estimates with cost breakdowns, including labor, material, equipment, overhead, and profit. Labor shall be broken down into hours and rate per hour. If applicable, the proposal shall include a breakdown for off-site labor (including factory labor, engineering, etc.). The Contractor's proposal shall include an analysis of schedule impact when the Contractor is requesting an adjustment in contract time. The Contractor shall be responsible for any delay associated with its failure to submit its change proposal within the time specified. If the Project Manager decides not to issue an amendment or change after requesting a proposal from the Contractor, the Contractor will be notified in writing. The Contractor is not entitled to reimbursement for Change Order preparation costs if the Contractor's proposal is not accepted by the Project Manager.
- d. If the Contractor agrees with the terms and conditions of the approved Change Order, the Contractor shall indicate its acceptance by signing the original copy and returning it to the Project Manager within 10 Work Days after receipt or with reasonable promptness and in such sequence as to not delay the Work or activities of the District or of separate contractors, whichever is sooner. If notice of any change is required to be given to a surety by the provisions of any bond, the Contractor shall provide notice and the amount of each applicable bond shall be adjusted separately. Payment in accordance with the terms and conditions set forth in the executed Change Order shall constitute full compensation for all Work included in the Change Order and the District will be released from any and all claims for direct, indirect, and impact expenses and additional time impact resulting from the Work. If the Contractor disagrees with the terms and conditions of the approved Change Order, the Contractor shall indicate specific areas of disagreement and return the approved Change Order to the Project Manager with a detailed written dispute. No payment will be made on the disputed work until the approved Change Order is returned to the Project Manager. However, whether or not the Contractor agrees with the terms and conditions of an approved Change Order, the Contractor shall immediately revise its sequence of operations as required to facilitate timely completion of the changed work and shall proceed with the revised work sequence.
- e. The Project Manager may, after having received a written cost quotation from the Contractor, order the Contractor, in writing, to proceed with the work prior to issuance of an approved Change Order through a change directive. The change directive will authorize the Contractor to proceed with the work subject to the cost quotation submitted by the Contractor. Within five days following receipt of the change directive, the Contractor shall submit a detailed change proposal documenting the amount of compensation. The Project Manager will review the change proposal and, at its option, will either issue an approved Change Order for the work or direct the Contractor to perform the work through Force Account. Until the method of compensation is determined and the approved Change Order is received, the Contractor shall keep full and complete time and material records of the cost of the ordered work and shall permit the Project Manager to have access to such records. An approved Change Order shall supersede any previously issued written change directive covering the same Work.

16. EFFECT OF EXTENSIONS OF TIME

The granting, or acceptance, of extensions of time to complete the Work or furnish the labor, supplies, materials or equipment, or any one of the aforementioned, will not operate as a release of Contractor or the surety on Contractor's faithful performance bond.

17. DELAYS

- a. The Contractor shall take reasonable precautions to foresee and prevent delays to the Work. When the Contractor foresees a delay event, and upon the occurrence of a delay event, the Contractor shall immediately notify the Project Manager of the probability or the actual occurrence of a delay, and its cause. With respect to all delays (compensable, excusable or inexcusable), the Contractor shall reschedule the Work and revise its operations, to the extent possible, to mitigate the effects of the delay. Within 15 days from the beginning of a delay the Contractor shall provide the Project Manager with a detailed written description of the delay, its cause, its impact and the Contractor's mitigation plans. Failure to provide the notification required above waives the Contractor's right to any additional time or compensation resulting from the delay for whatever cause. The Project Manager will investigate the facts and ascertain the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the sureties from their obligations, which shall remain in full force until the discharge of the contract.
- b. For inexcusable delays (delays caused by circumstances within the Contractor's control, the control of its subcontractors or supplies of any tier, or within the scope of the Contractor's contract responsibilities) the Contractor shall not be entitled to an extension of time or additional compensation for any loss, cost, damage, expense or liability resulting directly or indirectly from the inexcusable delay.
- c. For excusable delays (delays to completion of the Work within the time limits set forth in the Contract Documents directly caused by events beyond the control of both the Contractor and the District, which delay is not concurrent with an inexcusable delay and which could not have been avoided by the Contractor through reasonable mitigation measures).
- d. For compensable delays (delays to completion of the Work within the time limits set forth in the Contract Documents that could not be avoided by Contractor mitigation, caused directly and solely by the District or by causes within the exclusive control of the District, and which were not concurrent with any other type of delay) the Project Manager will grant the Contractor an extension of the time to perform under the Contract and compensation in an amount that represents the Contractor's actual direct costs incurred as a direct result of the compensable delay. The Contractor may recover its direct costs only and may not recover (and waives) all other types of indirect, consequential, special and incidental damages.
- e. For concurrent delays (two or more independent causes of delay directly preventing the Contractor from completing the Work within the time limits set forth in the Contract Documents where the delays occur at the same time during all or a portion of the delay period being considered, and where each of the delays would have caused delay to the

Contractor even in the absence of any of the other delays, and none of the delays could have been avoided by Contractor mitigations) the following rules apply:

- i. One or more of the concurrent delays are excusable or compensable, then the period of concurrent delay will be treated as an excusable delay; and
- ii. All of the concurrent delays are inexcusable, then the period of concurrent delay will be inexcusable.

18. TERMINATION

a. Termination by the District for Cause:

- i. District may terminate the Contractor's right to proceed under the Contract, in whole or in part, for cause at any time after the occurrence of any of the following events, each of which constitutes a default:
 - 1. The Contractor becomes insolvent or files for relief under the bankruptcy laws of the United States.
 - 2. The Contractor makes a general assignment for the benefit of its creditors or fails to pay its debts as the same become due.
 - 3. A receiver is appointed to take charge of the Contractor's property.
 - 4. The Contractor fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to prosecute the Work in accordance with the Contract Documents.
 - 5. The Contractor fails to make progress so as to endanger performance of the Work within the contractually required time.
 - 6. The Contractor disregards legal requirements of agencies having jurisdiction over the Work, the Contractor, or the District.
 - 7. The Contractor fails to provide the District with a written plan to cure a District identified default within five business days after the District's request for a plan to cure; the District does not accept the Contractor's plan for curing its default; or the Contractor does not fully carry out an accepted plan to cure.
 - 8. The Contractor abandons the Work. Abandonment is conclusively presumed when the District requests a written plan to cure a default and the Contractor does not submit the plan within five business days of the District's request.

9. The Contractor materially fails to meet its obligations in accordance with the Contract Documents.
10. The Contractor is in default of any other material obligation under the Contract Documents.

- ii. If any of the above events occur, the District may, in its discretion, require that the Contractor submit a written plan to cure its default, which plan must be provided to the District within 5 business days of the request and must include a realistic, executable plan for curing the noted defaults.
- iii. Upon any of the occurrences referred to in Article 18.a.i. above, the District may, at its election and by notice to the Contractor, terminate the Contract in whole or in part; accept the assignment of any or all of the subcontracts; and then complete the Work by any method the District may deem expedient. If requested by the District, the Contractor shall remove any part or all of the Contractor's materials, supplies, equipment, tools, and machinery from the site of the Work within seven days of such request; and, if the Contractor fails to do so, the District may remove or store, and after 90 days sell, any of the same at the Contractor's expense.
- iv. No termination or action taken by the District after termination shall prejudice any other rights or remedies of the District provided by law or by the Contract Documents.
- v. Conversion: If, after termination for other than convenience, it is determined that the Contractor was not in default or material breach, or that the default or material breach was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for convenience pursuant to Article 18.b. below.

b. Termination by the District for Convenience:

- i. The District may, at its option, and for its convenience, terminate the Contract at any time by giving written notice to the Contractor specifying the effective date of termination. Upon such termination, the Contractor agrees to comply with the notice and further agrees to waive any claims for damages, including loss of anticipated profits, on account of the termination; and, as the sole right and remedy of the Contractor, the District shall pay the Contractor as set forth below.
- ii. Upon receipt of a notice of termination for convenience, the Contractor shall, unless the notice directs otherwise, do the following:

1. Immediately discontinue its performance of the Contract to the extent specified in the notice.
 2. Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary for completion of a portion of the Work that is not discontinued or that is necessary for an orderly cessation of the Work.
 3. Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent they relate to the performance of the discontinued portion of the Work.
 4. Thereafter, do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment in transit to or on the site of performance.
- iii. Upon such termination for convenience, the District will pay to the Contractor the sum of the following:
1. The amount of the contract sum allocable to the portion of the Work properly performed by the Contractor as of the effective date of termination, less sums previously paid to the Contractor.
 2. Previously unpaid costs of any items delivered to the project site that were already fabricated for subsequent incorporation into the Work.
 3. Any proven losses with respect to materials and equipment directly resulting from the termination.
 4. Reasonable demobilization costs.
- iv. The above reimbursement is the sole and exclusive remedy to which the Contractor is entitled in the event the contract is terminated for convenience; and the Contractor expressly waives any other claims, damages, demands, compensation or recovery related to this contract or project. The Contractor agrees to sign a general release incorporating this waiver.
- c. Effect of Termination: Upon termination, the obligations of the Contract shall continue as to portions of the Work already performed and, subject to the Contractor's obligations under Article 18.b.ii, as to bona fide obligations assumed by the Contractor prior to the date of termination.
- d. Force Majeure: If the contract is suspended or terminated by the District because Contractor's performance is prevented or delayed by an event including an irresistible, superhuman cause, or by the act of public enemies of the State of

California or of the United States ("Force Majeure") , the Contractor will be paid for Work performed prior to the Force Majeure event at either (i) the unit prices named in the Contract; or (ii) in the event no unit prices are named, a sum equal to the percentage of the total contract amount that matches the percentage of the total contract Work performed prior to the Force Majeure event.

19. DAMAGES

All losses or damages to material or equipment to be furnished pursuant to the Contract Documents occurring prior to receipt and final acceptance of the Work shall be sustained by the Contractor. The Contractor shall sustain all losses arising from unforeseen obstructions or difficulties, either natural or artificial, encountered in the prosecution of the Work, or from any action of the elements prior to final acceptance of the work, or from an act or omission on the part of the Contractor not authorized by the Contract Documents.

20. ORDER OF PRECEDENCE

- a. In the case of conflicts, errors, or discrepancies in any of the Contract Documents, the order of precedence is as follows. Within the same order of precedence, specific requirements shall take precedence over general requirements.
 - i. Approved Change Orders.
 - ii. Addenda.
 - iii. RFQ or RFP.
 - iv. Referenced Standard Specifications and Drawings.
 - v. Contractor's Response Packet.
- b. With reference to drawings:
 - i. Numerical dimensions govern over scaled dimensions.
 - ii. Detailed drawings govern over general drawings.
 - iii. Addenda/Change Order drawings govern over contract drawings.
 - iv. Contract drawings govern over standard drawings.
 - v. Notes apply only to the drawing where the notes appear, unless classified as "typical" or intended to apply elsewhere in which case they apply to all drawings where the conditions or circumstance noted occurs.
 - vi. Typical details apply to all drawings unless a specific different detail is shown.

21. INDEMNIFICATION/RESPONSIBILITY

- a. Contractor shall indemnify, keep and save harmless the District and each of its directors, officers, agents and employees against any and all suits, claims or actions arising out of

any of the following:

- i. Any injury to persons or property that may occur, or that may be alleged to have occurred, arising from the performance or implementation of this Contract; or
 - ii. Any allegation that materials or services developed, provided or used for this Contract infringe or violate any copyright, trademark, patent, trade secret, or any other intellectual-property or proprietary right of any third party.
- b. Contractor further agrees to defend any and all such actions, suits or claims and pay all charges of attorneys and all other costs and expenses of defenses as they are incurred. If any judgment is rendered, or settlement reached, against the District or any of the other agencies or individuals enumerated above in any such action, Contractor shall, at its expense, satisfy and discharge the same.
- c. This indemnification shall survive termination or expiration of the Contract.

22. PROHIBITION OF ASSIGNMENT

The Contractor shall not assign, transfer, or otherwise dispose of any of its rights, duties or obligations under this Contract. This prohibition does not apply to the District. The District retains the right to assign this Contract in whole or in part at any time upon reasonable terms.

23. NEWS RELEASES

The Contractor, its employees, subcontractors, and agents shall not refer to the District, or use any logos, images, or photographs of the District for any commercial purpose, including, but not limited to, advertising, promotion, or public relations, without the District's prior written consent. Such written consent shall not be required for the inclusion of the District's name on a customer list.

24. SEVERABILITY

Should any part of the Contract be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid or beyond the authority of either party to enter into or carry out, such decision shall not affect the validity of the remainder of the Contract, which shall continue in full force and effect, provided that the remainder of the Contract can be interpreted to give effect to the intentions of the parties.

25. COVENANT AGAINST GRATUITIES

The Contractor warrants that no gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Contractor, or any agent or representative of the Contractor, to any officer or employee of the District with a view toward securing the Contract or securing favorable treatment with respect to any determinations concerning the performance of the Contract. For breach or violation of this warranty, the District shall have the right to terminate the Contract, either in whole or in part, and any loss or damage sustained by the District in procuring on the open market any items which Contractor agreed to supply shall be borne and paid for by the Contractor. The rights and remedies of the District provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or in

equity.

26. RIGHTS AND REMEDIES OF THE DISTRICT

The rights and remedies of the District provided herein shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

27. WAIVER OF RIGHTS

Any action or inaction by the District or the failure of the District on any occasion, to enforce any right or provision of the Contract, shall not be construed to be a waiver by the District of its rights and shall not prevent the District from enforcing such provision or right on any future occasion. Rights and remedies are cumulative and are in addition to any other rights or remedies that the District may have at law or in equity.

28. CONFIDENTIALITY

Contractor agrees to maintain in confidence and not disclose to any person or entity, without the District's prior written consent, any trade secret or confidential information, knowledge or data relating to the products, process, or operation of the District. Contractor further agrees to maintain in confidence and not to disclose to any person or entity, any data, information, technology, or material developed or obtained by Contractor during the term of the Contract. The covenants contained in this paragraph shall survive the termination of this Contract for whatever cause.



EXHIBIT D

IRAN CONTRACTING ACT CERTIFICATION

Pursuant to Public Contract Code (PCC) § 2204, an Iran Contracting Act Certification is required for solicitations of goods or services of \$1,000,000 or more.

To submit a bid or proposal to East Bay Municipal Utility District (District), you must complete **ONLY ONE** of the following two paragraphs. To complete paragraph 1, check the corresponding box **and** complete the certification for paragraph 1. To complete paragraph 2, check the corresponding box and attach a copy of the written permission from the District.

- ☐ 1. We are not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to PCC § 2203(b), and we are not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

CERTIFICATION FOR PARAGRAPH 1:

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY, that I am duly authorized to legally bind the proposer/bidder to the clause in paragraph 1. This certification is made under the laws of the State of California.

Firm: _____

By: _____ Date: _____
(Signature of Bidder)

Title: _____

Signed at: _____ County, State of: _____

OR

- ☐ 2. We have received written permission from the District to submit a bid or proposal pursuant to PCC § 2203(c) or (d). *A copy of the written permission from the District is included with our bid or proposal.*

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Submit samples, drawings, and data for the Engineer's approval which demonstrate fully that the construction, and the materials and equipment to be furnished will comply with the provisions and intent of this Specification. All submittals shall be written in Standard American English and all numerical data, whether in drawings, test reports, engineering calculations, manufacturer's literature, or maintenance manuals, shall be in United States Customary System (USCS) measuring units (foot, pound, gallons, etc). If original design work was completed in metric units, their equivalent USCS dimension and unit shall be indicated. All submittals, in printed or electronic format, shall be original quality and completely legible. Any obfuscation or loss of clarity of original which may result in ambiguous interpretation is not acceptable.
2. Specific items to be covered by the submittals shall include, as a minimum, the following:
 - a. For mechanical equipment submit all data pertinent to the installation and maintenance of the equipment including shop drawings, manufacturer's recommended installation procedure, detailed installation drawings, test data and curves, maintenance manuals, and other details necessary.
 - b. Substitutions

1.2 PRODUCT HANDLING

- A. Submittals shall be accompanied by a letter of transmittal and shall be in strict accordance with the provisions of this section.
- B. Compact disks or DVDs shall be packaged in a hard plastic case. The case and media shall be labeled as to content.
- C. Submit materials to the EBMUD Materials Testing Laboratory when so specified. Submit other submittals to Construction Division, EBMUD, in accordance with Article 3.1 unless specified otherwise.

1.3 SUBMITTALS

A. Submittals shall include the following information:

1. A copy of the applicable section(s), with addendum updates included as appropriate, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements.
2. A check mark 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 is 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.

B. Failure to include a copy of the marked-up specification sections, 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. Any deviation from the contract documents not specifically requested and clearly identified, although accepted through oversight, may be rejected at any stage of the Work. The Contractor shall, at his own expense, reconstruct all work affected by the later rejection of a contract deviation that was not specifically called and explained for review and acceptance by the District as detailed above.

PART 2 - PRODUCTS

2.1 SHOP DRAWINGS

A. Scale required:

1. Make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the work.

B. Type of prints required:

1. Make all shop drawing prints in blue or black line on white background. Reproductions of District drawings are not acceptable.

C. Size of drawings required:

1. The overall dimensions of each drawing submitted to the Engineer shall be equal to one of the District's standard sheet sizes as listed below. The title block shall be located in the lower right hand corner of each drawing and shall be clear of all linework, dimensions, details, and notes.

Sheet Sizes
Height x Width

11" x 8-1/2"
11" x 17"
22" x 34"

- A. Stamp or permanently print on each drawing "Reference EBMUD Drawing _____" and enter the pertinent drawing number.

2.2 MANUFACTURERS' LITERATURE

- A. Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, clearly show which portions of the contents are being submitted for review.
- B. Clearly mark the literature with the materials and options being provided to illustrate conformance with the specification details.
- C. Provide the complete part number and include the legend containing the descriptive details that define the meaning of each digit of the number.

2.3 OPERATIONS AND MAINTENANCE MANUALS

- A. See "Table 1: O&M Manual Summary" at the end of this section.
- B. The provisions of this article are considered minimal requirements and do not supersede any requirements in individual sections of this specification.
- C. When O&M manuals are required to be submitted covering items included in this work, prepare all such manuals in approximately 8-1/2" x 11" format in durable, three ring plastic binders. Each manual shall be identical and include at a minimum information identified on the O&M Manual Review Checklist appended as supplement to Section 33 12 16.08. In addition, furnish the following:
1. Binder Cover: Identification on, or readable through, the front cover stating the District's specification (project) number and project title, District facility or facilities where the equipment will be installed, specification section number, and the system or equipment described in the manual.
 2. Binder Spine Label: Include the system or equipment name as shown on the binder cover along with the specification section number.
 3. Title page including applicable equipment tag numbers and equipment manufacturer's name, address, telephone number, and the submittal date. In addition, provide name, address and telephone number of the local manufacturer's representative.

4. Table of contents organized and referenced to manual section dividers
 5. Complete instructions regarding storage, handling, installation, operation, servicing, and maintenance of all equipment involved
 6. Comprehensive replacement parts list, with complete nomenclature of all replaceable parts, their part numbers, current cost, and name and address of nearest vendor of parts
 7. Detailed description of handling, replacement, and disposal of all fluids and replacement parts
 8. Copies of Safety Data Sheets (SDS) as required
 9. Copies of all guarantees and warranties issued including the start and end dates for the warranty period or conditions for the initial start date and the duration
 10. Copies of drawings with all data concerning changes made during construction
 11. Copies of calculations or reports appropriately prepared including sketches, given or known information with the source of the data, equations with each variable defined and applicable units, cross-references, code/standard references, annotations and footnotes
 12. All field and factory test data
 13. Engineering calculations or reports pertinent to the content of the O&M manual. See Article 2.8 Engineering Calculations or Reports.
 14. Provide a separate section with tab divider for documents developed in the field after the O&M manual has been approved. These documents include, but not limited to the following: manufacturer's certificate of proper installation, field test results, etc.
- D. Materials shall be word-processed.
- E. For mechanical equipment that require O&M manuals: provide separate O&M manuals for each piece of equipment installed at each site. Title the O&M manuals to denote which site the equipment pertains to.
- F. Manufacturer's literature shall be originals, or original quality copies. Specifically identify all equipment models and features being provided. Delete or cross out any extra information provided in standard manufacturer's literature that does not apply to the equipment furnished.
- G. Operating and Testing Procedures, and Diagrams: All manufacturers' standard procedures shall be customized or rewritten as necessary to accurately describe the system as it is installed and operated for the project. Procedures shall include District device tag numbers (as shown on the P&IDs) whenever available. All

diagrams illustrating the system shall be customized to show installed conditions, and shall include District device tag numbers whenever available.

H. Three-hole punch shall not obliterate any information. Reduce original material as necessary to provide a suitable margin for three-hole punching or provide three-hole punched clear plastic pockets for inserting single sheet material.

I. O&M Manual Review Checklist:

1. The manufacturer's representative shall fill out a minimum of one O&M Manual Review Checklist form per submittal appended as supplement to Section 33 12 16.08) and include a copy in each submitted manual. Provide more than one checklist when specified in the technical specification sections. Clearly identify the location in the O&M Manual for each element in the Technical Content section (O&M tab number and page number). If the content is in multiple locations or on multiple pages, identify each location in the space provided or in the Comments column on the form.
2. All portions of the form shall be completed prior to submittal, or the submittal may be returned unreviewed. Submittals may also be returned unreviewed if the O&M Manual Checklist form contains multiple error and/or omissions.

J. O&M Manual Review Process

1. Preliminary O&M Manuals: Submit preliminary O&M manuals as searchable Portable Document Format (PDF). The District will return the submittals to the Contractor along with comments identifying necessary corrections or additions to the manuals. The District reserves the right to keep possession all of the O&M manuals, and have the Contractor arrange to correct the manuals to comply with the reviewer comments.
 - a. Preliminary O&M manuals shall be submitted and accepted prior to the delivery of the respective equipment or system.
2. Final O&M Manuals:
 - a. The manuals shall not be considered final until the submittal has received an "Approved" review status.
 - 1) Submit the Final O&M Manuals per the requirements of Paragraph 2.6.C.
 - 2) Submit requested number of Final O&M Manual hard copies as shown in Table 1 at the end of this section.

K. Electronic Files:

1. After the District has approved each O&M Manual, two copies of an electronic version shall be supplied in addition to the required number of hard copies.

2. Electronic files shall be created in both searchable Portable Document Format (PDF) compatible with Adobe Acrobat version XI and Word format compatible with Microsoft Word 2010 or 2013. The security features of all submitted files shall be disabled so that the District can perform future editing without restriction. Custom-developed drawings included in the O&M manuals (i.e. loop diagrams, system interconnection diagrams, etc.) shall also be submitted electronically in both PDF and the native CAD file format for future editing of the drawings by the Engineer. For CAD files, the associated PDF files shall be saved such that all CAD layering is preserved in the PDF file.
3. Electronic versions shall match the hard copy page for page with blank pages deleted. Electronic files shall be converted to PDF directly rather than using optical scanning. For any document not already in electronic format, the documents shall be scanned using optical character recognition to provide searching capability in the document.
4. All electronic files shall be supplied to the Engineer on CD +/-R 700 MB CD or DVD +/-R4.7 GB DVD if the file is larger than 700 MB along with the approved O&M manuals.

L. Maintenance Summary Forms

1. Furnish a completed Maintenance Summary Form (see typical format appended as supplement to Section 33 12 16.08) as part of the O&M Manual. Include all typical, routine, or preventive maintenance required to ensure satisfactory performance during warranty period and longevity of the equipment. Manufacturer's representative shall sign and date the form certifying accuracy of the information.
2. Briefly summarize each maintenance activity on the form. Specific references to more detailed maintenance information located elsewhere in the O&M manual may be placed in the "Comments" column. However, simply referencing other sections in the O&M manual without a brief description of the maintenance activity is not acceptable.
3. Information on the form shall be word-processed, or typewritten.
4. Maintenance Summary Forms shall be on 8-1/2 inch by 11-inch paper and may be as many pages as required to completely summarize the required maintenance. However, the order and format must be in accordance with the supplied form. The Maintenance Summary Forms will be provided in electronic format (MS Word) upon request.

2.4 ENGINEERING CALCULATIONS OR REPORTS

- A. Engineering calculations/reports required by this specification shall be based on well-established engineering theories and principles. Each calculation/report shall be a complete and independent package.

- B. The calculations/reports shall be comprehensive for each structure or item, in that all calculations/reports are contained within the individual structure or item's calculation/report document (i.e., no calculation/report references to other calculation documents).
- C. Presentation format shall be similar to that described in Article 2.6-Operations and Maintenance Manuals. As a minimum, all calculations/reports shall be bound in an appropriately labeled binder, and contain the following elements:
 - 1. Facility title, including substructure number, equipment description, applicable equipment tag number(s), and applicable specification section.
 - 2. Table of Contents
 - 3. Introduction, including description of structure or item, purpose of calculation/report, design assumptions with justification, software utilized for the analysis including the version, and codes/standards used.
 - 4. A list of references used to provide the bases for assumptions, equations, or data used in the calculation/report.
 - 5. Calculations or reports appropriately prepared, including sketches, given or known information with the source of the data, equations with each variable defined and applicable units, cross-references, code/standard references, annotations and footnotes.
 - 6. Results shall be clearly identified. Summary tables shall be used for large amounts of data (especially if a software application is used).
 - 7. Final design details, ready for transmittal to design drawings or shop drawings.
 - 8. Professional Engineer's Seal or signature, as appropriate, of the individual(s) who prepared the calculations/reports.
 - 9. Appendices, including input and output files from computer design, and photocopies of catalog sheets for any special material or equipment (e.g., manufacturer sheet for equipment, ICBO reports for anchors, etc.), and checker markups.
- D. When any part of the calculation/report has been prepared by computer software, a copy of the input and output files shall be included as part of the final design calculation.
- E. Shop drawings shall not be submitted until all design calculations/reports have been appropriately reviewed, checked and signed. The checker markups and comments shall also be included in an appendix to each calculation.

2.5 SUBMITTAL QUANTITIES

- A. Submit four (4) copies of all data and drawings unless specified otherwise.
- B. Submit one (1) electronic copy of the scanned data and drawings in searchable PDF (compatible with Adobe Acrobat version XI). Submit scanned copy on EADOC.
- C. Submit three (3) of each sample, unless specified otherwise.
- D. Submit five (5) copies of each manual unless specified otherwise.
- E. Submit quantity specified of materials submitted to the EBMUD Materials Testing Laboratory.

2.6 ELECTRONIC SUBMITTALS

- A. Provide electronic submittals in searchable PDF (compatible with Adobe Acrobat version XI). All portions of the electronic submittals shall be legible and shall be in full color identical to the original material. Provide manufacturer's literature in original electronic file, if available.
- B. Provide one electronic submittal file for each submittal except as noted hereinafter. The electronic submittal file name shall use the following format: submittal number – specification section number - description (e.g.: “001.1-01 33 00-Coating of Widgets”). Providing multiple electronic files for a single submittal (except as noted hereinafter) is not acceptable. The Contractor shall merge multiple files into a single electronic file.
- C. For larger submittals containing multiple volumes, submit one electronic file for each hardcopy volume and each electronic submittal file name shall include the corresponding hard copy volume number (e.g. “001.1-01 33 00-Coating of Widgets – Volume 3”).
- D. Upon acceptance of the electronic submittal (noted as Approved, Accepted, Approved as Noted, or Acknowledged Receipt), submit three (3) hardcopy sets of the submittal. The hardcopies shall be edited with highlighting, addressing/incorporating District review comments. A revised electronic file shall accompany the hardcopy submission, and shall match the hard copy submittal page for page including cover transmittal forms, title pages, and blank pages.
- E. Exceptions requiring hardcopy material initially, are:
 - 1. O&M processing
 - 2. As-built processing,
 - 3. When hardcopy material is originally in a form larger than 11” x 17”; the material shall not only be included in the electronic submittal, but shall also be submitted in hardcopy form along with the original electronic submittal

required in Paragraphs A and B above. Seven (7) submittal copies of the large materials shall be provided.

- F. The Contractor is solely responsible for verifying that the hardcopy submittal and accompanying electronic submittal are identical and address/incorporate prior Engineer review comments.
- G. All portions of the electronic submittals shall be provided with text searching capabilities whenever possible. For any document not already in electronic format, the documents shall be scanned using optical character recognition to provide text searching capability in the document.
- H. Electronic files shall be submitted to the Engineer on EADOC or in the following manner, if required by the Engineer:
 - 1. For files 10 MB or less, one copy via email, with the subject line matching the file name.
 - 2. For files more than 10 MB but not larger than 700 MB, provide three copies on CD +/-R 700 MB CD.
 - 3. For files larger than 700MB, provide three copies on DVD +/-4.7 GB DVD.

2.7 REVIEW CHECKLISTS

- A. Review Checklists are required for some specification sections (when specified in the section) and for all O&M manual submittals.
- B. Each submittal requiring review checklists shall comply with the following:
 - 1. Each page of the submittal shall include a unique and sequential page number. The page numbers shall be located in the same general location on each page.
 - 2. Page numbering may include “point numbers” (10.1, 10.2, etc.) to facilitate inserting pages without renumbering an entire submittal. However, all pages in the submittal shall be in numerical order.
 - 3. The review checklists shall be completed in its entirety with accurate page number references for each checklist item. Submittals with inaccurate review checklists may be returned without review for correction.
 - 4. The review checklist shall be inserted at the beginning of the submittal.

PART 3 - EXECUTION

3.1 GENERAL

- A. Prepare and use a transmittal form for submittals that includes the following information:

1. *Project name and specification number
2. *Date of submittal
3. *"To: Construction Division, MS #62
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623-1055
ATTN: Office Engineer"
4. *"From:" Name and address of Contractor
5. Name and address of subcontractor
6. Name and address of supplier
7. Name of manufacturer
8. *Spec. Section, Article Number, Paragraph and Subparagraph Number and/or drawing number and detail references
9. Location of use
10. *Submittal number
11. *Signature and title of transmitter
12. *Original submittal or resubmittal

Note: All transmittals shall include asterisked items as a minimum to be acceptable for review.

B. Stamp or permanently print on each submittal the following certification statement.

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated into Specification Number __, is in compliance with the Contract drawings and specifications, can be installed in the allocated spaces, and is submitted for District (record/approval).

Certified by _____ Date _____ "

3.2 TIMING OF SUBMITTALS

A. General:

1. Make all submittals far enough in advance of scheduled dates of installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.

In scheduling, unless otherwise noted, allow at least twenty (20) work days for the Engineer's review, plus the transit time to and from the District office.

3.3 APPROVAL BY ENGINEER

- A. Approval of each submittal by the Engineer will be general only and shall not be construed as:
 - 1. Permitting any departures from the contract requirements.
 - 2. Relieving the Contractor of the responsibility for any errors and omissions in details, dimensions, or of other nature that may exist.
 - 3. Approving departures from additional details or instructions previously furnished by the Engineer.
- B. One copy of each submittal, except manuals and as-built drawings, will be returned to the Contractor marked "Approved", "Approved as Noted", "Revise and Resubmit", or "Acknowledged Receipt", except that in some cases, all copies of a submittal may be returned to the Contractor marked "Returned without Review".
 - 1. "Approved" indicates that item covered by the submittal may proceed provided it complies with requirements of the specifications. Final acceptance will depend upon that compliance.
 - 2. "Approved as Noted" indicates that item covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the specifications. Final acceptance will depend on that compliance.
 - 3. "Revise and Resubmit" indicates that the Contractor shall not proceed with any phase of the item covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations and requirements of the specifications.
 - 4. "Acknowledged Receipt" indicates that the item is required to be submitted to the Engineer primarily for information or record purposes, and is not subject to Engineer's review.
 - 5. "Returned without Review" indicates that the submittal was not reviewed by the Engineer due to the submittal being incomplete, illegible, inadequate, or otherwise failing to conform to the requirements of the specification. Contractor shall prepare a new submittal for this item.
- C. Resubmit revised drawings or data as indicated, in seven (7) copies unless otherwise specified.

- D. Work requiring the Engineer's approval shall not begin until the submittals for that work have been returned as "Approved" or "Approved as Noted".

3.4 CHANGES TO APPROVED SUBMITTALS

- A. A resubmittal is required for any proposed change to a submittal that has been "Approved" or "Approved as Noted". Changes which require resubmittal include, but are not limited to, drawing revisions, changes in materials and equipment, changes to installation procedures and test data. All resubmittals shall include an explanation of the necessity for the change.
- B. Minor corrections to an approved submittal may be accomplished by submitting a "Corrected Copy".

3.5 O&M MANUAL SUMMARY LIST

- A. Table 1 is a summary of equipment/systems that require O&M manuals. Additional O&M manuals might be required when specified elsewhere.

Table 1: O&M Manual Summary (Additional O&M manuals might be required in other Sections)		Number of Hard Copy(ies) to Print
Section	System / Equipment, or Facility	
33 12 16.08	Slide Gates	5

END OF SECTION

SECTION 01 42 19

REFERENCE STANDARDS

1.1 GENERAL

A. Referenced Standards:

The standards referred to, except as modified, shall have full force and effect as though printed in this Specification, and shall be the latest edition or revision thereof in effect on the bid opening date, unless a particular edition or issue is indicated. Copies of these standards are not available from the District. Abbreviations and terms, or pronouns in place of them, shall be interpreted as follows:

AASHTO:	American Association of State Highway and Transportation Officials, Standard Specifications
ACI:	American Concrete Institute, Standards
AEIC:	Association of Edison Illuminating Companies
AISC:	American Institute of Steel Construction, Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings, and the AISC Code of Standard Practice
AITC:	American Institute of Timber Construction
AMCA:	Air Movement and Control Association International, Standards
ANSI:	American National Standards Institute
APA:	American Plywood Association
API:	American Petroleum Institute
APWA:	American Public Works Association, Standard Specifications for Public Works Construction
ASA:	Acoustical Society of America
ASCE:	American Society of Civil Engineers
ASHRAE:	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME:	American Society of Mechanical Engineers
ASTM:	ASTM International, Standards

ASNT:	American Society for Nondestructive Testing Standards
ATIS:	Alliance for Telecommunications Industry Solutions
AWPA:	American Wood-Preservers' Association, Standards
AWS:	American Welding Society
AWWA:	American Water Works Association, Standards
CARB:	California Air Resources Board
CBC:	California Building Code
CCR:	California Code of Regulations
CEC:	California Electrical Code, California Energy Commission
CFR:	Code of Federal Regulations
CISPI:	Cast Iron Soil Pipe Institute, Standards
CMAA:	Crane Manufacturers' Association of America
CRSI:	Concrete Reinforcing Steel Institute, Standards
CSA:	Canadian Standards Association
CSS:	CalTrans Standard Specifications, State of California, Department of Transportation
DOSH:	Division of Occupational Safety and Health, State of California, Department of Industrial Relations
EIA	Electronic Industries Alliance
EUSERC	Electric Utility Service Equipment Requirements Committee
FS:	Federal Specification
GSA:	United States General Services Administration
HI:	Hydraulic Institute
IBC:	International Building Code
ICC:	International Code Council
ICEA:	Insulated Cable Engineers Association
IEC:	International Electrotechnical Commission

IEEE:	Institute of Electrical and Electronic Engineers
ISA:	The International Society of Automation
ISO:	International Organization for Standardization
LIA:	Laser Institute of America
MSS:	Manufacturers Standardization Society
NAAMM:	National Association of Architectural Metal Manufacturers
NACE:	NACE International, Standards
NEC:	National Electrical Code
NECA:	National Electrical Contractors Association
NEMA:	National Electrical Manufacturers' Association, Standards
NERC:	North American Electric Reliability Corporation
NESC:	National Electrical Safety Code
NETA:	International Electrical Testing Association
NFPA:	National Fire Protection Association
NSF:	National Sanitation Foundation/NSF International
OSHA	U.S. Department of Labor, Occupational Safety and Health Administration.
PG&E:	Pacific Gas and Electric Company
PUC:	Public Utilities Commission of the State of California
RIS:	Redwood Inspection Service, Standard Specifications
RUS:	United States Department of Agriculture, Rural Utilities Service
SAMA	Scientific Apparatus Makers Association
SDI:	Steel Door Institute
SEI:	Structural Engineering Institute
SMACNA:	Sheet Metal and Air Conditioning Contractors National Association
SSPC:	Society for Protective Coatings

TIA: Telecommunications Industry Association

UBC: Uniform Building Code of the International Conference of Building Officials

UL: Underwriters Laboratories

WCLIB: West Coast Lumber Inspection Bureau, Standard Grading and Dressing Rules

END OF SECTION

SECTION 01 45 27

SHOP INSPECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Work includes:

1. Provide the District's Plant Inspection Section with advanced notification for Short Term (three consecutive weeks or less at one facility), and Long Term (more than three consecutive weeks at one facility) inspection assignments, and reimburse the District for travel expenses described in this Section.
2. Provide notification to the District's Plant Inspection Section of all work performed off the project site in fabrication, assembly, and coating plants; provide safe access to all areas where work is being performed.
3. The District reserves the right to use Third Party Inspectors in lieu of District personnel. All aspects of this section shall also apply to District contracted Third Party Inspectors.
4. For Long Term assignments provide the following:
 - a. Adequate office space including desk, office chair, lighting, and climate control;
 - b. A large format (up to 11 X 17 paper size) printer/scanner/copier and paper and printer supplies for the duration of the assignment;

B. Contractor and its Material Suppliers shall ensure that there shall be adequate lighting, ventilation, and safety procedures in place to permit safe and thorough inspection at all times.

C. All inspection and measurement tools and equipment employed by Contractor or Material Suppliers shall be made available to the District and remain in the area for inspection, and shall be subject to regular inspection and verification by the Contractor that such tools and equipment are properly calibrated and in an operable condition.

D. Contractor and its Material Suppliers shall identify in writing the person responsible for the receipt and coordination of all Inspector communications. A representative from the Material Supplier responsible for Quality Control shall be present and available to the Engineer at all times during the course of inspections.

- E. Contractor and its Material Suppliers shall respond promptly to address and correct all fabrication and inspection processes to comply with the Contract Documents. Corrective measures undertaken by the Contractor and/or Material Supplier shall be documented and the documentation made available for review, inspection and copying by the Engineer at all times.
- F. See individual sections, listed in Article 1.4, for specific processes requiring shop inspection.

1.2 WITNESS NOTIFICATION

- A. The Contractor shall provide advanced written notification including the following information:
 - 1. The related specification section(s);
 - 2. Details of materials, parts or components to be inspected/tested;
 - 3. Name and location of shop to be visited;
 - 4. Shop's contact information;
 - 5. Approved submittal number; and,
 - 6. Proposed dates for those processes described in this and related Sections (Quality Control) for each shop location.
- B. The shop where the inspections and tests will occur shall contact the District Plant Inspection Section at (510) 287-1132 to schedule all shop inspections. Visits will be scheduled based on Engineer's availability.
- C. Notification Schedule:

ONE-WAY DISTANCE FROM OAKLAND	SHORT TERM ASSIGNMENTS	LONG TERM ASSIGNMENTS
less than 75 miles	5 work days in advance	15 work days in advance
75 to 200 miles	10 work days in advance	15 work days in advance
greater than 200 miles	15 work days in advance	20 work days in advance
international	30 work days in advance	30 work days in advance

- D. Shift work outside of standard first shift work hours (7 AM to 5 PM), including changes to previously staffed shift work (excluding cancelation of

shift work), require advanced approval by the Engineer. Following approval by the Engineer, shift work shall start no sooner than the first Monday following 10 work days' notice for locations up to 200 miles from Oakland, and the first Monday following 15 work days' notice for locations over 200 miles from Oakland.

- E. If the required notification is not given, the District will schedule the witness inspection at its convenience and the activity to be witnessed shall not proceed until the Engineer arrives or the Engineer notifies the Contractor that it is choosing to waive its witness inspections. In the event that the required notification is not given and the activity has occurred in the absence of the Engineer, the Engineer may reject the processes completed to date and require the activity to be redone.

- 1. Delays resulting from failure to provide the required notification will be non-excusable. Expenses incurred by delays; repeat of the work process; or to correct unacceptable work shall be borne by the Contractor.

F. Out of Country Inspection and Witnessing

- 1. Equipment and items of supply that are subject to witness inspection by the District as identified in Article 1.4, "Witness Schedule" and other contractually required work and all places to be used for their production or testing, shall be available to District personnel. The District's decision that such equipment, items, or work cannot be safely inspected or observed, including a decision that the country, area, or facility in which production or testing is to occur may not be safe for District personnel shall be final and shall preclude the Contractor's utilization of such country, area or facility. The District will consult the US Department of State website (<https://travel.state.gov/content/passports/en/alertswarnings.html>) for "Travel Advisories" to countries and regions to determine the safety of international travel. Areas with travel advisories shall not be considered for procurement of items that require District inspection.

G. Confidentiality or Non-Disclosure Agreements

- 1. Facilities that require execution of a Confidentiality or Nondisclosure Agreement (NDA) shall submit a copy of the agreement for review to the District through the submittal process for the project or purchase agreement prior to requesting District inspection. The NDA will be considered an agreement between the District (not individual inspectors) and the requesting company. The requirements of the California Public Records Act shall supersede the terms of any NDA and language to that effect will be included in the NDA by the District.

1.3 TRAVEL EXPENSES

- A. The Contractor shall include in the bid price all travel expenses for the Engineer to conduct the witness inspections noted if any of the inspections are to be performed at a locality exceeding 125 miles one way from Oakland, CA.
- B. Travel expenses include hotel lodging at an establishment rated three diamond or better by American Automobile Association (AAA), or comparable listing, and a minimum \$61 meal and incidental expenses allowance per day, or at the rate established by US General Services Administration (for domestic) or US Department of State (for international), whichever is greater, for the duration of the trip.
- C. If travel exceeds 200 miles one way from Oakland, CA, in addition to the expenses described in 1.3.B, travel expenses shall also include round trip direct route coach airfare from Oakland, CA; San Francisco, CA; Sacramento, CA; or San Jose, CA Airports to manufacturer's plant or testing facility, mid-sized car rental or taxi services, fuel, tolls, ground transportation to and from the airport, and airport parking at the departing airport; the following expenses shall apply as determined by the Engineer:
 - 1. For international or travel outside the continental United States, per diem rates are those established by the US Department of State for the specific location and dates of travel. Travel expenses may include the direct cost of securing passports, visas, language interpreters, document translators, communications, and internet access.
 - 2. If weekend stays are requested to defray transportation costs, reimbursement for the Engineers' stay over the weekend will include meal allowance, hotel expenses, phone and internet access charges, rental car or transportation charges to and from eating establishments, laundry service, language interpreters, or other necessary business expenses or services.
 - 3. Reimburse the District for any inspection that has to be repeated due to repair or rework of unacceptable work. Reimbursement shall include District Engineers' wages, or if done by a District agent, the agent's complete invoice for the needed inspection.
- D. All fees incurred such as airline reservation change fees, loss of fare due to purchase of nonrefundable tickets, hotel cancellation/rebooking fees, etc., due to Contractor-requested changes to the inspection schedule after the initial notification shall be borne by the Contractor.

1.4 WITNESS SCHEDULE

- A. The District will witness the following processes as specified in the applicable specification sections listed below or as required elsewhere in the Contract Documents. For purposes of estimating, anticipate that one Engineer will cover only one shift of shop inspection work per plant site. The costs for additional inspection required by the operation of more than one work shift per day or by more than one shop inspection site per day shall be included in the bid costs.

Spec. Section	Section Title and Description
33 12 16.08	Slide Gates

PART 2 - NOT USED

PART 3 - NOT USED

END OF SECTION

SECTION 01 75 17

FIELD TESTING AND STARTUP

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes: Perform field testing, and startup of installed equipment and systems, as well as other manufacturer services.
- B. All field testing shall comply with the requirements of this section. Additional field testing requirements are specified in other sections.
- C. For factory testing and other testing requirements, see technical sections.
- D. District Furnished Services: The District will furnish non-potable water required for testing unless otherwise specified.

1.2 DEFINITIONS

- A. Commissioning: The process of testing the installation for compliance with contract requirements and demonstrating, through documented verification, that the project has successfully met the contractual requirements and the Project is ready for Operational Start-up.
- B. Factory Acceptance Testing (FAT): Quality control testing conducted at the Manufacturer's facility to demonstrate components, devices, equipment/systems, and software meets specified performance requirements prior to shipment. Also referred to as source testing.
- C. Functional Test: The field testing required to determine if installed equipment or system will operate in a satisfactory manner and as specified. The Functional Test is a point-by-point test to confirm that all components associated with the equipment or system is operating properly. Functional testing is not intended to measure efficiency and performance.
- D. Manufacturer's Certificate of Proper Installation: The form is submitted to the Engineer prior to Functional Testing to confirm that the equipment/system is installed in conformance with the Contract Documents. The form is appended to Specification 33 12 16.08.
- E. Operational Startup Test: A test of all systems operating together to demonstrate satisfactory performance of the facility as a whole for a continuous period.
- F. Performance Test: The field testing required to demonstrate the individual equipment or system meets all of the specified performance requirements.
- G. Startup: The process of performing startup testing of the facility.

- H. Test Procedures: Test procedures shall include testing methods, acceptance criteria, procedures, and test data forms for functional and performance tests.

1.3 FIELD TESTING INSTRUMENTS

- A. The Contractor or its qualified subcontractors/vendors shall provide all instruments and materials necessary to complete the field tests unless otherwise specified. If required calibration instruments and materials are not provided on the day of test, the Engineer may postpone witnessing and sign off of instrument testing.
- B. All instruments shall be calibrated prior to the start of testing. Certificates of calibration for all instruments used for testing shall be current, and shall be at the job site during testing. If an uncalibrated instrument was used in a test, the entire test shall be redone with calibrated instruments at the Contractor's sole expense including labor costs and other expenses incurred by District staff to witness the retest.

1.4 QUALITY ASSURANCE

- A. All tests shall be subject to approval of the Engineer, and shall be witnessed by the District. No testing shall be scheduled by the Contractor without Engineer approved test submittals. The Contractor shall provide a minimum of 5 work days' written notice confirming testing dates to the Engineer to enable witnessing of the testing. Notification shall be provided via the three week look-ahead schedule as described in Section 01 31 19 – Project Meetings.

1.5 SUBMITTALS

- A. Submit the following at least 60 calendar days prior to factory and field testing:
 - 1. Test procedures for all field tests
 - 2. Manufacturer's representative's resume demonstrating their qualifications and ability to perform the specified services
- B. Prior to field testing, submit Calibration certificates for all instruments to be used during testing.
- C. Test Reports:
 - 1. Test Reports shall be submitted for complete systems; which is typically by specification section. Submitting partial test reports is not acceptable. Test submittals shall include the Specification Section number and Equipment Name in the title.
 - 2. Upon completion of testing for each equipment item or system, the Contractor shall submit typewritten or word processed test reports and forms for review and acceptance within 10 calendar days of completed testing. Submit test results with signed statement by manufacturer's representative that results meet

specification requirements and manufacturer standards; when a manufacturer's representative is not required to be present during testing, this signed statement shall be provided by the Contractor. Upon acceptance, all test reports (including all factory and field testing) shall be inserted by the Contractor into their respective O&M manuals.

1.6 MANUFACTURERS' SERVICES

- A. A manufacturer's authorized representative shall perform all services when manufacturer's services are specified in the technical sections. The authorized representative shall be factory trained and experienced in the technical applications, installation, operation, and maintenance of the equipment, subsystem, or system. Additional qualifications may be specified elsewhere.

Manufacturer's representatives shall be subject to acceptance by the Engineer. No substitute representatives will be allowed without prior written approval by the District.

1.7 TEST PROCEDURES

- A. The manufacturer's representative shall compose test procedures and Field Functional Test Data Forms for each required Functional and Performance test and for all equipment specified in the individual equipment specifications.
- B. Unless otherwise noted, submit individual Field Test Procedures and Field Functional Test Data forms by specification section. Grouping test procedures for multiple specification sections into a single submittal is not acceptable. If functional tests are submitted together with performance tests, then separate each procedure and clearly identify each test by name: Functional Test, or Performance Test.
- C. Coordinate with the District to determine the operating requirements of adjacent or related systems that may be required to complete the Startup Test.
- D. Prior to submitting for Engineer review, the Contractor shall review all test procedures to verify completeness and compliance with the specifications.
- E. All test procedures shall be comprehensive, neatly organized, and word-processed. Test procedures shall include the following:
 - 1. Detailed test methods including sample calculations as required.
 - 2. Test setup procedures including details of all necessary adjustments, balancing, required equipment isolations or configurations, testing equipment, and testing instruments.
 - 3. Step-by-step testing procedures (number each step). Specifically identify each test instrument (including tag numbers) used during testing.

4. Acceptance Criteria: For each test phase, specifically indicate what is considered an acceptable test result.
5. Data Forms: Include test name, equipment (with tag numbers as applicable) or system name, specification section and paragraph number, test instrument tag numbers, test date, space for testing personnel names, test data names and units, reference equations for all calculated values, and signature lines for manufacturer's representative, Contractor, and District witness.
6. Field Functional Test Data Form: A template for a field functional test data form is amended to Specification Section 33 12 16.08. The Contractor may use this template as a starting point when developing specific field functional test data forms, or the Contractor may develop their own data form provided that the data forms include all required information as specified in the template. A Microsoft Word electronic version of the field functional test data form template will be made available upon request.
7. Test Procedures: Testing procedures and manufacturer representative's resumes shall be approved by the Engineer prior to performing any tests.

1.8 FUNCTIONAL TESTS

- A. Functional tests shall not proceed until the Engineer has received, reviewed and approved the items listed below. The Contractor shall ensure that copies of these materials are on-site during testing.
 1. Interconnection diagrams
 2. As-builts
 3. Manufacturer's Certificate of Proper Installation (when required)
 4. Approved equipment or system technical submittal
 5. Approved draft O&M Manuals with all factory test results and certificates excluding field functional testing and as-builts
 6. All factory test reports
 7. Calibration certificates (for all instruments used during testing)
 8. All piping, conduit, equipment and systems have been properly tagged and labeled
 9. Functional Test Procedures and Field Functional Test Data Forms

B. Equipment ID Tags:

1. All ID tags and labels on equipment, piping, valves, instruments, conduit and other devices or systems directly or indirectly related to the functional test shall be installed by the Contractor and verified by the Engineer prior to conducting the functional test.

C. Functional tests include:

1. Installation Inspection: Check for proper rotation, adjustment, alignment, mechanical and electrical connections, wire labeling, proper lubrication, and any other conditions which may damage or impair functioning.
2. Operation Check: Check for the proper operation of all system components.
3. Run Check: Each system or equipment item shall be operated continuously for 1 hour, minimum, to verify satisfactory operation. Additional operating time may be required as specified in the individual technical specifications, or as recommended by the manufacturer.
4. The individual technical specifications or the manufacturer may specify additional functional test requirements for each component or system.
5. If any part of a unit shows evidence of unsatisfactory or improper operation during the one-hour test period, or the test period specified by equipment technical specifications, correction or repairs shall be made, and the full test operation, as specified herein, shall be repeated after all parts operate satisfactorily.

1.9 PERFORMANCE TESTS

- A. Performance tests shall not proceed until the Functional Test has been successfully completed.
- B. Copies of all prior test results (factory, and field functional tests) shall be available on-site, prior to proceeding with performance tests.
- C. Performance tests shall demonstrate that the equipment or system meets all specified performance requirements; see technical specification sections.

1.10 OPERATIONAL STARTUP TEST

- A. The facilities startup test shall not proceed until all of the following have been completed:
 1. All other required tests have been completed and accepted by the Engineer. At the Engineer's discretion, selected performance tests may be conducted during the Startup Test period.

2. Copies of all prior tests (factory, field functional, and performance tests) shall be available on-site.
- B. Operational Startup tests shall be scheduled no sooner than 7 calendar days after the projected completion of Functional Testing on all related systems. All equipment/systems required by these specifications shall be included in the Startup Test.
- C. The Contractor shall coordinate with District staff to startup the facility equipment and systems. The District will conduct a seven (7) day Operational Startup test with support of the Contractor, Subcontractors and Vendor Representatives as required by the Engineer to demonstrate to the District's satisfaction that all equipment and systems required by these specifications operate together as intended
- D. The Contractor shall provide qualified personnel to support startup and testing, and appropriate construction trade personnel to correct malfunctions and deficiencies at any time during the Startup Test. Only District personnel shall operate the equipment and systems.
- E. The District will provide Contractor-trained operating personnel for the duration of the Startup Test. The District's operating personnel shall be monitored by the Contractor and/or the manufacturer's representatives to assure each system is being operated as intended.
- F. The District will determine facility operating parameters such as plant flow rates, chemical dosages, and which systems or equipment will be operated at any given time. All systems and equipment will be operated within their normal operating ranges.
- G. All defects in operation, materials, or workmanship that appear during the Startup Test shall be immediately corrected by the Contractor. In case of a system interruption, the Contractor shall repeat the Operational Startup Test of the affected systems and any other system directly related to the operation of the affected system. The Startup Test shall not be accepted as complete until all systems have successfully operated together to the satisfaction of the Engineer for a continuous seven (7) day period. All costs for corrective work and retesting shall be borne by the Contractor.
- H. System interruptions include the following:
 1. Malfunction or deficiency that results in a shut down or partial shutdown of any system
 2. Malfunction or deficiency in any backup system that cannot be corrected by the Contractor within 4 hours after notification of the problem
 3. Malfunction or deficiency that results in system or equipment performance that is less than specified

- I. The Contractor shall maintain the qualified staff or vendor representatives (either onsite or on-call) to be able to respond immediately (24-hours per day) to system or equipment related questions and to correct deficiencies. The Contractor shall provide a list of qualified staff or vendor representatives to perform troubleshooting services during the Operational Startup period. On call staff shall report to the site within 2 hours of being informed of a deficiency.
- J. The District will maintain a log of equipment or system deficiencies along with the date and time when the Contractor was notified of the deficiency and the date and time when the Contractor notifies the District that the deficiency has been corrected. All corrected deficiencies must be inspected and approved by the District.
- K. The Contractor shall maintain a log of equipment or system deficiencies along with a description of the required repairs necessary to correct the problem. The Contractor shall furnish up-to-date copies of this log to the District upon request.
- L. If the Operational Startup Test is interrupted through no fault of the Contractor, the test may resume at the earliest mutually agreeable time at no additional cost to the District.

PART 2 - NOT USED

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor or its qualified equipment manufacturer representative shall perform all functional and performance testing of installed equipment unless otherwise specified. The Contractor shall be present during all testing, even if the specific functional or performance test is performed by its equipment manufacturer representative.
- B. The Contractor shall complete all testing in accordance with the District approved test procedures.
- C. The Contractor, at a minimum, shall maintain and provide to the District, the following records:
 - 1. Daily logs indicating all equipment testing and startup activities and activities of all manufacturers' representatives
 - 2. Records of all tests, calibrations, inspections, adjustments, services and corrective actions taken
 - 3. Copies of all test data collected at the end of each day of testing
- D. In addition to the tests specified in the individual technical specifications, the Contractor shall perform additional tests as required by the Engineer to demonstrate

to the Engineer's satisfaction that all equipment and systems required by the specifications will operate as intended.

- E. If the testing of any equipment may affect the operation of existing District facilities, the testing shall be done under direct supervision of the Engineer. The Contractor shall comply with directions given by the Engineer.
- F. Table 1 is a summary of equipment/systems that require functional, and performance tests. Additional testing may be required when specified elsewhere.

Table 1: Testing Summary (Additional tests may be required in other specification sections.)			
Specification Section	System / Equipment Name	Functional Test Required	Performance Test Required
33 12 16.08	Slide Gates	X	X
All equipment/systems required by these specifications shall be included in the Startup Test.			

3.2 FIELD TESTING COORDINATION MEETINGS

- A. The Contractor shall prepare materials for and attend periodic testing coordination meetings. During periods when field testing occurs regularly, the Engineer will schedule weekly or biweekly field testing coordination meetings. The Contractor's Testing Coordinator shall attend all meetings, and the Contractor shall provide suitable representation from each subcontractor having testing responsibilities so that informed decisions can be made during the meetings.

END OF SECTION

SECTION 01 81 02

SEISMIC DESIGN CRITERIA

PART 1 - GENERAL

1.1 REFERENCES:

- A. ASCE 7, American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures.
- B. Related Sections:
 - 1. Section 01 42 19 – Reference Standards
 - 2. Section 01 43 11 – Seismic Qualification and Certification
 - 3. Section 05 50 00 – Metal Fabrications

1.2 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. Architectural elements, mechanical and electrical components, equipment housings and their attachments, supporting structures, and anchorages shall comply with the requirements of ASCE 7, using the following values:
 - a. Design spectral acceleration at short periods, $S_{DS} = 1.81$
 - b. Design spectral acceleration at long periods, $S_{D1} = 0.98$
 - c. Seismic Design Category, D
 - d. Component importance Factor, $I_p = 1.50$
 - e. Component amplification factor, a_p : In accordance with ASCE 7, Tables 13.5-1 and 13.6-1.
 - f. Component response modification factor, R_p : In accordance with ASCE 7, Tables 13.5-1 and 13.6-1.
 - g. Overstrength Factor, Ω : In accordance with ASCE 7, Tables 13.5-1 and 13.6-1 for anchorage in concrete.
 - 2. Resist seismic forces through direct bearing on anchors and fasteners. Do not design or provide connections that use friction to resist seismic loads.
 - 3. Anchoring and fastening to concrete.

- a. Provide anchors as shown on the drawings and specified in Section 05 50 00.

1.3 SUBMITTALS

- A. Shop drawings and calculations: Complete shop drawings and seismic calculations.
- B. Contractor shall submit for review and approval test data or calculations signed and sealed by a Civil or Structural Engineer registered in the State of California to show compliance with the above requirements.

PART 2 - NOT USED

PART 3 - NOT USED

END OF SECTION

SECTION 33 12 16.08

SLIDE GATES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section covers the work necessary to furnish and install slide gates and appurtenances, complete.
- B. Related Work Specified Elsewhere:
 - 1. Section 01 33 00 – Submittal Procedures.
 - 2. Section 01 42 19 – Reference Standards
 - 3. Section 01 81 02 – Seismic Design Criteria
 - 4. Section 01 45 27 – Shop Inspection
 - 5. Section 01 75 17 – Field Testing and Startup

1.2 REFERENCES

- A. AWWA C561-14 – Fabricated Stainless-Steel Slide Gates.
- B. AWS D1.6-2017 – Structural Welding Code - Stainless Steel

1.3 GENERAL

- A. Like items of equipment specified herein shall be the end products of one manufacturer.
- B. Service Conditions:
 - 1. Water Chemistry: Materials that contact water covered by this specification will be subjected to water that promotes galvanic corrosion. Materials and coatings shall be suitable for soft water (less than 50 ppm total dissolved solids) with pH from 6.5 to 9.5.
 - 2. Water Temperature: 65 °F - 80 °F

3. Site Climatic Conditions:

District Location	Sobrante WTP
Summer (0.5%)	89° F DB 66° F WB
Winter	28° F
Mean Daily Range:	23° F

1.4 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 00 and as specified herein.
- B. All slide gates furnished for this contract shall be by same manufacturer, unless approved in writing by the Engineer prior to submittals or manufacture.
- C. Submit the Following With the Bid:
 - 1. See the submittal content requirements listed in “Slide Gate Technical Submittal Checklist” attached at the end of this section.
 - 2. Each page of the submittal shall have a unique sequential page number (hand-written is acceptable, but must be completely legible).
 - 3. The first page of the submittal shall include the “Slide Gate Technical Submittal Checklist” completed by the manufacturer’s representative. Each submittal requirement listed in the checklist shall include the corresponding submittal page number(s).
 - 4. If the “Slide Gate Technical Submittal Checklist” is not included with the submittal or if all portions of the checklist are not completed accurately by the manufacturer’s representative, the submittal will be returned without review.
- D. Submit the Following 30 Days after Award:
 - 1. Force Calculation: In accordance with AWWA C561 Appendix A.
 - 2. Actuator Torque Calculations: Calculations to prove the applied manual force by the Operator does not exceed 40 lbs under any condition, including breakaway (this requirement exceed the values in AWWA C561).
 - 3. Seismic calculations and anchorage design in accordance with Section 01 81 02.

E. Submit the Following Prior to Shipment:

1. Submit a sample cutting from the slide gate manufacturing process for materials analysis by the District. A sample shall be no less than 2 square inches and shall be marked to indicate the heat number of the sample and where it was taken on the gate assembly. The supplier shall provide a sample for each plate used in the assembly.
2. Operating and Maintenance (O&M) Manuals:
 - a. At a minimum, include a completed O&M Manual Checklist (appended as supplement to this section) in the submittal, and include all applicable items from that list.
 - b. In addition to the requirements of section 01 33 00, O&M manuals shall include a section for field installation certification and field test results. The Supplier shall furnish the required number of copies for insertion into the final O&M Manuals.
 - c. Include in the front of the manuals the manufacturer and manufacturer's local representative's name, address, and phone number along with instructions for ordering replacement parts.
3. Certified copies of all manufacturer factory checks and tests made under AWWA Standard C561 (see Quality Assurance hereinafter).

F. Submit the Following Prior to Contract Completion:

1. Manufacturer's Certificate of Proper Installation.
2. Field Functional Test results

1.5 QUALITY ASSURANCE

A. Shop Inspection:

1. All gates shall be provided in accordance with the approved technical submittal.
2. Welding: The Engineer will witness all welding in accordance with AWWA C561 and AWS D1.6. Any gate found not to comply with the specifications and the standard will not be accepted until the deficiencies are corrected.
3. Coatings: The Engineer will inspect surface preparation and finished coatings, if any.
4. Performance Test: The Engineer will witness this test in accordance with AWWA C561 (shop leakage test not required).

5. The Engineer will release the gates for shipping after satisfactory completion of all inspections and tests.
6. Provide notification for Engineer to be present for inspections and testing. See Section 01 45 27, Shop Inspection, for inspection advance notification requirements, travel restrictions, nondisclosure agreements, and District travel expenses reimbursement.
7. Failure by the Engineer to inspect or witness tests at the manufacturer's plant shall not be construed as waiving inspection upon delivery.

B. Coordination:

1. The Supplier shall coordinate with the District and conduct on-site inspections to field verify all gate dimensions including, but not limited to, the length of gate torque tube.

1.6 MANUFACTURER'S SERVICES

- A. Manufacturer's Representative: furnish the services of a factory trained field representative designated by the equipment/system manufacturer, who shall be present at the project site to provide the services listed below. The manufacturer's representative shall have superior knowledge of all aspects of the equipment/system being furnished in this section. The manufacturer through their field representative shall advise the Contractor and the Engineer of the proper procedures for each of the services listed.
- B. The Supplier shall inspect and verify all necessary specifications of the existing slide gate and adjust the manufactured slide gate as appropriate to ensure fit.

Minimum Total Time (Person-Days*)	Manufacturer's Service
2	Installation assistance and certification.
2	Field testing and startup (see Section 01 75 17 for additional requirements)
* The person-days shown are total days for each service listed. One person-day is equivalent to 8 hours. The person-days shown are the minimum days required for each service, and travel time to and from the site and/or classroom is not included.	

PART 2 - PRODUCTS

2.1 GENERAL

- A. The use of a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired only.
- B. All slide gates shall be complete including all gates, guides, frames, floor stands, base plates, brackets, gaskets, anchor bolts, stems, and stem guides, torque tubes, operators, and all other necessary appurtenances for a complete and operable system as specified herein.
- C. Furnish in accordance with Table A: Slide Gate Schedule.

2.2 SLIDE GATES

- A. All slide gates, unless otherwise specified herein, shall conform to AWWA C561. All slide gates shall be of the rising stem type.
- B. Materials: Use ASTM A276, Type 316 stainless steel when "stainless steel" is specified.

Table A: Slide Gate Schedule									
Gate ID	Service	Clear Opening Size	Frame Type ¹	Mounting Type ²	Lift Mounting ³	Actuator Type ⁴	Design Head*		Drawing No.
							Unseated	Seated	
236-SWS-SGT-200-1-E 236-SWS-SGT-200-1-W	Water	72" x 72"	SC	DM	TT	HW	11'	13"	S-033.21 Z-010.03
<p>* Design Head conditions shall be under seated or unseated head conditions as measured from the gate centerline to the maximum water surface elevation.</p> <p>1. Frame Type: NSC = non-self contained (conventional); SC = self contained</p> <p>2. Mounting Type: WP = wall pipe; WT = wall thimble; DM = direct mount to concrete</p> <p>3. Lift Mounting: FS-S = floorstand slab mounted ; FS-B = floorstand bracket mounted; Y = yoke mounted; TT = torque tube mounted; OP = offset pedestal</p> <p>4. Actuator Type: HC = handcrank; HW = handwheel; EM = electric motor</p>									

C. Frames:

- 1. Materials: stainless steel.
- 2. Frame Anchorage: The back flange shall be oversized so that the new gate anchor bolts avoid the location of the existing gate anchor bolts as shown on drawing "Sobrante WTP Slide Gate". The existing gate anchor bolts will be

cutoff (by others) flush with the concrete surface and will remain embedded in the concrete. The new anchor bolts shall be no closer than 3" to the existing anchor bolt locations.

3. Top Wedges: Adjustable, stainless steel.
 4. Side Seals: Adjustable, Ultra High Molecular Weight (UHMW) Polymer, ASTM D4020
 5. Bottom Seal: Flush type, EPDM elastomer.
 6. Maximum vertical dimension: 17 feet.
 7. Dimension from floor to clear opening: 12 inches.
- D. Guides: Guides shall be stainless steel, and of such length as to retain and support at least 1/2 of the disc in the fully OPEN position.
- E. Seals: A permanent elastomeric gasket (EPDM, or approved equal) of uniform thickness shall be provided for the flush-bottom seal, and between the slide gate frame and the wall.
- F. Stems:
1. Gate stems shall be 1-1/2 inch minimum diameter and of ample cross-section to prevent distortion.
 2. Materials: ASTM A276, Type 316 stainless steel.
 3. Design:
 - a. Withstand thrusts in compression without damage or permanent deformation equal to 2-1/2 times the rated output of the hoisting mechanism, with a 40-pound effort applied to the operator handwheel, or crank.
 - b. Length / Radius of Gyration (L/r): 200 maximum for unsupported spans.
 - c. Length: As required including 2-inches, minimum, above the operator when gate is in CLOSED position.
 4. Stem Guides: Stainless steel, bushed stem guides, and spaced so that the stem L/r ratio does not exceed 200.
 5. Travel Stops: All stems shall be furnished with adjustable stop collars for the CLOSED and OPEN position.
 6. Stem Covers:

- a. Transparent plastic, vented pipe stem cover and cap.
- b. OPEN/CLOSED designators with 1-inch graduations on clear Mylar pressure sensitive, adhesive tape, suitable for outdoor application.

G. Workmanship and Painting:

- 1. All labor, materials, and transportation necessary to replace or repair any gate or portion thereof which fails to meet the requirements of either this section and AWWA C561 as applicable, shall be at the expense of the Supplier.
- 2. All ferrous metal parts of the gate assembly including actuator (except those made of stainless steel), excluding the seating edge of the disc, flange faces, and finished surfaces, shall be coated in accordance with AWWA 561.
- 3. All defects in film thickness or continuity shall be repaired at the expense of the Supplier. The extent of the repair work required to correct defects found upon inspection after delivery will be determined by the Engineer. Application of the repair coating, including surface preparation, shall be the same as that specified by the coating manufacturer for over coating an old or fully cured coating.

2.3 GATE OPERATORS

- A. See Table A, "Lift Mounting" for operator type. Operator mounting height: 36" above finished grade to center of the handwheel. Field verify dimensions prior to fabrication.
- B. Operator components shall withstand a minimum of 250 percent of the design torque or thrust at extreme operator positions without damage.
- C. All gear train and gate stem sections shall produce a self-locking drive train.
- D. Maximum Manual Effort: Maximum manual effort required to operate the gate at any point, including breakaway, shall not exceed 40-pounds applied to the handwheel.
- E. All gates shall have rising stems and shall be provided with an insert lubricator flange in the lift, with a grease fitting for greasing the stem threads below the stem nut. Threads above the stem nut shall be greased prior to placing the gate in operation. All grease shall be food-grade.
- F. Torque Tube: When required in Table A, shall rigidly connect the frame to the gate operator transmitting all operator torque to the gate frame. Torque Tube material shall be stainless steel construction.

2.4 ANCHOR BOLTS AND HARDWARE

- A. All necessary attaching bolts, anchor bolts, mounting and assembly hardware shall be of Type 316 stainless steel and shall be furnished by the slide gate manufacturer.

2.5 SPARE PARTS AND SPECIAL TOOLS

- A. The following spare parts and special tools shall be furnished. All parts and tools shall be suitably marked and packed in a single, hinged-cover metal box.

Item	Quantity
Stop collars for all gate stems, closing and opening positions	1 of each different size
Lift nuts	1 of each different size
Special tools	1 set

2.6 EQUIPMENT TAGS

- A. Tag Text and Format:

SED BASIN EAST GATE 236-SWS-SGT-200-1-E
SED BASIN WEST GATE 236-SWS-SGT-200-1-W

- B. Tag Construction: Tags shall be constructed of two-ply laminated plastic.
1. Hanging tags shall be 1" x2-½"x1/16" thick, minimum.
- C. Tag Colors: Colors shall conform to the safety colors prescribed in ANSI Z535.1, "Safety Color Code", unless otherwise specified.
1. Letters: white
 2. Background: green
- D. Acceptable Manufacturer's and Products:
1. Seton, Custom Engraved Plastic Name Plates
 2. Emedco, Custom-Worded Engraved Plates

3. Or equal as approved by the Engineer.
- E. Tag Attachment: Flexible plastic-coated multi-stranded 18-8 stainless steel cable. Cable shall be 7x7 strand core 0.036" cable diameter minimum with 0.044" coating diameter. Nylon ties are not acceptable. Clamps shall be zinc plated copper or stainless steel crimped clamping sleeves. Lead clamps are not acceptable.
 1. Acceptable cable products: McMaster-Carr 8930-T28 or equal as approved by the Engineer.
 2. Acceptable clamping sleeve products: Brady 38090, McMaster Carr 3898T11, or equal as approved by the Engineer.

2.7 INSPECTION, TESTING AND REJECTION

- A. See "Shop Inspection" hereinbefore and Section 01 45 27 for shop inspection requirements.

2.8 MANUFACTURERS AND PRODUCTS

- A. Slide gates and accessories shall be as manufactured by the following:
 1. Rodney Hunt, Orange, MA.
 2. Hydrogate, Orange, MA.
 3. Waterman Industries, Inc.
 4. Or equal as approved by the Engineer.

PART 3 - EXECUTION

3.1 SHIPPING AND HANDLING

- A. All gates 18" and larger shall be bolted to skids.
- B. Gates will be handled and stored in accordance with the gate manufacture's written instructions included in the O&M Manual.
- C. All gates will be inspected upon delivery for compliance with these specifications. Any gate found not to comply with the contract documents will not be accepted until deficiencies are corrected.
- D. Supplier shall submit a written notice to the District, at least fourteen (14) work days prior to delivery of all gates.

3.2 INSTALLATION

- A. The slide gates shall be completely shop assembled to ensure the proper fit and adjustment of all parts.
- B. All gates shall be thoroughly cleaned and installed in strict conformance with the manufacturer's written recommendations (included in the O&M Manual) and as shown on drawings.
- C. All anchor bolts and necessary bolt setting templates shall be provided by the manufacturer. Two nuts shall be provided for each anchor bolt. Anchor bolts shall be Type 316 stainless steel, furnished by the gate manufacturer.
- D. Gate Position Indicator and "Open" and "Closed" markings shall be painted a contrasting color. If gates have no "Open Closed" markings, marks shall be hand painted.
- E. The gate mechanical stops shall be properly set for minimal leakage (as specified in "LEAKAGE AND OPERATION" hereinafter).
- F. Gate torque tube and stem must be installed separately through a small pass-hole in the concrete, and then attached to the gate. Installation will be completed by the installing contractor and inspected and certified by the Supplier.

3.3 LEAKAGE AND OPERATION

- A. All slide gates installed under this section shall be substantially watertight when closed. Leakage shall not exceed 0.1 gallon per minute per foot of gate periphery under either seating or unseating head conditions. All gates shall operate without vibrating, jerking, or binding.

3.4 FIELD TESTING AND ADJUSTMENT

- A. See Section 01 75 17 – Field Testing and Startup for general requirements.
- B. The Supplier will provide on-site installation assistance and will certify the installation with "Manufacturer's Certificate of Proper Installation" provided at as a supplement to this section.
- C. After the gates have been properly adjusted and tested for leakage and are operating as intended, the Supplier shall coordinate a District witnessed functional test to demonstrate leakage rate conformance, proper adjustment, and proper operation of the gates. The Field Functional Test Data Form will be completed by the Supplier during this witnessed test.

3.5 SUPPLEMENTS

A. The supplements listed below are located after “END OF SECTION” and are a part of this specification.

1. Slide Gate Technical Submittal Checklist
2. Field Functional Test Data Form
3. Manufacturer’s Certificate of Proper Installation.
4. O&M Manual Review Checklist

END OF SECTION

SLIDE GATE TECHNICAL SUBMITTAL CHECKLIST
(Manufacturer's Representative to complete one form per type of gate)

SPEC. SECTION TITLE & NO.: 33 12 16.08, Slide Gate	
SUBMITTAL CONTENT REQUIREMENTS	Page Number(s)
1. Affidavit of compliance that the gates furnished comply with the applicable provisions of AWWA Standard C561 and this specification.	
2. Manufacturer's standard literature and catalog cuts on equipment and appurtenances.	
3. Certified manufacturers' drawings shall show dimensions, construction details, and materials used for all parts of gate including:	
a. Outline and principal dimensions of each assembled gate with its actuator attached.	
b. Details of the following:	
1) Guides, seats, seals, gaskets	
2) Wedge attachment to disc and seat facings	
3) Attachment of disc to shaft	
4) Torque tube frame attachment	
5) Actuator extension stem supports (when required)	
c. Dimensions of the following:	
1) Detailed gate assembly dimensions with anchorage dimensional layout	
2) Shaft diameter at all sections, and fillets at changes in shaft diameter.	
3) Disc details at section on shaft centerline and at attachment of disc to shaft.	
4) Main shaft bearing length and diameter.	
d. Number of turns to open.	
4. Net weight of each complete assembly.	
5. Factory Finish	
a. Specifications including coating material specification, minimum dry film thickness, surface preparation, and color selection.	
b. Proof that the coating applicator is currently certified by the coating manufacturer to be competent in the preparation and application of the coating to be used.	
6. Data sheet for actuator including torque output capability and gear ratio, open direction, position indicator and limit switches (if applicable).	
7. NSF/ANSI 61 certification for materials in contact with water.	

FIELD FUNCTIONAL TEST DATA FORM

EBMUD Project Title: **Sobrante WTP**

Test Date(s): _____

Equipment Name: **Slide Gates**

Section No.: **33 12 16.08**

Tag No.: _____

P&ID No. _____

I. Pretest Documentation/Setup

Documents:

Yes No NA

Comments:

a) Interconnection & Loop diagrams provided

☐ ☐ ☒

b) Mfr's Cert of Proper Installation provided

☐ ☐ ☐

c) Technical Submittal complete (contractor show EDOCs record)

☐ ☐ ☒

d) Spare Parts provided

☐ ☐ ☒

e) Final O&Ms provided (Supplier show final O&Ms)

☐ ☐ ☐

f) Pipe pressure tests completed for adjacent piping (contractor to show test records).

☐ ☐ ☒

Field Test Setup (Identify any test instrument, special setups like tanks, hoses, etc):

FIELD FUNCTIONAL TEST DATA FORM

EBMUD Project Title: **Sobrante WTP**

Test Date(s): _____

Equipment Name: **Slide Gates**

Section No.: **33 12 16.08**

Tag No.: _____

P&ID No. _____

II. Field Functional Test

1. Calibration/Loop/Electrical

Yes No NA

Comments:

☐ ☐ ☒

2. Installation Check

Pass Fail NA

Comments:

2.1 Correct equipment tags have been installed (tags shall match P&IDs).

☐ ☐ ☐

2.2 All fields on Asset List Spreadsheet completed for device (Supplier shall show inspector at the time of the test that the asset list is complete and accurate for this system)

☐ ☐ ☐

3. Operations Check

Pass Fail NA

Comments:

3.1 Count and record the number of turns of the nut, or handwheel required needed to fully open and close the gate. Account for any discrepancies between actual number turns and the number of turns identified by the manufacturer.

☐ ☐ ☐

3.2 Handwheel Rim Pull Test: Verify the maximum wheel pull is less than 40 lbs under any operating condition including breakaway.

☐ ☐ ☐

3.3 Gate Operation Test: Open and close the gate fully a minimum of 2 full open/closed cycles to verify proper operation and compliance with the functional requirements specified herein. Adjustable stop collars shall be adjusted and set in accordance with manufacturer's recommendations. Verify the gate opens and closes smoothly.

☐ ☐ ☐

FIELD FUNCTIONAL TEST DATA FORM

EBMUD Project Title: **Sobrante WTP**

Test Date(s): _____

Equipment Name: **Slide Gates**

Section No.: **33 12 16.08**

Tag No.: _____

P&ID No. _____

3.4 Leakage Test: Contractor shall construct temporary bulkheads at the downstream side of the gate to measure the gate leakage. The leak rate may be measured by pumping the bulkhead contained area, or some other means approved by the Engineer. Determine the gate seated perimeter during the leakage test and compute the leakage rate per ft. The acceptable maximum leakage rate of seated perimeter shall be 0.1 gpm/ft. Adjust the gates as necessary and repeat the leakage test until this rate is achieved.

☐ ☐ ☐

4. Controls Check

Pass Fail NA

Comments:

☐ ☐ ☒

5. Alarms Check

Pass Fail NA

Comments:

☐ ☐ ☒

6. Run Check

Pass Fail NA

Comments:

☐ ☐ ☒

7. Other Tests and Checks

Pass Fail NA

Comments:

☐ ☐ ☒

FIELD FUNCTIONAL TEST DATA FORM

EBMUD Project Title: **Sobrante WTP**

Test Date(s): _____

Equipment Name: **Slide Gates**

Section No.: **33 12 16.08**

Tag No.: _____

P&ID No. _____

III. Participants/Witness

Test conducted:

By (signature): _____ Date: _____

Title: _____ Company Name: _____

By (signature): _____ Date: _____

Title: _____ Company Name: _____

EBMUD Witness:

By (signature): _____ Date: _____

Title: _____

MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION

OWNER: _____ EQPT SERIAL
NO.: _____
EQPT TAG EQPT/SYSTEM: _____
NO.: _____
PROJECT SPEC. &
NO.: _____ SECTION: _____

I hereby certify that the above-referenced equipment/system has been:

Complete Not Applicable

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Installed in accordance with Manufacturer's recommendations. |
| <input type="checkbox"/> | <input type="checkbox"/> | Inspected, checked, and adjusted. |
| <input type="checkbox"/> | <input type="checkbox"/> | Serviced with proper initial lubricants. |
| <input type="checkbox"/> | <input type="checkbox"/> | Electrical and mechanical connections meet quality and safety standards. |
| <input type="checkbox"/> | <input type="checkbox"/> | All system instruments are calibrated. |
| <input type="checkbox"/> | <input type="checkbox"/> | All applicable safety equipment has been properly installed. |

Comments: _____

I, the undersigned Manufacturer's Representative, hereby certify that I am (i) a duly authorized representative of the manufacturer, (ii) empowered by the manufacturer to inspect, approve, and operate the equipment and (iii) authorized to make recommendations required to assure that the equipment furnished by the manufacturer is complete and ready for startup and operations. I further certify that all information contained herein is true and accurate.

Date: _____

Manufacturer: _____

By Manufacturer's Authorized Representative: _____
(Authorized Signature)

O&M MANUAL REVIEW CHECKLIST

(Manufacturer's Representative to complete one form per submittal)

SPEC. SECTION TITLE & NO:	
MFR Name, Address, Phone:	
Local Rep Name, Address, Phone:	

GENERAL FORMAT (See Section 01 33 00 for additional details)			
DESCRIPTION	PROVIDED?		COMMENTS
	YES	NO	
Specified copies provided			
Binder cover clearly labeled			
Spine Label			
System/Equipment type clearly identified			
District facility or facilities name(s) identified			
Specification number & title shown			
Title page provided			
Equipment tag numbers correctly shown			
Manufacturer's name, address, phone number provided			
Local Representative's name, address, phone number provided			
Table of contents provided			
Heavy section dividers w/ numbered or lettered plastic tabs provided			
Pages punched for 3-ring binder			
Info larger than 8-1/2 x 11 folded showing title block			
Original quality copies provided			

TECHNICAL CONTENT (See Section 01 33 00 for details)				
DESCRIPTION	LOCATION IN O&M			COMMENTS
	TAB#	PAGES	N/A	
Equipment Descriptions				
• Equipment names, model numbers & tag numbers				
• Equipment & major component functions				
• Drawings, diagrams & illustrations				
• Equipment Specification				
• Bill of materials				
• Legend, Abbreviation, and Acronym List				
Performance Information				
• Nameplate data				

TECHNICAL CONTENT (See Section 01 33 00 for details)				
DESCRIPTION	LOCATION IN O&M			COMMENTS
	TAB#	PAGES	N/A	
• Performance test data/curves				
Installation Instructions				
• Installation procedures & drawings				
• Equipment tolerances				
• Adjustment procedures				
Operating Instructions				
• Startup procedures				
• Normal & routine operations				
• Control functions				
• Alarms description and settings				
• Shutdown procedures				
• Emergency operations				
Electrical Information				
• Nameplate data				
• Relay, control, alarm contact settings				
• Motor test data				
Electrical Drawings				
• Single-line diagrams, three-line diagrams				
• Interconnection wiring diagram				
• Schematic and elementary diagrams				
• Panel layout drawings				
Instrumentation & Control				
• Control diagrams				
• Panel layout drawings				
• Instrument data sheets (specification forms)				
• Calibration Procedures				
• Final settings for adjustable control devices				
• Block diagrams and riser diagrams				
• Loop diagrams				
• Pneumatic/Hydraulic piping drawings				
• Hard copy printouts of control programs				
• Field calibration data sheets				
• Programming software (licensed to EBMUD) with user manuals				
Shipping and Storage Instructions				
Testing				
• Factory Test Report (procedures and results)				
• Field Test Procedures				
• Manufacturer's Certificate of Proper Installation (where specified)				
• Field Test Results				

TECHNICAL CONTENT (See Section 01 33 00 for details)				
DESCRIPTION	LOCATION IN O&M			COMMENTS
	TAB#	PAGES	N/A	
Troubleshooting guide				
Safety				
• Safety procedures/Lockout discussion				
• CAUTION, WARNING, DANGER text				
• Material Safety Data Sheets (MSDS)				
• Special safety equipment				
Preventive Maintenance				
Maintenance Summary Forms				
Lubrication Information				
• Location of lube points & frequency				
• Recommended type & grade, state specific MFR				
• Recommended viscosity & temperature range				
Overhaul Instructions				
• Detailed assembly drawings w/OEM part numbers				
• Tear down/rebuild instructions				
Spare Parts for Equipment & Components				
• Predicted life of parts subject to wear or aging				
• Recommended spare parts list w/ part numbers				
• Complete instructions for obtaining parts				
• Long-term storage requirements				
• Special tools				
Long-term Shutdown/Lay-up Instructions				
Warranty/Guarantee				

TYPICAL MAINTENANCE SUMMARY FORM

(Use as many pages as necessary. This form is available in MS Word format upon request)

1. Equipment Name: _____

2. Manufacturer: _____

3. Identification Numbers:

Tag: _____

Model: _____

Serial: _____

4. Nameplate Data (HP, voltage, speed, flow rate, head, etc.): _____

5. Manufacturer's Local Representative:

Name: _____

Telephone: _____

Address: _____

6. LUBRICANT LIST

<u>Reference Symbol</u> List symbols used in Item 8 below	<u>Lubricant Description</u> List equivalent lubricants: brand name(s), type, grade, viscosity, etc.

7. SPARE PARTS (Recommendation spare parts with part numbers; if any.)

<u>OEM Part#</u>	<u>Part Name-Description</u>

8. Equipment Replacement Cost [\$] _____

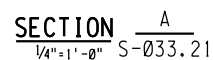
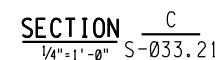
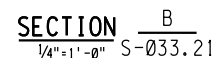
9. MAINTENANCE REQUIREMENTS

<u>Maintenance Task</u>	<u>Frequency</u>	<u>Task Duration</u>	<u>Lubricant</u>	<u>Task Details Location</u>
Briefly list each required preventive maintenance activity	(daily, weekly, monthly, Annual, etc)	Time needed to complete each task (with units: hours, days, weeks, etc)	Refer by symbol in lubricant list (Item 6)	List O&M Manual Tab and page number which provides details on the activity

I, _____ certify that the information on this form is an accurate and complete summary of all typical, routine, and preventive maintenance tasks required to ensure satisfactory performance during warranty period and the overall longevity of the equipment or systems.

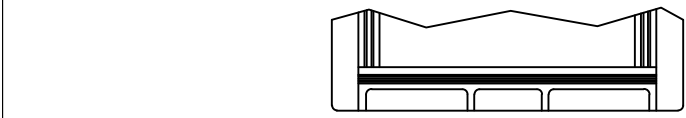
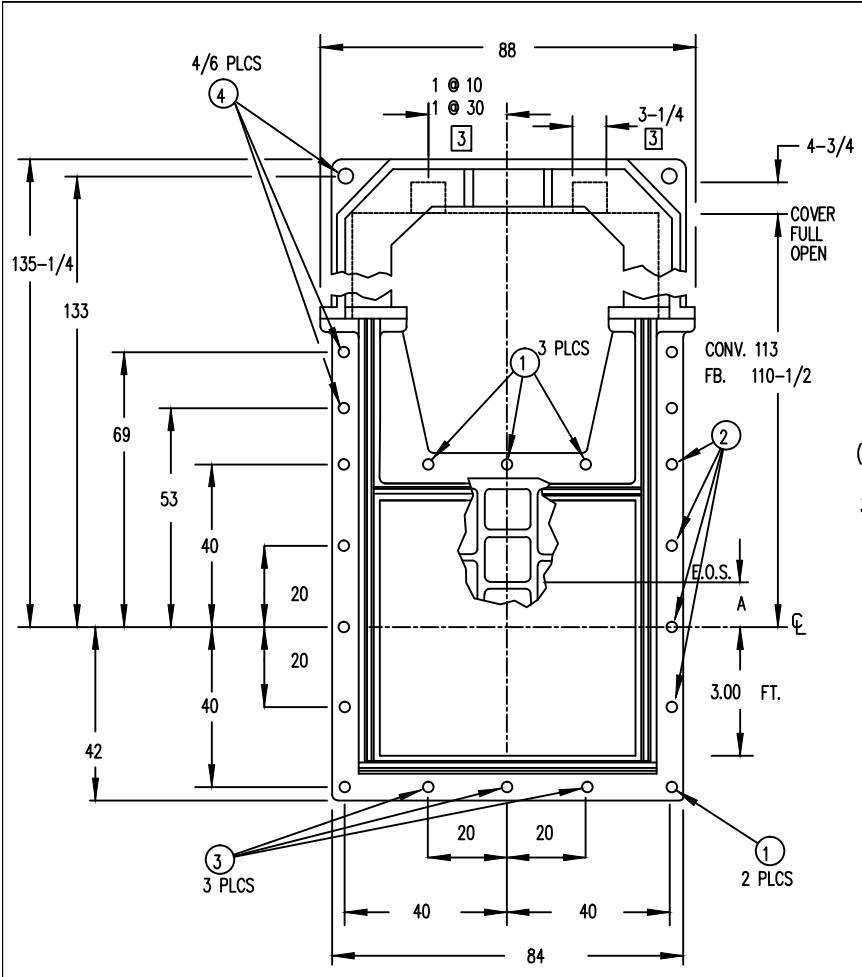
(Manufacturer's Representatives Signature)

(Date)

[illegible]

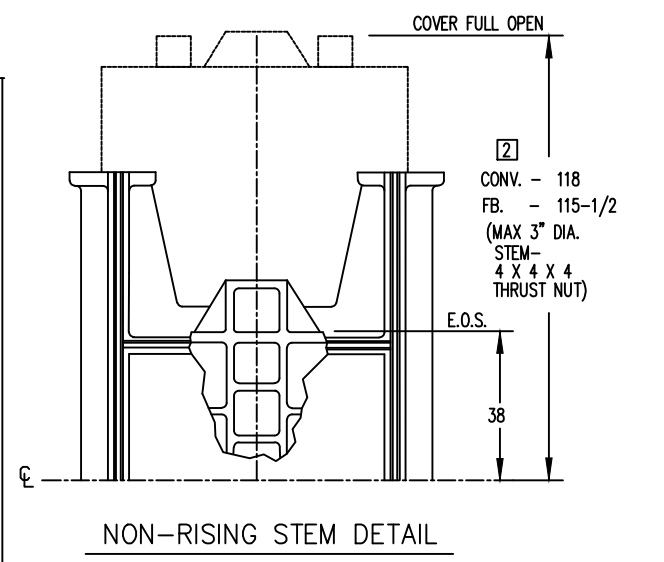
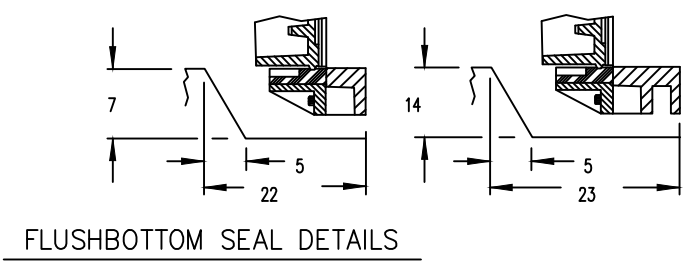
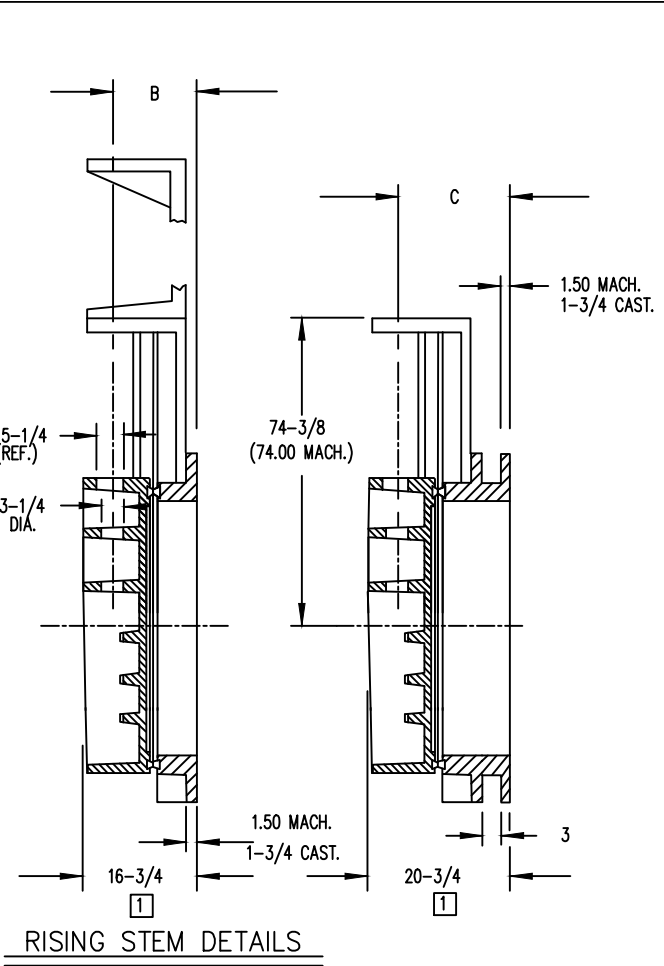
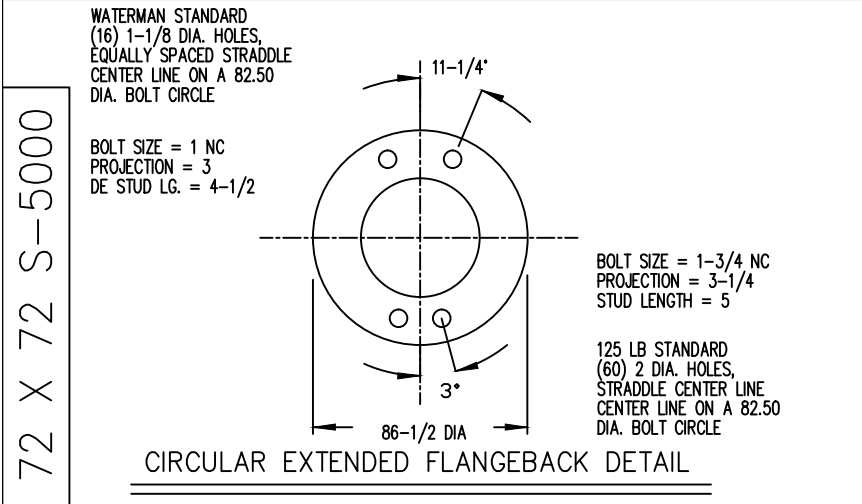
FORMERLY KNOWN AS DWG NO. 4321-G-33.21, REV 6				
DESIGN	DESIGNED BY	EAST BAY MUNICIPAL UTILITY DISTRICT		
	DESIGN CHECKED BY	OAKLAND, CALIFORNIA		
	DRAWN BY	SOBRANTE WATER TREATMENT PLANT		
		STRUCTURAL		
A COPY OF THE ORIGINAL DRAWING WITH ORIGINAL SIGNATURES CAN BE FOUND IN ENGINEERING RECORDS.		RAPID MIX PLAN & SECTIONS		
PP.	RECOMMENDED:	PROJ. NO.	505.11-S-033.21	7
	APPROVED:	SCALE AS SHOWN		
		DATE 16MAR1962	STRUCT.	DISC.
				REV.





LIFT NUT						
SIZE	DWG. NO.	CASTING NO.	MAX STEM DIA.	A	B	C
4 X 4 X 4	101224	W-5014	2-1/2	23	9	13
			3		9-1/2	13-1/2
6 X 6 X 7	101230	W-5350	3-3 1/2 *	29-3/4	10	14
	104072	W-5446	4-4 1/2 *		10-1/2	14-1/2

* THREADED & KEYED NUTS



REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
E	ED # 0877 - REDRAWN	6-19-91	GT
F	E.D. # 1239 TC	4-22-94	GT
G	E.D. # 1415 LV	11-01-96	GT
H	E.D. # 1994 RE-DRAWN LDU	4/3/03	

REFERENCE
SCALED ASSEMBLY DWGS.
S-5000-F 104574

FAB YOKE		
DWG NUMBER	MANUAL LIFT SIZE	CAPACITY [5] LBS.
104754	3E - 2:1	7900
104856	3E - 4:1	15390
104726	3E - 6:1	18010
104855	3E - 12:1	30780
CAST IRON 105207	3E - 12:1	37860


DESIGN LIMITATIONS		
COVER / YOKE MAT'L	GATE CAP. SEAT.	UNSEAT
CLASS B C.I.	51	20
CLASS C C.I.	67	26
NI-RESIST TYPE 2B	49	19
NI-RESIST TYPE 2	41	16

NOMENCLATURE	DWG. NO.	DESCRIPTION OR PART NO.	QTY.
FRAME COVER SEATS GUIDE RAIL (L & R)	100077	W-5477 { } W-5480 1-1/8 in. WIDE EXTRUSION	1 1 484 IN
SIDE WEDGES FRAME WEDGE WEDGE BOLT & WASHER COVER WEDGE WEDGE STUD, WASHER & NUT ADJUSTING SCREW & NUT	100067 100065 - 100066 -	SYSTEM B W-5004 L&R 1/2 NC X 2 LG. HEX HEAD BOLT W-5139 L&R 5/8 NC X 2-3/8 LG. 3/8 NC X 2-1/2 LG. SQ HD SET SCREW	4 EA 4 EA 16 4 EA 8 8
TOP WEDGE ASSEMBLY WEDGE : TOP WEDGE BLOCK BRACKET WEDGE BLOCK BOLT WEDGE BOLT & WASHER ADJUSTING SCREW & NUT	100074 100069 100070 - - -	- W-5006 W-5007 5/8 NC X 1-3/4 LG. SOC. HEAD BOLT 3/4 NC X 3 LG. HEX HEAD CAP SCREW 1/2 NC X 2 LG. SQ HEAD SET SCREW	4 4 4 8 4 4
BOTTOM WEDGE ASSEMBLY WEDGE : BOTTOM WEDGE BLOCK BRACKET WEDGE BLOCK BOLT WEDGE BOLT & WASHER ADJUSTING SCREW & NUT	100075 100069 100071 - - -	- W-5006 W-5008 5/8 NC X 3-1/2 LG. HEX HEAD BOLT 3/4 NC X 3 LG. HEX HEAD CAP SCREW 1/2 NC X 2 LG. SQ HEAD SET SCREW	4 4 4 8 4 4
FLUSHBOTTOM SEAL ASSEMBLY FLUSHBOTTOM BRACKET SEAL SEAL RETAINER BAR FLUSHBOTTOM BRACKET BOLT RETAINER BAR SCREW	102982 102981 - -	- W-5156 () - LENGTH : 76 - 5/8 NC X 1-1/2 LG. HEX HEAD BOLT 3/8 NC X 1-3/4 LG FLAT HEAD SCREW	1 1 1 1 1
FAB YOKE YOKE HDW	SEE TABLE -	SEE TABLE 5/8 NC (3/4 ON 104855)	1 6
SHIPPING STOP BLOCK STOP BLOCK BOLT	104768 -	W-2018	2

ASSOCIATED EQUIPMENT					
THRUST NUT			[6]		1
ANCHOR BOLT & D.E. STUD (SQUARE GATE ONLY)	SIZE NC	PROJECTION F FF	STUD LENGTH W/ THIMBLE F FF		
NO. 1	3/4	3	4 D.E.	4 D.E.	5
NO. 2		9	10 D.E.		8
NO. 3		6-1/2	7-1/2 D.E.		3
NO. 4		9	13		4/6

- [6] SEE LIFT NUT TABULATION BLOCK.
- [5] MAXIMUM CAPACITY PULL-OUT FORCE EMO OR CYLINDER OPERATOR.
- [4] MAXIMUM LOAD IN POUNDS MAINTAINING 5:1 SAFETY FACTOR.
- [3] TOP WEDGE LOCATION AND DIMENSIONS
- [2] DIMENSION TO TOP OF NUT POCKET; TOP OF WEDGES MAY BE HIGHER.
- [1] MINIMUM REQUIRED CLEARANCE DIMENSION.

NOTE : UNLESS OTHERWISE SPECIFIED



WATERMAN INDUSTRIES INC.
EXETER, CALIFORNIA 93221

72 X 72
MODEL S-5000 SLUICE GATE
DRAFTING MANUAL

DRAWN	MJ	6-24-91	SIZE	B	100103
CHECKED	MK	6-24-91	SCALE:	NONE	WT.:
ENGR	GT	6-25-91			SHEET: