

# City of San Diego

CONTRACTOR'S NAME: Blue Pacific Engineering & Construction

ADDRESS: 7330 Oppertunity Road, Suite J, San Diego, CA 92111

TELEPHONE NO.: 858-956-1456

FAX NO.: \_\_\_\_\_

CITY CONTACT: Antoinette Sanfilippo, Contract Specialist, Email: [ASanfilippo@sandiego.gov](mailto:ASanfilippo@sandiego.gov)

Phone No. (619) 533-3439

M.Bajoua /RWBustamante / Lad

## BIDDING DOCUMENTS



FOR

## OTAY WATER TREATMENT PLANT BASIN NO. 1 CONCRETE RESTORATION

BID NO.: \_\_\_\_\_ **K-19-1763-DBB-3**

SAP NO. (WBS/IO/CC): \_\_\_\_\_ **B-17092**

CLIENT DEPARTMENT: \_\_\_\_\_ **2000**

COUNCIL DISTRICT: \_\_\_\_\_ **CITYWIDE**

PROJECT TYPE: \_\_\_\_\_ **BI**

### **THIS CONTRACT WILL BE SUBJECT TO THE FOLLOWING:**

- PHASED-FUNDING
- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM
- PREVAILING WAGE RATES: STATE  FEDERAL
- APPRENTICESHIP

### **BID DUE DATE:**

**2:00 PM**

**SEPTEMBER 11, 2018**

**CITY OF SAN DIEGO**

**PUBLIC WORKS CONTRACTS**

**525 B STREET, SUITE 750, MS 908A**

**SAN DIEGO, CA 92101**

**ENGINEER OF WORK**

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Registered Engineer:



1) Registered Engineer

7/27/2018

Date

Seal:





2) For City Engineer

7/27/18

Date

Seal:



## TABLE OF CONTENTS

SECTION .....	PAGE
1. NOTICE INVITING BIDS .....	4
2. INSTRUCTIONS TO BIDDERS .....	7
3. PERFORMANCE AND PAYMENT BONDS .....	17
4. ATTACHMENTS:	
A. SCOPE OF WORK.....	20
B. PHASED FUNDING PROVISIONS .....	22
C. INTENTIONALLY LEFT BLANK .....	25
D. PREVAILING WAGES.....	26
E. SUPPLEMENTARY SPECIAL PROVISIONS.....	31
TECHNICALS .....	45
1. Appendix A - Addendum to a Mitigate Negative Declaration .....	184
2. Appendix B - Fire Hydrant Meter Program .....	190
3. Appendix C - Materials Typically Accepted by Certificate of Compliance.....	204
4. Appendix D - Sample City Invoice with Spend Curve .....	206
5. Appendix E - Location Map .....	209
6. Appendix F - Sample of Public Notice .....	211
7. Appendix G - Advanced Metering Infrastructure (AMI) Device Protection.....	213
F. INTENTIONALLY LEFT BLANK .....	220
G. CONTRACT AGREEMENT .....	221
5. CERTIFICATIONS AND FORMS.....	224

## NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for **Otay Water Treatment Plant Basin No. 1 Concrete Restoration**. For additional information refer to Attachment A.
2. **FULL AND OPEN COMPETITION:** This contract is open to full competition and may be bid on by Contractors who are on the City's current Prequalified Contractors' List. For information regarding the Contractors Prequalified list visit the City's web site: <http://www.sandiego.gov>.
3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$1,030,000**.
4. **BID DUE DATE AND TIME ARE: SEPTEMBER 11, 2018, at 2:00PM.**
5. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.
6. **LICENSE REQUIREMENT:** The City has determined that the following licensing classification(s) are required for this contract: **A**
7. **SUBCONTRACTING PARTICIPATION PERCENTAGES:** Subcontracting participation percentages apply to this contract.
  - 7.1. The City has incorporated **mandatory** SLBE-ELBE subcontractor participation percentages to enhance competition and maximize subcontracting opportunities. For the purpose of achieving the mandatory subcontractor participation percentages, a recommended breakdown of the SLBE and ELBE subcontractor participation percentages based upon certified SLBE and ELBE firms has also been provided to achieve the mandatory subcontractor participation percentages:

1. SLBE participation	<b>3.2%</b>
2. ELBE participation	<b>4.3%</b>
3. Total mandatory participation	<b>7.5%</b>
  - 7.2. The Bid may be declared non-responsive if the Bidder fails to meet the following requirements:
    - 7.2.1. Include SLBE-ELBE certified subcontractors at the overall mandatory participation percentage identified in this document; **OR**
    - 7.2.2. Submit Good Faith Effort documentation, saved in searchable Portable Document Format (PDF) and stored on Compact Disc (CD) or Digital Video Disc (DVD), demonstrating the Bidder made a good faith effort to outreach to and include SLBE-ELBE Subcontractors required in this document within 5 Working Days of the Bid opening if the overall mandatory participation percentage is not met.



8. **PRE-BID SITE VISIT:** All those wishing to submit a bid are **required** to visit the Work Site with the Engineer. The purpose of the Site visit is to acquaint Bidders with the Site conditions. To request a sign language or oral interpreter for this visit, call the Public Works Contracts at (619) 533-3450 at least 5 Working Days prior to the meeting to ensure availability. **Failure to attend the Mandatory Pre-Bid Site Visit may result in the Bid being deemed non-responsive.** The Mandatory Pre-Bid Site Visit is scheduled as follows:

**Time: 10:00 AM**

**Date: August 22, 2018**

**Location: 1500 Wueste Road, Chula Vista CA 91915**

Attendance at the Mandatory Pre-Bid Site Visit will be evidenced by the Bidder's representative's signature on the attendance roster. It is the responsibility of the Bidder's representative to complete and sign the attendance roster.

9. **AWARD PROCESS:**

- 9.1. The Award of this contract is contingent upon the Contractor's compliance with all conditions of Award as stated within these documents and within the Notice of Intent to Award.
- 9.2. Upon acceptance of bids and determination of the apparent low bidder, the City will prepare the contract documents for execution within approximately 21 days of the date of the bid opening. The City will then award the contract upon receipt of properly signed Contract, bonds, and insurance documents.
- 9.3. This contract will be deemed executed and effective only upon the signing of the Contract by the Mayor or his designee and approval as to form by the City Attorney's Office.
- 9.4. The low Bid will be determined by the Base Bid alone.
- 10.5 Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base Bid alone.

10. **SUBMISSION OF QUESTIONS:**

- 10.1. The Director (or Designee) of the Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. Any questions related to this solicitation shall be submitted to:

Public Works Contracts  
525 B Street, Suite 750, MS 908A  
San Diego, California, 92101  
Attention: Antoinette Sanfilippo – Contract Specialist

OR:

[ASanfilippo@sandiego.gov](mailto:ASanfilippo@sandiego.gov)

- 10.2.** Questions received less than 14 days prior to the date for opening of Bids may not be considered.
  - 10.3.** Questions or clarifications deemed by the City to be material shall be answered via issuance of an addendum and posted to the City's online bidding service.
  - 10.4.** Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Bidder's responsibility to be informed of any addenda that have been issued and to include all such information in its Bid.
- 11. PHASED FUNDING:** For Phased Funding Conditions, see Attachment B.

## INSTRUCTIONS TO BIDDERS

### 1. PREQUALIFICATION OF CONTRACTORS:

- 1.1. Contractors submitting a Bid must be pre-qualified for the total amount proposed, including all alternate items, prior to the date of submittal. Bids from contractors who have not been pre-qualified as applicable and Bids that exceed the maximum dollar amount at which contractors are pre-qualified may be deemed **non-responsive** and ineligible for award. Complete information and links to the on-line prequalification application are available at:

<http://www.sandiego.gov/cip/bidopps/prequalification.shtml>

- 1.2. The completed application must be submitted online no later than 2 weeks prior to the bid opening.
- 1.3. Due to the City's responsibility to protect the confidentiality of the contractors' information, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on [PlanetBids™](#).

### 2. ELECTRONIC FORMAT RECEIPT AND OPENING OF BIDS: Bids will be received in electronic format (eBids) EXCLUSIVELY at the City of San Diego's electronic bidding (eBidding) site, at: <http://www.sandiego.gov/cip/bidopps/index.shtml> and are due by the date, and time shown on the cover of this solicitation.

- 2.1. **BIDDERS MUST BE PRE-REGISTERED** with the City's bidding system and possess a system-assigned Digital ID in order to submit and electronic bid.
- 2.2. The City's bidding system will automatically track information submitted to the site including IP addresses, browsers being used and the URLs from which information was submitted. In addition, the City's bidding system will keep a history of every login instance including the time of login, and other information about the user's computer configuration such as the operating system, browser type, version, and more. Because of these security features, Contractors who disable their browsers' cookies will not be able to log in and use the City's bidding system.
- 2.3. The City's electronic bidding system is responsible for bid tabulations. Upon the bidder's or proposer's entry of their bid, the system will ensure that all required fields are entered. **The system will not accept a bid for which any required information is missing.** This includes all necessary pricing, subcontractor listing(s) and any other essential documentation and supporting materials and forms requested or contained in these solicitation documents.

- 2.4. BIDS REMAIN SEALED UNTIL BID DEADLINE.** eBids are transmitted into the City's bidding system via hypertext transfer protocol secure (https) mechanism using SSL 128-256 bit security certificates issued from Verisign/Thawte which encrypts data being transferred from client to server. Bids submitted prior to the "Bid Due Date and Time" are not available for review by anyone other than the submitter who has until the "Bid Due Date and Time" to change, rescind or retrieve its proposal should it desire to do so.
- 2.5. BIDS MUST BE SUBMITTED BY BID DUE DATE AND TIME.** Once the bid deadline is reached, no further submissions are accepted into the system. Once the Bid Due Date and Time has lapsed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, EOCB compliance and other issues. The City may require any Bidder to furnish statement of experience, financial responsibility, technical ability, equipment, and references.
- 2.6. RECAPITULATION OF THE WORK.** Bids shall not contain any recapitulation of the Work. Conditional Bids may be rejected as being non-responsive. Alternative proposals will not be considered unless called for.
- 2.7. BIDS MAY BE WITHDRAWN** by the Bidder only up to the bid due date and time.
- 2.7.1. Important Note:** Submission of the electronic bid into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.
- 2.8. ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE:** To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed on the cover of this solicitation at least five (5) working days prior to the Bid/Proposal due date to ensure availability.

### **3. ELECTRONIC BID SUBMISSIONS CARRY FULL FORCE AND EFFECT**

- 3.1.** The bidder, by submitting its electronic bid, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.
- 3.2.** By submitting an electronic bid, the bidder certifies that the bidder has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its bid proposal, the bidder acknowledges, agrees

to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.

- 3.3.** The Bidder, by submitting its electronic bid, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this bid are true and correct.
- 3.4.** The Bidder agrees to the construction of the project as described in Attachment "A– Scope of Work" for the City of San Diego, in accordance with the requirements set forth herein for the electronically submitted prices. The Bidder guarantees the Contract Price for a period of 120 days from the date of Bid opening. The duration of the Contract Price guarantee shall be extended by the number of days required for the City to obtain all items necessary to fulfill all conditions precedent.
- 4. BIDS ARE PUBLIC RECORDS:** Upon receipt by the City, Bids shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Bid. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.
- 5. CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:**

  - 5.1. Prior** to the Award of the Contract or Task Order, you and your Subcontractors and Suppliers must register with the City's web-based vendor registration and bid management system. For additional information go to:  
  
<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>.
  - 5.2.** The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.
- 6. JOINT VENTURE CONTRACTORS:** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receiving the Contract forms. See 7-6, "The Contractors Representative" in The GREENBOOK and 7-6.1 in The WHITEBOOK.
- 7. PREVAILING WAGE RATES WILL APPLY:** Refer to Attachment D.
- 8. SUBCONTRACTING PARTICIPATION PERCENTAGES:** Subcontracting participation percentages apply to this contract. Refer to Attachment E.

**9. INSURANCE REQUIREMENTS:**

- 9.1. All certificates of insurance and endorsements required by the contract are to be provided upon issuance of the City’s Notice of Intent to Award letter.
- 9.2. Refer to sections 7-3, “LIABILITY INSURANCE”, and 7-4, “WORKERS’ COMPENSATION INSURANCE” of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

**10. REFERENCE STANDARDS:** Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction (“The GREENBOOK”) <a href="http://www.greenbookspecs.org/">http://www.greenbookspecs.org/</a>	2015	PWPI070116-01
City of San Diego Standard Specifications for Public Works Construction (“The WHITEBOOK”)* <a href="https://www.sandiego.gov/publicworks/edocref/greenbook">https://www.sandiego.gov/publicworks/edocref/greenbook</a>	2015	PWPI070116-02
City of San Diego Standard Drawings* <a href="https://www.sandiego.gov/publicworks/edocref/standarddraw">https://www.sandiego.gov/publicworks/edocref/standarddraw</a>	2016	PWPI070116-03
Citywide Computer Aided Design and Drafting (CADD) Standards <a href="https://www.sandiego.gov/publicworks/edocref/drawings">https://www.sandiego.gov/publicworks/edocref/drawings</a>	2016	PWPI092816-04
California Department of Transportation (CALTRANS) Standard Specifications – <a href="http://www.dot.ca.gov/des/oe/construction-contract-standards.html">http://www.dot.ca.gov/des/oe/construction-contract-standards.html</a>	2015	PWPI092816-05
CALTRANS Standard Plans <a href="http://www.dot.ca.gov/des/oe/construction-contract-standards.html">http://www.dot.ca.gov/des/oe/construction-contract-standards.html</a>	2015	PWPI092816-06
California Manual on Uniform Traffic Control Devices Revision 1 (CA MUTCD Rev 1) - <a href="http://www.dot.ca.gov/trafficops/camutcd/">http://www.dot.ca.gov/trafficops/camutcd/</a>	2014	PWPI092816-07
<b>NOTE:</b> *Available online under Engineering Documents and References at: <a href="http://www.sandiego.gov/publicworks/edocref/index.shtml">http://www.sandiego.gov/publicworks/edocref/index.shtml</a>		

**11. CITY’S RESPONSES AND ADDENDA:** The City, at its discretion, may respond to any or all questions submitted in writing via the City’s eBidding web site in the **form of an addendum**. No other responses to questions, oral or written shall be of any force or effect with respect to this solicitation. The changes to the Contract Documents through addenda are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt

of Addenda at the time of bid submission.

12. **CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Notice Inviting Bids at any time, and further reserves the right to reject submitted Bids, without giving any reason for such action, at its sole discretion and without liability. Costs incurred by the Bidder(s) as a result of preparing Bids under the Notice Inviting Bids shall be the sole responsibility of each bidder. The Notice Inviting Bids creates or imposes no obligation upon the City to enter a contract.
13. **CONTRACT PRICING:** This solicitation is for a Lump Sum contract with Unit Price provisions as set forth herein. The Bidder agrees to perform construction services for the City of San Diego in accordance with these contract documents for the prices listed below. The Bidder further agrees to guarantee the Contract Price for a period of 120 days from the date of Bid opening. The duration of the Contract Price guarantee may be extended, by mutual consent of the parties, by the number of days required for the City to obtain all items necessary to fulfill all contractual conditions.
14. **SUBCONTRACTOR INFORMATION:**

**14.1. LISTING OF SUBCONTRACTORS.** In accordance with the requirements provided in the "Subletting and Subcontracting Fair Practices Act" of the California Public Contract Code, the Bidder shall provide the **NAME** and **ADDRESS** of each Subcontractor who will perform work, labor, render services or who specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Contractor's total Bid. The Bidder shall also state within the description, whether the subcontractor is a **CONSTRUCTOR, CONSULTANT** or **SUPPLIER**. The Bidder shall state the **DIR REGISTRATION NUMBER** for all subcontractors and shall further state within the description, the **PORTION** of the work which will be performed by each subcontractor under this Contract. The Contractor shall list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement may result in the Bid being rejected as **non-responsive** and ineligible for award. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3, "Subcontracts", which stipulates the percent of the Work to be performed with the Bidders' own forces. The Bidder shall list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which Bidders are seeking recognition towards achieving any mandatory, voluntary (or both) subcontracting participation goals.

Additionally, pursuant to California Senate Bill 96 and in accordance with the requirements of Labor Code sections 1771.1 and 1725.5, by submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the California Department of Industrial Relations (DIR). **The Bidder shall provide the name, address, license number, DIR registration number of any Subcontractor -**

**regardless of tier** - who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract.

- 14.2. LISTING OF SUPPLIERS.** Any Bidder seeking the recognition of Suppliers of equipment, materials, or supplies obtained from third party Suppliers towards achieving any mandatory or voluntary (or both) subcontracting participation goals shall provide, at a minimum, the **NAME, LOCATION (CITY), DIR REGISTRATION NUMBER** and the **DOLLAR VALUE** of each supplier. The Bidder will be credited up to 60% of the amount to be paid to the Suppliers for materials and supplies unless vendor manufactures or substantially alters materials and supplies, in which case, 100% will be credited. The Bidder is to indicate within the description whether the listed firm is a supplier or manufacturer. If no indication is provided, the listed firm will be credited at 60% of the listed dollar value for purposes of calculating the Subcontractor Participation Percentage.
- 14.3. LISTING OF SUBCONTRACTORS OR SUPPLIERS FOR ALTERNATES.** For subcontractors or suppliers to be used on additive or deductive alternate items, in addition to the above requirements, bidder shall further note "ALTERNATE" and alternate item number within the description.
- 15. SUBMITTAL OF "OR EQUAL" ITEMS:** See Section 4-1.6, "Trade Names or Equals" in The WHITEBOOK and as amended in the SSP.
- 16. AWARD:**
- 16.1.** The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award.
- 16.2.** Upon acceptance of a Bid, the City will prepare contract documents for execution within approximately 21 days of the date of the Bid opening and award the Contract approximately within 7 days of receipt of properly executed Contract, bonds, and insurance documents.
- 16.3.** This contract will be deemed executed and effective only upon the signing of the Contract by the Mayor or his designee and approval as to form the City Attorney's Office.
- 17. SUBCONTRACT LIMITATIONS:** The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" in The GREENBOOK and as amended in the SSP which requires the Contractor to self-perform not less than the specified amount. Failure to comply with this requirement shall render the bid **non-responsive** and ineligible for award.
- 18. AVAILABILITY OF PLANS AND SPECIFICATIONS:** Contract Documents may be obtained by visiting the City's website: <http://www.sandiego.gov/cip/>. Plans and Specifications for this



contract are also available for review in the office of the City Clerk or Public Works Contracts.

- 19. ONLY ONE BID PER CONTRACTOR SHALL BE ACCEPTED:** No person, firm, or corporation shall be allowed to make, file, or be interested in more than one (1) Bid for the same work unless alternate Bids are called for. A person, firm or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or from submitting a Bid in its own behalf. Any Bidder who submits more than one bid will result in the rejection of all bids submitted.
- 20. SAN DIEGO BUSINESS TAX CERTIFICATE:** The Contractor and Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, First floor and submit to the Contract Specialist upon request or as specified in the Contract Documents. Tax Identification numbers for both the Bidder and the listed Subcontractors must be submitted on the City provided forms within these documents.
- 21. BIDDER'S GUARANTEE OF GOOD FAITH (BID SECURITY) FOR DESIGN-BID-BUILD CONTRACTS:**

  - 21.1.** For bids \$250,000 and above, bidders shall submit Bid Security at bid time. Bid Security shall be in one of the following forms: a cashier's check, or a properly certified check upon some responsible bank; or an approved corporate surety bond payable to the City of San Diego for an amount of not less than 10% of the total bid amount.
  - 21.2.** This check or bond, and the monies represented thereby, will be held by the City as a guarantee that the Bidder, if awarded the contract, will in good faith enter into the contract and furnish the required final performance and payment bonds.
  - 21.3.** The Bidder agrees that in the event of the Bidder's failure to execute this contract and provide the required final bonds, the money represented by the cashier's or certified check will remain the property of the City; and the Surety agrees that it will pay to the City the damages, not exceeding the sum of 10% of the amount of the Bid, that the City may suffer as a result of such failure.
  - 21.4.** At the time of bid submission, bidders must upload and submit an electronic PDF copy of the aforementioned bid security. Whether in the form of a cashier's check, a properly certified check or an approved corporate surety bond payable to the City of San Diego, the bid security must be uploaded to the City's eBidding system. Within twenty-four (24) hours after the bid due date and time, the first five (5) apparent low bidders must provide the City with the original bid security.
  - 21.5.** Failure to submit the electronic version of the bid security at the time of bid submission AND failure to provide the original within twenty-four (24) hours may cause the bid to be rejected and deemed **non-responsive**.

**22. AWARD OF CONTRACT OR REJECTION OF BIDS:**

- 22.1.** This contract may be awarded to the lowest responsible and reliable Bidder.
- 22.2.** Bidders shall complete ALL eBid forms as required by this solicitation. Incomplete eBids will not be accepted.
- 22.3.** The City reserves the right to reject any or all Bids, to waive any informality or technicality in Bids received, and to waive any requirements of these specifications as to bidding procedure.
- 22.4.** Bidders will not be released on account of their errors of judgment. Bidders may be released only upon receipt by the City within 3 Working Days of the bid opening, written notice from the Bidder which shows proof of honest, credible, clerical error of a material nature, free from fraud or fraudulent intent; and of evidence that reasonable care was observed in the preparation of the Bid.
- 22.5.** A bidder who is not selected for contract award may protest the award of a contract to another bidder by submitting a written protest in accordance with the San Diego Municipal Code.
- 22.6.** The City of San Diego will not discriminate in the award of contracts with regard to race, religion creed, color, national origin, ancestry, physical handicap, marital status, sex or age.
- 22.7.** Each Bid package properly signed as required by these specifications shall constitute a firm offer which may be accepted by the City within the time specified herein.
- 22.8.** The City reserves the right to evaluate all Bids and determine the lowest Bidder on the basis of the base bid and any proposed alternates or options as detailed herein.

**23. BID RESULTS:**

- 23.1.** The availability of the bids on the City's eBidding system shall constitute the public announcement of the apparent low bidder. In the event that the apparent low bidder is subsequently deemed non-responsive or non-responsible, a notation of such will be made on the eBidding system. The new ranking and apparent low bidder will be adjusted accordingly.
- 23.2.** To obtain the bid results, view the results on the City's web site, or request the results by U.S. mail and provide a self-addressed, stamped envelope. If requesting by mail, be sure to reference the bid name and number. The bid tabulations will be mailed to you upon their completion. The results will not be given over the telephone.

**24. THE CONTRACT:**

- 24.1.** The Bidder to whom award is made shall execute a written contract with the City of San Diego and furnish good and approved bonds and insurance certificates specified by the City within 14 days after receipt by Bidder of a form of contract for execution unless an extension of time is granted to the Bidder in writing.
- 24.2.** If the Bidder takes longer than 14 days to fulfill these requirements, then the additional time taken shall be added to the Bid guarantee. The Contract shall be made in the form adopted by the City, which includes the provision that no claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
- 24.3.** If the Bidder to whom the award is made fails to enter into the contract as herein provided, the award may be annulled and the Bidder's Guarantee of Good Faith will be subject to forfeiture. An award may be made to the next lowest responsible and reliable Bidder who shall fulfill every stipulation embraced herein as if it were the party to whom the first award was made.
- 24.4.** Pursuant to the San Diego City Charter section 94, the City may only award a public works contract to the lowest responsible and reliable Bidder. The City will require the Apparent Low Bidder to (i) submit information to determine the Bidder's responsibility and reliability, (ii) execute the Contract in form provided by the City, and (iii) furnish good and approved bonds and insurance certificates specified by the City within 14 Days, unless otherwise approved by the City, in writing after the Bidder receives notification from the City, designating the Bidder as the Apparent Low Bidder and formally requesting the above mentioned items.
- 24.5.** The award of the Contract is contingent upon the satisfactory completion of the above-mentioned items and becomes effective upon the signing of the Contract by the Mayor or designee and approval as to form the City Attorney's Office. If the Apparent Low Bidder does not execute the Contract or submit required documents and information, the City may award the Contract to the next lowest responsible and reliable Bidder who shall fulfill every condition precedent to award. A corporation designated as the Apparent Low Bidder shall furnish evidence of its corporate existence and evidence that the officer signing the Contract and bond for the corporation is duly authorized to do so.

- 25. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK:** The Bidder shall examine carefully the Project Site, the Plans and Specifications, other materials as described in the Special Provisions, Section 2-7, and the proposal forms (e.g., Bidding Documents). The submission of a Bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of

Work, the quantities of materials to be furnished, and as to the requirements of the Bidding Documents Proposal, Plans, and Specifications.

**26. CITY STANDARD PROVISIONS:** This contract is subject to the following standard provisions. See The WHITEBOOK for details.

**26.1.** The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.

**26.2.** The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.

**26.3.** The City of San Diego Municipal Code §22.3004 for Contractor Standards.

**26.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.

**26.5.** Sections 1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.

**26.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).

**26.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.

**27. PRE-AWARD ACTIVITIES:**

**27.1.** The contractor selected by the City to execute a contract for this Work shall submit the required documentation as specified in the herein and in the Notice of Award. Failure to provide the information as specified may result in the Bid being rejected as **non-responsive**.

**27.2.** The decision that bid is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

## PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND

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### FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

Blue Pacific Engineering & Construction , a corporation, as principal, and NORTH AMERICAN SPECIALTY INSURANCE COMPANY , a corporation authorized to do business in the State of California, as Surety, hereby obligate themselves, their successors and assigns, jointly and severally, to The City of San Diego a municipal corporation in the sum of One Million One Hundred Seventy Thousand and Six Hundred Twenty-Five Dollars and Zero Cents (\$1,170,625.00) for the faithful performance of the annexed contract, and in the sum of One Million One Hundred Seventy Thousand and Six Hundred Twenty-Five Dollars and Zero Cents (\$1,170,625.00) for the benefit of laborers and materialmen designated below.

### Conditions:

If the Principal shall faithfully perform the annexed contract with the City of San Diego, California, then the obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for or performing labor in the execution of this contract, and shall pay all amounts due under the California Unemployment Insurance Act then the obligation herein with respect to laborers and materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all persons, firms and corporations entitled to file claims under the provisions of Article 2. Claimants, (iii) public works of improvement commencing with Civil Code Section 9100 of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives notice of same.

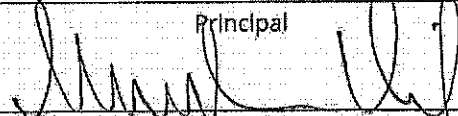
**PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND (continued)**

The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated NOVEMBER 5, 2018

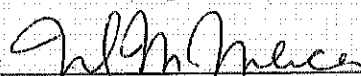
Approved as to Form

BLUE PACIFIC ENGINEERING & CONSTRUCTION

Principal  
By 

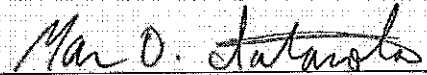
SHAHRAM ELILO  
Printed Name of Person Signing for Principal

Mara W. Elliott, City Attorney

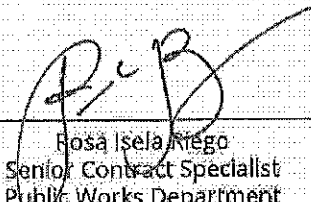
By   
Deputy City Attorney

NORTH AMERICAN  
SPECIALTY INSURANCE COMPANY

Surety

By   
MARK D. IATAROLA, Attorney-in-fact

Approved:

By   
Rosa Isela Riego  
Senior Contract Specialist  
Public Works Department

6 HUTTON CENTRE DRIVE, SUITE 850

Local Address of Surety

SANTA ANA, CA 92707

Local Address (City, State) of Surety

714/513-6839

Local Telephone No. of Surety

Premium \$ 15,206.00  
PREMIUM IS FOR CONTRACT TERM  
AND IS SUBJECT TO ADJUSTMENT  
BASED ON FINAL CONTRACT PRICE

Bond No. 2276944

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

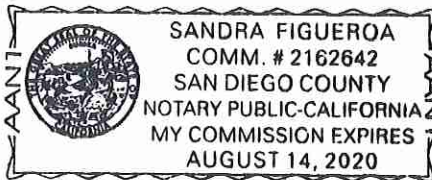
**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of SAN DIEGO }

On 11/5/2018 before me, SANDRA FIGUEROA, NOTARY PUBLIC  
*Date Here Insert Name and Title of the Officer*  
personally appeared MARK D. IATAROLA  
*Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature *Sandra Figueroa*  
*Signature of Notary Public*

Place Notary Seal and/or Stamp Above

**OPTIONAL**

*Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: MARK D. IATAROLA

Signer's Name: \_\_\_\_\_

Corporate Officer – Title(s): \_\_\_\_\_

Corporate Officer – Title(s): \_\_\_\_\_

Partner –  Limited  General

Partner –  Limited  General

Individual  Attorney in Fact

Individual  Attorney in Fact

Trustee  Guardian of Conservator

Trustee  Guardian of Conservator

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

SWISS RE CORPORATE SOLUTIONS

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Overland Park, Kansas, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Overland Park, Kansas, each does hereby make, constitute and appoint:

JOHN G. MALONEY, HELEN MALONEY, MARK D. IATAROLA, AND SANDRA FIGUEROA

HELEN E. WHEALDON

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of: FIFTY MILLION (\$50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached.



By [Signature] Steven P. Anderson, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company



By [Signature] Michael A. Ito, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 12 day of JANUARY, 20 18.

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois
County of Cook ss:

On this 12 day of JANUARY, 20 18, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



[Signature] M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 5TH day of NOVEMBER, 20 18.

[Signature] Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company & North American Specialty Insurance Company



## ATTACHMENTS

**ATTACHMENT A**  
**SCOPE OF WORK**

## **SCOPE OF WORK**

- 1. SCOPE OF WORK:** Concrete coating repair and restoration of Otay Water Treatment Plant sedimentation and flocculation Basin No.1.
  - 1.1.** The Work shall be performed in accordance to the contract documents including the plans and specification:
    - 1.1.1.** The Notice Inviting Bids, Plans numbered **40352-01-D** through **40352-08-D**, inclusive.
  
- 2. LOCATION OF WORK:** The location of the Work is as follows:

See **Appendix E** – Location map.

Otay Water Treatment Plant  
1500 Wueste Road  
Chula Vista, CA 91915
  
- 3. CONTRACT TIME:** The Contract Time for completion of the Work shall be **250 Working Days**.

**ATTACHMENT B**  
**PHASED FUNDING PROVISIONS**

## PHASED FUNDING PROVISIONS

### 1. PRE-AWARD

**1.1.** Within 10 Working Days after the Bid Opening date, the Apparent Low Bidder must contact the Project Manager to discuss fund availability for each phase and shall also submit the following:

**1.1.1.** Construction Cost Loaded Schedule in accordance with 6-1, "CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK" and 9-3, "PAYMENT.

**1.2.** Your failure to perform any of the following may result cancelling your award of the Contract:

**1.2.1.** Meeting with the City's Project Manager to discuss the Phased Funding Schedule.

**1.2.2.** Agreeing to a Phased Funding Schedule within **thirty** Working Days after meeting with the City's Project Manager.

### 2. POST-AWARD

**2.1.** Do not start any construction activities for the next phase until the NTP has been issued by the Engineer. The City will issue separate Notice to Proceed (NTP) documents for each phase.

**2.2.** If requested, the Engineer may issue the NTP for the next phase before the end of the current approved phase.

## PHASED FUNDING SCHEDULE AGREEMENT

**BID NUMBER:** K-19-1763-DBB-3

**CONTRACT OR TASK TITLE:** Otay Water Treatment Plant Basin No. 1 Concrete Restoration

**CONTRACTOR:** Blue Pacific Engineering & Construction

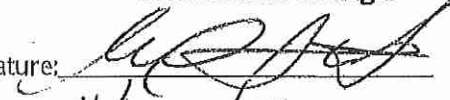
Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1	Project mobilization, concrete, coating, repair and restoration, punchlist, as-builts.	NTP 1/31/2019	Project Completion 2/1/2020	\$1,170,625
Contract Total				\$1,170,625

**Notes:**

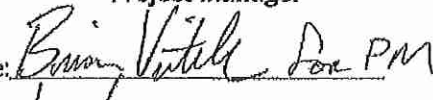
- 1) WHITEBOOK section 9-3.6, "Phased Funding Compensation" applies.
- 2) The total of all funding phases shall be equal to the TOTAL BID PRICE as shown on BID SCHEDULE 1 - PRICES.
- 3) This PHASED FUNDING SCHEDULE AGREEMENT will be incorporated into the CONTRACT and shall only be revised by written modifications to the CONTRACT.

**CITY OF SAN DIEGO**

PRINT NAME: Michael Marks  
**Construction Manager**

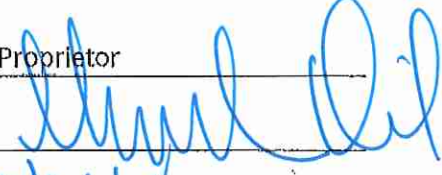
Signature:   
 Date: 11/26/18

PRINT NAME: Mike Bajoua  
**Project Manager**

Signature:   
 Date: 11/20/18

**CONTRACTOR**

PRINT NAME: Shahram Elihu

Title: Sole Proprietor  
 Signature:   
 Date: 11/26/18

**ATTACHMENT C**  
**INTENTIONALLY LEFT BLANK**

**ATTACHMENT D**  
**PREVAILING WAGES**



## **PREVAILING WAGES**

### **PREVAILING WAGES**

- 1. PREVAILING WAGE RATES:** Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.
  - 1.1. Compliance with Prevailing Wage Requirements.** Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.
    - 1.1.1.** Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.
    - 1.1.2.** The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.
  - 1.2. Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed. This shall

be in addition to any other applicable penalties allowed under Labor Code sections 1720 – 1861.

- 1.3. Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.

  - 1.3.1.** Contractor and their subcontractors shall also furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.
- 1.4. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.
- 1.5. Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on contractors and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.
- 1.6. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- 1.7. Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract."
- 1.8. Labor Compliance Program.** The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or

assistance, please contact the City of San Diego's Equal Opportunity Contracting Department at 619-236-6000.

- 1.9. Contractor and Subcontractor Registration Requirements.** This project is subject to compliance monitoring and enforcement by the DIR. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid or proposal, subject to the requirements of section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- 1.9.1.** A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.
- 1.9.2.** By submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration for themselves and all listed subcontractors to the City at the time of bid or proposal due date or upon request.
- 1.10. Stop Order.** For Contractor or its subcontractors engaging in the performance of any public work contract without having been registered in violation of Labor Code sections 1725.5 or 1771.1, the Labor Commissioner shall issue and serve a stop order prohibiting the use of the unregistered contractors or unregistered subcontractor(s) on ALL public works until the unregistered contractor or unregistered subcontractor(s) is registered. Failure to observe a stop order is a misdemeanor.
- 1.11. List of all Subcontractors.** The Contractor shall provide the list of subcontractors (regardless of tier), along with their DIR registration numbers, utilized on this Contract prior to any work being performed; and the Contractor shall provide a complete list of all subcontractors with each invoice. Additionally, Contractor shall provide the City with a complete list of all subcontractors (regardless of tier) utilized on this contract within ten working days of the completion of the contract, along with their DIR registration numbers. The City shall withhold final payment to Construction

Management Professional until at least thirty (30) days after this information is provided to the City.

**1.12. Exemptions for Small Projects.** There are limited exemptions for installation, alteration, demolition, or repair work done on projects of \$25,000 or less. The Contractor shall still comply with Labor Code sections 1720 et. seq. The only recognized exemptions are listed below:

**1.12.1.** Registration. The Contractor will not be required to register with the DIR for small projects. (Labor Code section 1771.1)

**1.12.2.** Certified Payroll Records. The records required in Labor Code section 1776 shall be required to be kept and submitted to the City of San Diego, but will not be required to be submitted online with the DIR directly. The Contractor will need to keep those records for at least three years following the completion of the Contract. (Labor Code section 1771.4).

**1.12.3.** List of all Subcontractors. The Contractor shall not be required to hire only registered subcontractors and is exempt from submitting the list of all subcontractors that is required in section 4.20.11 above. (Labor code section 1773.3).

**ATTACHMENT E**  
**SUPPLEMENTARY SPECIAL PROVISIONS**

## **SUPPLEMENTARY SPECIAL PROVISIONS**

The following Supplementary Special Provisions (SSP) modifies the following documents:

1. The **2015 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").
2. The **2015 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:
  - a) General Provisions (A) for all Contracts.

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### **SECTION 1 – TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS**

- 1-2 TERMS AND DEFINITIONS.** To the "WHITEBOOK", item 54, "Normal Working Hours", ADD the following:

The **Normal Working Hours** are **7:00 AM** to **3:30 PM**.

### **SECTION 2 - SCOPE AND CONTROL OF WORK**

- 2-3.2 Self Performance.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall perform, with your own organization, Contract Work amounting to at least 30% of the base Bid **AND** 30% of any alternates.

- 2-9.1 Permanent Survey Markers.** To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. You shall submit to the Engineer a minimum of 7 Days prior to the start of the Work a list of controlling survey monuments which may be disturbed. CMFS (or the private owner for Permit Work) shall perform the following:
  - a) Set survey points outside the affected Work area that reference and locate each controlling survey monument that may be disturbed.
  - b) File a Corner Record or Record of Survey with the County Surveyor after setting the survey points to be used for re-establishment of the disturbed controlling survey monuments.
  - c) File a Corner Record or Record of Survey with the County Surveyor after re-establishment of the disturbed controlling survey monuments.

**ADD:**

**2-10** **AUTHORITY OF THE BOARD AND THE ENGINEER.** To the "GREENBOOK", Paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of material, equipment, or work; execution, progress or sequence of work; requests for information (RFI), and interpretation of the Plans, Specifications, or other Contract Documents. This shall be precedent to any payment under the Contract. The Engineer shall be the single point of contact and shall be included in all communications.

**2-16** **CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM.** To the "WHITEBOOK", item 1, DELETE in its entirety.

**SECTION 3 – CHANGES IN WORK**

**3-3.2.3** **Markup.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Work paid under Allowance Bid items for permits, governmental fees, or direct payments specified in the Contract Documents shall not be subject to any markups.
2. The allowance for overhead and profit shall not exceed the values listed in the table below:

<b>Component</b>	<b>Overhead</b>	<b>Profit</b>
Labor	10%	10%
Material	10%	5%
Equipment	10%	5%

3. Markups for materials shall be applied to the actual cost of the material before applying the sales tax.
4. When a Subcontractor is performing Extra Work, the allowance for overhead and profit shall be applied to the labor, materials, and equipment costs of the Subcontractor as follows:
  - a) Regardless of the number of Subcontractor tasks for Extra Work, you may only apply 10% for the first \$50,000 of the Subcontractor's portion of accumulated total cost.
  - b) If the accumulated costs of single or subsequent tasks exceed the \$50,000 threshold, you shall instead only apply 5% to any amounts in excess of the \$50,000.
  - c) You shall not apply 10% to any costs after the first \$50,000 of accumulated total costs from performing Extra Work.

- d) Regardless of the number of hierarchical tiers of Subcontractors, you may only markup a Subcontractor's Work once.

**3-5.1 Claims.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

**ADD:**

**3-5.1 Claims.**

1. A Claim is a written demand by you that seeks an adjustment in the Contract Price, Contract Time, or other relief associated with a dispute arising under or relating to the Contract, including a breach of any provision thereof. A voucher, invoice, or other routine request for payment is not a Claim.
2. A Claim shall conform to these specifications and may be considered after the City has previously denied a request by you for a Change Order seeking the demanded relief.
3. You shall submit a Claim to the Engineer if a dispute occurs that arises from or relates to the Contract. The Claim shall seek all relief to which you assert you are entitled as a result of the event(s) giving rise to the dispute. Your failure to process a Claim in accordance with these specifications shall constitute a waiver of all relief associated with the dispute. Claims are subject to 6-11, "Right to Audit".
4. You shall continue to perform the Services and Work and shall maintain the Schedule during any dispute proceedings. The Engineer will continue to make payments for undisputed Services and Work.
5. The City's Claims process specified herein shall not relieve you of your statutory obligations to present claims prior to any action under the California Government Code.

**3-5.1.1 Initiation of Claim.**

1. You shall promptly, but no later than 30 Days after the event(s) giving rise to the Claim, deliver the Claim to the Engineer.
2. You shall not process a Claim unless the Engineer has previously denied a request by you for a Change Order that sought the relief to be pursued in the claim.

**3-5.1.1.1 Claim Certification Submittal.**

1. If your Claim seeks an increase in the Contract Price, the Contract Time, or both, submit with the Claim an affidavit certifying the following:
  - a) The Claim is made in good faith and covers all costs and delays to which you are entitled as a result of the event(s) giving rise to the Claim.
  - b) The amount claimed accurately reflects the adjustments in the Contract Price, the Contract Time, or both to which you believe you are entitled.



- c) All supporting costs and pricing data are current, accurate, and complete to the best of your knowledge. The cost breakdown per item of Work shall be supplied.
- d) You shall ensure that the affidavit is executed by an official who has the authority to legally bind you.

**3-5.1.2 Initial Determination.**

- 1. The Engineer will respond in writing to your Claim within 30 Days of receipt of the Claim.

**3-5.1.3 Settlement Meeting.**

- 1. If you disagree with the Initial Determination, you shall request a Settlement Meeting within 30 Days. Upon receipt of this request, the Engineer will schedule the Settlement Meeting within 15 Working Days.

**3-5.1.4 City's Final Determination.**

- 1. If a settle agreement is not reached, the City shall make a written Final Determination within 10 Working Days after the Settlement Meeting.
- 2. If you disagree with the City's Final Determination, notify the Engineer in writing of your objection within 15 Working Days after receipt of the written determination and file a "Request for Mediation" in accordance with 3-5.2, "Dispute Resolution Process".
- 3. Failure to give notice of objection within the 15 Working Days period shall waive your right to pursue the Claim.

**3-5.1.5 Mandatory Assistance.**

- 1. If a third party dispute, litigation, or both arises out of or relates in any way to the Services provided under the Contract, upon the City's request, you shall agree to assist in resolving the dispute or litigation. Your assistance includes, but is not limited to the following:
  - a) Providing professional consultations.
  - b) Attending mediations, arbitrations, depositions, trials, or any event related to the dispute resolution and litigation.

**3-5.1.5.1 Compensation for Mandatory Assistance.**

- 1. The City will reimburse you for reasonable fees and expenses incurred by you for any required assistance rendered in accordance with 3-5.1.5, "Mandatory Assistance" as Extra Work.
- 2. The Engineer will determine whether these fees and expenses were necessary due to your conduct or failure to act.
- 3. If the Engineer determines that the basis of the dispute or litigation in which these fees and expenses were incurred were the result of your conduct or your failure to act in part or in whole, you shall reimburse the City for any payments made for these fees and expenses.

4. Reimbursement may be through any legal means necessary, including the City's withholding of your payment.

**3-5.2.3 Selection of Mediator.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. A single mediator, knowledgeable in construction aspects and acceptable to both parties, shall be used to mediate the dispute.
2. To initiate mediation, the initiating party shall serve a Request for Mediation at the American Arbitration Association (AAA) on the opposing party.
3. If AAA is used, the initiating party shall concurrently file with AAA a "Request for Mediation" along with the appropriate fees, a copy of requested mediators marked in preference order, and a preference for available dates.
4. If AAA is selected to coordinate the mediation (Administrator), within 10 Working Days from the receipt of the initiating party's Request for Mediation, the opposing party shall file the following:
  - a) A copy of the list of the preferred mediators listed in preference order after striking any mediators to which they have any objection.
  - b) A preference for available dates.
  - c) Appropriate fees.
5. If the parties cannot agree on a mediator, then each party shall select a mediator and those mediators shall select the neutral third party to mediate the matter.

**3-5.3 Forum of Litigation.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. It is the express intention that all legal actions and proceedings related to the Contract or Agreement with the City or to any rights or any relationship between the parties arising therefrom shall be solely and exclusively initiated and maintained in courts of the State of California for the County of San Diego.

**ADD:**

**3-5.4 Pre-judgment Interest.**

1. The parties stipulate that if a judgment is entered against a party for breaching this Contract, the pre-judgment interest shall be two percent (2%) per annum.

## SECTION 4 - CONTROL OF MATERIALS

**4-1.3.6 Preapproved Materials.** To the "WHITEBOOK", ADD the following:

3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

**4-1.6 Trade Names or Equals.** To the "WHITEBOOK", ADD the following:

11. You shall submit your list of proposed substitutions for an "equal" item **no less than 15 Working Days prior to the Bid due date** and on the City's Product Submittal Form available at:

<http://www.sandiego.gov/publicworks/edocref/index.shtml>

## SECTION 5 - UTILITIES

**5-2 PROTECTION.** To the "WHITEBOOK", item 2, ADD the following:

- g) Refer to Appendix "G" for more information on the protection of AMI devices.

## SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

**6-1.1 Construction Schedule.** To the "WHITEBOOK", item 5, 9, and 22, DELETE in its entirety and SUBSTITUTE with the following:

5. Monthly progress payments are contingent upon the submittal of an updated Schedule and cash flow forecast as discussed in item 22 of 6-1.1, "Construction Schedule" to the Engineer. The Engineer may refuse to recommend the whole or part of any monthly payment if, in the Engineer's opinion, your failure or refusal to provide the required Schedule and cash flow forecast information precludes a proper evaluation of your ability to complete the Project within the Contract Time and amount.
9. Inclusive to the Contract Time, include 15 Working Days to the Schedule for the generation of the Punchlist. You shall Work diligently to complete all Punchlist items within 30 Working Days after the Engineer provides the Punchlist.
22. With every pay request, submit the following:
  - a) An updated cash flow forecast showing periodic and cumulative construction billing amounts for the duration of the Contract Time. If there has been any Extra Work since the last update, include only the approved amounts.
  - b) A curve value percentage comparison between the Contract Price and the updated cash flow forecast for each Project ID included in the Contract Documents. Curve values shall be set on a scale from 0% to 100% in intervals of 5% of the Contract Time. Refer to the Sample City

Invoice materials in **Appendix D – Sample City Invoice with Spend Curve** and use the format shown. Your invoice amounts shall be supported by this curve value percentage. For previous periods, use the actual values and percentages and update the curve value percentages accordingly. See “Cash Flow Curve Fitting Example” at the location below:

<https://www.sandiego.gov/publicworks/edocref>

**ADD:**

**6-3.2.1.1 Environmental Document.**

1. The City of San Diego has prepared an **Addendum to a Mitigate Negative Declaration** for **Otay Water Treatment Plan Basin No. 1 Concrete Restoration**, Project No. **32218**, as referenced in the Contract Appendix. You shall comply with all requirements of the **Addendum to a Mitigate Negative Declaration** as set forth in **Appendix A**.
2. Compliance with the City’s environmental document shall be included in the Contract Price.

**SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR**

**7-3 INSURANCE.** To the “GREENBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

**7-3 INSURANCE.**

1. The insurance provisions herein shall not be construed to limit your indemnity obligations contained in the Contract.

**7-3.1 Policies and Procedures.**

1. You shall procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.
2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
3. You shall maintain this insurance for the duration of this Contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this Contract. Your liabilities under the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this Contract.

4. The payment for insurance shall be included in the Contract Price as bid by you. Except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any Work under this Contract until you have provided and the City has approved all required insurance.
5. Policies of insurance shall provide that the City is entitled to 30 Days (10 Days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

**7-3.2 Types of Insurance.**

**7-3.2.1 Commercial General Liability Insurance.**

1. Commercial General Liability Insurance shall be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.
2. The policy shall cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
3. There shall be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You shall maintain the same or equivalent insurance for at least 10 years following completion of the Work.
4. All costs of defense shall be outside the policy limits. Policy coverage shall be in liability limits of not less than the following:

<u>General Annual Aggregate Limit</u>	<u>Limits of Liability</u>
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

**7-3.2.2 Commercial Automobile Liability Insurance.**

1. You shall provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily

injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").

2. All costs of defense shall be outside the limits of the policy.

**7-3.3 Rating Requirements.** Except for the State Compensation Insurance Fund, all insurance required by this Contract as described herein shall be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

**7-3.3.1 Non-Admitted Carriers.** The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers shall be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

**7-3.4 Evidence of Insurance.** Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document shall be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

**7-3.5 Policy Endorsements.**

**7-3.5.1 Commercial General Liability Insurance.**

**7-3.5.1.1 Additional Insured.**

1. You shall provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.
2. To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.
3. The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more shall include liability arising out of:
  - a) Ongoing operations performed by you or on your behalf,
  - b) your products,
  - c) your Work, e.g., your completed operations performed by you or on your behalf, or
  - d) premises owned, leased, controlled, or used by you.

4. The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 shall include liability arising out of:
  - a) Ongoing operations performed by you or on your behalf,
  - b) your products, or
  - c) premises owned, leased, controlled, or used by you.

**7-3.5.1.2 Primary and Non-Contributory Coverage.** The policy shall be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it shall provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

**7-3.5.1.3 Project General Aggregate Limit.** The policy or policies shall be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work shall reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit shall be in addition to the aggregate limit provided for the products-completed operations hazard.

**7-3.5.2 Commercial Automobile Liability Insurance.**

**7-3.5.2.1 Additional Insured.** Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

**7-3.6 Deductibles and Self-Insured Retentions.** You shall pay for all deductibles and self-insured retentions. You shall disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.

**7-3.7 Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this Contract.

**7-3.8 Notice of Changes to Insurance.** You shall notify the City 30 Days prior to any material change to the policies of insurance provided under this Contract.

**7-3.9 Excess Insurance.** Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

**7-4** **NOT USED.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

**7-4** **WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY INSURANCE.**

1. In accordance with the provisions of §3700 of the California Labor Code, you shall provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.

2. Limits for this insurance shall be not less than the following:

<u>Workers' Compensation</u>	<u>Statutory Employers Liability</u>
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit

3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you shall comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

**7-4.1** **Waiver of Subrogation.** The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.

**ADD:**

**7-6** **THE CONTRACTORS REPRESENTATIVE.** To the "GREENBOOK", ADD the following:

1. Both the representative and alternative representative shall be employees of the Contractor and shall not be assigned to a Subcontractor unless otherwise approved by the City in writing.

**7-8.6** **Water Pollution Control.** To the "WHITEBOOK", ADD the following:

6. Based on a preliminary assessment by the City, this Contract is subject to Minor WPCP.

**7-13.4** **Contractor Standards and Pledge of Compliance.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. The Contract is subject to City's Municipal Code §22.3004 as amended 10/29/13 by ordinance O-20316.



2. You shall complete a Pledge of Compliance attesting under penalty of perjury that you complied with the requirements of this section.
3. You shall ensure that all Subcontractors complete a Pledge of Compliance attesting under penalty of perjury that they complied with the requirements of this section.
4. You shall require in each subcontract that the Subcontractor shall abide by the provisions of the City's Municipal Code §22.3004. A sample provision is as follows:  

"Compliance with San Diego Municipal Code §22.3004. The Subcontractor acknowledges that it is familiar with the requirements of San Diego Municipal Code §22.3004 ("Contractor Standards"), and agrees to comply with requirements of that section. The Subcontractor further agrees to complete the Pledge of Compliance, incorporated herein by reference."

**ADD:**

**7-13.8 Equal Pay Ordinance.**

1. You shall comply with the Equal Pay Ordinance (EPO) codified in the San Diego Municipal Code (SDMC) in section 22.4801 through 22.4809, unless compliance is not required based on an exception listed in SDMC section 22.4804.
2. You shall require all of your Subcontractors to certify compliance with the EPO in their written subcontracts.
3. You shall post a notice informing your employees of their rights under the EPO in the workplace or job site.
4. By signing this Contract with the City of San Diego, you acknowledge the EPO requirements and pledge ongoing compliance with the requirements of SDMC Division 48, section 22.4801 et seq., throughout the duration of this Contract.

**7-20 ELECTRONIC COMMUNICATION.** To the "WHITEBOOK", ADD the following:

2. Virtual Project Manager shall be used on this Contract.

**7-21.1 General.** To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. During the construction phase of projects, the minimum waste management reduction goal is 90% of the inert material (a material not subject to decomposition such as concrete, asphalt, brick, rock, block, dirt, metal, glass, and etc.) and 65% of the remaining project waste. You shall provide appropriate documentation, including a Waste Management Form attached

as an appendix, and evidence of recycling and reuse of materials to meet the waste reduction goals specified.

## **SECTION 8 - FACILITIES FOR AGENCY PERSONNEL**

**8-2** **FIELD OFFICE FACILITIES.** To the "WHITEBOOK", ADD the following.

1. There are two existing office trailers located at the plant outside main entrance that will be utilized for this project by both the contractor and construction manager. The contractor shall be responsible for housekeeping and maintaining the two trailers during the contract period. The cost of housekeeping shall be included in the Mobilization bid item.

## **SECTION 9 - MEASUREMENT AND PAYMENT**

**9-3.7** **Compensation Adjustments for Price Index Fluctuations.** To the "WHITEBOOK" ADD the following:

5. This Contract is not subject to the provisions of The "WHITEBOOK" for Compensation Adjustments for Price Index Fluctuations for paving asphalt.

## **SECTION 600 - ACCESS**

**ADD:**

**600-1** **GENERAL.** To the "WHITEBOOK", item 5, DELETE in its entirety and SUBSTITUTE with the following:

5. If the City's crews are unable to provide the citizens with the mandated services due to your failure to comply with these specifications, you shall collect trash, recyclables, and yard waste on the City's schedule and deliver to the City's designated locations. If you fail to perform this Work, you shall incur additional costs for the City to reschedule pick up of an area.

## **EQUAL OPPORTUNITY CONTRACTING PROGRAM (EOCP) SECTION A - GENERAL REQUIREMENTS**

**4.1** **Nondiscrimination in Contracting Ordinance.** To the "WHITEBOOK", subsection 4.1.1, paragraph (2), sentence (1), DELETE in its entirety and SUBSTITUTE with the following:

You shall not discriminate on the basis of race, gender, gender expression, gender identity, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers.

## **END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)**

# TECHNICALS

# OTAY WATER TREATMENT PLANT BASIN NO. 1 CONCRETE RESTORATION



Prepared by:



550 West C Street, Suite 1200  
San Diego, CA 92101

June 20, 2018

## TABLE OF CONTENTS

### DIVISION 1 – GENERAL REQUIREMENTS

01010	SUMMARY OF WORK
01025	MEASUREMENT AND PAYMENT
01040	COORDINATION
01045	CUTTING AND PATCHING
01050	FIELD ENGINEERING
01060	PERMITS AND REGULATORY REQUIREMENTS
01090	REFERENCES
01115	CONSTRUCTION SEQUENCE
01200	PROJECT MEETINGS
01300	SUBMITTALS
01380	CONSTRUCTION VIDEOTAPES AND PHOTOGRAPHS
01400	QUALITY CONTROL
01500	CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
01560	ENVIRONMENTAL PROTECTION
01600	MATERIAL AND EQUIPMENT
01630	SUBSTITUTIONS
01760	POST FINAL INSPECTION

### DIVISION 2 – SITEWORK

02667	TESTING AND DISINFECTION OF HYDRAULIC STRUCTURES
-------	--------------------------------------------------

### DIVISION 3 - CONCRETE

03200	REINFORCEMENT STEEL
03730	CONCRETE REHABILITATION
03740	PRESSURE INJECTION OF CRACKS

### DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07905	JOINT SEALERS
-------	---------------

### DIVISION 9 - FINISHES

09800	PROTECTIVE COATING
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## SECTION 01010 – SUMMARY OF WORK

### PART 1 - GENERAL

#### 1.01 SCOPE

- A. The Work to be performed under this Contract shall consist of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation and services, including fuel, power, water, and essential communications, and performing all work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The Work shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the Work in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to the Work of this Section. Work of other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this Work.
1. Section 01115 Construction Sequence
  2. Section 01500 Construction Facilities and Temporary Controls
  3. Section 01560 Environmental Protection
  4. Standard Specifications for Public Works Construction (SSPWC) also as known as the “Greenbook”, 2015 edition. References to the SSPWC shall include requirements and modifications stated in all supplements, amendments, and special provisions as adopted or issued by the OWNER. Technical specifications shall take precedence over the Greenbook.
  5. The “Whitebook”, Standard Specifications for Public Works Construction, the City of San Diego supplement to the Greenbook, 2015 edition. If Greenbook and Whitebook are in conflict, the Whitebook shall govern and take precedence.

#### 1.03 CONTRACT METHOD

- A. The Work, hereunder will be constructed under a single lump sum contract.

#### 1.04 WORK BY OTHERS

- A. The CONTRACTOR's attention is directed to the fact that work may be conducted concurrently at the site by other contractors during the performance of the Work under this Contract. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the work of such other contractors, and shall cooperate fully with such contractors to provide continued safe access to their respective portions of the site, as required to perform work under their respective contracts.
- B. Interference With Work On Utilities: The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the

relocation, altering, or otherwise rearranging of utilities which interfere with the progress of work by others, and shall schedule the Work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

#### 1.05 WORK SEQUENCE

- A. Working hours are limited to the hours during 7am to 3:30pm.
- B. The CONTRACTOR's attention is directed to the fact that any shutdown, such as the settled water channel, shall be coordinated with, and approved by, the Otay Water Treatment Plant staff. The CONTRACTOR, through their actions on the plant site, shall incur no interruption in water delivery and the CONTRACTOR shall so schedule its construction operations that no interference with the operation of the Otay Water Treatment Plant.

#### 1.06 CONTRACTOR USE OF PROJECT SITE

- A. The CONTRACTOR's use of the project site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities, and field offices.
- B. The CONTRACTOR shall not use the indicated portion of the site until further notice for any of its construction operations.

#### 1.07 OWNER USE OF THE PROJECT SITE

- A. The OWNER may utilize all or part of the existing facilities during the entire period of construction. The CONTRACTOR shall cooperate and coordinate with the OWNER and CONSTRUCTION MANAGER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall be allowed access to the project site during the period of construction.

### **PART 2 - PRODUCTS (NOT USED)**

### **PART 3 - EXECUTION (NOT USED)**

**\*\* END OF SECTION \*\***

## SECTION 01025 – MEASUREMENT AND PAYMENT

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor and services, operations, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the prices named in the Bid Schedule for the various appurtenant items of Work.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Section applies to Work of this Section. Other Sections of the Work not referenced below shall also apply to the extent required for proper performance of the Work.

- |    |                |                                                                                 |
|----|----------------|---------------------------------------------------------------------------------|
| 1. | Document       | Bid Schedule                                                                    |
| 2. | Subsection 9-2 | Lump Sum Work, Part 1 Special Provisions - General of the Contract Documents    |
| 3. | Subsection 9-3 | Field Orders of Part 1 Special Provisions - General of the Contract Documents.  |
| 4. | Subsection 9-3 | Phase Funding of Part 1 Special Provisions - General of the Contract Documents. |

#### 1.03 BONDS (PAYMENT AND PERFORMANCE NOT TO EXCEED 2.5% OF CONTRACT AMOUNT) [LUMP SUM]

- A. No measurement shall be made for this Item.
- B. Payment is made for this item for the Bonds required under this contract and shall be made as the lump sum price named in the Bid Schedule under Item No. 1 and in accordance with the City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 2-4.

#### 1.04 MOBILIZATION AND DEMOBILIZATION [LUMP SUM]

- A. No measurement shall be made for this item.



- B. Payment is made for this item for office trailers, temporary sheds, temporary utilities, all temporary facilities, and all preparatory work prior to the commencement of productive work at the site required under this contract. Payment for this item also includes demobilization, removal of said temporary facilities and return of the Otay Water Treatment Plant to the conditions and requirements of the Contract Documents. Payment under this bid item shall be made as the lump sum price named in the Bid Schedule under Item 2 and in accordance with the City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 9-3.4.

1.05 REBAR REPAIR [PRICES BASED UPON LINEAR MEASURE]

- A. Measurement for payment of rebar repair will be based on the number of linear feet actually repaired, as determined by measurement along the center line of such repaired rebar. This bid item includes exposing of damaged or corroded rebar, removal of that rebar, exposure to sound steel, corrosion protection with approved epoxy bonding agent and patching of exposed rebar suitable for cementitious overlay and protective coating.
- B. Payment for Rebar Repair will be made at the unit price per linear foot named in the Bid Schedule under Item 3 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in removal and disposal of existing rebar, providing all necessary temporary support systems and structures, cleaning rebar, protecting with anti-corrosive coating, furnishing and installing new rebar, and providing all connections, blasting, and welds necessary to tie in new or repair rebar as shown on the Drawings or as specified in the Specification.

1.06 CRACK REPAIR (1/32-INCH TO 1/8-INCH) [PRICES BASED UPON LINEAR MEASURE]

- A. Measurement for payment of Crack Repair (1/32-inch to 1/8-inch, measured as width) will be based on the number of linear feet actually repaired, as determined by measurement along the center line of such crack.
- B. Payment for Crack Repair (1/32-inch to 1/8-inch) will be made at the unit price per linear foot named in the Bid Schedule under Item 4 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in preparing the existing surface, grooving existing crack, furnishing and installing grout for crack repair, post installation surfacing and reworking or repairs, and sealing of cracks with epoxy gel as shown on the Drawings or as specified in the Specification for surface cracks with depths between 1/32-inch to 1/8-inch.

1.07 EXPANSION JOINT REPAIR (NO CONCRETE DAMAGE) [PRICES BASED UPON LINEAR MEASURE]

- A. Measurement for payment of Joint Repair (with or without concrete damage) will be based on the number of linear feet actually repaired, as determined by measurement along the center line of such joint. All expansion joints, horizontal and vertical, shall be repaired within Basin No. 1.
- B. Payment for Joint Repair (with or without concrete damage) will be made at the unit price per linear foot named in the Bid Schedule under Item 5 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in routing and removal of fiber joint material, cleaning and preparation of surfaces, furnishing and installing bond breaker, backing bar and elastomeric joint sealant as shown on the Drawings or as specified in the Specification.

1.08 EXPANSION JOINT RESTORATION [PRICES BASED UPON LINEAR MEASURE]

- A. Measurement for payment of Joint Restoration will be based on the number of linear feet actually restored, as determined by measurement along the center line of such joint. All expansion joints, horizontal and vertical, shall be repaired within Basin No. 1.
- B. Payment for Expansion Joint Restoration will be made at the unit price per linear foot named in the Bid Schedule under Item 6 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in cleaning and restoring of fiber joint material, cleaning and preparation of surfaces, creation of U-groove, restoration of bond breakers, backing bars and elastomeric joint sealant as shown on the Drawings or as specified in the Specification.

1.09 FOREIGN OBJECT REMOVAL AND REPAIR [PRICES BASED UPON QUANTITY, EACH]

- A. Measurement for payment of Foreign Object Removal will be based on the number of foreign obstructions actually removed. Areas which exhibit spalling, illustrated by Detail 3, Drawing C-3, shall also be paid under this bid item.
- B. Payment for Foreign Object Removal will be made at the unit price per each named in the Bid Schedule under Item 7 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in the removal and discarding of foreign objects as shown on the Drawings or as specified in the Specification.

1.10 ABRASIVE BLASTING [PRICES BASED UPON AREA MEASURE]

- A. Measurement for payment of Abrasive Blasting will be based on the number of square footage of area to receive concrete restoration, as determined by measurement of these areas within Basin No. 1.
- B. Payment for Abrasive Blasting will be made at the unit price per each named in the Bid Schedule under Item 8 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in the removal and discarding of foreign objects as shown on the Drawings or as specified in the Specification.

1.11 CEMENTITIOUS MORTAR OVERLAY [PRICES BASED UPON FINISHED SURFACE AREA]

- A. Measurement for payment of Cementitious Mortar Overlay will be based upon the number of square feet of finished surface area to be covered and includes scrub coats, filler coats and final coats necessary to restore the concrete surface ready for protective coating.
- A. Payment for Cementitious Mortar Overlay will be made at the unit price per square foot named in the Bid Schedule under Item 9 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in blade chipping and reduction or protruding aggregate, filling of existing pockets, cracks, and other profile differentials, furnishing and installing cementitious overlay base coat, furnishing and installing cementitious overlay final coat to meet thickness requirements and as shown on the Drawings or as specified in the Specification.

1.12 PROTECTIVE COATINGS [LUMP SUM]

- A. No measurement shall be made for this Item.
- B. Payment is made for this item for surface preparation, application, quality assurance/quality control, inspection, testing and materials for protective coatings of piping, valves, structures, walls, floors, soffits, columns, equipment and miscellaneous components within the Work by a qualified applicator and meeting the requirements of the Contract Documents. Payment under this bid item shall be made as the lump sum price named in the Bid Schedule under Item 10.

1.13 INJECTION GROUTING OF SETTLED WATER CHANNEL [PRICES BASED ON LINEAL FEET OF CRACK REPAIR]

- A. Measurement for payment of injection grouting of settled water channel will be based upon the lineal feet of crack repair required based upon the inspection of the dewatered settled water channel. As the channel is in operation and can only be taken offline for a period of 24 hours, the overall lineal footage has not been estimated and therefore an estimate has been provided for this bid item.
- B. Payment for this bid item will be made at the unit price per lineal foot named in the Bid Schedule under Item 11 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in preparing of surfaces including dewatering of channel for temporary work access, crack routing, setting of injection ports, grouting and cleanup as directed by the manufacturer in order to meet the requirements shown on the Drawings or as specified in the Specification.

1.14 WATER POLLUTION CONTROL PLAN (WPCP) - DEVELOPMENT [LUMP SUM]

- A. No measurement shall be made for this Item.
- B. Payment is made for the preparation and development of the WPCP required under this contract shall be made as the lump sum price named in the Bid Schedule under Item 12 and shall be and in accordance with the City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 7-8.6.4. Payment for this item shall include the preparation of the 100 percent WPCP based on the draft WPCP and shall include all necessary additional BMP's as required for compliance with the permitting agency.

1.15 WATER POLLUTION CONTROL PLAN (WPCP) - IMPLEMENTATION [LUMP SUM]

- A. No measurement shall be made for this Item.
- B. Payment is made for the development of the WPCP required under this contract shall be made as the lump sum price named in the Bid Schedule under Item 13 and shall be and in accordance with the City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 7-8.6.4. Payment for this item shall include the implementation of the 100 percent WPCP based on the draft WPCP and shall include all necessary additional BMP's as required for compliance with the permitting agency. Payment shall include implementation, monitoring, upkeep and removal of all necessary BMP's as required in the approved WPCP.

1.16 DIFFUSER BAFFLE REPLACEMENT [LUMP SUM]

- A. No measurement is made for Diffuser Baffle Replacement.
- B. Payment for this bid item will be made as a Lump Sum for replacement of the primary and secondary diffuser baffles in Basin No. 1 named in the Bid Schedule under Item 14 which price shall include full compensation for providing all labor materials, tools, equipment, and incidentals, and for doing all work involved in providing securely fastened and operational diffuser baffles.

1.17 FIELD ORDERS [LUMP SUM]

- A. No measurement shall be made for this item.
- B. Payment is made for this item as an allowance towards field orders and contingencies that may occur during the course of the Work. Payment for this item shall be made as a lump sum price named in the Bid Schedule under Item 15 and in accordance with the City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 9-3.5.

1.18 RETENTION

- A. The Owner shall retain a percentage of each progress payment in accordance with Section 9-3 Partial and Final Payment of Part 1 Special Provisions - General of the Contract Documents. The retained amount is available for the protection and payment of the person(s), mechanics, subcontractors, or material men who perform labor upon the Contract or Work thereunder, and the persons who supply such person(s), or subcontractors with components and supplies for carrying on such Work.
- B. Pursuant to Section 22300 of the Public Contract Code of the State of California, the CONTRACTOR has the option, at its expense, to deposit securities with an Escrow Agent as a substitute for retention earnings required to be withheld by the City. Securities eligible for such substitution are bank or savings and loans certificates of deposit or such securities which are eligible for investment pursuant to Government Code Section 16430. As to any such security or securities so substituted for monies withheld, the CONTRACTOR shall be the beneficial owner of same and shall receive any interest thereon. Such security shall, at the request and expense of the CONTRACTOR, be deposited with the City or with a State or Federally Chartered bank as the escrow agent who shall pay such monies to the CONTRACTOR upon notification by the City that payment can be made. Such notification will be given at the expiration of thirty-five (35) days from the date of acceptance of the work, or as prescribed by law, provided however, that there will be a continued retention of the necessary securities to cover such amounts as are required by law to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the contract to be further retained.

1.19 PHASE FUNDING

- A. The Contract conditions and requirements for Phase Funding are contained in Section 6-1 Construction Schedule and Commencement of Work, and Section 9-3 Phase Funding of Part 1 Special Provisions - General of the contract documents.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**\*\* END OF SECTION \*\***

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## SECTION 01040 – COORDINATION

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall coordinate work under the Contract and work by others on the Project including, but not limited to, the following:
1. General construction coordination and administration procedures.
  2. Work required by City Forces.
  3. Work required by City Contractor's
  4. Work required by Utility Companies and Utility Company Contractors.
  5. Scheduled Shutdowns
  6. Section 01115 – Construction Sequence
- B. The CONTRACTOR shall take precautions necessary to assure that no damage or unscheduled shutdowns occur to any facilities, including piping, utilities, traffic signals, roads, and structures, that are to remain in operation and are not to be modified or replaced. It is the CONTRACTOR'S responsibility to contact Underground Service Alert, (800-422-4133), prior to any excavation for verification and location of utilities and notification of commencement of work. Any temporary facilities, materials, equipment and labor required to achieve this objective shall be provided by the CONTRACTOR at his own expense. At the completion of work, all such temporary facilities, materials, and equipment remaining shall be removed from the site.
- C. Regarding connection to existing buried piping and facilities at or adjacent to the site, it shall be the responsibility of the CONTRACTOR to uncover and verify their locations, elevations, materials, and dimensions prior to beginning construction or fabrication of any new materials or facilities which are dependent on the location of existing facilities.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Section[s] applies to the Work of this Section. Work of other Sections of the Specification, not referenced below, shall also apply to the extent required for proper performance of this Work.
1. Section 01010 - Summary of Work.
  2. Section 01115 – Construction Sequence
  3. Section 01200 - Project Meetings
  4. Section 01300 - Submittals
  5. Section 01500 - Construction Facilities and Temporary Controls.

#### 1.03 GENERAL COORDINATION

- A. Coordinate construction operations to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
  3. Make provisions to accommodate items scheduled for later installation.
- B. The work shall be carried on at such places on the project and also in such order or precedence as may be found necessary by the CONSTRUCTION MANAGER to expedite the completion of the project. After work has begun on any part of the project, it shall be carried forward to its final completion, unless otherwise determined by the CONSTRUCTION MANAGER.
- C. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
1. Prepare similar memoranda for the CONSTRUCTION MANAGER and OWNER and other Contractor's where coordination of their work is required.
- D. Staff Names: Within 15 working days of Notice to Proceed, submit a list of the CONTRACTOR'S principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
1. Post copies of the list in the Project meeting room, the temporary field offices, and each temporary telephone.
- E. The CONTRACTOR shall include time-lines in its Pre-award and monthly construction schedules for water system shutdowns and work by City Forces on the project per City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 6-1.1.

#### 1.04 WATER SYSTEM SHUTDOWNS

- A. Any proposed shutdowns must be indicated on the CONTRACTOR'S Pre-award and Baseline Construction Schedules to be submitted for review by the CONSTRUCTION MANAGER per City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 6-1.1. All shutdowns shall require an approved Shutdown Request Form with all backup documentation in accordance with Section 01115.
- B. The CONTRACTOR shall compile a detailed list of all items of work which must be accomplished during any shutdown. The CONTRACTOR shall coordinate his work to minimize the required number of shutdowns by accomplishing as many tasks as possible during each shutdown period. The CONTRACTOR shall submit this list of items to the CONSTRUCTION MANAGER for his review as a part of the construction schedule defined in City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 6-1.1. The schedule shall indicate all periods and duration of each proposed shutdown and the items of work which will be accomplished. The written request shall include a complete detailed plan of the CONTRACTOR'S proposed activities. Work in the Settled Water Channel shall require a partial shutdown, the timing and duration of which shall be coordinated with the Otay Water



Treatment Plant staff using the Shutdown request Form found in Section 01115, Construction Sequence. Subject to regional system conditions, the City reserves the right to select the hours of the day, the day of the week, and the time of year on which it will make the shutdown(s). The Contractor shall familiarize themselves with the regional and seasonal constraints which the City is committed to in providing uninterrupted water service to City customers. Timing of shutdowns must consider the necessity that Contractor activities cannot disrupt or interrupt the delivery of water to customers.

#### 1.05 SUBMITTALS

- A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
1. Show the relationship of components shown on separate Shop Drawings and staging requirements for component installation.
  2. Indicate required installation sequences.
  3. Comply with requirements contained in Section 01300 - Submittals.

#### 1.06 UTILITY COORDINATION

- A. Existing Facilities
1. The CONTRACTOR shall maintain required clearances from Utility Company facilities during the course of the Work.
  2. Support or relocation of existing Utility Company facilities to accommodate CONTRACTOR'S means and methods of conducting the Work shall be coordinated directly with the Utility Company at no additional cost to the OWNER.

### **PART 2 - PRODUCTS (NOT USED)**

### **PART 3 - EXECUTION (NOT USED)**

#### 3.01 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

**\*\* END OF SECTION \*\***

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## SECTION 01045 – CUTTING AND PATCHING

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall provide labor and materials for cutting and patching required to perform the Work required under the Contract.

#### 1.02 DEFINITION

- A. "Cutting-and-Patching" is defined to include the cutting and patching of nominally completed and previously existing concrete, steel, wood and miscellaneous metal structures; piping and pavement, in order to accommodate the coordination of Work, or the installation of other facilities or structures or to uncover other facilities and structures for access or inspection, or to obtain samples for testing, or for similar purposes.

#### 1.03 REQUIREMENTS OF STRUCTURAL WORK

- A. Structural Work shall not be cut and patched in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio.
- B. Prior to cutting-and-patching the following categories of Work, the CONTRACTOR shall obtain the CONSTRUCTION MANAGER's approval to proceed:
  - 1. Structural steel
  - 2. Miscellaneous structural metals, including equipment supports, stair systems and similar categories of work
  - 3. Structural concrete
  - 4. Foundation construction
  - 5. Timber and primary wood framing
  - 6. Bearing and retaining walls
  - 7. Structural decking
  - 8. Exterior curtain wall construction
  - 9. Pressurized piping, vessels and equipment

#### 1.04 OPERATIONAL AND SAFETY LIMITATIONS

- A. The CONTRACTOR shall not cut-and-patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in the manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.
- B. Prior to cutting-and-patching the following categories of Work, the CONTRACTOR shall obtain the CONSTRUCTION MANAGER's approval to proceed:
  - 1. Sheeting, shoring and cross bracing
  - 2. Operating systems and equipment

3. Water, moisture, vapor, air, smoke barriers, membranes and flashings
4. Noise and vibration control elements and systems
5. Control, communication, conveying and electrical wiring systems

#### 1.05 VISUAL REQUIREMENTS

- A. The CONTRACTOR shall not cut-and-patch Work which is exposed on the exterior or exposed in occupied spaces, in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of the cut-and-patch work, both as judged solely by the CONSTRUCTION MANAGER. The CONTRACTOR shall remove and replace work judged by the CONSTRUCTION MANAGER to have been cut-and-patched in a visually unsatisfactory manner.

#### 1.06 APPROVALS

- A. Where prior approval of cutting-and-patching is required, the CONTRACTOR shall submit the request 15 working days in advance of time the Work will be performed. The request should include a description of why cutting-and-patching cannot reasonably be avoided, how it will be performed, how structural elements (if any) will be reinforced, products to be used, firms and tradesmen to perform the Work, approximate dates of the Work, and anticipated results in terms of structural, operational, and visual variations from the original Work.
- B. The CONTRACTOR shall also request approval to proceed prior to starting Work of this Section.

### **PART 2 - PRODUCTS**

#### 2.01 MATERIALS USED IN CUTTING-AND-PATCHING

- A. Except as otherwise indicated, the CONTRACTOR shall provide materials for cutting-and-patching which will result in equal-or-better Work than the Work being cut-and-patched, in terms of performance characteristics and including visual effects where applicable. The CONTRACTOR shall use material identical with the original materials where feasible.
- B. Materials shall comply with the requirements of the technical specifications wherever applicable.

### **PART 3 - EXECUTION**

#### 3.01 PREPARATION

- A. The CONTRACTOR shall provide adequate temporary support for the Work to be cut to prevent failure.
- B. The CONTRACTOR shall provide adequate protection of other Work during cutting-and-patching.

### 3.02 INSTALLATION

- A. The CONTRACTOR shall employ skilled tradesmen to perform cutting-and-patching. Except as otherwise indicated, the CONTRACTOR shall proceed with cutting-and-patching at the earliest feasible time and perform the Work promptly.
- B. The CONTRACTOR shall use methods least likely to damage the Work to be retained and Work adjoining.
  - 1. In general, where physical cutting action is required, the CONTRACTOR shall cut the Work with sawing and grinding tools, not with hammering and chopping tools. Openings through concrete work shall be core drilled.
  - 2. Comply with the requirements of technical specifications wherever applicable.
  - 3. Comply with the requirements of applicable sections of Division 2 where cutting-and-patching requires excavating and backfilling.
- C. The CONTRACTOR shall patch with seams which are as invisible as possible and comply with specified tolerances for the Work.
- D. The CONTRACTOR shall restore exposed seams of patched area; and, where necessary, extend finish restoration onto retained Work adjoining, in a manner which will eliminate evidence of patching.

\*\* END OF SECTION \*\*

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## SECTION 01050 – FIELD ENGINEERING

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. General: This Section specifies CONTRACTOR's administrative and procedural requirements for field-engineering services and the CONTRACTOR's daily construction reporting including, but not limited to, the following:
1. Engineering services.
  2. Contractor's Daily Construction Report
  3. Authorization to proceed with excavation

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to the Work of this Section. Work of other Sections of the Specifications not referenced below shall also apply to the extent required for proper performance of this Work.
1. Section 01400            Quality Control
  2. Section 7-10            Public Convenience and Safety Orders, of Part 1 Special Provisions - General of the Contract Documents.

#### 1.03 SUBMITTALS

- A. Contractor's Daily Report: Using the standard report form "Contractor's Daily Construction Report" which is attached to this Section, the CONTRACTOR records daily work activities, utilization of manpower and equipment, site visits, and current or potential problems. The report includes the status of activities planned to be worked in accordance with the CONTRACTOR'S approved schedule. The CONTRACTOR transmits this report of the previous day's activities to the CONSTRUCTION MANAGER daily.
- B. Project Record Documents: Submit a record of Work performed and record survey data as required under provisions of City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 2-5.4. Submit an electronic copy of all CADD (.dgn format) and Coordinate (ASCII.txt format), and alignment geometry files (format varies).

#### 1.04 QUALITY ASSURANCE

## Contractor's Daily Construction Report

Capital Improvement Program

DOWNTOWN  
600 B Street, Suite 700  
San Diego, CA 92101  
(619) 533-4112  
Fax (619) 533-5278

City of San Diego  
**WATER DEPARTMENT**

## Contractor's Daily Construction Report

Date: _____	Project Name: _____
To: _____	CIP No.: _____ W.O. No.: _____
Attn: _____	Contractor: _____
From: _____	Contract No.: _____
Subject: _____	

Weather Condition:    Temperature a.m.: \_\_\_\_\_ p.m. \_\_\_\_\_  
                                          Conditions a.m.: \_\_\_\_\_ p.m. \_\_\_\_\_  
                                          Precipitation a.m.: \_\_\_\_\_ p.m. \_\_\_\_\_

Lost Time This Report: \_\_\_\_\_

Progress on Construction Activities Scheduled This Date:

\_\_\_\_\_

\_\_\_\_\_

Other Activities Occurring This Date:

\_\_\_\_\_

\_\_\_\_\_

Contractor			Subcontractor		
Manpower (List Trades)	No.	Work Hours	Firm/Discipline	No.	Work Hours
TOTALS					



**Contractor's Daily Construction Report**  
***continued***

**Contractor's Daily Construction Report**  
Page 2 of 2

Major Process Equipment/Materials Received On-Site This Date: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Construction Equipment Usage:

(List Each Equipment Item)	No.	Hours	Remarks

Special Problems Encountered and Solutions, If Resolved: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

General Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Contractor's Signature

cc:

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Identification: The CONSTRUCTION MANAGER shall identify and perpetuate all existing survey control points and property line corner survey monuments or offsets.
- B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
  - 1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
  - 2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.
- C. Establish and maintain a minimum of 2 permanent benchmarks on the site, referenced to data established by survey control points.
  - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- D. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.

### **3.02 PERFORMANCE**

- A. Work from lines and elevations established by the property survey. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions. Use dimensions provided on civil and/or architectural Drawings to determine locations of improvements.
  - 1. Advise subcontractors engaged in construction activities of marked lines and elevations provided for their use, and of the responsibility to protect and preserve these points.
  - 2. As construction proceeds, incorporate horizontal and vertical checks to verify the location of key and/or major improvements and meet existing conditions.
- B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.

1. Record deviations from design grade, profiles and elevations, and advise the CONSTRUCTION MANAGER when deviations exceed industry standards for maintaining design criteria. On Project Record Drawings, record deviations that are accepted and not corrected.
  2. On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- C. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.

### 3.03 REQUEST FOR AUTHORIZATION TO PROCEED WITH AN EXCAVATION

- A. All excavation for earthwork, underground utility installation, foundation construction or temporary facilities, shall not begin until the CONTRACTOR has received authorization to proceed with the excavation from the CONSTRUCTION MANAGER.
- B. The purpose of the excavation authorization procedure is as follows:
1. Notifies the Safety Representative of the need for monitoring the excavation and to assure that all safety plans and/or trench shoring plans have been reviewed.
  2. Advises the Safety Representative of the name of the Competent Person in charge of the excavation.
  3. Allows the CONSTRUCTION MANAGER to notify the CONTRACTOR of special conditions or procedures required during the excavation.
  4. Notifies the CONSTRUCTION MANAGER of any work that must be coordinated by the CONTRACTOR with other contractors, agencies on-site, or adjacent to the work site.
- C. The CONTRACTOR shall notify the CONSTRUCTION MANAGER of intention to excavate by transmitting "REQUEST FOR AUTHORIZATION TO PROCEED WITH EXCAVATION," at least five (5) days prior to the date proposed for the start of excavation. The CONTRACTOR shall not submit the request until all required safety/shoring plans have been reviewed and the notifications required have been completed.
- D. The CONTRACTOR shall number the requests consecutively as directed by the CONSTRUCTION MANAGER. When the excavation is authorized, a copy of the authorization shall be posted near the excavation and protected from rain or damage. The Competent Person responsible for the excavation shall have a copy of the authorization available at all times that work is underway in the excavation.
- E. Authorization to proceed with the excavation shall not relieve the CONTRACTOR of any responsibilities for conducting the work in a safe manner and meeting all the requirements of Construction Safety orders for Excavations, to include Subsection 7-10.4.1 of Part 1 Special Provisions - General of the Contract Documents.

## **PART 4 - EXHIBITS**

### **4.01 REQUEST FORM**

#### **A. Exhibit A - Request For Authorization To Proceed With Excavation**

**Exhibit A**

**REQUEST FOR AUTHORIZATION TO PROCEED WITH EXCAVATION**

---

CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
REQUEST NO.: \_\_\_\_\_

DATES OF EXCAVATION: FROM: \_\_\_\_\_ TO: \_\_\_\_\_

(MAXIMUM FOUR (4) WEEKS. IF EXCAVATION MUST CONTINUE A NEW AUTHORIZATION MUST BE OBTAINED.)

DESCRIPTION OF EXCAVATION:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SKETCH OF EXCAVATION LOCATION: (ATTACHED)

NAME OF COMPETENT PERSON IN CHARGE:

\_\_\_\_\_

EXCAVATION GREATER THAN 4FT DEEP: YES \_\_\_\_\_ NO \_\_\_\_\_ MAXIMUM DEPTH: \_\_\_\_\_

SPECIAL CONDITIONS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CAL OSHA PERMIT RECEIVED: \_\_\_\_\_ CALL USA NOTIFIED: \_\_\_\_\_

SAFETY PLAN/TRENCH SHORING PLAN SUBMITTED: \_\_\_\_\_

U.G. FACILITY OWNERS NOTIFIED: \_\_\_\_\_ (DATE OF APPROVAL/NOTIFICATION TO BE ENTERED)

---

**VERIFICATION OF UNDERGROUND UTILITIES**

OWNER, CONTRACTOR AND CONSTRUCTION MANAGER HAVE REVIEWED ALL EXISTING DOCUMENTATION AND INFORMATION AVAILABLE TO

INCLUDE, BUT NOT LIMITED TO, PIPING DIAGRAMS; EXISTING UNDERGROUND UTILITIES; YARD DRAWINGS; AS BUILTS; ETC. CONTRACTOR

SHALL NOT PROCEED WITH EXCAVATION UNTIL ALL AVAILABLE INFORMATION HAS BEEN RESEARCHED AND REVIEWED BY CONSTRUCTION

MANAGER REPRESENTATIVE.

CONSTRUCTION MANAGER RESPONSIBLE FOR REVIEW: \_\_\_\_\_

---

**CONSTRUCTION MANAGER AUTHORIZATION TO PROCEED**

CONTRACTOR IS AUTHORIZED TO PROCEED WITH THE WORK DESCRIBED ABOVE.

SPECIAL CONDITIONS OR PROCEDURES TO BE OBSERVED FOR THIS EXCAVATION:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AS BUILT DRAWINGS ARE REQUIRED FOR THE INSTALLATION OF ALL TEMPORARY OR PERMANENT UNDERGROUND PIPELINES, DUCT BANKS AND CABLES.

\_\_\_\_\_  
CONSTRUCTION MANAGER

\_\_\_\_\_  
DATE

**\*\* END OF SECTION \*\***

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## SECTION 01060 – PERMITS AND REGULATORY REQUIREMENTS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall comply with all regulatory and permit requirements, including but not limited to the following:
1. City Permits
  2. Special Inspections
  3. Noise Abatement and Control Regulations
  4. Storm Water Discharge Control
- B. The Work required by this section shall be paid under the Environmental Compliance Bid Item and the Best Management Practice (BMP) Bid Items, if the latter are included in the Bid Schedule. If no Environmental Compliance Bid Item is included in the Bid Schedule, then the Work shall be included in and charged against other Bid Items in the Bid Schedule.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections applies to the Work of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this Work.
1. Section 01300            Submittals
  2. Section 01400            Quality Control
  3. Section 01500            Construction Facilities and Temporary Controls
  4. Section 01560            Environmental Protection

#### 1.03 DEFINITIONS AND REQUIREMENTS

- A. City Permits: There is no requirement for a City Development Services Department issued building permit for this Work.
- B. Special Inspections: Special Inspections shall be in accordance with the California Building Code (CBC), as adopted by the City of San Diego. When building components are fabricated off-site, the CONTRACTOR must submit an application to the City to perform off-site fabrications and submit certificates of compliance. The CONTRACTOR shall use approved suppliers or pay for special inspections at the place of manufacture. Special inspection procedures for both on-site and off-site inspections are further addressed in Section 01400 - Quality Control.
- C. Noise Abatement and Control: The CONTRACTOR shall comply with applicable State of California, City of San Diego and County of San Diego (when applicable) noise control regulations. The CONTRACTOR shall conduct all Work in a manner that avoids exceeding the legal noise limits specified in Tables 1 and 2.

1. Sound Level Limits:

**Table 1**  
**City of San Diego**  
**Sound Level Limits at or Beyond Project Boundary Lines**

	Receptor Land Use Zone <sup>1</sup>	L <sub>eq</sub> (1h) Sound Level <sup>2</sup> , dBA		
		7am-7pm	7pm-10pm	10pm-7am
1.	Residential: - All R-1	50	45	40
2.	Residential: - All R-2	55	50	45
3.	Residential: - R-3, R-4 and, all other Residential	60	55	50
4.	All Commercial:	65	60	60
5.	Manufacturing, Industrial, Agricultural, Extractive Industry	75	75	75
6.	All Residential Zones due to Facility Construction (Note 1 does not apply):	75	no const. allowed	no const. allowed
1.	<b>The sound level limits at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.</b>			
2.	<b>The requirements of more restrictive City codes shall apply.</b>			

**Table 2**  
**County of San Diego**  
**Sound Level Limits at or Beyond Project Boundary Lines**

	Receptor Land Use Zone <sup>1</sup>	Leq(1h) Sound Level <sup>2</sup> , dBA	
		7am-10pm	10pm-7am
1.	Residential density less than 11 dwellings per acre: R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, and R-U	50	45
2.	Residential density equal to or greater than 11 dwellings per acre: R-RO, R-C, R-M, C-30, S-86	55	50
3.	S-94 and all other Commercial:	60	55
4.	M-50, M-52, M-54	70	70
5.	S-82, M-58, and all other Industrial	75	75
6.	All Residential Zones due to Facility Construction (Note 1 does not apply):	75	no const. allowed

1. The sound level limits at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.
2. The requirements of more restrictive County codes shall apply.

2. **Night-time and Holiday Work:** If CONTRACTOR desires to perform Work between the hours of 7 p.m. and 7 a.m., or at any time on a Sunday or City Holiday, then the CONTRACTOR shall obtain and pay for necessary permits from City Noise Control Officer and other appropriate agencies, and make necessary arrangements prior to commencing Work, including attendance at Public Hearings. Provide a copy of the Noise Permit to the CONSTRUCTION MANAGER.

D. **Storm Water Discharge Control:** The CONTRACTOR shall comply with all applicable storm water standards, orders or requirements including: Construction Activities Storm Water General Permit (Order No. 99-08-DWQ); Adopted Modifications of the Construction Activities Storm Water General Permit (Resolution No. 2001-046); Municipal Storm Water Permit (Order No. 2001-01); and City' Urban Runoff Management and Standard Urban Storm Water Mitigation Plans. CONTRACTOR shall also comply with Chapter 4, Article 3, Division 3 of the San Diego Municipal Code entitled, "Storm Water Management and Discharge Control [Ordinance No. 0-17988 (New Series)]," latest adopted ordinance. This ordinance prohibits the discharge of polluted runoff and non-storm water to a storm water conveyance system, except as provided in Municipal Code, Section 43.0305. Copies of the ordinance are available at the office of the City Clerk.

1. The CONTRACTOR shall prepare a Water Pollution Control Plan (WPCP) to include: project description and schedule; potential pollution sources; lists of BMPs for all phases of Work; and a construction BMP maintenance, inspection and repair program. A WPCP template will be provided by the OWNER upon request. The WPCP shall be submitted to the CONSTRUCTION MANAGER for review and acceptance. CONTRACTOR shall revise the WPCP to the OWNER's satisfaction, file one copy of the completed document with OWNER, and maintain the WPCP at the construction site. CONTRACTOR shall implement and update the WPCP, when necessary, monitor the construction site, and maintain BMPs in effective working condition.

2. Storm water BMPs identified in the project shall be incorporated into the WPCP.
- E. Other National Pollutant Discharge Elimination System Permit(s):
1. The CONTRACTOR shall comply with the General Permit for Discharges of Hydrostatic Test Water and Potable Water to Surface Waters and Storm Drains. The discharge water must be dechlorinated to a non-detectable or 0.1 mg/l level, effluent pH has to be maintained between 6 and 9, and the release cannot cause downstream erosion or a violation of a water quality standard in the Regional Water Quality Control Board' (RWQCB') Basin Plan.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 NOISE ABATEMENT AND CONTROL**

- A. Construction Noise Monitoring:
1. Noise shall be monitored during all construction phases at critical locations so that construction noise at the identified noise-sensitive receptors does not exceed the limits shown in Section 01060, Part 1.3.C.
  2. The construction noise monitoring shall be conducted by a qualified acoustical consultant to be provided by OWNER. Acoustician shall submit weekly monitoring reports to CONTRACTOR, Construction Manager, OWNER's Project Manager, and Environmental and Permits Section (EPS).
- B. The CONTRACTOR must provide temporary controls to limit construction noise in accordance with Section 01060, Part 1.3.C, Noise Abatement and Control. If necessary, acoustician shall submit plans via CONTRACTOR to CONSTRUCTION MANAGER, OWNER's Project Manager, and Environmental and Permits Section (EPS) for mitigating construction noise impacts and complying with applicable noise criteria, including method of construction, equipment to be used, and acoustical treatment.

### **3.02 WPCP IMPLEMENTATION**

- A. The CONTRACTOR shall avoid erosion, turbidity and siltation entering and leaving the Work site by proper scheduling of Work and careful construction practices, and by employing BMPs for erosion and sediment control.
- B. The CONTRACTOR shall provide immediate erosion and sediment control protection for areas of the construction site that are not being actively graded and would be left exposed for a period of 7 calendar days or greater.
- C. A Clean Storm Water informational bulletin, to be provided by OWNER, shall be posted on the jobsite by CONTRACTOR.

**\*\* END OF SECTION \*\***

## SECTION 01090 – REFERENCES

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. For products or workmanship specified by association, trade, or Federal Standards, CONTRACTOR shall comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The date of the standard is that in effect as of the Bid date, except when another specific date is specified.
- C. Obtain copy of referenced standards. Maintain copy at job site during submittals, planning, and progress of Work, until Substantial Completion.

#### 1.02 SCHEDULE OF REFERENCES

- A. ACI-American Concrete Institute  
Box 19150  
Redford Station  
Detroit, MI 48219
- B. AISC-American Institute of Steel Construction, Inc.  
400 North Michigan Avenue  
Eighth Floor  
Chicago, IL 60611
- C. AISI-American Iron and Steel Institute  
1000 16th Street, N.W.  
Washington, DC 20036
- D. AMCA-Air Movement and Control Association  
30 West University Drive  
Arlington Heights, IL 60004
- E. ANSI-American National Standards Institute  
1430 Broadway  
New York, NY 10018
- F. ASME-American Society of Mechanical Engineers  
345 East 47th Street  
New York, NY 10017
- G. ASTM-American Society for Testing and Materials  
1916 Race Street  
Philadelphia, PA 19103

- H. AWWA-American Water Works Association  
6666 West Quincy Avenue  
Denver, CO 80235
- I. NACE International – National Association of Corrosion Engineers  
15835 Park Ten Place  
Houston, Texas 77084
- J. OSHA-Occupation Safety and Health Administration  
U. S. Department of Labor  
Washington, DC
- K. SSPC – Society for Protective Coatings  
800 Trumbull Drive  
Pittsburgh, PA 15025

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**\*\* END OF SECTION \*\***

## SECTION 01115 - CONSTRUCTION SEQUENCE

### PART 1 -- GENERAL

#### 1.1 WORK OF THIS SECTION

- A. This specification sets forth the sequence for some of the major elements of the Work; it is not all-inclusive. The sequence specified here is required to maintain continued operation of the Otay Water Treatment Plant including keeping the Settled Water Channel in service until such time that it may be safely dewatered, inspected and repaired under a planned shutdown. The construction sequence set forth below includes the following major elements of the Work:

1. Knock down of protruding aggregate in preparation for cementitious mortar overlay
2. Foreign object removal and patching
3. Restoration of the sweep guide
4. Spot repairs of defects, foreign object removal and patching.
5. Exposed rebar repair, replacement, corrosion protection
6. Settled Water Channel injection grouting, crack repair
7. Crack repair within Basin No. 1
8. Expansion joint and construction joint repair
9. Abrasive brush blast of surfaces
10. Scrub coat of mortar to fill large voids,
11. Coating of valves, energy dissipater and all other metal within Basin No. 1 excluding mixing paddles
12. Cementitious overlay to prepare surface for coating
13. Epoxy coating of prepared surfaces
14. Epoxy coating of surfaces with repair of bugholes and holiday testing
15. Replacement of primary and secondary redwood baffles in Basin No. 1

- B. Schedule and perform the Work under this Contract in such a manner as to result in the least possible disruption to the operation of the existing Otay Water Treatment Plant. Submit to the ENGINEER a construction schedule covering the Construction Sequence activities before any Work begins. Coordinate all shutdowns, tie-ins to existing facilities, and operation of facilities with the City. All shutdowns or tie-ins, regardless of the duration or the size of the shutdown, shall be authorized by the City using the Shutdown Request Form provided in this specification Section. See Section 01040 Coordination for additional information related to shutdowns and coordination with plant staff during construction.

#### 1.2 RELATED SECTIONS

The Work of the following Sections apply to Work of this Section. Work of other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the Work.

1. Section 01010 Summary of Work
2. Section 01040 Coordination
3. Section 01060 Permits and Regulatory Requirements

4. Section 01300 Submittals

1.3 CONTRACTOR SUBMITTALS

The CONTRACTOR shall furnish submittals in accordance with Section 01300 - Submittals.

1. Proposed Construction Sequence other than the Construction Sequence suggested in this Section.
2. Develop and submit a detailed description of the complete sequence of construction for all of the events contained herein, including all shut-downs.
3. Associated temporary bypasses and construction required to accommodate construction sequencing.
4. Schedule for all requested shutdowns of existing water system facilities.

1.4 OPERATIONAL REQUIREMENTS

A. Water System Facility Shutdowns

1. Removal of water transmission and storage facilities from service, in order to enable connections, rehabilitation or inspections, must be conducted during low demand periods between November 1 and April 1. Critical short duration shutdowns must be conducted during off peak hours, between the hours of 9:00 p.m. and 6:00 a.m.
2. Precise scheduling of system shutdowns is subject to regional conditions. Procedures for coordinating shutdowns are outlined in Section 01040, Coordination.
3. Nightwork during shutdown conditions require a Noise Permit in accordance with Section 01060, Regulatory Requirements.

A. Construction Sequence

1. The suggested construction sequencing is provided to enable performance of the Work with minimal impact on facility operation.
2. The suggested construction sequence is general in nature and does not include all steps or details required to complete the Work.
3. Only tasks associated with proper sequencing of the Work are addressed.
4. The suggested construction sequence is not intended to define the methods of construction, but to assist the CONTRACTOR in identifying operational and practical constraints within which the Work must be constructed. The CONTRACTOR'S proposed changes to the suggested construction sequence must present equivalent or lesser impact to water system operations.



5. Evaluate the proposed sequence and provide additional construction sequencing, temporary facilities, construction, and coordination as required to complete the Work.
6. Coordinate sequence with construction schedule as described in City of San Diego “Whitebook”, City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 6-1.1.

## **PART 2 -- PRODUCTS (Not Used)**

## **PART 3 -- EXECUTION**

### **3.1 EXAMINATION**

- A. CONTRACTOR shall visit the site and become aware of existing conditions that may affect the sequencing of the Work, and include provision in the bid price for same.

**\*\* END OF SECTION \*\***

**SHUTDOWN REQUEST FORM**

PROJECT: Otay Water Treatment Basin No. 1 Concrete Restoration

OWNER: City of San Diego  
1500 Wueste Road  
Chula Vista, CA 91915

OWNER CONTACT: Otay Water Treatment Plant – Senior Water Operations Supervisor

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**CONTRACTOR REQUEST**

Date Submitted: \_\_\_\_\_

**PLEASE NOTE: Shutdown requests must be submitted at least 15 working days from the date requested for the shutdown, regardless of the nature of the shutdown. Attach backup documentation of sequence, procedures, planned durations as necessary to review the request.**

**General Contractor**

**Subcontractor**

Company: \_\_\_\_\_  
Name: \_\_\_\_\_  
Phone: \_\_\_\_\_

Company: \_\_\_\_\_  
Name: \_\_\_\_\_  
Phone: \_\_\_\_\_

**Type of shutdown requested (include detailed sequence and schedule for major activities):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Identify equipment needed out of service and expected maximum duration of outage:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Reason for shutdown:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Special requirements, Contingency Plans, bypass requirements, redundancy and risk/hazard analysis, lock out/tag out procedures, temporary power requirements, etc.:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date by which notification/confirmation of shutdown is required:

\_\_\_\_\_

Proposed start date and start time of shutdown:

\_\_\_\_\_

Proposed end date and end time of shutdown:

\_\_\_\_\_

Shutdown meeting location and time:

\_\_\_\_\_

Alternate date for shutdown in case original date cannot be met:

\_\_\_\_\_

**Approved By:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
City Construction Manager

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## SECTION 01200 – PROJECT MEETINGS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall participate in project meetings including, but not limited to, the following:
1. Preconstruction conferences.
  2. Progress meetings.
  3. Preinstallation conferences.
  4. Coordination meetings.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to the Work of this Section. Work of other Sections of the Specifications not referenced below shall also apply to the extent required for proper performance of the Work.
1. Section 01040 Coordination.
  2. Section 01115 Construction Sequence.
  3. Section 6, paragraph 6-1 Project Status Meetings, Part 1 Special Provisions - General of the Contract Documents.

#### 1.03 PRECONSTRUCTION CONFERENCE

- A. Prior to the commencement of the Work at the site, a preconstruction conference will be held at a mutually agreed time and place which shall be attended by the CONTRACTOR'S Project Manager, its superintendent, and its subcontractors, as the CONTRACTOR deems appropriate. Other attendees will be:
1. CONSTRUCTION MANAGER.
  2. OWNER'S Representatives.
  3. Governmental representatives as appropriate.
  4. Others as requested by CONTRACTOR, OWNER, or CONSTRUCTION MANAGER.
- B. Unless previously submitted to the CONSTRUCTION MANAGER, the CONTRACTOR shall bring to the conference one copy each of the following:
1. Pre-Award Cost Loaded Construction Schedule per City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 6-1.1.
  2. Procurement schedule of major equipment and materials, and items requiring long lead time.
  3. Shop Drawing/Sample/Substitute or "Or Equal" submittal schedule.

- C. The purpose of the Pre-Construction Conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The complete agenda will be furnished by the CONSTRUCTION MANAGER to the CONTRACTOR prior to the meeting date. However, the CONTRACTOR should be prepared to discuss all of the items listed below.
1. Status of CONTRACTOR's insurance and bonds.
  2. CONTRACTOR's tentative schedules.
  3. Transmittal, review, and distribution of CONTRACTOR's submittals.
  4. Processing applications for payment.
  5. Maintaining record documents.
  6. Critical work sequencing.
  7. Field decisions and Change Orders.
  8. Use of project site, office and storage areas, security, housekeeping, and OWNER's needs.
  9. Major equipment deliveries and priorities.
  10. CONTRACTOR's assignments for safety and first aid.
- D. The CONSTRUCTION MANAGER will preside at the preconstruction conference and will arrange for keeping and distributing the minutes to all persons in attendance.

#### 1.04 PROGRESS MEETINGS

- A. The CONSTRUCTION MANAGER will schedule and hold regular on-site progress meetings at least weekly and at other times as required by progress of the Work. The CONTRACTOR, CONSTRUCTION MANAGER, and all subcontractors active on the site shall attend each progress meeting. The CONSTRUCTION MANAGER may, at its discretion, request attendance by representatives of the CONTRACTOR's suppliers, manufacturers, and other subcontractors.
- B. The CONSTRUCTION MANAGER shall preside at the meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings will be to review the progress of the WORK, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop. During each meeting, the CONTRACTOR is required to present any issues which may impact his work, with a plan to resolve these issues expeditiously.
- C. The CONSTRUCTION MANAGER will invite the Design Consultant, CIP Project Manager, CIP Safety Manager, and the CIP Public Information Officer, to send representatives to the weekly progress meetings. From time to time, the CONSTRUCTION MANAGER may invite others to attend as well, including the CIP Owner Controlled Insurance Program manager, specialty design subconsultants, utility companies, and community groups.
- D. The agenda will include but will not be limited to the following:
1. Transcript or minutes of previous meeting.
  2. Safety and Traffic Control Issues.
  3. Community and public relations issues.

4. Progress since the last meeting.
5. The CONTRACTOR's three-week look-ahead schedule and planned Work progress for the next Work period.
6. Shop Drawings, Requests for Information, and Substitution Requests review.
7. Problems, conflicts, disputed issues, potential claims, and observations.
8. Field Orders and Change Orders.
9. Applications for payment.
10. Quality standards and control.
11. Schedules, including off-site fabrication and delivery schedules. Corrective measures required.
12. Coordination between parties.
13. Other issues and business as required.

#### 1.05 PRE-INSTALLATION CONFERENCES

- A. Conduct a pre-installation conference at the Project Site before each construction activity that requires coordination with other construction.
- B. Attendees: The Installer and representatives of manufacturers and fabricators involved in, or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the CONSTRUCTION MANAGER of scheduled meeting dates.
  1. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
    - a. Contract Documents.
    - b. Options.
    - c. Related Change Orders.
    - d. Purchases.
    - e. Deliveries.
    - f. Shop Drawings, Product Data, and quality control samples.
    - g. Review of mockups.
    - h. Possible conflicts.
    - i. Compatibility problems.
    - j. Time schedules.
    - k. Weather limitations.
    - l. Manufacturer's recommendations.
    - m. Warranty requirements.
    - n. Compatibility of materials.
    - o. Acceptability of substrates.

- p. Temporary facilities.
  - q. Space and access limitations.
  - r. Governing regulations.
  - s. Safety.
  - t. Inspecting and testing requirements.
  - u. Required performance results.
  - v. Recording requirements.
  - w. Protection.
2. Record significant discussions and agreements and disagreements of each conference, and the approved schedule. Promptly distribute the record of the meeting to everyone concerned, including the OWNER and the CONSTRUCTION MANAGER.
  3. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at the earliest feasible date.

#### 1.06 COORDINATION MEETINGS

- A. Coordination of water system shutdowns requires the CONTRACTOR to attend meetings with the Water Department Operations Division in order to plan and schedule system adjustments and shutdowns. The CONTRACTOR shall participate in coordination meetings, as requested by the CONSTRUCTION MANAGER. CONTRACTOR shall be prepared to present the detailed work plan for connection work, in accordance with Section 01040 Coordination.

### **PART 2 - PRODUCTS (NOT USED)**

### **PART 3 - EXECUTION (NOT USED)**

**\*\* END OF SECTION \*\***



## SECTION 01300 – SUBMITTALS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. Wherever submittals are required hereunder, all such submittals by the CONTRACTOR shall be submitted to the CONSTRUCTION MANAGER.
- B. Within 5 working days after the date of commencement as stated in the Notice to Proceed, the CONTRACTOR shall submit the following items to the CONSTRUCTION MANAGER for review:
  - 1. A Submittal Schedule of Shop Drawings, Samples, and proposed Substitutes (“Or Equal”) submittals. Additional submittals will not be accepted for review prior to acceptance of the Submittal Schedule by the CONSTRUCTION MANAGER.
  - 2. A list of all permits and licenses the CONTRACTOR shall obtain. Indicate the agency required to grant the permit, the expected date of submittal for the permit, and the required date for receipt of the permit.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Section apply to Work of this Section. The Work of other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the Work.
  - 1. Section 01040 Coordination
  - 2. Section 01060 Regulatory Requirements
  - 3. Section 01115 Construction Sequence.
  - 4. Section 01200 Project Meetings
  - 5. Section 01380 Construction Videotapes and Photographs.
  - 6. Section 01400 Quality Control
  - 7. Section 01560 Environmental Protection
  - 8. Section 01600 Material and Equipment
  - 9. Section 01630 Substitutions

#### 1.03 CONTRACTOR'S OPTIONS

- A. For those products, materials, or equipment (hereinafter products) addressed by the current edition of the City of San Diego Water Approved Materials List (hereinafter AML), the manufacturer, fabricator, supplier, or distributor (hereinafter manufacturer) of the products and the product shall conform to those named in the AML. This requirement applies to all CONTRACTOR'S options.
- B. For products specified only by reference standard, select products by any manufacturer meeting that standard. To the maximum extent possible, provide products of the same generic kind from a single source.

- C. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named that complies with the Contract Documents.
- D. For products specified by naming one or more products or manufacturers and stating “or equal,” submit a Request for Substitution, as defined in Section 01630, Substitutions, to the CONSTRUCTION MANAGER for any product or manufacturer that is not specifically named.
  - 1. Note that a limited time period is specified for the CONTRACTOR to submit Requests for Substitution. After that period has elapsed, the CONSTRUCTION MANAGER will no longer accept Requests for Substitution for review.
- E. Where more than one choice is available as a CONTRACTOR'S option, select a product that is compatible with other products already selected or specified.

#### 1.04 SHOP DRAWINGS

- A. Submit Shop Drawings to CONSTRUCTION MANAGER for review and acceptance in accordance with the accepted schedule of Shop Drawings and Sample submittals.
- B. Determine and verify before submitting each Shop Drawing or Sample:
  - 1. Field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto.
  - 2. Materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work.
  - 3. Information relative to CONTRACTOR'S sole responsibilities in respect of means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- C. CONTRACTOR shall review and coordinate each Shop Drawing or Sample with other Shop Drawings and Samples, and with the requirements of the Work and Contract Documents.
- D. All CONTRACTOR shop drawing submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the CONSTRUCTION MANAGER. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed, and certified. No consideration for review by the CONSTRUCTION MANAGER of any CONTRACTOR submittals will be made for any items which have not been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the CONSTRUCTION MANAGER, and any delays caused thereby shall be the sole responsibility of the CONTRACTOR.
- E. At the time of each submission, CONTRACTOR shall give CONSTRUCTION MANAGER specific written notice of variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract documents. The notice shall be by written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to CONSTRUCTION MANAGER for review and acceptance of each such variation.

- F. Review and acceptance of Shop Drawings and Samples will be only to determine if items covered by submittals will, after installation or incorporation in the Work, conform to information given in the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Review and acceptance will not extend to means, methods, techniques, sequences, or procedures of construction, except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents. The review and acceptance of a separate item as such will not indicate acceptance of the assembly in which the item functions. The review of CONTRACTOR shop drawing submittals shall not relieve the CONTRACTOR of the entire responsibility for the correctness of details and dimensions. The CONTRACTOR shall assume all responsibility and risk for any misfits due to any errors in CONTRACTOR submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details. CONTRACTOR shall make corrections required to submittals and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and acceptance. Contractor shall direct specific attention in writing to revisions other than corrections called for on previous submittals.
- G. Review and acceptance of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for variation from requirements of the Contract Documents, unless CONTRACTOR has in writing called attention to each such variation at the time of submission, and written acceptance has been given of each such variation by specific written notation thereof incorporated in, or accompanying, the Shop Drawing or Sample acceptance.
- H. Where a Shop Drawing or Sample is required by Contract Documents or schedule of Shop Drawings and Sample submissions accepted by CONSTRUCTION MANAGER, related Work performed prior to review and approval of pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

#### 1.05 SUBMITTAL PROCEDURES

- A. Wherever called for in the Contract documents, or where required by the CONSTRUCTION MANAGER, the CONTRACTOR shall furnish to the CONSTRUCTION MANAGER for review, 10 copies, plus the number the CONTRACTOR wants returned, not to exceed 12 copies, plus one reproducible copy, of each shop drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication, and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items.
- B. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturers "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the CONSTRUCTION MANAGER.
- C. A standard transmittal form approved by the CONSTRUCTION MANAGER shall be used for the project. Transmittal form shall identify CONTRACTOR, indicate date of submittal, and include information prescribed by the transmitted form and assign a sequential number to each submittal in a format approved by the CONSTRUCTION MANAGER.

Process transmittal forms to record actions regarding sample panels and sample installations.

- D. In order to indicate that the submittals have been Reviewed and Approved by CONTRACTOR as to conformance to Contract Documents, CONTRACTOR shall have made and shall use labels and/or a rubber stamp which shall materially conform to the following sample:

Submittal No.:		
Contract No.:	Project No.:	
Contractor:		
REVIEWED AND APPROVED for Conformance with the Contract Documents By:	(Signature)	
References:		
Drawing Sheet No's.:		
Specification Section No's.:		

- E. Except as may otherwise be indicated herein, the CONSTRUCTION MANAGER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within 30 calendar days following their receipt by the CONSTRUCTION MANAGER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the CONSTRUCTION MANAGER by the second submission of a submittal item. The OWNER reserves the right to withhold monies due the CONTRACTOR to cover additional costs of the review beyond the second submittal. The maximum review period for each submittal, including all resubmittals, will be 30 days per submittal. For a submittal that requires two resubmittals before it is complete, the maximum review period for that submittal could be 90 days.
- F. If 3 copies of a submittal are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN, formal revision and resubmission of said submittal will not be required.
- G. If 3 copies of a submittal are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal revision and resubmission of said submittal will be required when requested for confirmation.
- H. If a submittal is returned to the CONTRACTOR marked "REVISE-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the CONSTRUCTION MANAGER.
- I. If a submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the CONSTRUCTION MANAGER.
- J. Fabrication of an item shall be commenced only after the CONSTRUCTION MANAGER has reviewed the pertinent submittals and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections noted on submittals shall be considered as changes necessary to meet the requirements

of the Contract Documents and shall not be taken as the basis for changes to the contract requirements.

K. Submittal log

1. CONTRACTOR shall maintain an accurate submittal log which lists all the submittals required by this Contract, showing current status of each submittal.
2. Make the submittal log available for review upon request.

1.06 SUBMITTAL FORMAT AND COPIES

A. Format for Shop Drawings:

1. For shop drawings presented on sheets larger than 8 ½-inches by 17 inches, include on each drawing the drawing title, number, date, and revision numbers and dates.
2. For shop drawings presented on sheets 8 ½-inches by 17 inches or less, conform to the format and quantity requirements for product data, and present as a part of the bound volume for the submittals required by the Section.
3. Dimension drawings, except diagrams and schematic drawings; prepare dimensioned drawings to scale. Identify materials and products for work shown.
4. Shop drawings shall be not less than 8 ½ by 11 inches nor more than 30 by 42 inches.
5. Submit detailed drawings and descriptions of proposed deviations from details or component arrangement indicated on the drawings.
6. Provide finished drawings for approval indicating proposed installation of the Work, and materials and equipment being furnished.
7. Copies of plans will not be accepted for submission as drawings, nor will catalog numbers alone of materials or equipment.
8. Data shown on working drawings shall be complete with respect to dimensions, design criteria, material of construction, and other detail to enable review.

B. Format for Product Data:

1. Present product data submittals for each Section of the Specifications as a complete, bound volume. Include a table of contents listing page and catalog item numbers for product data.
2. Indicate, by prominent notation, each product which is being submitted; indicate the Section and paragraph numbers to which it pertains.
3. Supplement product data with material prepared for the project to satisfy submittal requirements for which product data does not exist. Note that the material is developed specifically for the project.
4. Catalog data shall be explicit with regard to details of products being furnished and complete enough to enable Design Consultant to determine that products submitted conform to requirements of specifications.
5. For submittals with more than one style, size, capacity, etc. of a product on a sheet, clearly indicate exactly which product type is being submitted for approval. Failure to do this is cause for rejection.

6. Catalog data shall bear name of manufacturer of product.
- C. Samples
1. Label or tag each sample identifying the specification Section number, manufacturer's name and address, brand name, product identification number, and intended use in the Work.
- D. Format of Administrative and Closeout Submittals
1. Submit administrative and closeout submittals in the format and quantities required for shop drawings.
  2. If the submittal includes a document which is to be used in the project or become a part of the project record, other than as a submittal, do not apply the CONTRACTOR'S approval stamp to the document, but to a separate sheet accompanying the document.
  3. Record documents shall be submitted in conformance with City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 2-5.4
- E. Unless otherwise directed in writing, CONTRACTOR shall submit the following number of copies of each submittal:
1. Product Data, Shop Drawings, and Working Drawings: 10 copies for the following distribution:
    - a. Design Consultant's review: 3 copies. 4copies for the CONSTRUCTION MANAGER.
    - b. OWNER's records: 1 copy.
    - c. Returned to CONTRACTOR: 3 copies.
      - (1) 1 copy for Record Documents file.
      - (2) 1 copy for CONTRACTOR's records.
      - (3) 1 copy for circulation to subcontractors and suppliers.
  2. Samples: Provide two sets of required samples. One sample will be returned after review with notations resulting from review.
    - a. Operation and Maintenance information: As specified in Section 01730 - Operation and Maintenance Information.
    - b. Training Manuals: Provide in number and for distribution as for Operations and Maintenance Information in Section 01730 - Operation and Maintenance Information, with the additional requirements in Section 01670 - Systems and Equipment Training.

#### 1.07 PRE-CONSTRUCTION AND CONSTRUCTION PROGRESS SCHEDULES

- A. Provide as required by City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 6-1.1.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

- C. Resolve conflicts as directed by CONSTRUCTION MANAGER at no additional cost to OWNER.

#### 1.08 MANUFACTURER'S INSTRUCTIONS

- A. Submit manufacturers' printed instructions for delivery, storage, assembly, installation, start up, adjusting, and finishing, in quantities specified for shop drawings when specified in individual Sections

#### 1.09 MANUFACTURER'S CERTIFICATES

- A. When specified in individual Sections, submit manufacturers' certificate(s) to CONSTRUCTION MANAGER for review, in quantities specified for shop drawings.
- B. Indicate material and equipment conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to CONSTRUCTION MANAGER.
- D. Where specified in Contract Documents that a certificate and/or affidavit shall be submitted to OWNER for approval of a particular product, or component of a product, such submittals shall be made in accordance with the following:
  - 1. A certificate submitted for a product, or component of a product, indicates test results proving that product, or component, meets the requirements of the standard specified in the Contract Documents.
  - 2. An affidavit consisting of a sworn statement by an official of the company manufacturing the product indicating that information on certificate is true and accurate shall accompany the certificate.
  - 3. A statement originating from CONTRACTOR, or his subcontractors, suppliers, or other agent which merely indicates that a particular item of equipment, product, or component of a product, meets the requirements of Contract Documents shall not be considered a certificate. A submittal made in this manner will not be accepted and corresponding equipment, product, or component, shall not be finally accepted.

### **PART 2 - PRODUCTS (NOT USED)**

### **PART 3 - EXECUTION (NOT USED)**

**\*\* END OF SECTION \*\***

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## SECTION 01380 – CONSTRUCTION VIDEOTAPES AND PHOTOGRAPHS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall video tape pre-construction site conditions, take preconstruction photographs, and take construction photographs, as specified.
- B. The CONTRACTOR shall obtain the CONSTRUCTION MANAGER's approval prior to taking the first series of photographs or video tapes of each specified type.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Section apply to Work of this Section. Work of other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the Work.
  - 1. Section 01300 Submittals

#### 1.03 SUBMITTALS

- A. Submit video tapes and photographs as specified and according to Section 01300, Submittals.

### PART 2 - PRODUCTS

#### 2.01 VIDEO TAPING EQUIPMENT

- A. The CONTRACTOR's video capability, equipment, and operators shall conform to the following minimum criteria:
  - 1. High resolution and clarity shall be provided by on a DVD format.
  - 2. DVD shall be automatically dated and timed.

#### 2.02 PRECONSTRUCTION PHOTOGRAPHIC EQUIPMENT

- A. The CONTRACTOR's photographic capability, equipment, and operators shall conform to the following minimum criteria:
  - 1. The camera shall be digital and capable of taking photographs with a minimum of 8 mega-pixels and photos saved to DVD.
  - 2. The camera shall be capable of imprinting an inalterable date on the film.

#### 2.03 DIGITAL PHOTO EQUIPMENT

- A. The CONTRACTOR shall provide a new digital camera of at least 8.0 effective megapixel resolution for this Project. The camera shall be manufactured by a reputable firm of common name (Sony, Olympus, Canon, Minolta, Ricoh, Kodak, or equal).

- B. The camera shall utilize a universal platform memory card or “flash” card for storing digital photographs.
- C. The camera shall utilize an automatic focus, f-stop, and built-in flash system with manual override to promote quality photography.
- D. The CONTRACTOR shall provide a minimum of two flash cards, each having a minimum capacity of 2 gigabytes (Gb).
- E. The digital camera and two flash cards in good working condition, accounting for reasonable wear and tear, shall be transferred to the City at the last Project progress meeting or at the time of Substantial Completion, whichever comes last.
  - 1. If the digital camera or any flash cards are destroyed or damaged beyond use during the course of the Project, they shall be replaced by the CONTRACTOR at no additional cost to the OWNER.

### **PART 3 - EXECUTION**

#### **3.01 VIDEO TAPING OF PRE-CONSTRUCTION CONDITIONS**

- A. The CONTRACTOR shall video tape all Project existing surface conditions prior to the start of any construction activities. Important Project aspects that shall be videotaped include but are not limited to:
  - 1. Exterior of Basin.
  - 2. Basin walkways, upper deck.
  - 3. Interior of all Basin surfaces.
  - 4. Mechanical components, energy dissipater, valves, etc.
  - 5. Sweep guides.
  - 6. Foreign objects.
  - 7. Exposed rebar.
  - 8. Cracks, expansion joints and construction joints.
  - 9. Safety conditions.
  - 10. Other unusual conditions or equipment/facility installations.
- B. All videotaping of pre-existing surface conditions shall be performed in the presence of the CONSTRUCTION MANAGER.
- C. The CONTRACTOR shall make all arrangements for videotaping, including coordination with the CONSTRUCTION MANAGER.
- D. The CONTRACTOR shall transmit all original DVD video to the CONSTRUCTION MANAGER immediately after taping. Video tapes shall be submitted to the CONSTRUCTION MANAGER no later than thirty (30) days after issuance of Notice to Proceed, and no construction Work shall commence prior to the CONSTRUCTION MANAGER’s acceptance of the video tapes.

- E. The CONTRACTOR shall not be entitled to any additional Working days due to videotaping activities, including securing videotaping services, taping and editing activities, or submitting video tapes to and obtaining acceptance from the CONSTRUCTION MANAGER.

### 3.02 PRECONSTRUCTION PHOTOGRAPHS

#### A. General

1. The CONTRACTOR shall take a sufficient number (200 photographs minimum; complex projects may require additional photographs) of preconstruction photographs necessary to resolve any disputes that may arise regarding the considerations prior to and subsequent to construction. Photographs of the same general types of Project aspects as described under Video Taping of Pre-Construction Conditions shall be taken. All photographs shall be imprinted with an unalterable date designation.
  2. If a dispute arises where no preconstruction photographs were taken, the disputed area shall be restored to the extent directed by the CONSTRUCTION MANAGER and to the satisfaction of the CONSTRUCTION MANAGER.
  3. The CONTRACTOR shall furnish one set of color prints of the preconstruction photographs to the CONSTRUCTION MANAGER, and shall make other photographs available for review in settling any disputes that may arise.
  4. The CONSTRUCTION MANAGER may, at his option, take additional preconstruction photographs that may be used to settle disputes, but will not be required to make these photographs available to the CONTRACTOR.
- B. All photographs of pre-construction surface conditions shall be performed in the presence of the CONSTRUCTION MANAGER.
  - C. The CONTRACTOR shall make all arrangements for preconstruction photographs including coordination with the CONSTRUCTION MANAGER.
  - D. The CONTRACTOR shall transmit all prints of preconstruction photographs to the CONSTRUCTION MANAGER immediately after photographing. Preconstruction photographs shall be submitted to the CONSTRUCTION MANAGER no later than thirty (30) days after issuance of Notice to Proceed, and no construction Work shall commence prior to the CONSTRUCTION MANAGER's acceptance of the preconstruction photographs.
  - E. The CONTRACTOR shall not be entitled to any additional Working days due to preconstruction photographing activities, including securing photographic services, photographic printing services, or submitting preconstruction photographs to and obtaining acceptance from the CONSTRUCTION MANAGER.

### 3.03 DIGITAL CONSTRUCTION PHOTOGRAPHS

- A. The CONTRACTOR shall provide continuing digital photographs illustrating all aspects of Project progress throughout the Project duration.
- B. The CONTRACTOR shall take photographs at the camera's maximum resolution in sufficient quantity to fill the flash card memory prior to each Project progress meeting.

- C. The CONSTRUCTION MANAGER shall approve the views to be taken and the time which they are to be taken.
- D. The CONTRACTOR shall record the following information for each photograph taken:
  - 1. Project title.
  - 2. Date taken.
  - 3. Photograph number.
  - 4. Description of view shown in photograph.
  - 5. Names of any persons in the view.
  - 6. Photographer's name and current contact information.
- E. The CONTRACTOR shall submit the memory or flash card of the pictures taken during the previous progress period to the CONSTRUCTION MANAGER at the regularly scheduled Project progress meetings. The CONSTRUCTION MANAGER will return the previously submitted empty flash card to the CONTRACTOR during the Project progress meeting.
  - 1. If more than two flash cards are required to make the specified exchange, or if any flash cards are damaged during the exchange process, the CONTRACTOR shall provide the flash cards at no additional cost to the OWNER.

\*\* END OF SECTION \*\*

## SECTION 01400 – QUALITY CONTROL

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall produce Work that meets the quality required by the Contract Documents and shall perform the quality control efforts necessary to ensure those requirements are met. The CONSTRUCTION MANAGER's inspection of any Work will not relieve the CONTRACTOR of the primary responsibility for such efforts.
- B. Specific quality control requirements for the Work are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the Work beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to Work of this Section. Work of other Sections of the Specifications not referenced below shall also apply to the extent required for proper performance of the Work.
  - 1. Section 01050 Field Engineering
  - 2. Section 01300 Submittals
  - 3. Section 01600 Material and Equipment
  - 4. Section 01630 Substitutions
  - 5. Section 4 Control of Materials, Part 1 Special Provision - General of the Contract Documents.

#### 1.03 PROJECT QUALITY CONTROL PLAN

- A. The CONTRACTOR shall submit to the CONSTRUCTION MANAGER a Quality Control Plan for review and acceptance within 21 days of the Notice to Proceed. The submittal must be accepted before construction Work begins. The Quality Control Plan will include:
  - 1. A description of the workings and structure of the CONTRACTOR's Quality Control Plan that will be implemented to assure quality Work will be done.
  - 2. A contract specific Inspection Plan that lists and describes inspections that the CONTRACTOR will conduct, their frequency, acceptance criteria, and who will conduct each inspection. The Inspection Plan shall include the Work to be performed by subcontractors, fabricators, and suppliers.
  - 3. Identification of the individuals within the CONTRACTOR's organization who are responsible for quality control including their role and authority.

After completion of the CONSTRUCTION MANAGER'S review of the CONTRACTOR's Quality Control Plan, the CONTRACTOR and CONSTRUCTION MANAGER will meet to

discuss and define quality standards and expectations and to coordinate the CONSTRUCTION MANAGER'S inspection efforts with the CONTRACTOR'S planned efforts.

- B. CONTRACTOR will be obligated to accommodate procedural changes to contract required quality control issues requested by the CONSTRUCTION MANAGER.

#### 1.04 FACTORY INSPECTIONS AND TESTS

- A. The CONTRACTOR shall provide all schedules and schedule updates using hard copy and electronic files on CD-RW disks. The CONTRACTOR shall be responsible for inspection and testing of materials, products, or equipment at the place of manufacture at its own expense when required by the Contract Documents. Where specified in the Contract Documents, the OWNER/CONSTRUCTION MANAGER will perform inspection and witness tests on materials, products, or equipment at the place of manufacture. The CONTRACTOR shall bear all costs for inspection and for witnessing factory tests by the OWNER's/CONSTRUCTION MANAGER's representatives as nominated by the OWNER for the number of days indicated for such inspections and observations. These costs shall include travel expenses, and expenses for lodging, meals, and car rental if the place of manufacture, fabrication and factory testing is more than fifty (50) miles outside the geographical limit of the City. If air travel is involved, it shall include economy class tickets. Costs paid by the CONTRACTOR for inspection and for witnessing factory tests shall not include the salaries or salary-related expenses of the inspectors.
- B. Where the Plans and/or Technical Specifications indicate that factory inspection and witnessing of testing by the OWNER/CONSTRUCTION MANAGER is optional or discretionary, the OWNER will pay for travel and related costs associated with such inspection and witnessing of tests by the OWNER's/CONSTRUCTION MANAGER's representatives.
- C. The presence of the OWNER's/CONSTRUCTION MANAGER's representatives at the place of manufacture shall not relieve the CONTRACTOR of the responsibility for furnishing materials, products, and equipment which comply with all requirements of the Contract Documents. The CONTRACTOR is obligated to meet the requirements of the Contract Documents, and any act or omission on the part of the OWNER/CONSTRUCTION MANAGER shall not relieve the CONTRACTOR of the obligation to fulfill the requirements of its Contract.
- D. In cases, where the OWNER/CONSTRUCTION MANAGER is indicated to perform inspection and witness tests, the CONTRACTOR shall provide the CONSTRUCTION MANAGER, as a minimum, an advance notice of fourteen (14) calendar days prior to the start of any testing at the place of manufacture. This notice period may be modified depending on the requirements of each specification section in the technical specifications of the Contract Documents.

- E. When tests fail to meet the specified requirements, retesting because of non-conformance to specified requirements shall be performed by the same testing laboratory as directed by the OWNER/CONSTRUCTION MANAGER. The CONTRACTOR shall bear all costs for such retesting, including costs for additional trips for factory inspection and testing by OWNER's / CONSTRUCTION MANAGER's inspectors.
- F. For samples and tests required by the CONTRACTOR for its own quality assurance program and needs, whether or not specified in the Contract Documents, costs shall be included in the Contract Price.
- G. All factory inspections and tests required by the specifications, regulatory permits, or referenced codes and standards shall be the responsibility of the CONTRACTOR, unless specifically noted otherwise.

#### 1.05 SAMPLING AND TESTING

- A. Unless otherwise indicated, all sampling and testing shall be in accordance with the methods prescribed in the most current standards of the ASTM, as applicable to the class and nature of the material, product, or equipment considered; however, the OWNER will use any generally-accepted system of sampling and testing which will insure that the quality of the workmanship is in full agreement with the Contract Documents.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the CONSTRUCTION MANAGER will make independent investigations and tests; and failure of any portion of the Work to meet any of the requirements of the Contract Documents shall be reasonable cause for the CONSTRUCTION MANAGER to require the removal or correction and reconstruction of any such work in accordance with the Contract Documents.

#### 1.06 INSPECTION AND TESTING LABORATORY SERVICE

- A. The OWNER will provide and pay for the services of a testing laboratory to perform routine testing of earth work and concrete at the site, and perform random tests of other areas previously completed and inspected by CONTRACTOR.
- B. The OWNER's testing laboratory will perform other inspections, testings, and other services specified in the Contract Documents, to be performed by the OWNER, or as required by the CONSTRUCTION MANAGER. The cost of these services will be paid for by the OWNER.
- C. Construction work located in the City right-of-way is subject to testing by the City Materials Test Lab. The CONTRACTOR shall coordinate with the CONSTRUCTION MANAGER to obtain City Materials Test Lab Services.

- D. Reports will be submitted by the OWNER's testing laboratory to the CONSTRUCTION MANAGER in duplicate, indicating observations and results of tests, and indicating compliance or non-compliance with Contract Documents.
- E. The CONTRACTOR shall cooperate with the CONSTRUCTION MANAGER and OWNER's testing laboratory by furnishing samples of materials, concrete design mix, equipment, tools, storage and other assistance as requested.
- F. The CONTRACTOR shall notify the CONSTRUCTION MANAGER 48 hours prior to the expected time for operations requiring inspection and laboratory testing services.
- G. Retesting required because of non-conformance to specified requirements shall be performed by the same testing laboratory as directed by the CONSTRUCTION MANAGER. The CONTRACTOR shall bear all costs from such retesting at no additional cost to the OWNER.
- H. For samples and tests required for the CONTRACTOR's use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of sampling and testing for the CONTRACTOR'S use shall be included in the Contract Price.
- I. All tests required by the specifications or referenced codes and standards are the responsibility of the CONTRACTOR, unless specifically noted otherwise.

#### 1.07 SPECIAL INSPECTION

- A. The Uniform Building Code requires that special inspections be performed on certain structural elements of the project. The OWNER through its CONSTRUCTION MANAGER will perform all on-site special inspections required by Section 1701 of the 1997 version of the Uniform Building Code. The cost of these services when provided during normal Work hours will be paid for by the OWNER.
- B. When building components are fabricated off site, the CONTRACTOR must utilize a fabricator approved by the City of San Diego Development Services Department. The CONTRACTOR must submit applications to perform off-site fabrications and certificates of compliance in accordance with Development Services Department procedures. If the CONTRACTOR elects to utilize a fabricator that is not approved by the Development Services Department, the CONTRACTOR shall provide a special inspector to perform continuous special inspection in the fabricator's shop. The special inspector must be certified by the Inspection Services Division of the City of San Diego Development Services Department. The CONTRACTOR shall be responsible for all costs associated with performing special inspection in the fabricator's shop.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### 3.01 INSTALLATION

- A. Inspection: The CONTRACTOR shall inspect materials or equipment upon arrival on the job site and immediately prior to installation. The CONTRACTOR shall reject damaged



and defective items. This inspection shall include a review of Contract requirements; a check to assure that all materials and/or equipment have been tested, submitted, and approved; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials and equipment to assure that they conform to reviewed shop drawings or submittal data. This inspection shall also include instruction as necessary to assure that workmen know the requirements of the Contract as they pertain to the feature, an examination of the quality of workmanship, as well as a review of control testing for compliance with the Contract requirements.

- B. Measurements: The CONTRACTOR shall verify measurements and dimensions of the Work, as an integral step of starting each installation.
- C. Special Procedures: Methods and facilities shall be provided to assure conformance with requirements for special process specifications such as welding, heat treating and nondestructive testing of materials. Certifications for personnel, procedures, and equipment shall be maintained as required to meet the requirement of the Contract Documents and all applicable codes.
- D. Manufacturer's Instructions: Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

### 3.02 MANUFACTURER'S FIELD INSTALLATION SERVICES AND REPORTS

- A. When specified in individual specification sections, the CONTRACTOR shall require material or product suppliers or equipment manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, (test, adjust, and balance of equipment) and to provide instructions when necessary.
- B. The CONTRACTOR shall report to the CONSTRUCTION MANAGER in writing any observations and site decisions or instructions given by the manufacturers' representative to the CONTRACTOR that are supplemental or contrary to manufacturers' written instructions.
- C. The CONTRACTOR shall submit manufacturer representative's reports (in duplicate) within 10 days of each field visit, to the CONSTRUCTION MANAGER for review. If duration of field visit is greater than one week, submit weekly reports. The final report shall certify that equipment or system has been satisfactorily installed and is functioning correctly.

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## SECTION 01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR may use existing construction trailers on the Otay Water Treatment Plant boundaries. The CONTRACTOR is responsible for providing their own utilities to the existing trailers at no cost to the OWNER. Notwithstanding, the CONTRACTOR shall provide facilities required for construction and temporary controls during the construction, including the following:
1. Layout of temporary facilities
  2. Temporary utilities
  3. Barriers
  4. Enclosures
  5. Protection of installed Work
  6. Temporary Controls
  7. Security
  8. Access roads and parking
  9. Field offices and sheds
  10. Removal of utilities, facilities and controls

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to Work of this Section. Work of other Sections of the Specifications not referenced below shall also apply to the extent required for proper performance of the Work.
1. Section 01010 Summary of Work.
  2. Section 01040 Coordination
  3. Section 01060 Regulatory Requirements
  4. Section 01560 Environmental Protection.

#### 1.03 LAYOUT OF TEMPORARY FACILITIES

- A. Submit drawings for approval showing proposed locations and sizes of offices, shops, storage areas, fencing, temporary stationary equipment, and similar facilities. Where onsite space for temporary facilities is limited, allocation of available space will be made by CONSTRUCTION MANAGER. Should CONTRACTOR require space in addition to that allocated, CONTRACTOR shall make his own arrangements for storage of materials and equipment in a location off the construction site. For allocated space, submit to CONSTRUCTION MANAGER for approval proposed plan and layout for temporary offices, sanitary facilities, temporary construction roads, storage buildings, storage yards,

and temporary power service and distribution. Said facilities shall be located so as not to impede or prevent the principal function of existing facilities.

#### 1.04 TEMPORARY UTILITIES

##### A. General

1. Provide and maintain temporary and interim utility services necessary for performance of Work. Include costs associated with these services in lump sum price bid.
2. Wherever feasible, the CONTRACTOR shall engage the utility company to install temporary service to the project, or as a minimum, to make connection to existing utility service; shall locate services where they will not interfere with total project construction work, including installation of permanent utility services; shall maintain temporary services as installed for required period of use; and shall relocate, modify or extend as necessary from time to time during that period as required to accommodate total project construction work.
3. Install and maintain utilities to comply with applicable code, safety, and utility company requirements.
4. Connect to OWNER's utility service only on approval of CONSTRUCTION MANAGER. Provide submeter for connections to OWNER's utilities and pay for utility used.
5. Use of permanent utilities or equipment during construction shall not constitute start of warranties or guaranties.
6. Inspections: Prior to placing temporary utility services into use, the CONTRACTOR shall inspect and test each service and arrange for governing authorities' required inspection and tests, and obtain required certifications and permits for use thereof.
7. Termination and Removal: When need for a temporary utility service or a substantial portion thereof has ended, or when its service has been replaced by use of permanent services, or not later than time of substantial completion, the CONTRACTOR shall promptly remove installation unless requested by CONSTRUCTION MANAGER to retain it for a longer period. The CONTRACTOR shall complete and restore work which may have been delayed or affected by installation and use of temporary utilities, including repairs to construction and grades and restoration and cleaning of exposed surfaces.

##### B. Electricity

1. CONTRACTOR Operations: the CONTRACTOR shall pay all costs for temporary electrical system installation and usage charges associated with its operations.
2. Provide connections, sized to provide service required for power and lighting. Feeder and branch wiring with area distribution boxes shall be located so that power is available through project site by use of power cords. Provide terminations for each voltage supply complete with circuit breakers, disconnect switches and other electrical devices required to protect power supply system.
3. Approval of Electrical Connections: All temporary connections for electricity shall be subject to approval of the CONSTRUCTION MANAGER and the power

company representative, and shall be removed in like manner at the CONTRACTOR's expense prior to final acceptance of the Work.

4. Provide and maintain lighting for construction operations.
  - a. Construction Lighting: All work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper work and to afford adequate facilities for inspection and safe working conditions.
  - b. Temporary Lighting: The CONTRACTOR shall provide a general, weatherproof, grounded temporary lighting system in every area of construction work, as soon as is practically feasible and provide sufficient illumination for safe work and traffic conditions; and run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations on grade, floors, or other recognized areas of possible damage or abuse.
  - c. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
  - d. Maintain lighting and provide routine repairs.
  - e. Permanent building lighting shall not be utilized during construction without prior written approval of the CONSTRUCTION MANAGER.
5. Separation of Circuits: Unless otherwise permitted by the CONSTRUCTION MANAGER, circuits separate from lighting circuits shall be used for all power purposes.
6. Construction Wiring: All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of Title 8, Industrial Relations, Sub-chapter 5, Electrical Safety Orders, California Administrative Code; and Subpart K of the OSHA Safety and Health Standards for Construction.
7. Temporary electrical power for use during construction shall not interfere with or adversely affect the normal operation of OWNER'S existing facilities.
8. Power: The CONTRACTOR shall provide all necessary power required for its operations under the Contract, at no additional cost to OWNER.
  - a. Temporary Power Distribution: The CONTRACTOR shall provide a weatherproof, grounded, temporary power distribution system sufficient to accommodate performance of entire Work of the Contract, including but not necessarily limited to temporary electrical heating where indicated; operation of test equipment and test operation of building equipment and systems which cannot be delayed until permanent power connections are operable; temporary operation of other temporary facilities, including permanent equipment and systems which must be placed in operation prior to use of permanent power connections (pumps, VAC. equipment, elevators, and similar equipment); and power for temporary operation of existing facilities (if any) at the site during change-over to new permanent power system. Provide circuits of adequate size and proper power characteristics for each use; run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage

from construction operations, and result in least interference with performance of the Work; provide rigid steel conduit or equivalent raceways for wiring which must be exposed on grade, floors, decks, or other recognized exposures to damage or abuse.

- b. Provide power outlets for CONTRACTOR's operations, with transformers, branch wiring and distribution boxes located safely and conveniently for the proposed construction activities. Provide flexible power cords as required.
- c. Maintain main service disconnect and overcurrent protection at source distribution equipment.
- d. Permanent convenience receptacles may not be utilized during construction.

C. Temporary Heat

1. Provide as required to maintain specified conditions for construction operations, to protect materials and finishes from damage due to temperature or humidity.
2. Any part of building or materials that become damaged because of lack of heat shall be replaced by CONTRACTOR and expenses to be borne by CONTRACTOR.
3. Prior to operation of permanent facilities for temporary purposes, verify that installation is approved for operation, and that filters are in place. Provide and pay for operation, maintenance, utilities, and other associated items.
4. Maintain minimum or higher ambient temperature of 50 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.

D. Temporary Ventilation

1. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
2. Utilize existing ventilation equipment. Extend and supplement equipment with temporary fan units as required to maintain clean air for construction operations.

E. Temporary Water Service

1. Provide, maintain and pay for suitable quality water service required for construction operations.
2. The CONTRACTOR shall provide and operate all pumping facilities, pipelines, backflow preventers, valves, hydrants, storage tanks, and all other equipment necessary for the adequate development and operation of the water supply system. Water used for domestic purposes shall be free of contamination and shall conform to the requirements of the State and local authorities for potable water. The CONTRACTOR shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for any claims arising from the use of same, including discharge or waste of water therefrom.
3. The CONTRACTOR shall coordinate with the CONSTRUCTION MANAGER for obtaining water service connections. The CONTRACTOR shall, at no additional cost to the OWNER, provide all facilities necessary to convey the water from the

source to the points of use in accordance with the requirements of the Contract Documents.

4. The CONTRACTOR shall pay all water permit fees and any fees for the water meter(s). All charges for water use shall be paid for by the CONTRACTOR, except as noted below.
5. Water Connections: The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency.
6. The CONTRACTOR shall provide potable water service for field offices.
7. The OWNER will provide initial filling water for testing and water for final flushing of piping. Costs of flushing water and refilling piping due to testing failures shall be borne by the CONTRACTOR. For Testing and Disinfection of reservoirs the OWNER will provide water sufficient to fill the reservoir one time. If, as a result of failure to meet testing and/or disinfection requirements, additional water is required, the CONTRACTOR shall pay for the additional water.

#### F. Sanitary Facilities

1. Toilet Facilities: Fixed or portable chemical toilets shall be provided wherever needed for the use of CONTRACTOR's employees. Toilets at construction job sites shall conform to the requirements of Subpart d, Section 1926.51 of the OSHA Standards for Construction. A sanitary sewer is available in the area designated for the CONTRACTOR's field office trailer. The CONTRACTOR must coordinate with the utility department for obtaining sewer connection and shall pay all permit and usage charges.
2. Sanitary and Other Organic Wastes: The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the CONSTRUCTION MANAGER and in accordance with all laws and regulations pertaining thereto.
3. Construction personnel shall not use existing Sanitary Facilities if any existing.
4. Remove temporary facilities for the site at completion of Work.

#### G. Fire Protection

1. Provide temporary fire protection equipment for protection of personal and property during Work. Remove debris and flammable materials daily to minimize potential hazards.
2. Fire Protection: All parts of the Work shall be connected with the CONTRACTOR's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other

portions of the Work, and responsible persons shall be designated and instructed in the operation of such fire apparatus so as to prevent or minimize the hazard of fire. The CONTRACTOR's fire protection program shall conform to the requirements of Article 34, Section 1805, b of Cal-OSHA, and Subpart F of the OSHA Standards for Construction.

#### 1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for OWNER's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing buildings.
- C. Provide protection for plant life designated to remain. Replace damaged plant life. Replacement of sensitive habitat to be conducted under supervision of a qualified biologist, to be provided by owner.
- D. Protect non-owned vehicular traffic, stored materials, site and structures from damage.
- E. Provide minimum 8 foot high fence around construction site; equip with vehicular and pedestrian gates with locks. Construction: Commercial grade chain link fence.

#### 1.06 ENCLOSURES

- A. Exterior Enclosures
  - 1. Provide temporary insulated weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

#### 1.07 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.



F. Prohibit landscaped areas from traffic.

## 1.08 TEMPORARY CONTROLS

### A. Drainage and Erosion Control

1. The CONTRACTOR shall comply with all applicable requirements for storm water discharge control contained in Section 01060, Regulatory Requirements.
2. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
3. Protect site from puddling or running water. Provide best management practices as required to minimize soil erosion and avoid downstream sedimentation.
4. Plan and execute construction using methods to control surface drainage from cuts and fills, as well as from borrow and waste disposal areas.
5. Minimize amount of bare soil exposed at any one time.
6. Provide temporary measures such as berms, dikes, and drains to control water flow.
7. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
8. Periodically inspect earthwork to detect evidence of erosion and sedimentation and promptly apply corrective measures when warranted.

### B. Dust and Overspray Control

1. Execute Work using methods to minimize raising dust from construction operations and, to prevent air-borne dust from dispersing into atmosphere. Such methods include tenting, keeping tented airspace under negative pressure or any other such environmental efforts to prevent fugitive dust from surface preparation, overspray from coating or shotcreting from escaping the work areas.

### C. Construction Noise Control

1. The CONTRACTOR shall oversee or undertake all construction activities so as to comply with all noise regulations. Use appropriate construction methods and equipment, and furnish and install acoustical barriers as necessary, to avoid exceeding legal noise levels as specified in Section 01060, Part 1.3.C, Noise Abatement and Control.

### D. Rodent and Pest Control

1. Keep work area, including storage areas, free from rodents, noxious pests, and other vermin.
2. The CONSTRUCTION MANAGER shall notify CONTRACTOR on any noncompliance with this requirement and of the corrective action required. This notice, when delivered to CONTRACTOR or CONTRACTOR's representative at site of Work, shall be deemed sufficient notice of noncompliance and corrective action shall be required. After receiving notice, immediately take corrective action. If CONTRACTOR fails or refuses to eliminate rodents, pests or vermin and causes

thereof promptly, OWNER may have necessary extermination work performed and charge costs to CONTRACTOR.

E. Pollution Control

1. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

F. Cleaning: CONTRACTOR shall execute cleaning as specified in this Section 01500 during progress of the Work, at completion of the Work as specified in City of San Diego "Whitebook", City supplement to the Standard Specifications for Public Works Construction, 2015 Edition, Section 7, and as required by General Conditions. If the CONTRACTOR fails to clean areas as specified, the OWNER will have the areas cleaned and back charge the CONTRACTOR.

1. Requirements of regulatory agencies:
  - a. In addition to the requirements herein, maintain the cleanliness of the Work and surrounding premises within the Work limits so as to comply with federal, state, and local fire and safety laws, ordinances, codes and regulations.
  - b. Comply with all federal, state and local anti-pollution laws, ordinances, codes and regulations when disposing of waste materials, debris and rubbish.
2. Scheduling of cleaning and disposal operations:
  - a. So that dust, wash water or other contaminants generated during such operations do not damage or mar painted or finished surfaces.
  - b. To prevent accumulation of dust, dirt, debris, rubbish and waste materials on or within the Work or on the premises surrounding the Work.
3. Waste disposal:
  - a. Dispose of all waste materials, surplus materials, debris and rubbish off the project site.
  - b. Do not burn or bury rubbish and waste materials on the project site.
  - c. Do not dispose of volatile or hazardous wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
  - d. Do not discharge wastes into streams or waterways.
  - e. For handling and disposal of hazardous wastes, CONTRACTOR shall comply with Section 01120 - Hazardous Waste Management and Disposal
4. Cleaning materials:
  - a. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
  - b. Use each type of cleaning material on only those surfaces recommended by the cleaning material manufacturer.
  - c. Use only materials which will not create hazards to health or property.

5. During the progress of the Work
  - a. Keep the Work and surrounding premises within Work limits free of accumulations of dirt, dust, waste materials, debris and rubbish.
  - b. Keep dust generating areas wetted down.
  - c. Provide suitable containers for storage of waste materials, debris and rubbish until time of disposal.
  - d. Dispose of waste, debris and rubbish off site weekly to legal disposal areas.

## 1.09 SECURITY

### A. Security Program

1. Protect Work existing premises and OWNER's operations from theft, vandalism, and unauthorized entry.
2. Develop, and submit a written CONTRACTOR security plan to be approved by the Owner prior to job mobilization.
3. Maintain program throughout construction period until directed by CONSTRUCTION MANAGER.

### B. Entry Control

1. Restrict entrance of persons and vehicles into Project site and existing facilities.
2. Allow entrance only to authorized persons with proper identification (picture ID).
3. Maintain daily log of workmen, vendors and visitors, make available to OWNER or designated owner's representative on request.
4. OWNER will control entrance of persons and vehicles related to OWNER's operations.
5. CONTRACTOR to coordinate access of CONTRACTOR's personnel to and from project site. CONTRACTOR's project entry/exit procedures to be implemented in conjunction with OWNER's security forces/plan.

### C. CONTRACTOR Personnel Identification Procedures

1. CONTRACTOR to provide daily project authorization access list to CONTRACTOR security forces to include all employees, sub-contractor employees, vendors and authorized visitors.
2. CONTRACTOR's security forces to manage personnel access list and require picture identification for authorized access to project.
3. CONTRACTOR will provide and establish two-way communications with CONTRACTOR security forces for coordination of access of employees/CONTRACTOR representatives and vendors not established on project access list.

### D. Security Service

1. CONTRACTOR employed uniformed patrol service watchman will enforce the CONTRACTOR's written security program and maintain access procedures to project during CONTRACTOR working hours.
2. CONTRACTOR employed uniform guard will maintain a roving post during project non-working hours.

E. Restrictions

1. Do not allow cameras on site or photographs taken except by written approval of OWNER, or as required by the Contract Documents.

1.10 ACCESS ROADS AND PARKING

A. Access Roads

1. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.
2. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.
3. Provide and maintain access to fire hydrants, free of obstructions.
4. Designated existing on-site roads may be used for construction traffic.

B. Parking:

1. When site space is not adequate, provide additional off-site parking.
2. Designate parking space for the OWNER and CONSTRUCTION MANAGER as described in paragraph 1.13 of this Section.

1.11 FIELD OFFICES AND SHEDS

A. CONTRACTOR's field office: The CONTRACTOR may use the existing City trailer on the Otay Water Treatment Plant site as the field office for the duration of the project. Provide and maintain temporary offices on the job site. Post a sign identifying CONTRACTOR and listing emergency telephone number(s) at, and outside of, CONTRACTOR's field office.

B. Cost of temporary office, including but not limited to the cost of heat, air conditioning, lighting, utilities, security, maintenance, and janitorial service, shall be paid by CONTRACTOR and included in Contract price.

## 1.12 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

### **PART 2 - PRODUCTS [NOT USED]**

### **PART 3 - EXECUTION [NOT USED]**

**\*\* END OF SECTION \*\***

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## SECTION 01560 - ENVIRONMENTAL PROTECTION

### PART 1 -- GENERAL

#### 1.1 WORK OF THIS SECTION

- A. The CONTRACTOR and all of its employees and agents shall observe and comply with existing laws, ordinances, regulations and orders, in relationship to the protection of the total environment.
- B. The CONTRACTOR shall provide the following environmental controls:
  - 1. Chemicals Handling
  - 2. Noise Abatement
  - 3. Water Pollution Control

#### 1.2 RELATED SECTIONS

The Work of the following Sections apply to Work of this Section. Other Sections of the Specifications not referenced below shall also apply to the extent required for acceptable performance of the Work.

- 1. Section 01010 Summary of Work
- 2. Section 01060 Regulatory Requirements
- 3. Section 01300 Submittals
- 4. Section 01500 Construction Facilities and Temporary Controls

#### 1.3 LAYOUT, REMOVAL, AND CLEAN-UP OF TEMPORARY ENVIRONMENTAL CONTROLS

Submit, for approval, working drawings showing proposed locations and details of environmental controls to be implemented in accordance with the requirements of regulations and ordinances pertaining to this project and Section 01300, Submittals. Upon substantial completion of the Work, CONTRACTOR shall, in an acceptable manner, remove and dispose of all temporary structures, surplus environmental control material and rubbish from right of way, staging areas and any other areas utilized by Contractor.

#### 1.4 CHEMICALS HANDLING

All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall be used and stored in accordance with procedures established by the U.S. Environmental Protection Agency, the U.S. Department of Agriculture or any other resource agency. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

#### 1.5 NOISE ABATEMENT - Reference is made to Section 01060, Part 1.3.C, Noise Abatement and Control.

## 1.6 STORMWATER POLLUTION PREVENTION

The CONTRACTOR shall comply with requirements for Stormwater Management Practices as provided in Section 01060, and Part 1, Special Provisions - General, Section 7-8.6.1; and shall exercise every reasonable precaution to prevent pollution of waterways.

### **PART 2 -- PRODUCTS [NOT USED]**

### **PART 3 -- EXECUTION [NOT USED]**

**\*\*END OF SECTION\*\***



## SECTION 01600 – MATERIAL AND EQUIPMENT

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. This Section describes general product requirements and product delivery, storage, and handling requirements.
- B. Products are defined as material, machinery, components, equipment, fixtures, and systems incorporated into and forming the Work.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to Work of this Section. Work of other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the Work.
  - 1. Section 01300 Submittals
  - 2. Section 01400 Quality Control
  - 3. Section 01630 Substitutions

#### 1.03 SUBMITTALS

- A. Within 30 days after date established in Notice to Proceed, submit a complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. Submit Shop Drawings and other submittals as required elsewhere in the Specification.

#### 1.04 PRODUCT DELIVERY

- A. CONTRACTOR shall arrange, with the United States Postal Service, a special address for the project. All deliveries shall be made to that address. No deliveries will be accepted by the OWNER.
- B. Arrange deliveries of products in accord with progress schedules and in sufficient time to facilitate inspection prior to installation.
- C. Coordinate deliveries to avoid conflict with Work and conditions at site and to accommodate the following:
  - 1. Work of other contractors, or OWNER.
  - 2. Limitations of storage space.
  - 3. Availability of equipment and personnel for handling products.
  - 4. OWNER's use of premises.

- D. Products shall not be shipped from the manufacturer's or fabricator's facility or delivered to project site until related Shop Drawings, data sheets, shop or factory test reports and records, have been returned without objection by the CONSTRUCTION MANAGER.
- E. Shipments of materials to CONTRACTOR or subcontractors shall be delivered to the site only during regular working hours. Shipments shall be addressed and consigned to the proper party giving name of project, street number and city. Shipments shall not be delivered to OWNER.
- F. Products shall not be delivered to the site until required storage facilities have been provided and are ready to receive products for storage.
- G. Products shall be delivered to site in manufacturer's original, unopened, labeled containers. Keep CONSTRUCTION MANAGER informed of delivery of all equipment to be incorporated in the Work.
- H. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts and to facilitate assembly.
- I. Immediately on delivery, inspect shipment to ensure:
  - 1. Product complies with requirements of Contract Documents and reviewed submittals.
  - 2. Quantities are correct.
  - 3. Containers and packages are intact, and labels are legible.
  - 4. Products are properly protected and undamaged.
- J. Package or crate products to protect from damage during shipping, handling, and storage.
  - 1. Mark or tag outside of packing to indicate contents by name and equipment number, special precautions for handling, and recommended requirements for storage.
  - 2. Protect machined and unpainted parts subject to damage by the elements.
  - 3. Transport and handle products in accordance with manufacturer's written instructions.
  - 4. Inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- K. Subsection 1.5 Product Handling below applies to this Subsection, Product Delivery.

#### 1.05 PRODUCT HANDLING

- A. Provide equipment and personnel necessary to handle products, including those furnished by OWNER, by methods to prevent soiling or damage to products or packaging.
- B. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.
- C. Handle products by methods to prevent bending or over stressing.
- D. Lift heavy components only at designated lifting points.

- E. Materials and equipment shall at all times be handled in a safe manner and as recommended by manufacturer or supplier so that no damage will occur to them. Do not drop, roll or skid products off delivery vehicles. Hand carry or use suitable materials handling equipment.

#### 1.06 PRODUCT STORAGE

- A. Store and protect materials in accordance with manufacturer's recommendations and requirements of the Contract Documents.
- B. Manufacturer's product containers shall not be opened until time of installation.
- C. CONTRACTOR shall make all arrangements and provisions necessary for the storage of materials and equipment. All excavated materials, construction equipment, and materials and equipment to be incorporated into the Work shall be placed so as not to injure any part of the Work or existing facilities, and so that free access can be maintained at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly and compactly stored in locations that will cause a minimum of inconvenience to the OWNER, other contractors, public travel, adjoining owners, tenants and occupants. Arrange storage in a manner to provide easy access for inspection.
- D. Areas available on the construction site for storage of materials and equipment shall be within the project site or at other sites approved by the CONSTRUCTION MANAGER. Products shall not be stored inside structures being constructed.
- E. Materials and equipment shall be stored to facilitate inspection and to ensure preservation of the quality and fitness of the Work, including proper protection against damage by freezing and moisture.
  - 1. Arrange storage to provide access for inspection and inventory control.
    - a. Periodically inspect to ensure products are undamaged, and are maintained under required conditions.
    - b. Maintain an inventory of materials stored to facilitate inspection and estimate progress payments for materials delivered but not yet installed.
  - 2. Store products in accordance with manufacturer's written instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's written instructions.
- F. Products subject to damage by moisture, freezing, or other effects of the elements shall be stored inside weatherproof storage areas equipped with suitable temperature and moisture controls.
- G. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- H. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.

- I. Lawns, grass plots, or other private property shall not be used for storage purposes without written permission of the OWNER or other person in possession or control of such premises.
- J. CONTRACTOR shall be fully responsible for loss or damage to stored materials and equipment.
- K. If necessary to relocate stored materials and equipment prior to or during construction, CONTRACTOR shall move materials and equipment without any additional compensation.

## **PART 2 - PRODUCTS**

### **2.01 GENERAL PRODUCT REQUIREMENTS**

- A. Provide new industrial quality products for the Work, unless used or reuse of existing is specifically authorized in the Contract Documents.
- B. Provide standard catalogue products of manufacturers regularly engaged in the manufacture of the products unless specifically authorized otherwise.
  - 1. Provide products that comply with specified requirements and that will function properly in their expected environment and under expected service conditions.
  - 2. Where two or more units of the same product class are provided, provide products from the same manufacturer that are interchangeable.
  - 3. Factory assemble equipment when practical.
  - 4. For equipment shipped unassembled, provide with assembly plans and written instructions. Match-mark or tag separate parts and assemblies to facilitate field assembly.
  - 5. Install products in accordance with requirements of Contract Documents and approved manufacturer's recommendations.
- C. CONTRACTOR shall make all arrangements for transportation, delivery and handling of equipment and materials required for prosecution and completion of the Work.
- D. Product fabrication, manufacture, or purchase shall not begin until related Shop Drawings are returned without objection by the CONSTRUCTION MANAGER.

### **2.02 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards or by Description Only: Provide any product meeting those standards.
- B. Products Specified by Naming One or More Manufacturers: Submit a Substitution Request for any manufacturer not specifically named. Product fabrication, manufacture, or purchase shall not begin until Substitution Requests and subsequent related Shop Drawings are returned without objection by the CONSTRUCTION MANAGER.

## **PART 3 - EXECUTION**

### **3.01 SYSTEMS DEMONSTRATION**

- A. Prior to final inspection, demonstrate satisfactory operation of each system to CONSTRUCTION MANAGER and OWNER.

**\*\* END OF SECTION \*\***

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## SECTION 01630 - SUBSTITUTIONS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. CONTRACTOR requests for review of a substitution shall conform to the requirements of the Contract Documents and shall contain complete data substantiating compliance of proposed substitution with the Contract Documents.
- B. The CONTRACTOR shall conform to the CONTRACTOR's options regarding selection of manufacturers, fabricators, suppliers, or distributors of products, materials, or equipment as defined in Section 01300, Submittals, Paragraph 1.3, CONTRACTOR's OPTIONS.
- C. For those CONTRACTOR's options requiring a Substitution Request, the CONTRACTOR shall submit a written Substitution Request per Part 1, Section 4.1-6 of the 2015 Whitebook, and as defined below.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to Work of this Section. Work of other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the Work.
  - 1. Section 01300 Submittals
  - 2. Section 01400 Quality Control
  - 3. Section 01600 Material and Equipment

#### 1.03 SUBSTITUTIONS

- A. Submit five (5) copies of the request for substitution. Submit a separate request for each substitution. In addition to requirements set forth in the Contract Documents, include in request the following:
  - 1. For products or manufacturers:
    - a. Manufacturer's information, including manufacturer's name and address, contact person name and telephone number, and company data - history, facilities, distribution facilities, technical support, sales offices, and similar information.
    - b. Manufacturer's product literature with product description, performance and test data, and reference standards.
    - c. Samples, if appropriate.
    - d. Priced list of product spare parts.
    - e. Name and address of the nearest service and technical support facility, including a current contact name and telephone number.
    - f. Reference list of current owner names and addresses, including current contact names and telephone numbers, of a minimum of ten (10) similar projects in an immersed potable water application in which manufacturer

or product was used within the last five years. Include the number of units installed and dates of installation.

2. For construction methods (if specified):
  - a. Detailed description of proposed construction method.
  - b. Drawings illustrating construction method.
3. Such other data that the OWNER and CONSTRUCTION MANAGER may request to establish that the proposed substitution is equal to the specified manufacturer, product, or construction method. Failure to provide such additional data, or failure to provide requested data in a timely manner are grounds for rejection of the Substitution Request.
4. The CONTRACTOR shall be responsible for the entire burden of demonstrating that the proposed substitution is equal to the specified manufacturer, product or construction method.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

**\*\* END OF SECTION \*\***



## SECTION 01760 – POST FINAL INSPECTION

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. This Section includes administrative and procedural requirements governing allowances.
  - 1. The CONTRACTOR shall participate in an inspection of the work after final completion and within the one year guarantee period for defective workmanship and materials. The CONTRACTOR shall replace or repair any defective work in a manner satisfactory to the CONSTRUCTION MANAGER.

### PART 2 - PRODUCTS (NOT USED)

### PART 3 - EXECUTION

#### 3.01 CORRECTION OF DEFECTIVE WORK

- A. Approximately one year after final acceptance, CONSTRUCTION MANAGER will make arrangements with OWNER and CONTRACTOR for a post final inspection and will send a written notice to said parties informing them of the date and time of the inspection.
- B. Inspection shall include, but not be limited to latent defects in coatings, concrete surfaces and joints.
- C. After the inspection, CONSTRUCTION MANAGER will inform CONTRACTOR of any corrections required and the time for completion of replacement or repairs.
- D. When the corrections have been satisfactorily completed, CONSTRUCTION MANAGER will forward acknowledgment to OWNER and CONTRACTOR.

**\*\* END OF SECTION \*\***

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## SECTION 02667 – TESTING AND DISINFECTION OF HYDRAULIC STRUCTURES

### PART 1 -- GENERAL

#### 1.1 WORK OF THIS SECTION

- A. The CONTRACTOR shall perform cleaning, flushing, and testing of all hydraulic structures and appurtenant piping, specifically the Settled Water Channel at the Otay Water Treatment Plant. The CONTRACTOR shall disinfect hydraulic structures and appurtenant piping to be used for potable water.

#### 1.2 RELATED SECTIONS

- A. The Work of the following Sections applies to the Work of this Section. Other Sections, not referenced below, shall also apply to the extent required for proper performance of this Work.
  - 1. Section 01115 Construction Sequence

#### 1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. The following commercial standards are referenced in this Section:
  - 1. ANSI/AWWA B300 Hypochlorites
  - 2. ANSI/AWWA B301 Liquid Chlorine
  - 3. ANSI/AWWA C652 Disinfection of Water-Storage Facilities
  - 4. ANSI/AWWA D100 Welded Steel Tanks for Water Storage

#### 1.4 CONTRACTOR SUBMITTALS

- A. All submittals shall be in strict accordance with the requirements of Section 01300 - Submittals.
- B. The CONTRACTOR shall submit a written testing schedule, including proposed plans for dewatering the Settled Water Channel, water conveyance, control, disposal, and disinfection for approval a minimum of 7 days before the coordinated shutdown is to start.

## **PART 2 -- PRODUCTS**

### **2.1 MATERIALS REQUIREMENTS**

- A. Temporary valves, bulkheads, or other water control equipment and materials shall be as determined by the CONTRACTOR subject to the CONSTRUCTION MANAGER'S review. No materials shall be used which would be injurious to the construction or its future function.
- B. Chlorine for disinfection shall be in the form of liquid chlorine, sodium hypochlorite solution, or calcium hypochlorite granules or tablets. Liquid chlorine shall be in accordance with the requirements of ANSI/AWWA B301; sodium hypochlorite and calcium hypochlorite shall be in accordance with the requirements of ANSI/AWWA B300. Liquid chlorine shall be used only (1) in combination with appropriate gas flow chlorinators and ejectors; (2) under the direct supervision of an experienced technician; and (3) when appropriate safety practices are observed.

## **PART 3 -- EXECUTION**

### **3.1 GENERAL**

- A. Water for the initial testing and disinfecting will be furnished by the OWNER; however, the CONTRACTOR shall make all necessary provisions for conveying the water from the OWNER-designated source to the points of use including providing all temporary piping, hose, valves, appurtenances, and services as needed to perform the work. Cost for water for re-disinfection and retesting shall be paid by the CONTRACTOR to the OWNER at the OWNER's standard rate. Chemicals for disinfection and dechlorination shall be furnished by the CONTRACTOR.
- B. All hydraulic structures and appurtenant pressure piping that shall be tested or dewatered for construction purposes and then returned to service; those for potable water shall also be disinfected. Disinfection shall be accomplished by chlorination. All chlorinating and testing operations shall be done in the presence of the CONSTRUCTION MANAGER.
- C. In the case of a reservoir, testing and disinfecting operations shall be combined.
- D. Disinfection operations shall be scheduled as late as possible during the construction schedule to ensure the maximum degree of sterility of the facilities at the time the Work is accepted by the OWNER. Bacteriological testing shall be performed by a certified testing laboratory acceptable to the OWNER. Results of the bacteriological testing shall be satisfactory to the State Department of Health or other appropriate regulatory agency.
- E. If industrial paint finishes or other protective coatings are to be applied to the interior surfaces of the hydraulic structure, such coatings shall be applied after all testing operations have been completed but prior to disinfection, except that in the case of reservoirs, such coatings shall be applied before the combined testing and disinfecting operations.

- F. Releases of water from structures, after testing and disinfecting have been completed, shall be acceptable to the CONSTRUCTION MANAGER and shall follow necessary procedures for dechlorination for water disposal.

### 3.2 PRELIMINARY CLEANING AND FLUSHING

- A. Before both testing and disinfecting, all hydraulic structures shall be cleaned by thoroughly hosing down all surfaces with a high pressure hose and nozzle of sufficient size to deliver a minimum flow of 50 gpm. All water, dirt, and foreign material accumulated in this cleaning operation shall be discharged from the structure or otherwise removed.

### 3.3 TESTING OF HYDRAULIC STRUCTURES (N/A)

- A. General: Testing shall be performed prior to backfilling, except where otherwise acceptable to the CONSTRUCTION MANAGER. Testing shall not be performed sooner than 14 days after all portions of structure walls and associated roof systems have been completed. The test shall consist of filling the structure with water to the maximum operating water surface. The rate of filling shall not exceed 24 inches of depth per day. All visible leakage shall be repaired.

- B. Leakage Test and Repairs: After the structure has been filled, the water loss leakage test shall be performed as follows: an initial water level reading shall be made. Seven days following the initial reading, a second reading shall be made. The structure shall be considered to have passed the test if water loss during the 7-day period, as computed from the two water level readings, does not exceed 0.1 percent of the total volume of water in the structure, after allowance is made for evaporation loss. If intermediate readings or observed leakage indicate that the allowable leakage will be exceeded, the test may be terminated before the end of the 7-day period and appropriate action taken to correct the problem before commencing a new 7-day test period. Should the structure fail to pass the test, the test shall be repeated for up to three additional 7-day test periods.

1. If, at the end of 28 days, the structure still fails to pass the leakage test, the CONTRACTOR shall empty the structure as acceptable to the CONSTRUCTION MANAGER and shall examine the interior for evidence of any cracking or other conditions that might be responsible for the leakage. Any cracks shall be "vee'd" and sealed in accordance with Section 03300 - Cast-in-Place Concrete. Any evidence of leakage shall be repaired. Following these operations, test the hydraulic structure again. The structure will not be accepted as completed until the water loss leakage test is passed and all visible leakage repaired. In the case of a reservoir, the retesting shall again be combined with disinfection, exclusive of the spraying operation.
2. Leaks in steel structures shall be repaired by chipping, gouging, or oxygen gouging and re-welding according to ANSI/AWWA D100. Following repair, test the structure again. The structure will be accepted when the leakage test is passed and all visible leakage is repaired. Retesting shall be combined with disinfection.

### 3.4 TESTING OF APPURTENANT PIPING

- A. Piping appurtenant to the Settled Water Channel shall be disinfected in accordance with Otay Water Treatment Plant staff.

### 3.5 DISINFECTION OF HYDRAULIC STRUCTURES AND APPURTENANT PIPELINES

- A. All hydraulic structures which store or convey potable water shall be disinfected by chlorination. Chlorination of hydraulic structures shall be performed in accordance with the requirements of ANSI/AWWA C652 using a combination of chlorination Methods 2 and 3 as modified herein.
- B. Chlorination: A strong chlorine solution (about 200 mg/l) shall be sprayed on all interior surfaces of the structure. Following this, the structure shall be partially filled with water to a depth of approximately 1 foot. During the partial filling operation, a chlorine-water mixture shall be injected by means of a solution-feed chlorinating device in such a way as to give a uniform chlorine concentration during the entire filling operation. The point of application shall be such that the chlorine solution will mix readily with the inflowing water. The dosage applied to the water shall be sufficient to provide a chlorine residual of at least 50 mg/l upon completion of the partial filling operation. Precautions shall be taken to prevent the strong chlorine solution from flowing back into the lines supplying the water. After the partial filling has been completed, sufficient water shall be drained from the lower ends of appurtenant piping to ensure filling the lines with the heavily chlorinated water.
- C. Retention Period: Chlorinated water shall be retained in the partially filled structure and appurtenant piping long enough to destroy all non-spore-forming bacteria, and in any event, for at least 24 hours. After the chlorine-treated water has been retained for the required time, the free chlorine residual in the structure and appurtenant piping shall be at least 25 mg/l. All valves shall be operated while the lines are filled with the heavily chlorinated water.
- D. Final Filling of Structure: After the free chlorine residual has been checked, and has been found to satisfy the above requirement, the water level in the structure shall be raised to its final elevation by addition of potable water and held for at least 24 hours. Before final filling is commenced, the quantity of heavily-chlorinated water remaining in the structure after filling the piping shall, unless otherwise acceptable to the CONSTRUCTION MANAGER, be sufficient, when the water level is raised to its final elevation to produce a free chlorine residual of between 1 and 2 mg/l. After the structures have been filled, the strength of the chlorinated water shall be determined. If the free chlorine residual is less than 1 mg/l, an additional dosage shall be applied to the water in the structure. If the free chlorine residual is greater than 2 mg/l, the structure shall be partially emptied and additional potable water added. After 24 hours, the free chlorine residual shall be no less than 1 mg/l or an additional dosage shall be applied and the residual tested again after 24 hours. In no case shall water be released prior to the expiration of the required retention period.

### 3.6 BACTERIOLOGICAL SAMPLING AND TESTING

- A. Disinfected water storage facilities shall be sampled and tested in accordance with ANSI/AWWA C652.

### 3.7 RETURN OF SETTLED WATER CHANNEL TO PLANT SERVICE

- A. When repair work has been made to the Settled Water Channel (channel) and the channel is to be returned to service, connections within the channel, the interior surfaces of all pipe

and fittings used in making the connections shall be swabbed or sprayed with a one percent hypochlorite solution and the above disinfection procedures followed for disposal of water, disinfection of the channel and return to service. Otay Water Treatment Plant procedures shall be followed throughout with close coordination with plant staff.

**\*\* END OF SECTION \*\***

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## SECTION 03200 – REINFORCEMENT STEEL

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall provide concrete reinforcement steel, welded wire fabric, couplers, concrete inserts, wires, clips, supports, chairs, spacers, and other accessories, complete, all in accordance with the Contract Documents.
- B. Work Included in this Section. Principal items are:
  - 1. Furnishing and placing bar and mesh reinforcing for cast-in-place concrete.
  - 2. Furnishing reinforcing steel bars for masonry, including delivery to the site.
  - 3. Submittals.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to the Work of this Section. Other Sections, not referenced below, shall also apply to the extent required for proper performance of this Work.
  - 1. Section 03360 Pneumatically Placed Concrete Mortar
  - 2. Section 03730 Concrete Rehabilitation
  - 3. Section 03740 Pressure Injection of Cracks
  - 4. Section 07905 Joint Sealers
  - 5. Section 09800 Protective Coatings

#### 1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Except as otherwise indicated in this Section of the Specifications, the CONTRACTOR shall comply with the latest adopted edition of the Standard specifications for Public Works Construction (SSPWC), together with the latest adopted editions of the City of San Diego Supplement Amendments.
- B. The current edition of the California Building Code (CBC) as adopted by the City of San Diego Municipal Code.
- C. Commercial Standards (Current Edition):
  - 1. ACI 315 Details and Detailing of Concrete Reinforcement
  - 2. ACI 318 Building Code Requirements for Structural Concrete
  - 3. CRSI MSP Concrete Reinforcing Steel Institute Manual of Standard Practice
  - 4. WRI Manual of Standard Practice for Welded Wire Fabric
  - 5. AWS D1.4 Structural Welding Code - Reinforcing Steel

- D. ASTM Standards in Building Codes (Current Edition):
1. ASTM A 82 Specification for Steel Wire, Plain, for Concrete Reinforcement
  2. ASTM A 185 Specification for Welded Steel Wire Fabric, Plain, for Concrete Reinforcement
  3. ASTM A 615 Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
  4. ASTM A 706 Specification for Low-Alloy Steel Deformed Bars for Concrete Reinforcement.
  5. ASTM A 775 Specification for Epoxy-Coated Reinforcing Steel Bars

#### 1.04 CONTRACTOR SUBMITTALS

- A. The CONTRACTOR shall furnish shop bending diagrams, placing lists, and drawings of all reinforcement steel before fabrication in accordance with the requirements of Section 01300 – Submittals.
- B. Details of the concrete reinforcement steel and concrete inserts shall be submitted at the earliest possible date after receipt of the Notice to Proceed. Details of reinforcement steel for fabrication and erection shall conform to ACI 315 and the requirements indicated. The shop bending diagrams shall show the actual lengths of bars, to the nearest inch, measured to the intersection of the extensions (tangents for bars of circular cross section) of the outside surface. The shop drawings shall include bar placement diagrams which clearly indicate the dimensions of each bar splice.

#### 1.05 QUALITY ASSURANCE

- A. If requested by the CONSTRUCTION MANAGER, the CONTRACTOR shall furnish samples from each heat of reinforcement steel delivered in a quantity adequate for testing. Costs of initial tests will be paid by the OWNER. Costs of additional tests due to material failing initial tests shall be paid by the CONTRACTOR.

## **PART 2 - PRODUCTS**

#### 2.01 MATERIAL REQUIREMENTS

- A. Materials which may remain or leave residues on or within the concrete shall be classified as acceptable for potable water use by the Environmental Protection Agency within 30 days of application or use.

#### 2.02 REINFORCEMENT STEEL

- A. Reinforcement steel for all cast-in-place reinforced concrete construction shall conform to the following requirements:
1. Bar reinforcement shall conform to the requirements of ASTM A 615 for Grade 60 Billet Steel Reinforcement or as otherwise indicated.
  2. All welded reinforcement, specifically detailed or otherwise indicated, shall be low-alloy grade 60 deformed bars conforming to the requirements of ASTM A 706.

3. Welded wire fabric reinforcement shall conform to the requirements of ASTM A 185 and the details indicated; provided, that welded wire fabric with longitudinal wire of W4 size wire and smaller shall be either provided in flat sheets or in rolls with a core diameter of not less than 10 inches; and provided further, that welded wire fabric with longitudinal wires larger than W4 size shall be provided in flat sheets only.
4. Spiral reinforcement shall be cold-drawn steel wire conforming to the requirements of ASTM A 82.
5. Tie wire shall be Annealed Steel, 14 gauge minimum.

**B. Accessories:**

1. Accessories shall include all necessary chairs, slab bolsters, concrete blocks, tie wires, dips, supports, spacers, and other devices to position reinforcement during concrete placement. All bar supports shall meet the requirements of the CRSI Manual of Standard Practice, Chapter 3, including special requirements for supporting epoxy coated reinforcing bars. Wire bar supports shall be CRSI Class 1 for maximum protection with a c-inch minimum thickness of plastic coating which extends at least 2-inch from the concrete surface. Plastic shall be gray in color.
2. Concrete blocks (dobies), used to support and position reinforcement steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Wire ties shall be embedded in concrete block bar supports.

- C.** Epoxy coating, bonding agent and anti-corrosion for reinforcing and accessories, where indicated and where repaired or exposed rebar requires protection, shall be Sika Armatec 110 EpoCem, an epoxy-modified cementitious coating and bonding agent for fresh mortar patching, or APPROVED EQUAL.

**2.03 MECHANICAL COUPLERS**

- A.** Mechanical couplers shall not be used.

**2.04 WELDED SPLICES**

- A.** Welded splices shall not be used.

**2.05 EPOXY GROUT**

- A.** Epoxy for grouting reinforcing bars shall be specifically formulated for such application, for the moisture condition, application temperature, and orientation of the hole to be filled. Epoxy grout shall be a two or three component, 100% solids, epoxy grout, Sikadur 42 or approved equal.

**PART 3 - EXECUTION**

**3.01 GENERAL**

- A.** All reinforcement steel, welded wire fabric, couplers, and other appurtenances shall be fabricated, and placed in accordance with the requirements of the California Building Code and the supplementary requirements indicated herein.

### 3.02 FABRICATION AND DELIVERY

- A. The CONTRACTOR shall conform to CRSI MSP, Chapters 6 and 7, except as otherwise indicated or specified. The CONTRACTOR shall bundle reinforcement and tag with suitable identification to facilitate sorting and placing, and transport and store at site so as not to damage material. The CONTRACTOR shall keep a sufficient supply of tested, approved, and proper reinforcement at site to avoid delays.
- B. Bending and Forming: The CONTRACTOR shall bend bars of indicated size and accurately form in accordance with the requirements of ACI 315 and ACI 318 to shapes and lengths indicated on drawings and required by methods not injurious to materials. The CONTRACTOR shall not heat reinforcement for bending. Bars with kinks or bends not scheduled will be rejected.
- C. Fabricating tolerance: All fabrication of reinforcing bars shall meet the requirements of ACI 117.

### 3.03 PLACING

- A. Reinforcement steel shall be accurately positioned and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcement steel shall be supported by concrete, plastic or metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcement steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used, in sufficient numbers to support the bars without settlement, but in no case shall such support be continuous. All concrete blocks used to support reinforcement steel shall be tied to the steel with wire ties which are embedded in the blocks. For concrete over formwork, the CONTRACTOR shall furnish concrete, metal, plastic, or other acceptable bar chairs and spacers.
- B. Limitations on the use of bar support materials shall be as follows:
  - 1. Concrete Dobies: Permitted at all locations except where architectural finish is required.
  - 2. Wire Bar Supports: Permitted only at slabs over dry areas, interior dry wall surfaces, and exterior wall surfaces.
  - 3. Plastic Bar Supports: Permitted at all locations except on grade.
- C. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.
- D. Bars additional to those shown which may be found necessary or desirable by the CONTRACTOR for the purpose of securing reinforcement in position shall be provided by the CONTRACTOR at no additional cost to the OWNER.
- E. Unless otherwise specified, reinforcement placing tolerances shall be within the limits specified in Section 7.5 of ACI 318 except where in conflict with the requirements of the CBC.
- F. Bars may be moved as necessary to avoid interference with other reinforcement steel, conduits, or embedded items. If bars are moved more than one bar diameter, or enough

to exceed the above tolerances, the resulting arrangement of bars shall be subject to the approval of the CONSTRUCTION MANAGER.

- G. Welded wire fabric reinforcement placed over horizontal forms shall be supported on slab bolsters. Slab bolsters shall be spaced not more than 30 inches on centers, shall extend continuously across the entire width of the reinforcement mat, and shall support the reinforcement mat in the plane indicated.
- H. Welded wire fabric placed over the ground shall be supported on wired concrete blocks (dobies) spaced not more than 3 feet on centers in any direction. The construction practice of placing welded wire fabric on the ground and hooking into place in the freshly placed concrete shall not be used.
- I. Epoxy coated reinforcing bars shall be stored, transported, and placed in such a manner as to avoid chipping of the epoxy coating. Non-abrasive slings made of nylon and similar materials shall be used. Specially coated bar supports shall be used. All chips or cracks in the epoxy coating shall be repaired with a compatible epoxy repair material prior to placing concrete.
- J. Accessories supporting reinforcing bars shall be spaced such that there is no deflection of the accessory from the weight of the supported bars. When used to space the reinforcing bars from wall forms, the forms and bars shall be located so that there is no deflection of the accessory when the forms are tightened into position.

#### 3.04 SPLICES

- A. Splicing shall be in accordance with ACI-318, unless otherwise noted on Drawings.
- B. Vertical Bars. Except as specifically detailed or otherwise indicated, splicing of vertical bars in concrete is not permitted, except at the indicated or approved horizontal construction joints or as otherwise specifically detailed.
- C. Horizontal Bars. Except as specifically detailed or otherwise indicated, splicing of horizontal bars in concrete is not permitted.
- D. Mechanical Couplers. Use of mechanical couplers is not permitted.
- E. Welding: Welding of reinforcing bars is not permitted.

#### 3.05 ADDITIONAL REINFORCING

- A. The CONTRACTOR shall provide additional reinforcing bars at sleeves and openings as indicated on Drawings.

#### 3.06 WELDED WIRE MESH

- A. The CONTRACTOR shall install necessary supports and chairs to hold the wire mesh in place during concrete pours. The CONTRACTOR shall straighten mesh to lay in a flat plane and bend mesh as shown or required to fit work. The CONTRACTOR shall provide laps of no less than one complete mesh, unless otherwise detailed, and shall tie every other wire at laps. Roll mesh is not acceptable.

### 3.07 EMBEDMENT OF DRILLED REINFORCING STEEL DOWELS

#### A. Hole Preparation:

1. The hole diameter shall be as recommended by the epoxy manufacturer but shall be no larger than 0.25 inch greater than the diameter of the outer surface of the reinforcing bar deformations.
2. The depth of the hole shall be as recommended by the epoxy manufacturer to fully develop the bar but shall not be less than 12 bar diameters, unless noted otherwise.
3. The hole shall be drilled by methods which do not interfere with the proper bonding of epoxy.
4. Existing reinforcing steel in the vicinity of proposed holes shall be located prior to drilling. The location of holes to be drilled shall be adjusted to avoid drilling through or nicking any existing reinforcing bars.
5. The hole shall be blown clean with clean, dry compressed air to remove all dust and loose particles.
6. Epoxy shall be injected into the hole through a tube placed to the bottom of the hole. The tube shall be withdrawn as epoxy is placed but kept immersed to prevent formation of air pockets. The hole shall be filled to a depth that insures that excess material will be expelled from the hole during dowel placement.
7. Dowels shall be twisted during insertion into the partially filled hole so as to guarantee full wetting of the bar surface with epoxy. The bar shall be inserted slowly enough to avoid developing air pockets.

\*\* END OF SECTION \*\*

## SECTION 03730 – CONCRETE REHABILITATION

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The WORK of this Section includes the patching and overlay of prepared, exterior concrete surfaces, vertical, horizontal and overhead, with cementitious, high-strength (7,000 psi @ 28 days minimum) repair mortar including, hence referred to as repair mortar, all appurtenant work related to this repair surface, complete. The WORK of this Section also includes the patching of interior and exterior vertical or overhead surfaces with a cementitious repair mortar and all appurtenant work, complete.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to Work of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the Work.
1. Section 01300 - Submittals
  2. Section 03740 – Pressure Injection of Cracks
  3. Section 09800 – Protective Coating

#### 1.03 CODES

- A. The Work of this Section shall comply with the current editions of the following codes as adopted by the City of San Diego Municipal Code:
1. Uniform Building Code

#### 1.04 SPECIFICATIONS AND STANDARDS

- A. Except as otherwise indicated, the current editions of the following apply to the Work of this Section:
1. ASTM C33 Concrete Aggregates
  2. ASTM C 40 Test Method for Organic Impurities in Fine Aggregates for Concrete
  3. ASTM C 42 Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
  4. ASTM C 87 Test Method for Effect of Organic Impurities in Fine Aggregate on Strength of Mortar
  5. ASTM C 136 Method for Sieve Analysis of Fine and Coarse Aggregates
  6. ASTM C 150 Specification for Portland Cement
  7. ASTM C 171 Specification for Sheet Materials for Curing Concrete

8. ASTM C 1240 Specification for Silica Fume for Use as a Mineral Admixture in Hydraulic Cement Concrete, Mortar, and Grout
9. ASTM C 685 Concrete Made by Volumetric Batching and Continuous Mixing
10. ASTM E 329 Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction

#### 1.05 CONTRACTOR SUBMITTALS

##### A. General

1. Submittals shall be furnished in accordance with Section 01300 - Submittals unless indicated otherwise below.

##### B. Submittals shall include the following information and be submitted at least 30 days before protective coating work:

1. Test reports and material proportions in mix design of proposed repair material, product data sheets, Material Safety Data Sheets (MSDS), technical and performance information that demonstrates compliance with the system performance and material requirements.
2. Manufacturer certifications of CONTRACTOR approved applicator status stating that they are approved to apply the repair material in this Section.
3. Standard of Reference Sample (mockup) Panels. Submit panels for inspection and quality acceptance within 30 days after receipt of notice to proceed.
4. Repair Mortar Reference Documentation: For the proposed repair mortar, the CONTRACTOR shall submit reference documentation from the manufacturer of a minimum of five (5) similar installations, in potable water applications, which have been in service for more than five (5) years in the southwest portions of the United States of America. Reference documentation shall include installation location/details, installation date, current owner contact information, and contractor/applicator contact information.
5. Repair mortar manufacturer's instructions and requirements for surface preparation and application:
  - a. Mortar repair material manufacturer's data sheet for each product proposed, including statements on the suitability of the material for the intended use.
  - b. Technical and performance information that demonstrates compliance with the system performance and material requirements.
  - c. Mortar repair material manufacturer's instructions and recommendations on surface preparation and application.
  - d. Proposed application techniques including proof of the acceptability of the proposed technique for each coating.
  - e. Colors available for each product (where applicable).
  - f. Compatibility of shop and field applied coatings (where applicable).
  - g. Material Safety Data Sheet for each product used.





- C. Furnish evidence to CONSTRUCTION MANAGER that CONTRACTOR conforms to above requirements, has been specializing in this work for a period of at least five years, and will use only experienced shotcrete foremen, nozzle men and delivery equipment operators on the work.
- D. Conform to ACI 506R, Paragraphs 4.2 and 4.3, for qualifications and duties of craftsmen.

#### 1.07 OWNER'S MANUAL

- A. The following shall be included in the OWNER'S MANUAL in compliance with Section 01300:
  - 1. Certificates from manufacturers or suppliers certifying that the materials supplied conform to the requirements of the Contract Documents.

#### 1.08 PRECONSTRUCTION TESTING/TEST PANELS

- A. The CONTRACTOR, OWNER, CONSTRUCTION MANAGER and third party testing personnel shall attend pre-construction training, provided at the CONTRACTOR's expense, provided by the manufacturer's representative of the approved mortar repair material.
- B. Standard of Reference Sample Panels: The CONTRACTOR shall prepare two, step-by-step sample procedure reinforced concrete sample (mockup panel) panels which will serve as the standard of workmanship for the duration of the Work. The asperity and aggregate profile shall be constructed to represent the current, existing aggregate profile of the Basin No. 1. Test panels must be accepted by the OWNER or the CONSTRUCTION MANAGER. Upon acceptance, the panels shall be used during quality acceptance as a standard of application and procedure workmanship. Provide one vertical panel a minimum of 50 square feet in area which shall be erected in vertical position for layup of repair coats. Provide one floor mockup panel a minimum of 100 square feet in area. The sample panels and workmanship shall illustrate as a mockup panel the following conditions:
  - 1. Existing surface profile and surface preparation using Basin No. 1 profile as standard;
  - 2. Scrub coat application;
  - 3. Intermediate coat(s);
  - 4. Final coat application demonstrating, flatness, surface preparation, holiday and bughole free condition of repaired surface prior to protective coating;
  - 5. Final protective coating (reference Section 09800).

## PART 2 - PRODUCTS

### 2.01 MATERIALS

Cementitious repair mortar:

- 1. The materials shall be non-combustible, both before and after cure.
- 2. The materials shall be supplied in a factory-proportioned unit.

3. The repair mortar must be placeable from 1/8" to 1-1/2" in depth per lift for vertical applications and 1/8" to 1" in depth for overhead applications.
- B. Water: Water for the repair mortar shall be furnished by the OWNER but metered and paid for by the CONTRACTOR. All water shall be clean and free from objectionable quantities of organic matter, alkali, salts, and other impurities which might reduce the strength, durability, or other quality of the cementitious repair modified mortar.
- C. Reinforcement: Steel reinforcement shall conform to the requirements of Section 03200.

## 2.02 PERFORMANCE CRITERIA

- A. Typical Properties of the cementitious repair mortar:
1. Working Time: Approximately 15-30 minutes
  2. Finishing Time: 20 - 60 minutes
  3. Color: gray
- B. Typical Properties of the cured cementitious repair mortar:
1. Compressive Strength
    - a. 28 day: 7,000 psi min. (48.3 MPa)
  2. Splitting Tensile Strength (ASTM C-496) @ 28 days: 850 psi (5.9 MPa)
  3. Density: 132 pcf (2.2 kg/l)
  4. The cement mortar shall not produce a vapor barrier.

## 2.03 MANUFACTURERS

- A. The CONTRACTOR shall provide products of the type indicated shall be manufactured by one of the following (or approved equal):
1. Cementitious, high-strength (7,000 psi @ 28 days minimum) shrinkage compensated pre-proportioned, cementitious repair mortar
    - a. Tnemec Mortarcrete Series 217, SikaTop 123 Plus, or approved equal.

## PART 3 - EXECUTION

### 3.01 GENERAL

- A. Hand applied mortar concrete shall be used on the work where shown; and, where not shown, may be used only with written approval of the CONSTRUCTION MANAGER.

### 3.02 SURFACE PREPARATION FOR REPAIR MORTAR

- A. Prior to the application of the repair mortar, all surfaces of concrete to be filled or coated shall be clean and dry to meet NACE6/SSPC-SP13 standards.

### 3.03 MIXING AND APPLICATION

- A. Mechanically mix in an appropriate sized mortar mixer or with a mud paddle and low speed (400-600 rpm) drill. Mix only that amount of material that can be placed in 10-15 minutes. Do not retemper material.
- B. Placement procedure: At the time of application, the substrate shall be saturated surface dry with no standing water. Mortar must first be scrubbed into the substrate filling all pores and voids. While the scrub coat is still plastic, force material against edge of repair, working toward center. After filling, consolidate then screed. Allow mortar to set to desired stiffness then finish with trowel for smooth surface. Wood float or sponge float for a rough surface. Areas where the depth of the repair area to sounds concrete is greater than 1-1/2", the repair shall be made in lifts of 1-1/2" maximum thickness. The top surface of each lift shall be scored to produce a rough surface for the next lift. The preceding lift shall be allowed to reach final set before applying fresh material. The fresh mortar must be scrubbed into the preceding lift.
- C. Construction tolerances: Set and maintain mortar screeds and perform finishing operations so as to ensure that the completed Work is within the tolerances specified herein. Surface defects and irregularities are defined as finishes and are to be distinguished from tolerances. Tolerance is the specified permissible variation from lines, grades, or dimensions shown. Where tolerances are not stated in the Specifications, permissible deviations will be in accordance with ACI 117.

The following construction tolerances are hereby established and apply to finished walls and slab unless otherwise shown:

Item	Tolerance
Variation of the constructed linear outline from the established position in plan.	In 10 feet: 1/4-inch; In 20 feet or more: 1/2-inch
Variation from the level or from the grades shown.	In 10 feet: 1/4-inch; In 20 feet or more: 1/2-inch
Variation from the plumb	In 10 feet: 1/4-inch; In 20 feet or more: 1/2-inch
Variation in the thickness of slabs and walls.	Minus 1/4-inch; Plus 1/2-inch
Variation in the locations and sizes of slabs and wall openings	Plus or minus 1/4-inch

### 3.04 JOINTS

- A. Construction Joints: Particular care shall be given to formation of construction joints. They shall be sloped to a thin edge and the edge shall be thoroughly wetted before adjacent section of concrete is placed. No square joints will be allowed. The location of all construction joints is apparent in the as-built drawings and can be confirmed by the as-built condition of Basin No. 1. Construction joints, as well as expansion joints, are to be matched. All other joints shall be acceptable to the CONSTRUCTION MANAGER.

Particular care shall be given to the existing Basin expansion and construction joints. Placement of cementitious repair mortar shall be designed to consider the location of joints, work stoppage and starting each day and required movement. Material may not be applied with a feather edge.

- B. Formed Joints: All formed joints shall be constructed as detailed, at the locations shown.

### 3.05 CURING

- A. Concrete rehabilitation mortar shall be damp cured for at least 7 days, or manufacturer recommended time, after placing. Ambient conditions such as temperature and humidity shall be taken into account when placing. Curing compounds are not an acceptable substitute for continuous damp curing with spray and curing blankets.
- B. When required by the CONSTRUCTION MANAGER the CONTRACTOR shall provide longer curing times or supplemental methods for curing concrete in structural members, and no additional payment will be allowed therefor.

### 3.06 CLEANUP

- A. Upon completion of the Work indicated in this Section, the CONTRACTOR shall remove all forming, shoring, rebound, excess material, and protective materials from the project site.

**\*\* END OF SECTION \*\***

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## SECTION 03740 – PRESSURE INJECTION OF CRACKS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The Work of this Section includes the repair of cracks in concrete by the injection of an epoxy resin adhesive.

#### 1.02 SPECIFICATIONS AND STANDARDS

- A. The publications listed below form part of this specification to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said standards unless otherwise called for.

- 1. ASTM D 695 Test Method for Compressive Properties of Rigid Plastics

#### 1.03 REPAIR CRITERIA

- A. Cracks in concrete at least 0.02 inches in size shall be repaired.

#### 1.04 QUALIFICATIONS

- A. Epoxy injection shall be performed by a certified applicator.
- B. Contractor's/Subcontractor's operator engaged in the epoxy injection process shall have satisfactory operator experience in the methods of restoring concrete structures utilizing the specific epoxy injection process indicated. Operator's experience shall include previous repairs of cracked or damaged concrete structures, the technical knowledge of correct material selection and use, and the operation, maintenance and troubleshooting of equipment.
- C. Must be NSF approved.

### PART 2 - PRODUCTS

#### 2.01 EPOXY RESIN ADHESIVE FOR INJECTION

- A. Epoxy adhesive grout shall be a 100 percent solids 2-part water insensitive low-viscosity epoxy resin system. Epoxy shall be suitable for grouting both dry and damp cracks. Epoxy shall develop a minimum tensile strength (ASTM D695) of 6,000 psi and a minimum compressive strength of 8,000 psi. Epoxy shall be Sikadur 35, Hi-Mod LV by Sika Corporation, or equivalent.

#### 2.02 SURFACE SEAL

- A. The surface seal material is that material used to confine the injection adhesive in the fissure during injection and cure.
- B. Must be NSF approved.

- C. The surface seal material shall have adequate strength to hold injection fittings firmly in place and to resist injection pressures adequately to prevent leakage during injection.
- D. The material shall be from the same manufacturer of the epoxy resin adhesive and be of a compatible material.

### 2.03 EQUIPMENT FOR INJECTION

- A. The equipment used to meter and mix the two injection adhesive components and inject the mixed adhesive into the crack shall be portable, positive displacement type pumps with interlock to provide positive ratio control of exact proportions of the two components at the nozzle. The pumps shall be electric or air powered and shall provide in-line metering and mixing.
- B. The injection equipment shall have automatic pressure control capable of discharging the mixed adhesive at any pre-set pressure up to 200 psi plus or minus 5 psi and shall be equipped with a manual pressure control override.
- C. The injection equipment shall have the capability of maintaining the volume ratio for the injection adhesive prescribed by the manufacturer of the adhesive within a tolerance of plus or minus 5 percent by volume at any discharge pressure up to 200 psi.

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Surface adjacent to cracks or other areas of application shall be cleaned of dirt, dust, grease, oil, efflorescence or other foreign matter which may be detrimental to the integrity of the bond between the epoxy and the injection surface. Acids and corrosives shall not be permitted.
- B. Grind surface application area to expose aggregate.
- C. Entry ports shall be provided along the crack at intervals of not more than the thickness of the concrete being repaired. Ports shall be compatible with pressure injection equipment.
- D. Surface seal material shall be applied to the face of the crack between the entry ports. For through cracks, surface seal shall be applied to both faces.
- E. Enough time for the surface seal material to gain adequate strength shall pass before proceeding with the injection.

### 3.02 EPOXY INJECTION

- A. Injection of epoxy adhesive shall begin at lower entry port and continue until there is an appearance of epoxy adhesive at the next entry port adjacent to the entry port being pumped.
- B. When epoxy adhesive travel is indicated by appearance at the next adjacent port, injection shall be discontinued on the entry port being pumped, and epoxy injection shall be transferred to the next adjacent port where epoxy adhesive has appeared.



- C. Epoxy adhesive injection shall be performed continuously until cracks are completely filled.
- D. If port to port travel of epoxy adhesive is not indicated, the work shall immediately be stopped and the Engineer of Record notified.

### 3.03 FINISHING

- A. When cracks are completely filled, epoxy adhesive shall be cured to sufficient time to allow removal of surface seal without any draining or runback of epoxy material from cracks.
- B. Surface seal material and injection adhesive runs or spills shall be removed from concrete surfaces.
- C. The face of the crack shall be finished flush to the adjacent concrete showing no indentations or protrusions caused by the placement of entry ports.

### 3.04 PRESSURE TEST

- A. The mixing head of the injection equipment shall be connected and the equipment run until clear uniformly mixed material flows into the purge pail. The operator shall engage the equipment shut-off nozzle valve and subsequently bump the on-off switch while monitoring pressure on psi gauge until the pressure reaches 200 psi. Pressure gauge shall be monitored for one minute. If pressure is maintained between 190-200 psi, check valves shall be considered to be functioning properly and the injection may proceed. If pressure drops below 190 psi, Contractor shall be required to have new seals installed on the check valves and the equipment shall be subsequently retested.
- B. The pressure test shall be run for each injection unit at the beginning and after meal break of every shift that the unit is used in the work of crack repair.
- C. The adequacy and accuracy of the equipment shall be solely the responsibility of the Contractor.

### 3.05 RATIO TEST

- A. The epoxy mixture ratio shall be monitored continuously while injecting by placing a strip of masking tape on the sides of the A and B reservoirs full height. After filling reservoirs, the A and B levels shall be marked and monitored while running injection machine into purge pail for a period of one minute.
- B. The ratio test shall be run for each injection unit at the beginning and after meal break of every shift that the unit is used in the work of crack repair.

### 3.06 PROOF OF RATIO AND PRESSURE TEST

- A. At all times during the course of the work the Contractor shall keep complete and accurate records available to the Engineer of the pressure and ratio tests specified above.
- B. In addition, the Engineer at any time without prior notification of the Contractor, may request the Contractor to conduct the tests specified above in the presence of the Engineer.

**\*\* END OF SECTION \*\***

## SECTION 07905 – JOINT SEALANTS

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall provide joint sealants, bond breaker and compression seals for the Work, complete and in accordance with the Contract Documents.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections applies to the Work of this Section. Other Sections, not referenced below, shall also apply to the extent required for proper performance of this Work.

1. Section 03740 Pressure Injection of Cracks

#### 1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Except as otherwise indicated in this Section of the Specifications, the CONTRACTOR shall comply with the latest adopted edition of the Standard Specifications for Public Works Construction (SSPWC), together with the latest adopted editions of the City of San Diego Supplement Amendments.

- B. The Work of this Section shall comply with the current edition of the Uniform Building Code as adopted by the City of San Diego.

- C. Except as otherwise indicated, the current editions of the following apply to the Work of this Section:

1. Federal Specifications:

A-A-272 Sealing Compound-Single Component Butyl Rubber for Buildings and Other Construction

2. ASTM Standards:

ASTM C 719 Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement

ASTM C 790 Recommended Practices for Use of Latex Sealing Compounds

ASTM C 834 Specification for Latex Sealant Compounds

ASTM C 919 Practice for Use of Sealants in Acoustical Applications

ASTM C 920 Specification for Elastomeric Joint Sealants

ASTM C 962 Guide for Use of Elastomeric Joint Sealants

ASTM D 412 Test Methods for Rubber Properties in Tension

ASTM D 1056	Specification for Flexible Cellular Materials - Sponge or Expanded Rubber
ASTM D 2628	Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete

#### 1.04 CONTRACTOR SUBMITTALS

A. The following shall be submitted in compliance with Section 01300 - Submittals:

1. Product Data: Manufacturer's recommended applications and technical data for each joint sealer product required, including instructions for joint preparation and joint sealer application.
2. Samples for Initial Selection Purposes: Manufacturer's standard bead samples consisting of strips of actual products showing the full range of colors available, for each product exposed to view.
3. Technical Data: The CONTRACTOR shall submit a complete materials list along with the manufacturer's technical data and literature, specifications, joint width and depth tables, and installation instructions.
4. Certificates: The CONTRACTOR shall submit, if requested by the CONSTRUCTION MANAGER, certificates from an independent testing laboratory approved by the CONSTRUCTION MANAGER, certifying that the submitted materials meet all the requirements of the ASTM and Federal Specifications cited.
5. Warranty: The CONTRACTOR shall provide a 5-year written warranty of the entire sealant installation against faulty and/or incompatible materials and workmanship, together with a statement that it agrees to repair or replace, to the satisfaction of the OWNER, at no additional cost to the OWNER, any such defective areas which become evident within said 5-year warranty period.

#### 1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery of Materials: Manufactured materials shall be delivered in original, unbroken packages or containers bearing the manufacturer's label. Packages or containers shall be delivered to the site with seals unbroken. Manufacturer's labels shall bear name of manufacturer, product name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multi-component materials.
- B. Storage: All materials shall be carefully stored in an area that is protected from deleterious elements and in a manner recommended by the product manufacturer. Storage and handling of materials shall be in such a manner as to prevent deterioration or damage due to moisture, temperature changes, contaminants or other causes.

## PART 2 - PRODUCTS

### 2.01 GENERAL

- A. Manufacturer's Recommendations: Only products recommended for the specific application indicated shall be used.

- B. Single Source Responsibility: All joint sealer materials for a specific application shall be obtained from a single manufacturer.
- C. Compatibility: Joint sealers, joint fillers, and other related materials shall be provided which are compatible with one another and with joint substrates under the indicated conditions of service and application, as demonstrated by manufacturer's testing and field experience.
- D. Colors: Colors of exposed joint sealers shall be provided as indicated or, if not otherwise indicated, as selected by the CONSTRUCTION MANAGER from the manufacturer's standard colors.

## 2.02 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standards: The manufacturer's standard chemically curing elastomeric sealant shall be of base polymer indicated which complies with ASTM C 920 requirements, including those for Type, Grade, Class and Uses.
  - 1. Two-Part Water Immersion Polysulfide or Polyurethane Sealant: Type M; Grade NS; Class 25; Uses T, M, G, A, and Federal Specification TT-S-00227E, Type II, Class A, as applicable to the joint substrates indicated, and with a history of successful field experience in sealing joints immersed intermittently or continuously in water and approved for potable water application by NSF 61.
  - 2. Manufacturers:
    - a) Sikaflex-2C NS
    - b) Or approved equal

## 2.03 SOLVENT RELEASE CURING JOINT SEALANTS

- A. Acrylic Sealant: Manufacturer's standard one-part, nonsag, solvent release curing, acrylic terpolymer sealant complying with ASTM C 920 for Type S; Grade NS: Uses NT, M, G, A, and, as applicable to joint substrates indicated, Use O; except for selected test properties which are revised as follows:
 

1. Heat aged hardness	-	40 to 50
2. Weight loss	-	15 percent
3. Maximum cyclic movement capability	-	plus or minus 7-1/2 percent

(Class)
- B. Butyl Sealant: Manufacturer's standard one-part, nonsag, solvent release curing, polymerized butyl sealant complying with Federal Specification A-A-227 for Type I and formulated with minimum of 75 percent solids to be nonstaining, paintable, and have a tack-free time of 24 hours or less.
- C. Pigmented Small Joints Sealant: Manufacturer's standard, solvent release curing, pigmented, synthetic rubber sealant formulated for sealing joints 3/16-inch or smaller in width.

## 2.04 COMPRESSION SEALS

- A. **Preformed Foam Sealant:** The manufacturer's standard preformed, precompressed, impregnated open-cell foam sealant manufactured from high-density urethane foam impregnated with a nondrying, water repellent agent; factory-produced in precompressed sizes and in roll or stick form to fit joint widths indicated and to develop a watertight and airtight seal when compressed to the degree specified by the manufacturer. Provide products which are permanently elastic, mildew-resistant, non-migratory, nonstaining, compatible with joint substrates and other joint sealers, and comply with the following requirements:
1. **Impregnating agent:** Manufacturer's standard
  2. **Density:** Manufacturer's standard
  3. **Backing:** Pressure sensitive adhesive, factory applied to one side, with protective wrapping or coated on one face with release agent serving as bond breaker for primary joint sealant.
- B. **Preformed Hollow Neoprene Gasket:** Manufacturer's standard preformed polychloroprene elastomeric joint seal of the open-cell compression type complying with ASTM D 2628 and with requirements indicated for size, profile and cross-section design.

## 2.05 JOINT SEALANT BACKING

- A. **General:** Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers.
- B. **Plastic Foam Joint-Fillers:** Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of either flexible, open cell polyurethane foam or non-gassing, closed-cell polyethylene foam, subject to sealant manufacturer's approval; and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. **Bond-Breaker Tape:** Polyethylene tape or other plastic tape as recommended by the sealant manufacturer for preventing bond between sealant and joint filler or other materials at the back or third surface of the joint. Provide self-adhesive tape where applicable.
- D. **Elastomeric Tubing Joint Fillers:** Neoprene, butyl or EPDM tubing complying with ASTM D 1056, non-absorbent to water and gas, capable of remaining resilient at temperatures down to minus 26 degrees F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth and otherwise contribute to optimum sealant performance.

## 2.06 MISCELLANEOUS MATERIALS

- A. **Primer:** The CONTRACTOR shall provide primers recommended by the joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated.

- B. Cleaners for Nonporous Surfaces: The CONTRACTOR shall provide non-staining, chemical cleaner of a type acceptable to manufacturer of the sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.
- C. Masking Tape: The CONTRACTOR shall provide non-staining, non-absorbent type tape compatible with joint sealants and with surfaces adjacent to joints.

## 2.07 MANUFACTURERS

- A. The CONTRACTOR shall provide products of the type indicated shall be manufactured by one of the following (or approved equal):
  - 1. Two-Part Nonsag Polysulfide or Polyurethane Sealant Immersion Service
    - a. Sikaflex-2C NS
    - b. Or approved equal
  - 2. Butyl-Polyisobutylene Tape Sealant
    - a. Pecora Corp., [Extru-Seal Tape]
    - b. Protective Treatments, Inc., [PTI 606]
  - 3. Compression Seals
    - a. Emseal Corp., [Emseal Greyflex]
    - b. Illbruck, [Will-Seal Tape Type 250]
    - c. Sandell Manufacturing Co., Inc., [Polytite Standard]
  - 4. Preformed Hollow-Neoprene Gasket
    - a. Acme Highway Products Corp.
    - b. Watson Bowman Associates, Inc.

## PART 3 - EXECUTION

### 3.01 PROJECT CONDITIONS

- A. Environmental Conditions
  - 1. CONTRACTOR shall not proceed with installation of joint sealers under the following conditions:
    - a. When ambient and substrate temperature conditions are outside the limits permitted by the joint sealer manufacturers.
    - b. When joint substrates are wet due to rain, frost, condensation, or other causes.
- B. Joint Width Conditions: Installation of joint sealers shall not proceed when joint widths are less than, or more than, allowed by the joint sealer manufacturer for the application indicated.

### 3.02 PREPARATION

- A. Surface Cleaning of Joints: All joints shall be cleaned out immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
1. All foreign material shall be removed from joint substrates which could interfere with adhesion of joint sealer, including dust; paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer) oil; grease; waterproofing; water repellents; water, and surface dirt.
  2. Concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces shall be cleaned by brushing, grinding, blast cleaning, mechanical abrading, acid washing or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Loose particles remaining from the above cleaning operations shall be removed by vacuuming or blowing out joints with oil-free compressed air.
  3. Laitance and form release agents shall be thoroughly removed from all concrete surfaces.
  4. Metal, glass, porcelain enamel, glazed surfaces of ceramic tile and other non-porous surfaces shall be cleaned with chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- B. Joint Priming: Joint substrates shall be primed where indicated or where recommended by joint sealer manufacturer. Primer shall be applied so as to comply with joint sealer manufacturer's recommendations. Primers shall be confined to areas of joint sealer bond. Spillage or migration onto adjoining surfaces shall not be allowed.
- C. Filler material shall be resilient, closed-cell polyethylene foam conforming to ASTM D 1752, Type II or III, and/or bond breakers of proper size for joint widths. Filler shall be compatible with sealant manufacturer's product and shall not stain the sealant nor the materials to which they are applied.
- D. Primer shall be used in accordance with manufacturer's instructions, with all primers being applied prior to the installation of any backer rod or bond breaker tape. Primers shall be as recommended in the manufacturers printed instructions for caulking and sealants and shall not stain the sealant nor the materials to which they are applied. Manufacturer shall be consulted for all surfaces not specifically covered in submittal application instructions.
- E. Masking Tape: Masking tape shall be used where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Tape shall be removed immediately after tooling without disturbing joint seal.

### 3.03 INSTALLATION

- A. General



1. Unless otherwise indicated, comply with joint sealer manufacturers' printed installation instructions.
- B. Elastomeric Sealant Installation Standard
1. Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications and conditions indicated.
- C. Solvent-Release-Curing Sealant Installation Standard
1. Comply with requirements of ASTM C 804 for use of solvent-release-curing sealants.
- D. Latex Sealant Installation Standard
1. Comply with requirements of ASTM C 790 for use of latex sealants.
- E. Acoustical Sealant Application Standard
1. Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications and conditions indicated.
- F. Installation of Sealant Backings
1. Install sealant backings to comply with the following requirements:
    - a. Install joint-fillers of the types indicated to provide support of sealants during application and at position necessary to produce the required cross-sectional shapes and depths.
      - (1) Do not leave gaps between ends of joint-fillers.
      - (2) Do not stretch, twist, puncture or tear joint-fillers.
      - (3) Remove absorbent joint-fillers which have become wet prior to sealant application and replace with dry material.
    - b. Install bond breaker tape between sealants and joint-fillers, compression seals or back of joints, where required to prevent third-side adhesion of sealant to back of joint.
    - c. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint-fillers.
- G. Installation of Sealants
1. Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
- H. Tooling of Nonsag Sealants
1. Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling

agents which discolor sealants or adjacent surfaces or are not approved by the sealant manufacturer.

- a. Concave joint configuration per Figure 6A in ASTM C 962, unless otherwise indicated.
- b. Flush joint configuration per Figure 6B in ASTM C 962, where indicated.
- c. Recessed joint configuration per Figure 6C in ASTM C 962, of recess depth and at locations indicated.
  - (1) Where necessary, use masking tape to protect adjacent surfaces of tooled joints.

- I. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, and complying with sealant manufacturer's directions for installation methods, materials and tools which produce seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in conformance with sealant manufacturer's recommendations.
- J. Installation of Preformed Hollow Neoprene Gaskets: Install gaskets, with minimum number of end joints, in joint recesses with edges free of spalls and sides straight and parallel, both within tolerances specified by gasket manufacturer. Apply manufacturer's recommended adhesive to joint substrates immediately prior to installing gaskets. For straight sections provide gaskets in continuous lengths; where changes in direction occur, adhesively splice gasket together to provide watertight joints. Recess gaskets below adjoining surfaces by 1/8 inch to 1/4 inch.

#### 3.04 PROTECTION AND CLEANING

- A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of substantial completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers and reseal joints with new materials to produce installations with repaired areas indistinguishable from original work.
- B. Clean off excess sealants or sealant smears adjacent to joints as Work progresses, by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

**\*\* END OF SECTION \*\***

## SECTION 09800 – PROTECTIVE COATING

### PART 1 - GENERAL

#### 1.01 WORK OF THIS SECTION

- A. The CONTRACTOR shall provide protective coatings, complete and in place, in accordance with the Contract Documents.
- B. Definitions:
1. The term "paint," "coatings," or "finishes" as used herein, shall include surface treatments, emulsions, enamels, paints, epoxy resins, and all other protective coatings, excepting galvanizing or anodizing, whether used as a pretreatment, primer, intermediate coat, or finish coat.
  2. The term "DFT" means minimum dry film thickness.
- C. The following surfaces shall not be protective coated unless specifically indicated in other Sections or on the Drawings.
1. Travelling bridge.
  2. Stainless steel.
  3. Machined surfaces.
  4. Grease fittings.
  5. Glass.
  6. Equipment nameplates.
  7. Platform gratings, stair treads, door thresholds, and other walking surfaces.
  8. Plastic and fiberglass surfaces
  9. Embedded steel in concrete.
  10. Factory pre-finished surfaces with baked-on enamel, porcelain, polyvinylidene fluoride or other similar heat-applied factory finish.
- D. The coating system schedules summarize the surfaces to be coated, the required surface preparation, and the coating systems to be applied. Coating notes on the Drawings are used to show exceptions to the schedules, to show or extend the limits of coating systems, or to clarify or show details for application of the coating systems.

#### 1.02 RELATED SECTIONS

- A. The Work of the following Sections applies to the Work of this Section. Other Sections, not referenced below, shall also apply to the extent required for proper performance of this Work.
1. Section 01300 Submittals
  2. Section 03730 Concrete Rehabilitation
  3. Section 03740 Pressure Injection of Cracks

4. Section 07905 Joint Sealants

- B. Concrete Surfaces: Concrete dampproofing and waterproofing shall be coated in accordance with applicable sections in Division 3 - Concrete. All other concrete surfaces shall be coated as indicated in this Section.

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Except as otherwise indicated, the current editions of the following apply to the Work of this Section:

1. References herein to "SSPC Specifications" or "SSPC" shall mean the published standards of SSPC, the Society for Protective Coatings.
2. References herein to "NACE" shall mean the published standards of the NACE International.
3. References herein to "ANSI/AWWA" shall mean the published standards of the American Water Works Association including:
  - a. ANSI/AWWA C205 Cement-Mortar Protective Lining and Coating for Steel Water Pipe B 4 in. (100mm) and Larger - Shop Applied
  - b. ANSI/AWWA C210 Liquid Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines
  - c. ANSI/AWWA C213 Fusion-Bonded Epoxy Coating for the Interior and
4. Federal Specifications:
  - a. OSHA 1910.144 Safety Color Code for Marking Physical Hazards
5. National Sanitation Foundation "NSF," Standard 61 for Contact with Drinking Water.
6. ASTM Standards:
  - a. C-309 Liquid Membrane-Forming Compounds for Curing Concrete
  - b. ASTM C 868 Standard Test Method for Chemical Resistance of Protective Linings
  - c. ASTM C 1583/1583M Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)
  - d. ASTM D 2794 Standard Test Method for Resistance of Organic Linings to the Effects of Rapid Deformation (Impact)
  - e. ASTM D 4060 Standard Test Method for Abrasion Resistance of Organic Linings by the Taber Abraser
  - f. ASTM D 4285 Standard Test Method for Indicating Water or Oil in Compressed Air
  - g. ASTM D 4263 Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
  - h. ASTM D 4414 Standard Practice for Measurement of Wet Film Thickness

- by Notch Gages
  - i. ASTM D 6944 Standard Test Method for Measuring Humidity with a Psychrometer
  - j. ASTM D 7682 Standard Test Method for Replication and Measurement of Concrete Surface Profiles Using Replica Putty
  - k. ASTM F 1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
  - l. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
  - m. ASTM F 2414 Standard Practice for Sealing Sewer Manholes Using Chemical Grouting
- 7. ICRI Guidelines:
  - a. Technical Guideline No.03732, "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays
- 8. Regulatory Agency Requirements: Coatings for surfaces in contact with raw or potable water shall impart no taste or odor to the water nor result in any organic or inorganic content in excess of the maximum contaminant level established by applicable laws or regulations including NSF Standards. All coatings shall be approved by the San Diego Air Pollution Control District. The CONTRACTOR shall revise painting systems specified herein to provide manufacturer's regulatory agency approved coating system where required. All painting systems shall be VOC compliant.
- B. The Work of this Section shall comply with the current edition of the Uniform Building Code as adopted by the City of San Diego.
- C. Inspection records of shop or field-applied coatings and linings for buried or submerged items shall be submitted within 15 days after the work has been accepted.

#### 1.04 CONTRACTOR SUBMITTALS

- A. General: Submittals shall be furnished in accordance with Section 01300 - Submittals unless indicated otherwise below.
- B. Submittals shall include the following information and be submitted at least 30 days before protective coating work:
  - 1. Coating Materials List: Eight copies of a coating materials list showing the Manufacturer and the coating number, keyed to the coating systems herein. The list shall be submitted before or at the time of submittal of samples.
  - 2. Coating Manufacturer's Information: For each coating system to be used, the following data:
    - a. Coating manufacturer's data sheet for each product proposed, including statements on the suitability of the material for the intended use.
    - b. Technical and performance information that demonstrates compliance with the system performance and material requirements.

- c. Paint manufacturer's instructions and recommendations on surface preparation and application.
- d. Proposed application techniques including proof of the acceptability of the proposed technique for each coating.
- e. Colors available for each product (where applicable).
- f. Compatibility of shop and field applied coatings (where applicable).
- g. Material Safety Data Sheet for each product used.
- h. Qualification Data: Approved Installer Training Certificates from manufacturer.
- i. **Coating Reference Documentation:** For the proposed coating system, the CONTRACTOR shall submit reference documentation from the coating manufacturer of a minimum of five (5) similar installations, in potable water applications, which have been in service for more than five (5) years in the southwest portions of the United States of America. Reference documentation shall include installation location/details, installation date, current owner contact information, and contractor/applicator contact information.
- j. Construction Details: Copies of manufacturer's computer generated standard lining details for specified materials, including: leading edge termination, metal embedment in concrete, joint detail, wall-to-slab detail, pipe termination detail, and any other detail at the request of the Engineer.
- k. Maintenance Manual: Upon completion of the Work, submit five copies of corrosion protection lining manufacturer's written instructions for recommended maintenance practices. Include the following information:
  - (1) Product name and number.
  - (2) Name, address, e-mail address and telephone number of manufacturer and local representative.
  - (3) Detailed procedures for routine maintenance and cleaning.
  - (4) Detailed procedures for repairs.
- l. Product Substitution: The specified corrosion protection lining is the minimum standard of quality for this project. Equivalent materials of other manufacturers may be substituted only by approval of Engineer. Requests for material substitutions shall be in accordance with requirements of the project specification.
  - (1) Manufacturers of "or equal" products shall provide direct property comparison with the materials specified in addition to complying with all other requirements of these Specifications. "Or equal" products shall employ the same generic materials and system components as the corrosion protection lining specified. "Or equal" products shall provide equivalent performance as the specified corrosion protection lining.
  - (2) Bidders desiring to use corrosion protection lining other than those specified shall submit proposed system with their proposal at the time of bid, together with the information required herein.
  - (3) Bidders intending to propose an "or equal" product shall do so at the time of the bid and shall provide reference documentation from

the proposed manufacturer of the product(s) at the time of bid. Reference documentation shall include a minimum of ten (10) similar installations, in potable water applications, which have been in service for more than ten (10) years in the southwest portions of the United States of America. Reference documentation shall include installation location/details, installation date, current owner contact information, and contractor/applicator contact information.

- m. Jobsite Reports: Submit at the completion of Work
  - (1) Daily Reports: Include surface preparation, substrate conditions, ambient conditions application procedures, lining materials applied, material quantities, material batch number(s), description of work completed and location thereof.
  - (2) Quality Control Reports: Include all quality control testing and physical specimens.
  - (3) Contractor shall maintain a copy of records until the expiration of the specified warranty period.

#### 1.05 SPECIAL CORRECTION OF DEFECTS REQUIREMENTS

- A. Warranty Inspection: A warranty inspection may be conducted during the eleventh month following completion of all coating and painting work. The CONTRACTOR and a representative of the coating material manufacturer shall attend this inspection. All defective work shall be repaired in accordance with these Specifications and to the satisfaction of the OWNER. The OWNER may, by written notice to the CONTRACTOR, reschedule the warranty inspection to another date within the 2-year correction period, or may cancel the warranty inspection altogether. If a warranty inspection is not held, the CONTRACTOR is not relieved of its responsibilities under the Contract Documents.

#### 1.06 SERVICES OF MANUFACTURER

- A. For submerged and severe service coating systems, the CONTRACTOR shall require the paint manufacturer to furnish the following services:
  - 1. The manufacturer's representative shall furnish at least 6 hours of on-site instruction in the proper surface preparation, use, mixing, application and curing of the coating systems.
  - 2. The manufacturer's representative shall personally observe the start of surface preparation, mixing, and application of the coating materials.
  - 3. The manufacturer's representative shall provide technical support in the field to resolve field problems associated with manufacturer's products furnished under this Contract or the application thereof.

#### 1.07 SAFETY AND HEALTH REGULATIONS

- A. General: In accordance with the requirements of OSHA Safety and Health Standards for Construction (29CFR1926) and the applicable requirements of regulatory agencies having jurisdiction, as well as manufacturer's printed instructions and appropriate technical bulletins and manuals, the CONTRACTOR shall provide and require use of personnel protective lifesaving equipment for persons working in or about the project site.

- B. **Head and Face Protection and Respiratory Devices:** Equipment shall include protective helmets which shall be worn by all persons while in the vicinity of the Work. In addition, workers engaged in or near the work during sandblasting shall wear OSHA approved eye and face protection devices and air purifying, halfmask or mouthpiece respirators. Barrier creams shall be used on any exposed areas of skin.
- C. **Ventilation:** Where ventilation is used to control hazardous exposure, all equipment shall be explosion-proof. Forced air ventilation shall be provided to reduce the concentration of air contaminant to a safe limit. Air circulation and exhausting of solvent vapors shall be continued until coatings have fully cured.
- D. **Sound Levels:** Whenever the occupational noise exposure exceeds maximum allowable sound levels, the CONTRACTOR shall implement furnish and require the use of approved ear protective devices.
- E. **Illumination:** Adequate illumination shall be provided while Work is in progress, which may include explosion-proof lights, scaffolding and electrical equipment. Whenever required by the CONSTRUCTION MANAGER, the CONTRACTOR shall provide additional illumination to cover all areas to be inspected. The level of illumination for inspection purposes shall be determined by the CONSTRUCTION MANAGER.
- F. **Temporary Ladders and Scaffolding:** All temporary ladders and scaffolding shall conform to applicable safety requirements. They shall be erected where requested by the CONSTRUCTION MANAGER to facilitate inspection and shall be moved by the CONTRACTOR to locations as requested by the CONSTRUCTION MANAGER.

## **PART 2 - PRODUCTS**

### **2.01 GENERAL**

- A. **Suitability:** Use suitable coating materials as recommended by the Manufacturer.
- B. **Compatibility:** In any coating system only compatible materials from a single Manufacturer shall be used in the Work. Particular attention shall be directed to compatibility of primers and finish coats. If necessary, a barrier coat shall be applied between existing prime coat and subsequent field coats to ensure compatibility.
- C. **Containers:** Coating materials shall be sealed in containers that plainly show the designated name, formula or specification number, batch number, color, date of manufacture, and name of manufacturer, all of which shall be plainly legible at the time of use.
- D. **Colors:** All colors and shades of colors of all coats of paint shall be as indicated or selected by the CONSTRUCTION MANAGER. Each coat shall be of a slightly different shade, to facilitate inspection of surface coverage of each coat. Finish colors shall be as selected from the manufacturer's standard color samples by the CONSTRUCTION MANAGER.
- E. **Substitute or "Or-Equal" Products:**
  - 1. To establish equality under Section 01600 - Materials and Equipment, the CONTRACTOR shall furnish satisfactory documentation from the manufacturer of



the proposed substitute or “or-equal” product that the material meets the indicated requirements and is equivalent or better in the following properties:

- a. Quality.
  - b. Durability.
  - c. Resistance to abrasion and physical damage.
  - d. Life expectancy.
  - e. Ability to recoat in future.
  - f. Solids content by volume.
  - g. Dry film thickness per coat.
  - h. Compatibility with other coatings.
  - i. Suitability for the intended service.
  - j. Resistance to chemical attack.
  - k. Temperature limitations in service and during application.
  - l. Type and quality of recommended undercoats and topcoats.
  - m. Ease of application.
  - n. Ease of repairing damaged areas.
  - o. Stability of colors.
2. Protective Coating Materials shall be standard products produced by recognized manufacturers who are regularly engaged in production of such materials for essentially identical service conditions. Where requested, provide the CONSTRUCTION MANAGER with the names of not less than 10 successful applications of the proposed manufacturer's products which comply with these requirements.
  3. The cost of all testing and analyzing proposed substitute products which may be required by the CONSTRUCTION MANAGER shall be paid by the CONTRACTOR at no additional cost to the OWNER. If a proposed substitution requires changes in the Work, bear all such costs involved and the costs of allied trades affected by the substitution at no additional cost to the OWNER.

## 2.02 INDUSTRIAL COATING SYSTEMS

- A. Material Sources: Each of the following manufacturers is capable of supplying many of the industrial coating materials indicated herein. Where manufacturers and paint numbers are listed, it is to show the type and quality of coatings that are required. Proposed substitute materials will be considered as indicated above. All industrial coating materials shall be materials that have a record of satisfactory performance in industrial plants, manufacturing facilities, and water and wastewater treatment plants.
  1. Sherwin Williams
  2. Carboline Coatings Company
  3. Tnemec Company
  4. Sika Corporation

## 2.03 COLORS AND FINISHES

- A. Surface treatments and finishes are shown under “Coating Systems” below. All substrates scheduled under “Coating Systems” shall be coated whether or not shown on the Drawings or in the Coating System Schedule, unless an item is specifically scheduled as not requiring one of the coating systems described in this Section.
- B. Color Selection
1. In general, all color coding of piping, ducts and equipment shall comply with applicable standards of ANSI A13.1 and OSHA 1910.144. Piping colors shall conform to the requirements of Section 15030 - Pipe Identification Systems.
  2. The CONTRACTOR shall select colors in accordance with the attached Schedule A for the project.
- C. The CONSTRUCTION MANAGER will provide final acceptance of colors based on samples applied on the job. After approval of submittals but before the CONTRACTOR starts the coating work, the CONSTRUCTION MANAGER will furnish color schedules for surfaces to be coated in accordance with this Section. The CONSTRUCTION MANAGER reserves the right to select non-standard colors for all coating systems specified within the ability of the manufacturer to produce such non-standard colors. Selection of non-standard colors shall not be cause for CONTRACTOR rejecting the CONSTRUCTION MANAGER’s color selections and CONTRACTOR shall supply such colors at no additional expense to OWNER.
- D. Color Pigments: Color pigments shall be pure, nonfading, applicable types to suit the substrates and service indicated. Lead content shall not exceed amount permitted by federal, state and local government laws and regulations.

## 2.04 COATING SYSTEMS

- A. Materials Sources: The manufacturers' products listed in this paragraph are materials which satisfy the material descriptions of this paragraph and have a documented successful record for long term submerged or severe service conditions. Proposed substitute products will be considered as indicated above.
- B. *System No. 3 - Epoxy, Steel:* High build, amine-cured, epoxy resin shall have a solids content of at least 98% by volume and shall be suitable for long-term immersion service in potable water. For potable water service, the coating material shall be listed by the NSF International as in compliance with NSF Standard 61 - Drinking Water System Components - Health Effects.
1. Prime coat and finish coats (2 or more of contrasting colors, DFT = 25 mils), Tnemec Series 22 Epoxoline, Sikagard 62, Carboline Phenoline 341, Sherman Williams Duraplate UHS, or equal.
  2. For coating of valves and equipment, DFT = 25 mils.
- C. *System No. 7 - Epoxy, Concrete:* The coating material shall be a 98% solids polyamine-cured epoxy material suitable for long-term immersion in water and for service where subjected to occasional splash and spillage of water treatment chemicals. Epoxy shall be listed by the NSF International as in compliance with NSF Standard 61, and shall conform with state and local health regulations and policies for service in potable water. The repair

mortar shall be a rapid curing cementitious Portland cement base material as listed in Section 03730.

1. Prime and finish coats (2 or more, DFT = 25 mils), Tnemec Series 22 Epoxoline, Sikagard 62, Carboline Phenoline 341, Sherwin Williams Duraplate UHS, or equal. On floor surfaces, use a nonskid additive or broadcast sand in the final coat. Coats shall be of contrasting colors. Colors shall be approved by the OWNER.

## 2.05 COATING SYSTEM SCHEDULE

Item	Surface Prep.	System No.
Surfaces of piping and equipment and ferrous surfaces submerged or intermittently submerged in potable water and all surfaces inside enclosed hydraulic structures and vents (excluding shop-coated valves, couplings, pumps).	Near-White metal blast cleaning SSPC-SP10	(3) epoxy, steel
Above-grade concrete, submerged and non-submerged	Per paragraph 3.07	(7) epoxy, concrete
Below-grade concrete, submerged, potable water	Per paragraph 3.07	(7) epoxy, concrete
Steel fittings and surfaces where indicated	Near-white blast cleaning SSPC-SP10	(3) epoxy, steel

## PART 3 - EXECUTION

### 3.01 WORKMANSHIP

- A. Skilled craftsmen and experienced supervision shall be used on all Work.
- B. Coating shall be done in a workmanlike manner so as to produce an even film of uniform thickness. Edges, corners, crevices, and joints shall receive special attention to insure thorough cleaning and an adequate thickness of coating material. The finished surfaces shall be free from runs, drops, ridges, waves, laps, brush marks, and variations in color, texture, and finish. The hiding shall be so complete that the addition of another coat would not increase the hiding. Special attention shall be given to ensure that edges, corners, crevices, welds, and similar areas receive a film thickness equivalent to adjacent areas, and installations shall be protected by the use of drop cloths or other precautionary measures.
- C. All damage to surfaces resulting from the Work shall be cleaned, repaired, and refinished to original condition.

### 3.02 STORAGE, MIXING, AND THINNING OF MATERIALS

- A. Manufacturer's Recommendations: Unless otherwise indicated, the coating manufacturer's printed recommendations and instructions for thinning, mixing, handling,

applying, and protecting its coating materials, for preparation of surfaces for coating, and for all other procedures relative to coating shall be strictly observed.

- B. All protective coating materials shall be used within the manufacturer's recommended shelf life.
- C. Storage and Mixing: Coating materials shall be stored under the conditions recommended by the Material Safety Data Sheets, and shall be thoroughly stirred, strained, and kept at a uniform consistency during application. Equipment for plural mixing of coating components shall have calibration documentation verifying the proper volume and quantity of mixed components in the applied coating. Coatings of different manufacturers shall not be mixed together.

### 3.03 PREPARATION FOR COATING

- A. General: All surfaces to receive protective coatings shall be cleaned as indicated before application of coatings. Examine all surfaces to be coated, and correct surface defects before application of any coating material. All marred or abraded spots on shop-primed and on factory-finished surfaces shall receive touch-up restoration before any coating application. Surfaces to be coated shall be dry and free of visible dust.
- B. Protection of Surfaces Not to be Coated: Surfaces which are not to receive protective coatings shall be protected during surface preparation, cleaning, and coating operations.
- C. All hardware, lighting fixtures, switchplates, machined surfaces, couplings, shafts, bearings, nameplates on machinery, and other surfaces not to be painted shall be removed, masked or otherwise protected. Drop cloths shall be provided to prevent coating materials from falling on or marring adjacent surfaces. The working parts of all mechanical and electrical equipment shall be protected from damage during surface preparation and coating operations. Openings in motors, including moisture weep holes, shall be masked to prevent entry of coating or other materials.
- D. Care shall be exercised not to damage adjacent work during blast cleaning operations. Spray painting shall be conducted under carefully controlled conditions. The CONTRACTOR shall be fully responsible for and shall promptly repair any and all damage to adjacent work or adjoining property occurring from blast cleaning or coating operations.
- E. Protection of Painted Surfaces: Cleaning and coating shall be coordinated so that dust and other contaminants from the cleaning process will not fall on wet, newly coated surfaces.

### 3.04 SURFACE PREPARATION STANDARDS

- A. The following referenced surface preparation specifications of SSPC: The Society for Protective Coatings shall form a part of this specification:
  - 1. Solvent Cleaning (SSPC-SP1): Removal of oil, grease, soil, salts, and other soluble contaminants by cleaning with solvent, vapor, alkali, emulsion, or steam.
  - 2. Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, by hand chipping, scraping, sanding, and wire brushing.

3. Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, by power tool chipping, descaling, sanding, wire brushing, and grinding.
4. White Metal Blast Cleaning (SSPC-SP5): Removal of all visible rust, oil, grease, soil, dust, mill scale, paint, oxides, corrosion products and foreign matter by blast cleaning.
5. Commercial Blast Cleaning (SSPC-SP6): Removal of all visible oil, grease, soil, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except that staining shall be limited to no more than 33 percent of each square inch of surface area.
6. Brush-Off Blast Cleaning (SSPC-SP7): Removal of all visible oil, grease, soil, dust, loose mill scale, loose rust, and loose paint.
7. Near-White Blast Cleaning (SSPC-SP10): Removal of all visible oil, grease, soil, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except that staining shall be limited to no more than 5 percent of each square inch of surface area.
8. Surface Preparation of Concrete (SSPC-SP13): Concrete surface shall be free of contaminants, laitance, loosely adhering concrete and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.

### 3.05 METAL SURFACE PREPARATION (UN GALVANIZED)

- A. The minimum abrasive blasting surface preparation shall be as indicated in the coating system schedules included at the end of this Section. Where there is a conflict between these Specifications and the coating manufacturer's printed recommendations for the intended service, the higher degree of cleaning shall apply.
- B. Workmanship for metal surface preparation shall be in conformance with the current SSPC Standards and this Section. Blast cleaned surfaces shall match the standard samples available from the National Association of Corrosion Engineers, NACE Standard TM-01-70 - Visual Standard for Surfaces of New Steel Airblast Cleaned with Sand Abrasive and TM-01-75 - Visual Standard for Surfaces of New Steel Centrifugally Blast Cleaned with Steel Grit.
- C. All oil, grease, welding fluxes, and other surface contaminants shall be removed by solvent cleaning per SSPC-SP1 - Solvent Cleaning before blast cleaning.
- D. All sharp edges shall be rounded or chamfered and all burrs, and surface defects and weld splatter shall be ground smooth before blast cleaning.
- E. The type and size of abrasive shall be selected to produce a surface profile that meets the coating manufacturer's recommendation for the particular coating and service conditions. Abrasives for submerged and severe service coating systems shall be clean, hard, sharp cutting crushed slag. Automated blasting systems shall not be used for surfaces that will be in submerged service. Metal shot or grit shall not be used for surfaces that will be in submerged service, even if subsequent abrasive blasting is planned to be one with hard, sharp cutting crushed slag.

- F. The abrasive shall not be reused unless an automated blasting system is used for surfaces that will be in nonsubmerged service. For automated blasting systems, clean oil-free abrasives shall be maintained. The abrasive mix shall include at least 50 percent grit.
- G. Comply with the applicable federal, state, and local air pollution control regulations for blast cleaning.
- H. Compressed air for air blast cleaning shall be supplied at adequate pressure from well-maintained compressors equipped with oil and moisture separators which remove at least 95% of the contaminants.
- I. Surfaces shall be cleaned of all dust and residual particles of the cleaning operation by dry air blast cleaning, vacuuming, or another approved method before painting.
- J. Enclosed areas and other areas where dust settling is a problem shall be vacuum cleaned and wiped with a tack cloth.
- K. Damaged or defective coating shall be removed by the specified blast cleaning to meet the clean surface requirements before recoating.
- L. If the specified abrasive blast cleaning will damage adjacent work, the area to be cleaned is less than 100 square feet, and the coated surface will not be submerged in service, then SSPC-SP2 - Hand Tool Cleaning or SSPC-SP3 - Power Tool Cleaning, may be used.
- M. Shop-applied coatings of unknown composition shall be completely removed before the indicated coatings are applied. Valves, castings, ductile or cast iron pipe, and fabricated pipe or equipment shall be examined for the presence of shop-applied temporary coatings. Temporary coatings shall be completely removed by solvent cleaning per SSPC-SP1 before the abrasive blast cleaning work has been started.
- N. Shop primed equipment shall be solvent cleaned in the field before finish coats are applied.

### 3.06 SURFACE PREPARATION FOR GALVANIZED FERROUS METAL

- A. Galvanized ferrous metal shall be alkaline cleaned per SSPC-SP1 to remove oil, grease, and other contaminants detrimental to adhesion of the protective coating system to be used.
- B. Pretreatment coatings of surfaces shall be in accordance with the printed recommendations of the coating manufacturer.

### 3.07 SURFACE PREPARATION FOR CONCRETE

- A. The initial surface has been high-pressure hydro-blasted and prepared to ICRI CSP 9-10 surface profile. Prepare surfaces of the repaired concrete by mechanically preparing in accordance with SSPC-SP13/NACE No. 6, ICRI-CSP 4-5 surface profile. This ensure complete removal of the weak upper laitance layer and create the necessary surface amplitude for topcoating.

### 3.08 APPLICATION OF COATINGS

- A. Application of the epoxy coating shall not start until all surfaces of the concrete have been resurfaced, properly cured, and mechanically prepared in accordance with SSPC-SP13/NACE No. 6, ICRI-CSP 9-10 surface profile.
- B. The application of protective coatings to steel substrates shall be in accordance with SSPC-PA1 - Paint Application Specification No. 1.
- C. Cleaned surfaces and all coats shall be inspected before each succeeding coat. Schedule such inspection with the CONSTRUCTION MANAGER in advance.
- D. Blast cleaned ferrous metal surfaces shall be painted before any rusting or other deterioration of the surface occurs. Blast cleaning shall be limited to only those surfaces that can be coated in the same working day.
- E. Coatings shall be applied in accordance with the manufacturer's instructions and recommendations, and this Section, whichever has the most stringent requirements.
- F. Special attention shall be given to edges, angles, weld seams, flanges, nuts and bolts, and other places where insufficient film thicknesses are likely to be present. Use stripe painting for these areas.
- G. Special attention shall be given to materials which will be joined so closely that proper surface preparation and application are not possible. Such contact surfaces shall be coated before assembly or installation.
- H. Finish coats, including touch-up and damage repair coats shall be applied in a manner which will present a uniform texture and color matched appearance.
- I. Coatings shall not be applied under the following conditions:
  - 1. Temperature exceeding the manufacturer's recommended maximum and minimum allowable.
  - 2. Surface in direct sunlight.
  - 3. Ascending temperatures (avoidance of outgassing of entrapped air).
  - 4. Dust or smoke laden atmosphere.
  - 5. Damp or humid weather.
  - 6. When the substrate or air temperature is less than 5 degrees F above dewpoint. This requirements holds during curing as well.
  - 7. When air temperature is expected to drop below 40 degrees F or less than 5 degrees F above the dewpoint within 8 hours after application of coating.
  - 8. When wind conditions are not calm.
- J. Dewpoint shall be determined by use of a sling psychrometer in conjunction with U.S. Department of Commerce, Weather Bureau psychrometric tables.
- K. Expansion Joint Termination: Carry protective coating to the joint and seal the termination at an expansion joint Sikaflex 2cNS ezMix sealant, or approved equal.

- L. Tie-in of New Coating Outside of Recoat Window: For this condition, manufacturers recommendations shall be followed. Typically, light abrasion of cured surface followed by an approved manufacturer's solvent wipe will suffice.
- M. Unburied steel piping shall be abrasive blast cleaned and primed before installation.

### 3.09 CURING OF COATINGS

- A. Maintain curing conditions in accordance with the conditions recommended by the coating material manufacturer or by this Section, whichever is the most stringent, before placing the completed coating system into service.
- B. In the case of enclosed areas, forced air ventilation, using heated air if necessary, may be required until the coatings have fully cured.

### 3.10 FIELD INSPECTION AND TESTING

- A. General: Furnish the CONSTRUCTION MANAGER a minimum of 3 days' advance notice of the start of any field surface preparation work or coating application work.
- B. All inspection, testing, and operation of inspection tools for field-applied coatings and linings shall be performed only in the presence of the CONSTRUCTION MANAGER, unless the CONSTRUCTION MANAGER has granted prior approval to perform such Work in its absence.
- C. At no additional cost to the OWNER, the inspection shall be performed by a third-party inspection agency acceptable to the CONSTRUCTION MANAGER and certified in the inspection of coating and lining application procedures.
- D. Inspection by the CONSTRUCTION MANAGER, or the waiver of inspection of any particular portion of the Work, shall not relieve the CONTRACTOR of its responsibility to perform the Work in accordance with these Specifications.
- E. For external or internal application of lining or coating materials for buried or submerged piping systems, the CONTRACTOR shall supply inspection procedures for use by the CONSTRUCTION MANAGER. Procedures shall be supplied in advance of starting work.
- F. Inspection Devices: Furnish, until final acceptance of such coatings, inspection devices in good working condition for the detection of holidays and measurement of dry-film thicknesses of protective coatings. Dry-film thickness gauges shall be made available for the CONSTRUCTION MANAGER's use at all times while coating is being done, until final acceptance of such coatings. Furnish the services of a trained operator of the holiday detection devices until the final acceptance of such coatings. Holiday detection devices shall be operated only in the presence of the CONSTRUCTION MANAGER.
- G. Holiday Testing: *Holiday testing is required of all finished, coated surfaces within Basin No. 1 to determine if any defects exist and map those areas for repair.* Holiday test all coated surfaces within Basin No. 1 and all steel surfaces coated, other surfaces which will be submerged in water or other liquids, or surfaces which are enclosed in a vapor space in such structures and surfaces coated with any of the submerged and severe service coating systems. Areas which contain holidays shall be marked and repaired or recoated in accordance with the coating manufacturer's printed instructions and then retested at the



CONTRACTOR's expense. Electrical inspection for linings and coatings shall be in accordance with applicable NACE standards SPO188 and/or SPO274.

1. Coatings With Thickness Exceeding 20 Mils: For surfaces having a total dry film coating thickness exceeding 20 mils: pulse-type holiday detector such as Tinker & Razor Model AP-W, D.E. Stearns Co. Model 14/20, or equal shall be used. The unit shall be adjusted to operate at the voltage required to cause a spark jump across an air gap equal to twice the specified coating thickness.
  2. Coatings With Thickness of 20 Mils or Less: For surfaces having a total dry film coating thickness of 20 mils or less: Tinker & Razor Model M1 nondestructive type holiday detector, K-D Bird Dog, or equal shall be used. The unit shall operate at less than 75 V. For thicknesses between 10 and 20 mils, a nonsudsing type wetting agent, such as Kodak Photo-Flo, or equal, shall be added to the water before wetting the detector sponge.
- H. Film Thickness Testing: On ferrous metals, the dry film coating thickness shall be measured in accordance with the SSPC "Paint Application Specification No. 2" using a magnetic-type dry film thickness gauge such as Mikrotest model FM, Elcometer model 111/1EZ, or equal. Each coat shall be tested for the correct thickness. No measurements shall be made until at least 8 hours after application of the coating. On nonferrous metals and other substrates, the coating thicknesses shall be measured at the time of application using a wet film gauge.
- I. Surface Preparation: Evaluation of blast cleaned surface preparation work will be based upon comparison of the blasted surfaces with the standard samples available from the NACE, using NACE standards NACE No. 1 and NACE TM-01-74.
- J. Third-Party Inspection: At no additional cost to the OWNER, the CONTRACTOR shall employ a NACE Level 3 certified quality assurance inspector for the inspection of surface preparation, coatings and linings during the course of the Work. The City shall also provide a NACE Level 3 inspector (City Inspector) for the duration of the Work.
- K. Hold Point Inspections: Hold Point inspections will be performed by the City and their designated third party inspectors (City Inspector). The Contractor's Quality Control team and crew foreman shall notify the City when the work has progressed to the point where the Hold Point inspection can be performed. The City will discuss with CONTRACTOR anything that may lead to rejection of work in progress. The City will apprise the CONTRACTOR of his conclusion regarding any testing that may be performed. No further work on the surface area undergoing Hold Point inspection shall be performed until the item inspected has been judged acceptable by the City's third-party inspector. The fact that the inspector may inadvertently overlook a deviation from some requirement of this Specification shall not constitute a waiver of the requirement or the CONTRACTOR's obligation to correct the condition, even if it is discovered after the fact. The following Hold Points are established for the surface preparation, concrete repair, and coatings application for this project:
1. After abrasive blast cleaning, after blowdown or vacuum, and prior to application of repair materials and the first coat of lining material.
    - a. All substrates on which abrasive blasting has been performed shall be inspected for degree of cleanliness, soundness, profile and uniformity of anchor pattern as required by the Specification.

- b. Concrete surfaces shall be examined for bugholes, cracks, cavities, voids, and other defects. These defects shall be identified and categorized, and the degree of repair and resurfacing shall be determined.
    - c. Deficiencies shall be marked with chalk and corrected by the CONTRACTOR to the satisfaction of the City Inspector.
  - 2. Hold Point following application of the prime coat of lining material and prior to application of the succeeding coat of lining material.
    - a. All substrates which have received application of the prime coat of the coating material shall be examined by the City Inspector to determine that no contamination or inclusions of particles in the material has occurred.
    - b. Deficiencies shall be marked with chalk and corrected by the CONTRACTOR to the satisfaction of the Inspector.
  - 3. Hold Point following completion of DFT repairs and / or Holiday Testing repairs in the final coat
    - a. All substrates which have received the final coat and which have been examined and repaired by the CONTRACTOR's QCM or designated representative for non-conforming areas of low film thickness, blistering, dry spray, pinholes (holidays), embedded trash inclusions or other surface defects shall be examined by the City Inspector.
    - b. City Inspector shall determine conformance of film thickness requirements in accordance with SSPC-PA 2, except that readings will be taken at closer intervals to outline areas of non-conformance. Areas of film thickness lower than Specification minimum requirement will be marked and repaired by the Contractor application of additional lining material shall be in accordance with Coating Manufacturer' recommended re-coat times.
    - c. The City Inspector shall perform, or witness the Contractor perform, holiday testing over all surfaces of the applied coating material. Holiday testing shall be performed prior to final forced cure. The coating shall be 100% holiday free. Any defects detected shall be marked with chalk and repaired by the CONTRACTOR. Repairs shall be re-tested per the Specification requirements.
    - d. The City Inspector shall examine all surfaces of the lining material to determine that the surface is free from embedded contaminants. Any defects shall be marked with chalk and repaired by the CONTRACTOR.
- L. One Year Inspection: In addition to the independent, third-party inspection above, within the one-year acceptance period of the Work, Basin #1 shall be drained and re-inspected in the presence of the CONTRACTOR. The CONTRACTOR shall be given 30 calendar days advance notice of this inspection. Insofar as may be possible, both the City and the CONTRACTOR will have available the same supervisory and inspection personnel as were present for the original work. This inspection group shall include a representative of the material manufacturer. CONTRACTOR shall, within 90 calendar days of this inspection, complete all required coating repair and deficiencies revealed during this inspection. All defective coatings shall be repaired by CONTRACTOR using

coating materials, equipment and methods similar to those used in the original work. Materials shall be of fresh manufacture and within the manufacturer's stated shelf life at the time of application.

### 3.11 PROTECTION

- A. Protect work of other trades, whether to be painted or not, against damage by the painting and finishing Work. Leave all such work undamaged. Correct all damages by cleaning, repairing or replacing, and repainting, as acceptable to the CONSTRUCTION MANAGER.
- B. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove all temporary protective wrappings provided for protection of this Contract and other contracts after completion of painting operations.

### 3.12 CLEAN-UP

- A. During the progress of Work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each work day.
- B. Upon completion of painting Work, clean window glass and all other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- C. At the completion of Work of other trades, touch up and restore all damaged or defaced painted surfaces as determined by the CONSTRUCTION MANAGER.
- D. Upon completion of the Work, all staging, scaffolding, containers, and Work related material or debris shall be removed from the site to the satisfaction of the City Resident Engineer. Coating or oil spots or stains on adjacent surfaces shall be removed and the job site cleaned. All damaged surfaces resulting from the Contractor's operations shall be cleaned, repaired, or refinished, to the satisfaction of the City Resident Engineer at no cost to the City.

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**SUPPLEMENTARY SPECIAL PROVISIONS**  
**APPENDICES**

**APPENDIX A**  
**ADDENDUM TO MITIGATE NEGATIVE DECLARATION**

5.1.1



## Addendum to a Mitigated Negative Declaration

Land Development  
Review Division  
(619) 446-5460

Project No. 32218  
Addendum to MND No. 40-0932  
SCH No. 2001061035

**SUBJECT:** Otay Water Treatment Plant Upgrades (Phase 3): COUNCIL APPROVAL of CAPITAL IMPROVEMENTS PROJECT (CIP) No. 732850 for: (a) the construction of a flocculation/sedimentation basin to be connected to an existing sludge line by a below-grade pipeline 463 feet long and 12 inches in diameter; the rehabilitation of 16 filters to be connected to an existing waste wash water line by a below-grade pipeline 176 feet long and 24 inches in diameter; (b) an ultraviolet (UV) disinfection facility, filter effluent meter vault, and associated pipeline and electrical support facilities; a chlorine contact basin; and (c) four filters; a UV reactor; and the rehabilitation of two existing flocculation/sedimentation basins. The existing Otay Water Treatment Plant (WTP) is located on property owned by the City of San Diego at 1500 Wueste Road, southwest of the Lower Otay Reservoir, within the City of San Diego, the City of Chula Vista, and the County of San Diego. The proposed improvements would be located west and north of existing facilities within the treatment plant. The area within the existing facility (24.4 acres), bounded by an existing fence, is excluded from the Otay Lakes Cornerstone Agreement and the Multi-Habitat Planning Area (MHPA). An additional five acres outside the fence line is also excluded from the Otay Lakes Cornerstone Agreement and the MHPA for future expansion. Applicant: City of San Diego Water Department, CIP.

### I. PROJECT DESCRIPTION:

Phase 3 of the Otay WTP Upgrades Project would include the construction of a flocculation/sedimentation basin immediately to the west of two existing identical basins. Mitigated Negative Declaration (MND) No. 40-0932 originally identified rehabilitation of the two existing basins, but it was later determined a third one should be constructed. The new basin would be 225 feet long by 56 feet wide by 17.5 feet high, and would be connected to the existing sludge line (which discharges away from the outlet tower) by a 463 feet long pipeline 12 inches in diameter within the paved roadway. Much of the basin height would be located below grade, with approximately 4.5 feet extending above grade. Sixteen existing filters would also be rehabilitated with a new pumped backwash system, filter-to-waste system, new underdrains, and new filter media, and would be connected to an existing waste wash water line by a pipeline 176 feet long and 24 inches in diameter.

The second stage of construction would involve the construction of a chlorine contact basin, UV disinfection facility, filter effluent meter vault, and associated

pipings and electrical support facilities. The original MND identified a membrane facility (100 feet wide by 215 feet long by 30-60 feet high) as the proposed method of disinfection. After extended analysis of effectiveness and cost, UV was determined to be the preferred disinfection method over membrane filtration. The UV disinfection facility would be located in approximately the same location as identified in the original MND for the membrane facility and would be approximately 170 feet long by 50 feet wide by 20 feet high. The new chlorine contact basin would be constructed just south of the UV facility. This basin would be approximately 135 feet long by 65 feet wide by 20 feet high. The combined area occupied by the UV disinfection facility and chlorine contact basin would be less than the area originally proposed for the membrane facility.

The third stage of construction would involve the construction of four new filters, the addition of a UV reactor, and the rehabilitation of two existing flocculation/sedimentation basins. The four new filters (6,700 square feet in size) would be similar in design and size to the existing filters on site and would be installed next to them. The additional UV reactor would be located within the proposed UV disinfection facility and would be constructed below grade.

## II. ENVIRONMENTAL SETTING:

See original MND and attached Initial Study.

## III. PROJECT BACKGROUND:

The Otay Service Area (OSA), one of three major water service areas within the City of San Diego, services the southern portion of the City, which includes Otay Mesa, South San Diego, San Ysidro, Paradise Hills, Nestor, and a portion of Paradise Mesa. The OSA is primarily supplied by the Otay WTP, which is located adjacent to the Lower Otay Reservoir just six miles north of the United States-Mexico border. Water is supplied to the Otay WTP from the Otay, Barrett, and Morena reservoirs via the 40-inch Otay Raw Water Pipeline and the San Diego County Water Authority (SDCWA) 2<sup>nd</sup> Aqueduct Pipeline.

The Otay WTP was upgraded in 1971 to a 15-million-gallons-per-day (MGD) facility. In 1981, new gravity filters were constructed to replace the aging pressure filters, along with a new Operations Building. In 1989, the facility was upgraded to its current configuration, which includes a raw water pump station, eight more gravity filters, two flocculation/sedimentation basins, and improvements to the chemical systems. The current rated capacity of the Otay WTP is 34 MGD with an ultimate planned capacity of 60 MGD. The site has areas reserved for future unit processes, and the critical yard piping between existing process facilities has already been installed to accommodate 60 MGD. The plant currently provides approximately 20 to 34 MGD of treated water to the OSA.

The Otay WTP Clearwells identified in Phases 1 and 2 of the original MND are currently under construction. This addendum addresses only Phase 3 identified in the MND as consisting of a membrane filtration facility and surrounding access road, a chlorine contactor, improvements to the two existing flocculation/sedimentation basins, operational improvements to filters, and replacement of an existing flash mixer. For funding reasons, Phase 3 has now been divided into three stages. The project description above addresses those sub-phases and the modifications made to the original MND.



These upgrades would enable the Otay WTP to comply with the requirement to achieve the following water quality goals, as set by the United States Environmental Protection Agency (EPA) and California Department of Health Services:

- Lower disinfection by-product levels to achieve compliance with proposed EPA requirements.
- Maintain or improve inactivation and/or removal of Giardia, Cryptosporidium, viruses, bacteria, and other microbiological pathogens.
- Meet increased disinfection requirements.
- Reduce taste and odor problems.

#### IV. DETERMINATION:

The City of San Diego previously prepared an MND for the project.

Based upon a review of the current project, it has been determined that:

- a. There are no new significant environmental impacts not considered in the previous MND;
- b. No substantial changes have occurred with respect to the circumstances under which the project is undertaken; and
- c. There is no new information of substantial importance to the project.

Therefore, in accordance with Section 15164 of the State CEQA Guidelines, this addendum has been prepared. No public review of this addendum is required.

#### V. MITIGATION MONITORING AND REPORTING PROGRAM INCORPORATED INTO THE PROJECT:

None required.

#### VI. SIGNIFICANT UNMITIGATED IMPACTS:

There are no new significant impacts identified for the current project, and the final MND for the original project identified no significant unmitigated impacts.

Chris Zirkle  
Assistant Deputy Director  
Development Services Department

May 18, 2004  
Date of Final Report

Analyst: McGinnis

DISTRIBUTION:

The addendum was distributed to:

Federal Government

U.S. Army Corps of Engineers (16, 26)  
Environmental Protection Agency (19)  
U.S. Border Patrol (22)  
U.S. Fish and Wildlife Service (23)

State Government

Caltrans, District 11 (31)  
Department of Fish and Game (32, 32A)  
Department of Health Services (36)  
CAL EPA (37A)  
Office of Historic Preservation (41)  
Resources Agency (43)  
Regional Water Quality Control Board (44)  
Department of Water Resources (45)  
State Clearinghouse (46)  
Boating and Waterways (52)  
Native American Heritage Commission (56)  
California State Water Resource Control Board (55)  
State Lands Commission (62)  
State Parks (474)

County of San Diego

Department of Parks and Recreation (69)  
County Water Authority (73)  
Hazardous Materials Management Division (75)

City of San Diego

Councilmember Inzunza, District 8  
Development Services (78, 78A)  
Planning Department (87, 352)  
Library (81)  
Park and Recreation (83, 89)  
Water Department  
Metropolitan Wastewater Department  
Wetland Advisory Board (91A)

City of Chula Vista

City Manager  
City of Chula Vista Environmental Review Coordinator (94)  
Planning Department  
Engineering Department

Others

San Diego United School District (125)  
UCSD Central Library (134)  
Daily Transcript (135)\*  
Sierra Club (165)  
Carolyn Chase (165A)

San Diego Natural History Museum (166)  
San Diego Audubon Society (167)  
California Native Plant Society (170)  
Southwest Center for Biodiversity (176)  
Endangered Habitats League (182)  
Dr. Florence Shipek (208)  
Dr. Lynne Christensen (208A)  
South Coastal Information Center (210)  
Save Our Heritage Organisation (214)  
Ron Christman (215)  
Louie Guassac (215A)  
San Diego County Archaeological Society, Inc. (218)  
Native American Heritage Commission (222)  
Acquisitions Library, SDSU (224)  
Kumeyaay Cultural Repatriation Committee (225)  
Native American Distribution (225A-R)\*  
Otay Mesa/Nestor Community Planning Group (228)  
Tijuana River National Estuarine Reserve (229)  
Otay Mesa Development Council (230)  
Otay Mesa Chamber of Commerce (231A)  
Michael A. Vogt (232)  
Otay Mesa Planning Committee (235)  
Otay Mesa/Nestor Community Service Center (236)  
United States International University (438)  
Walter Library, USIU (441)  
Arco Olympic Training Center

\*Notice only

**APPENDIX B**  
**FIRE HYDRANT METER PROGRAM**

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 1 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

2.1 All authorities and references shall be current versions and revisions.

2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15

2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986

2.4 California Code of Regulations, Titles 17 and 22

2.5 California State Penal Code, Section 498B.0

2.6 State of California Water Code, Section 110, 500-6, and 520-23

2.7 Water Department Director

**Reference**

2.8 State of California Guidance Manual for Cross Connection Programs

2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention

2.10 American Water Works Association Standards for Water Meters

2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 2 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

- 3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.
- 3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. **POLICY**

- 4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.
- 4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.
- 4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:
  - a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.
  - b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:
    - 1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 3 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
7. All private fire hydrant meters shall have backflow devices attached when installed.
8. The customer must maintain and repair their own private meters and private backflows.
9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 4 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.
  12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
  13. The outlet shall have a 2 ½ “National Standards Tested (NST) fire hydrant male coupling.
  14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).
- 4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.
- 4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.
- 4.6 Conditions and Processes for Issuance of a Fire Hydrant Meter**
- Process for Issuance
- a. Fire hydrant meters shall only be used for the following purposes:
    1. Temporary irrigation purposes not to exceed one year.



<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 5 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

2. Construction and maintenance related activities (see Tab 2).
  - b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
  - c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
  - d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
  - e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
  - f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
  - g. After the fees have been paid and an account has been created, the

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 6 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

#### 4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as “Hotline”), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter’s relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

#### 4.8 Disconnection of Fire Hydrant Meter

- a. After ten (10) months a “Notice of Discontinuation of Service” (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 7 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. **EXCEPTIONS**

- 5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

- a) **Vehicle Mounted Meters:** Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 8 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

- b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

- 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
- 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 9 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

7. **FEE AND DEPOSIT SCHEDULES**

- 7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. These deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. **UNAUTHORIZED USE OF WATER FROM A HYDRANT**

- 8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.
- 8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.
- 8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.
- 8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 10 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

- 8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

**Water Department Director**

- Tabs: 1. Fire Hydrant Meter Application  
2. Construction & Maintenance Related Activities With No Return To Sewer  
3. Notice of Discontinuation of Service

#### APPENDIX

**Administering Division:** Customer Support Division

**Subject Index:** Construction Meters  
Fire Hydrant  
Fire Hydrant Meter Program  
Meters, Floating or Vehicle Mounted  
Mobile Meter  
Program, Fire Hydrant Meter

**Distribution:** DI Manual Holders



# Application for Fire Hydrant Meter (EXHIBIT A)

(For Office Use Only)

NS REQ	FAC#
DATE	BY

METER SHOP (619) 527-7449

## Meter Information

Application Date	Requested Install Date:
------------------	-------------------------

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) <u>Zip:</u>	T.B.	G.B. (CITY USE)
Specific Use of Water:		
Any Return to Sewer or Storm Drain, if so, explain:		
Estimated Duration of Meter Use:	<input type="checkbox"/>	<input type="checkbox"/> Check Box if Reclaimed Water

## Company Information

Company Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
*Business license#		*Contractor license#	
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: <small>(PERSON IN ACCOUNTS PAYABLE)</small>			Phone: ( )
Site Contact Name and Title:			Phone: ( )
Responsible Party Name:			Title:
Cal ID#			Phone: ( )
Signature:		Date:	
<small>Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter</small>			

<b>Fire Hydrant Meter Removal Request</b>	Requested Removal Date:
Provide Current Meter Location if Different from Above:	
Signature:	Title: Date:
Phone: ( )	Pager: ( )

<input type="checkbox"/> City Meter	<input type="checkbox"/> Private Meter
Contract Acct #:	Deposit Amount: <b>\$ 936.00</b> Fees Amount: <b>\$ 62.00</b>
Meter Serial #	Meter Size: <b>05</b> Meter Make and Style: <b>6-7</b>
Backflow #	Backflow Size: Backflow Make and Style:
Name:	Signature: Date:

**WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER**

Auto Detailing  
Backfilling  
Combination Cleaners (Vactors)  
Compaction  
Concrete Cutters  
Construction Trailers  
Cross Connection Testing  
Dust Control  
Flushing Water Mains  
Hydro Blasting  
Hydro Seeing  
Irrigation (for establishing irrigation only; not continuing irrigation)  
Mixing Concrete  
Mobile Car Washing  
Special Events  
Street Sweeping  
Water Tanks  
Water Trucks  
Window Washing

**Note:**

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.



Date

Name of Responsible Party  
Company Name and Address  
Account Number: \_\_\_\_\_

Subject:           Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter # \_\_\_\_\_, located at *(Meter Location Address)* ends in 60 days and will be removed on or after *(Date Authorization Expires)*. Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please contact the Water Department, or mail your request for an extension to:

City of San Diego  
Water Department  
Attention: Meter Services  
2797 Caminito Chollas  
San Diego, CA 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619) \_\_\_\_\_ - \_\_\_\_\_.

Sincerely,

Water Department

## APPENDIX C

### MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

## MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

**APPENDIX D**  
**SAMPLE CITY INVOICE WITH SPEND CURVE**



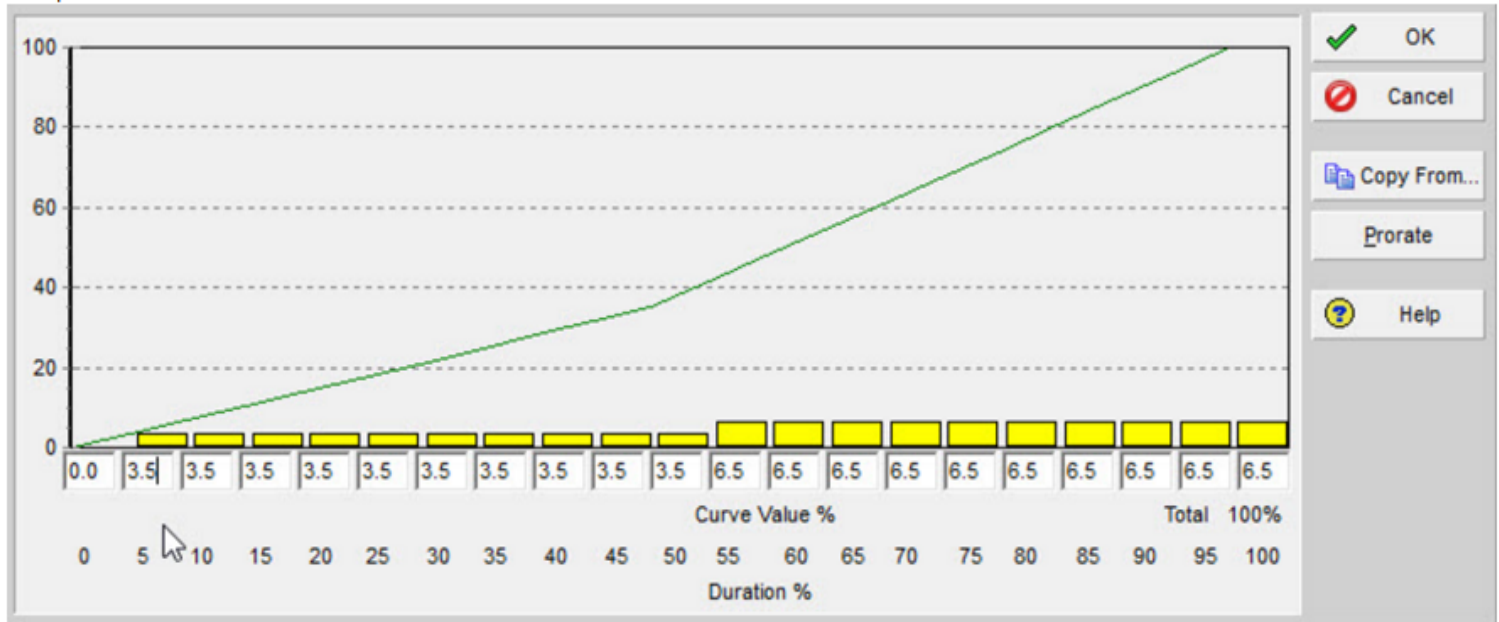
## Sample Project Spend Curve

Sample Date Entries Required

Incremental Curve Value  
Duration % Increment

0.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%

Sample Screenshot from Primavera P6



**APPENDIX E**  
**LOCATION MAP**

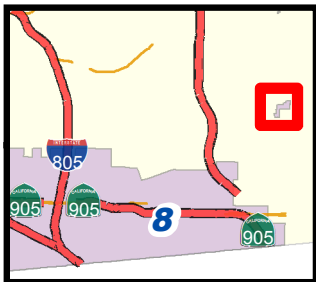
**OTAY WATER TREATMENT PLANT  
BASIN # 1 CONCRETE RESTORATION**

SENIOR ENGINEER  
Brian Vitelle  
619 - 533 - 5105

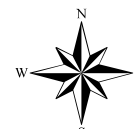
PROJECT MANAGER  
Mike Bajoua  
619 - 533 - 4628

PROJECT ENGINEER  
Francisco Bordon  
619 - 533 - 6625

FOR QUESTIONS ABOUT THIS PROJECT  
Call: 619-533-4207  
Email: [engineering@sandiego.gov](mailto:engineering@sandiego.gov)



**Legend**  
● **Project Location**



No Scale

THIS MAP/DATA IS PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Note: This product may contain information reproduced with permission granted by RAND McNALLY & COMPANY© to SanGIS. This map is copyrighted by RAND McNALLY & COMPANY©. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without the prior, written permission of RAND McNALLY & COMPANY.



**APPENDIX F**  
**SAMPLE OF PUBLIC NOTICE**



CONSTRUCTION NOTICE

PROJECT TITLE

Work on your street will begin within one week to replace the existing water mains servicing your community.

The work will consist of:

- Saw-cutting and trench work on Ingulf Street from Morena Boulevard to Galveston Street to install new water mains, water laterals and fire hydrants.
• Streets where trenching takes place will be resurfaced and curb ramps will be upgraded to facilitate access for persons with disabilities where required.
• This work is anticipated to be complete in your community by December 2016.

How your neighborhood may be impacted:

- Water service to some properties during construction will be provided by a two-inch highline pipe that will run along the curb. To report a highline leak call 619-515-3525.
• Temporary water service disruptions are planned. If planned disruptions impact your property, you will receive advance notice.
• Parking restrictions will exist because of the presence of construction equipment and materials.
• "No Parking" signs will be displayed 72 hours in advance of the work.
• Cars parked in violation of signs will be TOWED.

Hours and Days of Operation:

Monday through Friday X:XX AM to X:XX PM.

City of San Diego Contractor:

Company Name, XXX-XXX-XXXX



CONSTRUCTION NOTICE

PROJECT TITLE

Work on your street will begin within one week to replace the existing water mains servicing your community.

The work will consist of:

- Saw-cutting and trench work on Ingulf Street from Morena Boulevard to Galveston Street to install new water mains, water laterals and fire hydrants.
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• Parking restrictions will exist because of the presence of construction equipment and materials.
• "No Parking" signs will be displayed 72 hours in advance of the work.
• Cars parked in violation of signs will be TOWED.

Hours and Days of Operation:

Monday through Friday X:XX AM to X:XX PM.

City of San Diego Contractor:

Company Name, XXX-XXX-XXXX

## **APPENDIX G**

### **ADVANCED METERING INFRASTRUCTURE (AMI) DEVICE PROTECTION**

## Protecting AMI Devices in Meter Boxes and on Street Lights

The Public Utilities Department (PUD) has begun the installation of the Advanced Metering Infrastructure (AMI) technology as a new tool to enhance water meter reading accuracy and efficiency, customer service and billing, and to be used by individual accounts to better manage the efficient use of water. **All AMI devices shall be protected per Section 5-2, "Protection", of the 2015 Whitebook.**

AMI technology allows water meters to be read electronically rather than through direct visual inspection by PUD field staff. This will assist PUD staff and customers in managing unusual consumption patterns which could indicate leaks or meter tampering on a customer's property.

Three of the main components of an AMI system are the:

- A. Endpoints, see Photo 1:

**Photo 1**



- B. AMI Antenna attached to Endpoint (antenna not always required), see Photo 2:

**Photo 2**



Network Devices, see Photo 3:

**Photo 3**



AMI endpoints transmit meter information to the AMI system and will soon be on the vast majority of meters in San Diego. These AMI devices provide interval consumption data to the PUD's Customer Support Division. If these devices are damaged or communication is interrupted, this Division will be alerted of the situation. The endpoints are installed in water meter boxes, coffins, and vaults adjacent to the meter. A separate flat round antenna may also be installed through the meter box lid. This antenna is connected to the endpoint via cable. The following proper installation shall be implemented when removing the lid to avoid damaging the antenna, cable, and/or endpoint. Photo 4 below demonstrates a diagram of the connection:

**Photo 4**





The AMI device ERT/Endpoint/Transmitter shall be positioned and installed as discussed in this Appendix. If the ERT/Endpoint/Transmitter is disturbed, it shall be re-installed and returned to its original installation with the end points pointed upwards as shown below in Photo 5.

**The PUD's code compliance staff will issue citations and invoices to you for any damaged AMI devices that are not re-installed as discussed in the Contract Document**

Photo 5 below shows a typical installation of an AMI endpoint on a water meter.

**Photo 5**

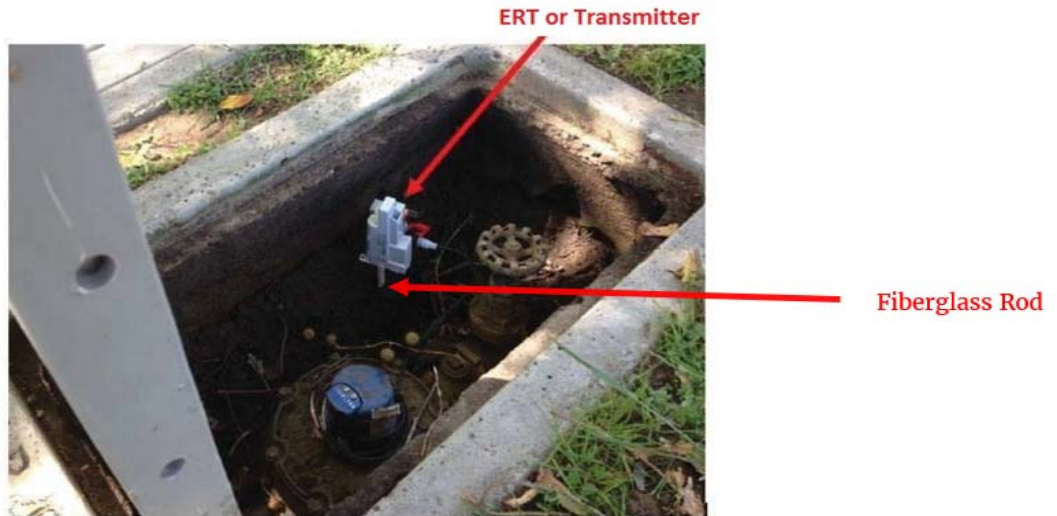


Photo 6 below is an example of disturbance that shall be avoided:

**Photo 6**



**You are responsible when working in and around meter boxes.** If you encounter these endpoints, use proper care and do not disconnect them from the registers on top of the water meter. If the lid has an antenna drilled through, do not change or tamper with the lid and inform the Resident Engineer immediately about the location of that lid. Refer to Photo 7 below:

**Photo 7**



Another component of the AMI system are the Network Devices. The Network Devices are strategically placed units (mainly on street light poles) that collect interval meter reading data from multiple meters for transmission to the Department Control Computer. **If you come across any of these devices on street lights that will be removed or replaced (refer to Photos 8 and 9 below), notify AMI Project Manager Arwa Sayed at (619) 362-0121 immediately.**

Photo 8 shows an installed network device on a street light. On the back of each Network Device is a sticker with contact information. See Photo 9. **Call PUD Water Emergency Repairs at 619-515-3525 if your work will impact these street lights.** These are assets that belong to the City of San Diego and you shall be responsible for any costs of disruption of this network.



**Photo 8**



**Network Device**

**Photo 9**



**If you encounter any bad installations, disconnected/broken/buried endpoints, or inadvertently damage any AMI devices or cables, notify the Resident Engineer immediately. The Resident Engineer will then immediately contact the AMI Project Manager, Arwa Sayed, at (619) 362-0121.**

**ATTACHMENT F**  
**INTENTIONALLY LEFT BLANK**

**ATTACHMENT G**  
**CONTRACT AGREEMENT**

## CONTRACT AGREEMENT

---

### CONSTRUCTION CONTRACT

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and Blue Pacific Engineering & Construction, herein called "Contractor" for construction of **Otay Water Treatment Plants Basin No. 1 Concrete Restoration; Bid No.K-19-1763-DBB-3** in the amount of One Million One Hundred Seventy Thousand and Six Hundred Twenty-Five Dollars and Zero Cents (\$1,170,625.00), which is comprised of the Base Bid only.

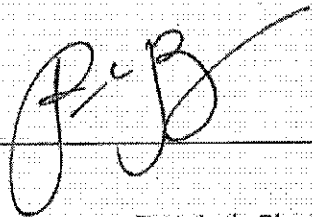
1. The following are incorporated into this contract as though fully set forth herein:
  - (a) The attached Faithful Performance and Payment Bonds.
  - (b) The attached Proposal included in the Bid documents by the Contractor.
  - (c) Reference Standards listed in the Instruction to Bidders and the Supplementary Special Provisions (SSP).
  - (d) Phased Funding Schedule Agreement.
  - (e) That certain documents entitled **Otay Water Treatment Plants Basin No. 1 Concrete Restoration**, on file in the office of the Public Works Department as Document No. **B-17092**, as well as all matters referenced therein.
2. The Contractor shall perform and be bound by all the terms and conditions of this contract and in strict conformity therewith shall perform and complete in a good and workmanlike manner **Otay Water Treatment Plants Basin No. 1 Concrete Restoration**, Bid Number **K-19-1763-DBB-3**, San Diego, California.
3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and the Contractor shall accept such payment in full satisfaction of all claims incident to such performances.
4. No claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
5. This contract is effective as of the date that the Mayor or designee signs the agreement.

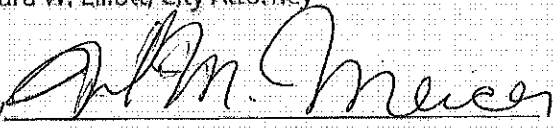
**CONTRACT AGREEMENT (continued)**

**IN WITNESS WHEREOF**, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code §22.3102 authorizing such execution.

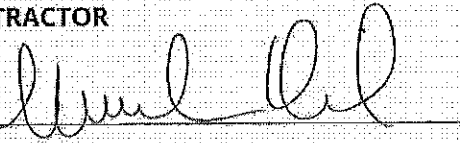
**THE CITY OF SAN DIEGO**

**APPROVED AS TO FORM**

By   
Print Name: Rosa Isela Riego  
Senior Contract Specialist  
Public Works Department  
Date: 01/03/2019

Mara W. Elliott, City Attorney  
By   
Print Name: Mark A. Merca  
Deputy City Attorney  
Date: 1/4/19

**CONTRACTOR**

By   
Print Name: Shahram Elibu  
Title: Owner  
Date: 11/6/18

City of San Diego License No.: B2010019612

State Contractor's License No.: 824455

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1500003217

## CERTIFICATIONS AND FORMS

**The Bidder / Proposer, by submitting its electronic bid or proposal, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certifications, forms and affidavits submitted as part of this submission are true and correct.**

## **BIDDER'S GENERAL INFORMATION**

To the City of San Diego:

Pursuant to "Notice Inviting Bids", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

The undersigned bidder(s) further warrants that bidder(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Bidding Documents therefore, and that by submitting said Bidding Documents as its bid proposal, bidder(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Bidding Documents.

**NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED  
WITH BID UNDER 23 UNITED STATES CODE 112 AND PUBLIC CONTRACT CODE  
7106**

State of California

County of San Diego

The bidder, being first duly sworn, deposes and says that he or she is authorized by the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.



## CONTRACTOR CERTIFICATION

---

### DRUG-FREE WORKPLACE

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in the WHITEBOOK, Section 7-13.3, "Drug-Free Workplace", of the project specifications, and that;

This company\_has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.

## CONTRACTOR CERTIFICATION

---

### AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the Americans With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, "Americans With Disabilities Act", of the project specifications, and that:

This company has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.

## **CONTRACTOR CERTIFICATION**

---

### **CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE**

I declare under penalty of perjury that I am authorized to make this certification on behalf of the company submitting this bid/proposal, that as Contractor, I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in the WHITEBOOK, Section 7-13.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.

## **CONTRACTOR CERTIFICATION**

---

### **EQUAL BENEFITS ORDINANCE CERTIFICATION**

I declare under penalty of perjury that I am familiar with the requirements of and in compliance with the City of San Diego Municipal Code § 22.4300 regarding Equal Benefits Ordinance.

## **CONTRACTOR CERTIFICATION**

---

### **EQUAL PAY ORDINANCE CERTIFICATION**

Contractor shall comply with the Equal Pay Ordinance (EPO) codified in the San Diego Municipal Code (SDMC) at section 22.4801 through 22.4809, unless compliance is not required based on an exception listed in SDMC section 22.4804.

Contractor shall require all of its subcontractors to certify compliance with the EPO in their written subcontracts.

Contractor must post a notice informing its employees of their rights under the EPO in the workplace or job site.

By signing this Contract with the City of San Diego, Contractor acknowledges the EPO requirements and pledges ongoing compliance with the requirements of SDMC Division 48, section 22.4801 et seq., throughout the duration of this Contract.

## **AFFIDAVIT OF DISPOSAL**

(To be submitted upon completion of Construction pursuant to the contracts Certificate of Completion)

**WHEREAS**, on the \_\_\_\_\_ DAY OF \_\_\_\_\_, 2\_\_\_\_\_ the undersigned entered into and executed a contract with the City of San Diego, a municipal corporation, for:

**Otay Water Treatment Plants Basin No. 1 Concrete Restoration**

(Project Title)

as particularly described in said contract and identified as Bid No. **K-19-1763-DBB-3**; SAP No. (WBS/IO/CC) **B-17092**; and **WHEREAS**, the specification of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and **WHEREAS**, said contract has been completed and all surplus materials disposed of:

\_\_\_\_\_  
\_\_\_\_\_

**NOW, THEREFORE**, in consideration of the final payment by the City of San Diego to said Contractor under the terms of said contract, the undersigned Contractor, does hereby affirm that all surplus materials as described in said contract have been disposed of at the following location(s)

\_\_\_\_\_  
\_\_\_\_\_

and that they have been disposed of according to all applicable laws and regulations.

Dated this \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_  
Contractor

**ATTEST:**

State of \_\_\_\_\_ County of \_\_\_\_\_

On this \_\_\_\_\_ DAY OF \_\_\_\_\_, 2\_\_\_\_\_, before the undersigned, a Notary Public in and for said County and State, duly commissioned and sworn, personally appeared \_\_\_\_\_ known to me to be the \_\_\_\_\_ Contractor named in the foregoing Release, and whose name is subscribed thereto, and acknowledged to me that said Contractor executed the said Release.

Notary Public in and for said County and State

**LIST OF SUBCONTRACTORS**

**\*\*\* PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY \*\*\* TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY \*\*\* SEE INSTRUCTIONS TO BIDDERS FOR FURTHER INFORMATION**

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the California Public Contract Code (PCC), the Bidder is to list below the name, address and license number of each Subcontractor who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement, in an amount of or in excess of 0.5% of the Contractor's total Bid. Failure to comply with this requirement may result in the Bid being rejected as non-responsive. The Contractor is to list only one Subcontractor for each portion of the Work. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3 Subcontracts, which stipulates the percentage of the Work to be performed with the Bidder's own forces. The Bidder is to also list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which the Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	DIR Registration Number	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB <sup>Ⓛ</sup>	WHERE CERTIFIED <sup>Ⓜ</sup>	CHECK IF JOINT VENTURE PARTNERSHIP
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								

- Ⓛ As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):
- |                                               |        |                                                |         |
|-----------------------------------------------|--------|------------------------------------------------|---------|
| Certified Minority Business Enterprise        | MBE    | Certified Woman Business Enterprise            | WBE     |
| Certified Disadvantaged Business Enterprise   | DBE    | Certified Disabled Veteran Business Enterprise | DVBE    |
| Other Business Enterprise                     | OBE    | Certified Emerging Local Business Enterprise   | ELBE    |
| Certified Small Local Business Enterprise     | SLBE   | Small Disadvantaged Business                   | SDB     |
| Woman-Owned Small Business                    | WoSB   | HUBZone Business                               | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB |                                                |         |
- Ⓜ As appropriate, Bidder shall indicate if Subcontractor is certified by:
- |                                                      |        |                                                  |          |
|------------------------------------------------------|--------|--------------------------------------------------|----------|
| City of San Diego                                    | CITY   | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission               | CPUC   |                                                  |          |
| State of California's Department of General Services | CADoGS | City of Los Angeles                              | LA       |
| State of California                                  | CA     | U.S. Small Business Administration               | SBA      |

**The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.**

**NAMED EQUIPMENT/MATERIAL SUPPLIER LIST**

**\*\*\* PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY \*\*\* TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY \*\*\* SEE INSTRUCTIONS TO BIDDERS FOR FURTHER INFORMATION**

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DIR Registration Number	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB <sup>①</sup>	WHERE CERTIFIED <sup>②</sup>
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

- ① As appropriate, Bidder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE,SLBE and ELBE):
- |                                               |        |                                                |         |
|-----------------------------------------------|--------|------------------------------------------------|---------|
| Certified Minority Business Enterprise        | MBE    | Certified Woman Business Enterprise            | WBE     |
| Certified Disadvantaged Business Enterprise   | DBE    | Certified Disabled Veteran Business Enterprise | DVBE    |
| Other Business Enterprise                     | OBE    | Certified Emerging Local Business Enterprise   | ELBE    |
| Certified Small Local Business Enterprise     | SLBE   | Small Disadvantaged Business                   | SDB     |
| Woman-Owned Small Business                    | WoSB   | HUBZone Business                               | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB |                                                |         |
- ② As appropriate, Bidder shall indicate if Vendor/Supplier is certified by:
- |                                                      |        |                                                  |          |
|------------------------------------------------------|--------|--------------------------------------------------|----------|
| City of San Diego                                    | CITY   | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission               | CPUC   |                                                  |          |
| State of California's Department of General Services | CADoGS | City of Los Angeles                              | LA       |
| State of California                                  | CA     | U.S. Small Business Administration               | SBA      |

**The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.**



## **ELECTRONICALLY SUBMITTED FORMS**

### **THE FOLLOWING FORMS MUST BE SUBMITTED IN PDF FORMAT WITH BID SUBMISSION**

The following forms are to be completed by the bidder and submitted (uploaded) electronically with the bid in PlanetBids.

- A. BID BOND – See Instructions to Bidders, Bidders Guarantee of Good Faith (Bid Security) for further instructions**
  
- B. CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS**
  
- C. MANDATORY DISCLOSURE OF BUSINESS INTERESTS FORM**
  
- D. SUBCONTRACTOR LISTING (OTHER THAN FIRST TIER)**

**Bids will not be accepted until ALL the above-named forms are submitted as part of the bid submittal**

**BID BOND**

**See Instructions to Bidders, Bidder Guarantee of Good Faith  
(Bid Security)**

KNOW ALL MEN BY THESE PRESENTS,

That BLUE PACIFIC ENGINEERING & CONSTRUCTION as Principal, and NORTH AMERICAN SPECIALTY INSURANCE COMPANY as Surety, are held and firmly bound unto The City of San Diego hereinafter called "OWNER," in the sum of **10% OF THE TOTAL BID AMOUNT** for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required under the bidding schedule(s) of the OWNER's Contract Documents entitled

OTAY WATER TREATMENT PLANT BASIN NO. 1 CONCRETE RESTORATION

NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and in the manner required in the "Notice Inviting Bids" enters into a written Agreement on the form of agreement bound with said Contract Documents, furnishes the required certificates of insurance, and furnishes the required Performance Bond and Payment Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by said OWNER and OWNER prevails, said Surety shall pay all costs incurred by said OWNER in such suit, including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this \_\_\_\_\_ 11TH day of \_\_\_\_\_ SEPTEMBER, 20 18 \_\_\_\_\_

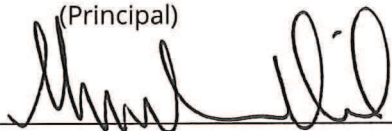
BLUE PACIFIC ENGINEERING & CONSTRUCTION (SEAL)

NORTH AMERICAN SPECIALTY INSURANCE COMPANY (SEAL)

(Principal)

(Surety)

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



(Signature)

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



(Signature)

MARK D. IATAROLA, ATTORNEY-IN-FACT

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)



**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

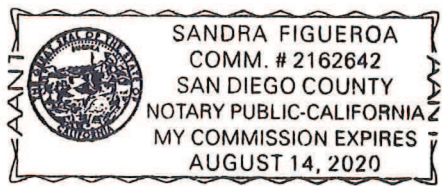
CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of SAN DIEGO

On 9/11/2018 before me, SANDRA FIGUEROA, NOTARY PUBLIC  
*Date Here Insert Name and Title of the Officer*  
personally appeared MARK D. IATAROLA  
*Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.  
WITNESS my hand and official seal.

Signature *Sandra Figueroa*  
*Signature of Notary Public*

Place Notary Seal and/or Stamp Above

**OPTIONAL**

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_  
Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_  
Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: MARK D. IATAROLA Signer's Name: \_\_\_\_\_  
 Corporate Officer – Title(s): \_\_\_\_\_  Corporate Officer – Title(s): \_\_\_\_\_  
 Partner –  Limited  General  Partner –  Limited  General  
 Individual  Attorney in Fact  Individual  Attorney in Fact  
 Trustee  Guardian of Conservator  Trustee  Guardian of Conservator  
 Other: \_\_\_\_\_  Other: \_\_\_\_\_  
Signer is Representing: \_\_\_\_\_ Signer is Representing: \_\_\_\_\_



SWISS RE CORPORATE SOLUTIONS

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Overland Park, Kansas, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Overland Park, Kansas, each does hereby make, constitute and appoint:

JOHN G. MALONEY, HELEN MALONEY, MARK D. IATAROLA, AND SANDRA FIGUEROA

HELEN E. WHEALDON

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of: FIFTY MILLION (\$50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By [Signature] Steven P. Anderson, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company



By [Signature] Michael A. Ito, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 12 day of JANUARY, 2018.

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois
County of Cook ss:

On this 12 day of JANUARY, 2018, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



[Signature] M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 11th day of SEPTEMBER, 2018.

[Signature] Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company & North American Specialty Insurance Company

## CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS

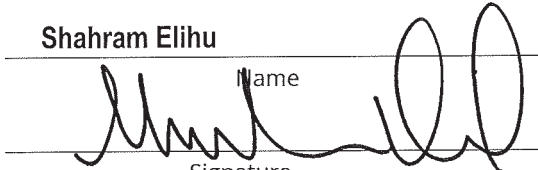
As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK ONE BOX ONLY.

- The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.
- The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN

Contractor Name: Blue Pacific Engineering & Construction

Certified By Shahram Elihu Title Sole Proprietor  
  
Name  
Signature Date 09/25/2018

**USE ADDITIONAL FORMS AS NECESSARY**

## Mandatory Disclosure of Business Interests Form

### BIDDER/PROPOSER INFORMATION

Legal Name <b>Blue Pacific Engineering &amp; Construction</b>	DBA		
Street Address <b>7330 Opportunity Road, Suite A,</b>	City <b>San Diego,</b>	State <b>CA</b>	Zip <b>92111</b>
Contact Person, Title <b>Shahram Elihu, Sole Proprietor</b>	Phone <b>858-956-1456</b>	Fax <b>619-291-0482</b>	

Provide the name, identity, and precise nature of the interest\* of all persons who are directly or indirectly involved\*\* in this proposed transaction (SDMC § 21.0103).

\* The precise nature of the interest includes:

- the percentage ownership interest in a party to the transaction,
- the percentage ownership interest in any firm, corporation, or partnership that will receive funds from the transaction,
- the value of any financial interest in the transaction,
- any contingent interest in the transaction and the value of such interest should the contingency be satisfied, and
- any philanthropic, scientific, artistic, or property interest in the transaction.

\*\* Directly or indirectly involved means pursuing the transaction by:

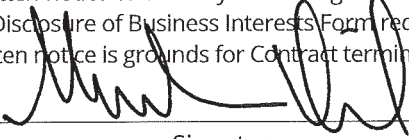
- communicating or negotiating with City officers or employees,
- submitting or preparing applications, bids, proposals or other documents for purposes of contracting with the City, or
- directing or supervising the actions of persons engaged in the above activity.

<b>Shahram Elihu</b>	<b>Sole Proprietor</b>
Name <b>327 El Pedregal, Solana Beach CA 92075</b>	Title/Position
City and State of Residence <b>100% Ownership/Sole Proprietor of Blue Pacific Engineering &amp; Construction</b>	Employer (if different than Bidder/Proposer)
Interest in the transaction	

Name	Title/Position
City and State of Residence	Employer (if different than Bidder/Proposer)
Interest in the transaction	

### \* Use Additional Pages if Necessary \*

Under penalty of perjury under the laws of the State of California, I certify that I am responsible for the completeness and accuracy of the responses contained herein, and that all information provided is true, full and complete to the best of my knowledge and belief. I agree to provide written notice to the Mayor or Designee within five (5) business days if, at any time, I learn that any portion of this Mandatory Disclosure of Business Interests Form requires an updated response. Failure to timely provide the Purchasing Agent with written notice is grounds for Contract termination.

<b>Shahram Elihu, Sole Proprietor</b>		<b>09/25/2018</b>
Print Name, Title	Signature	Date

**Failure to sign and submit this form with the bid/proposal shall make the bid/proposal non-responsive. In the case of an informal solicitation, the contract will not be awarded unless a signed and completed Mandatory Disclosure of Business Interests Form is submitted.**

**SUBCONTRACTOR LISTING**  
**(OTHER THAN FIRST TIER)**

Pursuant to California Senate Bill 96 and in accordance with the requirements of Labor Code sections 1771.1 and 1725.5, by submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the California Department of Industrial Relations (DIR). **The Bidder is to list below the name, address, license number, DIR registration number of any (known tiered subcontractor) - who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract. If none are known at this time, mark the table below with non-applicable (N/A).**

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				

\*\* USE ADDITIONAL FORMS AS NECESSARY \*\*

# City of San Diego

CITY CONTACT: Antoinette Sanfilippo, Contract Specialist, Email: [ASanfilippo@sandiego.gov](mailto:ASanfilippo@sandiego.gov)  
Phone No. (619) 533-3439

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## ADDENDUM A



FOR

## OTAY WATER TREATMENT PLANT BASIN NO. 1 CONCRETE RESTORATION

BID NO.:	K-19-1763-DBB-3
SAP NO. (WBS/IO/CC):	B-17092
CLIENT DEPARTMENT:	2000
COUNCIL DISTRICT:	CITYWIDE
PROJECT TYPE:	BI

---

**BID DUE DATE:**  
**2:00 PM**  
**SEPTEMBER 25, 2018**  
**CITY OF SAN DIEGO**  
**PUBLIC WORKS CONTRACTS**  
**525 B STREET, SUITE 750, MS 908A**  
**SAN DIEGO, CA 92101**



**A. CHANGES TO CONTRACT DOCUMENTS**

The following changes to the Contract Documents are hereby made effective as though originally issued with the bid package. Bidders are reminded that all previous requirements to this solicitation remain in full force and effect.

THE SUBMITTAL DATE FOR THIS PROJECT HAS BEEN **EXTENDED AS STATED ON THE COVER PAGE.**

James Nagelvoort, Director  
Public Works Department

Dated: *September 6, 2018*  
San Diego, California

JN/RWB/Lad

# City of San Diego

CITY CONTACT: Antoinette Sanfilippo, Contract Specialist, Email: [ASanfilippo@sandiego.gov](mailto:ASanfilippo@sandiego.gov)  
Phone No. (619) 533-3439, Fax No. (619) 533-3633

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## ADDENDUM B



FOR

## OTAY WATER TREATMENT PLANT BASIN NO. 1 CONCRETE RESTORATION


BID NO.:	K-19-1763-DBB-3
SAP NO. (WBS/IO/CC):	B-17092
CLIENT DEPARTMENT:	2000
COUNCIL DISTRICT:	CITYWIDE
PROJECT TYPE:	BI

---

**BID DUE DATE:**  
**2:00 PM**  
**SEPTEMBER 25, 2018**  
**CITY OF SAN DIEGO**  
**PUBLIC WORKS CONTRACTS**  
**525 B STREET, SUITE 750, MS 908A**  
**SAN DIEGO, CA 92101**

**ENGINEER OF WORK**

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Registered Engineer:

  
1) Registered Engineer

9/13/2018  
Date

Seal:



  
2) For City Engineer

9/13/18  
Date

Seal:



## **A. CHANGES TO CONTRACT DOCUMENTS**

The following changes to the Contract Documents are hereby made effective as though originally issued with the bid package. Bidders are reminded that all previous requirements to this solicitation remain in full force and effect.

## **B. BIDDER'S QUESTIONS**

Q1. PROTECTIVE COATING SECTION 09800 states that the coating systems for System No. 3 Epoxy (Steel) & No. 7 Epoxy (concrete) shall be applied in (2 or more, DFT = 25 mils). 100% solids epoxies are seldom applied in two (or more) coats but rather built up in multiple passes (versus cured coats) to develop the desired thickness (DFT). Can the specified material be applied in multiple passes to develop the desired DFT?

A1. Yes. The required dry film thickness (DFT) is the requirement and building up in multiple passes is acceptable.

Q2. Where does the CONTRACTOR dispose of washwater used during the construction process?

A2. The CONTRACTOR must contain all washwater and remove from the plant site. Baker or Rain-for-Rent tanks were utilized in the previous Basin #2 recoating and it is assumed that Bidders will include this cost in their bid which requires temporary storage of washwater in above mentioned tanks and disposal of washwater in a manner which conforms to all current State of California, Regional Water Quality Control Board and regional requirements.

Q3. Is tenting of the entire operation (from initial brushoff blasting to final coating) required? If so, will air be required to be treated through a HEPA filter?

A3. The CONTRACTOR is required to prevent overspray and fugitive dust from coating or repair mortar operations. The Contractor may use tenting, or other means necessary, in accordance with the Contract Technical Specifications, to control the ambient temperature, exposure to direct sunlight and/or the curing environment of either the mortar repair or coating operation. Filtration of air by HEPA filters is not a requirement.

- Q4. What is the requirement for pull testing (adhesion)?
- A4. ASTM D 4541 "Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers" is the standard for adhesion testing of the applied coating and will be applied for this project.
- Q5. Regarding the Phased-Funding. Is it the District's normal procedure to have multiple start and stops on projects? Or will the project continue through with just one mobilization?
- A5. The project will continue and will be funded per the project phase funding. It is not anticipated that the phased funding will cause any additional mobilizations.
- Q6. Is it possible for the contractor to discharge wash-down water to a location on-site to eliminate hauling off-site?
- A6. See A2 above.
- Q7. Is it possible for the contractor to discharge residual chlorinated water to a location on-site to eliminate hauling off-site?
- A7. See A2 above. Washwater must be legally disposed of offsite.

James Nagelvoort, Director  
Public Works Department

Dated: *September 14, 2018*  
San Diego, California

JN/RWB/Lad

**Bid Results**

**Bidder Details**

**Vendor Name** Blue Pacific Engineering & Construction  
**Address** 7330 Opportunity Road, Suite J, San Diego, CA, 92111  
 San Diego, CA 92111  
 United States  
**Respondee** Shahram Elihu  
**Respondee Title** Sole Proprietor  
**Phone** 858-956-1456 Ext.  
**Email** richard@bluepacificeng.com  
**Vendor Type** CAU,MALE,PQUAL,SLBE,CADIR,Local  
**License #** 824455 **Exp.** 09/30/2019  
**CADIR** 1000003217 **Exp.** 06/30/2019

**Bid Detail**

**Bid Format** Electronic  
**Submitted** September 25, 2018 1:23:57 PM (Pacific)  
**Delivery Method**  
**Bid Responsive**  
**Bid Status** Submitted  
**Confirmation #** 154801  
**Ranking** 0

**Respondee Comment**

**Buyer Comment**

**Attachments**

File Title	File Name	File Type
Pending Actions	bp pending actions.pdf	CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS
Mandatory Disclosure of Bus Int	bp mand discl bus int.pdf	MANDATORY DISCLOSURE OF BUSINESS INTERESTS FORM
Subcontractor listing other than first tier	bp other than first tier.pdf	SUBCONTRACTOR LISTING (OTHER THAN FIRST TIER)
Bid Bond	bp bid bond.pdf	Bid Bond

**Line Items**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
<b>Main Bid</b>						
1	Bonds (Payment and Performance)					
	524126	LS	1	\$25,000.00	\$25,000.00	
2	Mobilization					
	238110	LS	1	\$80,000.00	\$80,000.00	
3	Rebar Repair					
	238120	LF	50	\$200.00	\$10,000.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
4	Crack Repair (1 /32-inch to 1 /8-inch)					
	238110	LF	100	\$100.00	\$10,000.00	
5	Expansion Joint Repair (no concrete damage)					
	238110	LF	450	\$70.00	\$31,500.00	
6	Expansion Joint Restoration					
	238110	LF	200	\$150.00	\$30,000.00	
7	Foreign Object Removal and Repair					
	238910	EA	20	\$1,000.00	\$20,000.00	
8	Abrasive Blasting					
	238910	SF	25000	\$5.13	\$128,250.00	
9	Cementitious Mortar Overlay					
	238110	SF	25000	\$17.00	\$425,000.00	
10	Protective Coatings					
	238390	LS	1	\$186,875.00	\$186,875.00	
11	Injection Grouting of Settled Water Channel					
	238110	LF	75	\$400.00	\$30,000.00	
12	Water Pollution Control program Development (WPCP)					
	541330	LS	1	\$4,000.00	\$4,000.00	
13	Water Pollution Control Program Implementation (WPCP)					
	238110	LS	1	\$60,000.00	\$60,000.00	
14	Diffuser Baffle Replacement					
	238990	LS	1	\$40,000.00	\$40,000.00	
15	Field Orders (EOC Type II)					
		AL	1	\$90,000.00	\$90,000.00	
<b>Subtotal</b>					<b>\$1,170,625.00</b>	
<b>Total</b>					<b>\$1,170,625.00</b>	

**Subcontractors**

Name & Address	Description	License Num	CADIR	Amount	Type
Parada Painting, Inc. 14281 Palisades Drive, Poway, CA, 92064 Poway, CA 92064 United States	Bid Items 8 and 10, Abrasive Blasting and Protective Coatings	742112	1000004724	\$212,000.00	CADIR, DBE, SDB, SL BE