

# City of San Diego

**CONTRACTOR'S NAME:** Ahrens Mechanical  
**ADDRESS:** 5959 Mission Gorge Road, Ste. #204, San Diego, CA 92120  
**TELEPHONE NO.:** 619-487-9036 **FAX NO.:** 619-487-9195  
**CITY CONTACT:** Rosa Isela Riego, Email: [RRiego@sandiego.gov](mailto:RRiego@sandiego.gov)  
Phone No. (619) 533-3426  
J.Arcillas

## QUOTE DOCUMENTS

FOR

**FINAL**



## BAYVIEW RESERVOIR YARD PIPING REHABILITATION

MC NO.: M-21-0024  
SAP NO. (WBS/IO/CC): 21004864

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

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

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## NOTICE INVITING QUOTES

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Minor Construction services for Bayview Reservoir Yard Piping Rehabilitation to replace and install new rectifier and deep anode groundbed. Route new anode leads and vent pipe to rectifier. For additional information refer to Attachment A.
2. **LIMITED COMPETITION:** This solicitation is open only to City-certified **SLBE/ELBE** firms on the City's approved Prequalified Contractors List. For information regarding the SLBE-ELBE Construction Program and registration visit the City's web site: <http://www.sandiego.gov>.
3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$183,500.00**.
4. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.
5. **LICENSE REQUIREMENT:** The City has determined that the following licensing classification(s) are required for this contract: C-10.
  - 5.1. **Specialty License Requirements:** All well drilling work that falls within the classification of a C-57 License shall be performed under a subcontractor with a C-57 License.
6. **AWARD PROCESS:**
  - 6.1. The Award of this contract is contingent upon the Contractor's compliance with all conditions of Award as stated within these documents.
  - 6.2. The City may award the contract to the contractor with the written price quotation offering the best value to the City, considering factors such as price, unit cost, life cycle cost, economic cost analysis, operating efficiency, warranty and quality, compatibility with existing equipment, maintenance costs, experience and qualification of the contractor, when the contractor can start and complete the project, and any additional factors deemed relevant.
  - 6.3. 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.
7. **SUBMISSION OF QUESTIONS:**
  - 7.1. Any questions related to this solicitation shall be submitted to:  
Public Works Contracts  
525 B Street, Suite 750  
San Diego, California, 92101  
Attention: Rosa Isela Riego  
OR:  
[RRiego@sandiego.gov](mailto:RRiego@sandiego.gov)

## INSTRUCTIONS TO BIDDERS

### 1. PREQUALIFICATION OF CONTRACTORS:

- 1.1. Contractors submitting a Quote must be pre-qualified for the total amount proposed, including all alternate items, prior to the date of submittal.

### 2. ELECTRONIC FORMAT RECEIPT AND OPENING OF QUOTES: Quotes will be received in electronic format 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 an electronic quote.
- 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 quote tabulations. Upon the bidder's or proposer's entry of their quote, the system will ensure that all required fields are entered. **The system will not accept a quote 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. **QUOTES REMAIN SEALED UNTIL QUOTE 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. Quotes submitted prior to the "Quote Due Date and Time" are not available for review by anyone other than the submitter who has until the "Quote Due Date and Time" to change, rescind or retrieve its proposal should it desire to do so.
- 2.5. **QUOTES MUST BE SUBMITTED BY QUOTE DUE DATE AND TIME.** Once the quote deadline is reached, no further submissions are accepted into the system. Once the Quote 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.

**2.6. QUOTES MAY BE WITHDRAWN** by the Bidder only up to the quote due date and time.

**2.6.1. Important Note:** Submission of the electronic quote 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 quotes are received on time by the City's eBidding system. The City of San Diego is not responsible for quotes that do not arrive by the required date and time.

**2.7. 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 Quote due date to ensure availability.

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

**3.1.** The bidder, by submitting its electronic quote, 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 quote, the bidder certifies that the bidder has thoroughly examined and understands the entire Contract Documents (which consist of drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its quote proposal, the bidder acknowledges, agrees to and is bound by the entire Contract Documents.

**3.3.** The Bidder, by submitting its quote, 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 quote 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 quote 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. QUOTES ARE PUBLIC RECORDS:** Upon receipt by the City, Quotes 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 Quote. 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 quote 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 3-6, "The Contractors Representative" in The GREENBOOK and WHITEBOOK.

**7. PREVAILING WAGE RATES WILL APPLY:** Refer to Attachment D.

**8. INSURANCE REQUIREMENTS:**

**8.1.** 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.

**8.2.** Refer to sections 5-4, "INSURANCE", and 5-4.11, "WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY INSURANCE" of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

**9. 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>	2018	PWPI010119-01

Title	Edition	Document Number
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>	2018	PWPI010119-02
City of San Diego Standard Drawings* <a href="https://www.sandiego.gov/publicworks/edocref/standarddraw">https://www.sandiego.gov/publicworks/edocref/standarddraw</a>	2018	PWPI010119-03
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>	2018	PWPI010119-04
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>	2018	PWPI030119-05
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>	2018	PWPI030119-06
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	PWPIO92816-07
<p><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></p> <p>*Electronic updates to the Standard Drawings may also be found in the link above.</p>		

**10. CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Notice Inviting Quotes at any time, and further reserves the right to reject submitted Quotes, 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 Quotes under the Notice Inviting Quotes shall be the sole responsibility of each bidder. The Notice Inviting Quotes creates or imposes no obligation upon the City to enter a contract.

**11. 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 Quote 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.

**12. SUBCONTRACTOR INFORMATION:**

**12.1. 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 Quote. 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 Quote to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement may result in the Quote being rejected as **non-responsive** and ineligible for award. The Bidder's attention is directed to the Special Provisions - General; Paragraph 3-2, "Self-Performance", 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.

**12.2.** 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 quote 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.

**13. SUBMITTAL OF "OR EQUAL" ITEMS:** See Section 4-6, "Trade Names" in The WHITEBOOK and as amended in the SSP.

**14. AWARD:**

**14.1.** The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award.

**14.2.** The City may award the contract to the contractor with the written price quotation offering the best value to the City, considering factors such as price, unit cost, life cycle cost, economic cost analysis, operating efficiency, warranty and quality, compatibility with existing equipment, maintenance costs, experience and qualification of the contractor, when the contractor can start and complete the project, and any additional factors deemed relevant.



- 14.3.** 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.
- 15. 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.
- 16. AWARD OF CONTRACT OR REJECTION OF QUOTES:**
- 16.1.** Bidders shall complete ALL eBid forms as required by this solicitation. Incomplete eBids will not be accepted.
- 16.2.** The City reserves the right to reject any or all Quotes, to waive any informality or technicality in Quotes received, and to waive any requirements of these specifications as to bidding procedure.
- 16.3.** 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 quote 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 Quote.
- 16.4.** 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.
- 16.5.** Each Quote 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.
- 17. QUOTE RESULTS:**
- 17.1.** The availability of the quotes on the City's eBidding system shall constitute the public announcement. 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.
- 17.2.** To obtain the 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 quote name and number. The quote tabulations will

be mailed to you upon their completion. The results will not be given over the telephone.

**18. THE CONTRACT:**

**18.1.** 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.

**18.2.** If the Bidder takes longer than 14 days to fulfill these requirements, then the additional time taken shall be added to the Quote 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.

**18.3.** 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 selected contractor does not execute the Contract or submit required documents and information, the City may award the Contract to another responsible and reliable Bidder who shall fulfill every condition precedent to award. The selected firm 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.

**19. 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 Quote 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.

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

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

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

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

- 20.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
- 20.5.** 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.
- 20.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
- 20.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.

**21. PRE-AWARD ACTIVITIES:**

- 21.1.** 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 Quote being rejected as **non-responsive**.
- 21.2.** The decision that quote 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

Premium will be adjusted based on final contract price

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

**Ahrens Mechanical** \_\_\_\_\_, 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 Hundred Eighty Three Thousand Five Hundred Dollars and Zero Cents (\$183,500.00)** for the faithful performance of the annexed contract, and in the sum of **One Hundred Eighty Three Thousand Five Hundred Dollars and Zero Cents (\$183,500.00)** 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.

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

The Surety expressly agrees that the City of San Diego may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal.

The Surety shall not utilize Principal in completing the improvements and work specified in the Agreement, nor shall Surety accept a bid from Principal for completion of the improvements and work specified in the Agreement if the City of San Diego, when declaring the Principal in default, notifies Surety of the City of San Diego's objection to Principal's further participation in the completion of the improvements and work specified in the Agreement.

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

Dated September 19th, 2020

Approved as to Form

Ahrens Mechanical

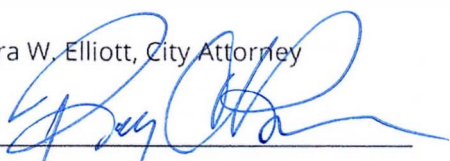
Principal

By 

Gregory S. Ahrens, President

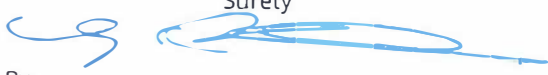
Printed Name of Person Signing for Principal

Mara W. Elliott, City Attorney

By   
Deputy City Attorney

North American Specialty Insurance Company

Surety

By 

Attorney-in-fact. Cyndi Beilman

Approved:

777 South Figueroa Street, Suite 3700

Local Address of Surety

By   
Stephen Samara  
Principal Contract Specialist  
Engineering & Capital Project Department

Los Angeles, CA 90017

Local Address (City, State) of Surety

(213) 337-3078

Local Telephone No. of Surety

Premium \$ 375.00

Bond No. 2310811

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:

CYNDI BEILMAN, ANNE WRIGHT, DANA MICHAELIS, and REBECCA JAMES

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 18 day of JANUARY, 2018.

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois
County of Cook ss:

On this 18 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 9th day of September, 2020.

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

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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 9/9/2020 before me, Anne Wright, Notary Public,  
Date Insert Name of Notary exactly as it appears on the official seal

personally appeared Cyndi Beilman  
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 [Signature]  
Signature of Notary Public Anne Wright



Place Notary Seal Above

## OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of the form to another 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: Cyndi Beilman

- Individual
- Corporate Officer — Title(s): \_\_\_\_\_
- Partner  Limited  General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

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

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

- Individual
- Corporate Officer — Title(s): \_\_\_\_\_
- Partner  Limited  General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

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

## ATTACHMENTS



**ATTACHMENT A**

**SCOPE OF WORK**

## SCOPE OF WORK

1. **SCOPE OF WORK:** The scope of work for this project is to Install new rectifier and deep anode groundbed. Route new anode leads and vent pipe to rectifier. Intercept AC power source from adjacent PRV and route to rectifier. Intercept existing test station structure leads, splice, and route to the new rectifier is electrical conduit. Install new galvanic anode cathodic protection groundbeds at the altitude vault, the reservoir inlet piping, south of the PRV vault, and north of the electric panels. Additional details and requirements are specified in the attached specifications and drawing plans.
  - 1.1. The Work shall be performed in accordance with:
    - 1.1.1. The Notice Inviting Quotes and Plans numbered **41782-1-D** through **41782-6-D**, inclusive.
2. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$183,500.00**
3. **CONTRACT TIME:** The Contract Time for completion of the Work shall be **120 Working Days**.

**ATTACHMENT B**  
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**ATTACHMENT C**  
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**ATTACHMENT D**  
**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 quote on, be listed in a quote 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 quote 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 quote protest or grounds for considering the quote non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to quote opening; (2) within twenty-four hours after the quote 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 quote 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 quote 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 1.11 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 **2018 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").
2. The **2018 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:
  - a) General Provisions (A) for all Construction Contracts.

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### SECTION 3 – CONTROL OF THE WORK

**3-2 SELF-PERFORMANCE.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

You shall perform, with your own organization, Contract Work amounting to at least **50%** of the base Bid.

**3-13.3 Warranty.** To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. Warranty and repair all defective materials and workmanship for a period of 1 year. This call back warranty period shall start on the date that the Work was accepted by the City. Additionally, you shall warranty the Work against all latent and patent defects for a period of 10 years.

### SECTION 4 - CONTROL OF MATERIALS

**4-3.6 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.

**4-6 TRADE NAMES.** To the "WHITEBOOK", ADD the following:

11. You shall submit your list of proposed substitutions for an "equal" item **no later than 5 Working Days after the determination of the Apparent Low Bidder** and on the City's Product Submittal Form available at:

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

## SECTION 5 – LEGAL RELATIONS AND RESPONSIBILITIES

**5-4 INSURANCE.** To the “GREENBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

**5-4 INSURANCE.**

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

**5-4.1 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.

**5-4.2 Types of Insurance.**

**5-4.2.1 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

**5-4.2.2 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.

**5-4.3 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.

**5-4.3.1 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.

**5-4.4 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.

## **5-4.5 Policy Endorsements.**

### **5-4.5.1 Commercial General Liability Insurance.**

#### **5-4.5.1.1 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.

**5-4.5.1.2 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.

**5-4.5.1.3 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.

#### **5-4.5.2 Commercial Automobile Liability Insurance.**

**5-4.5.2.1 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.

**5-4.6 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.

**5-4.7 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.

**5-4.8 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.

**5-4.9 Excess Insurance.** Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

**5-4.11 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.

**5-4.11.1. 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.

**5-13 ELECTRONIC COMMUNICATION.** To the "WHITEBOOK", ADD the following:

2. Virtual Project Manager shall be used on this Contract. For more information, refer to the VPM training videos at the location below:

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

**SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK**

**6-1.1 Construction Schedule.** To the "WHITEBOOK", item 1, subsection "s", DELETE in its entirety and SUBSTITUTE with the following:

- s) Submit an updated cash flow forecast with every pay request (for each Project ID or WBS number provided in the Contract) 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) Refer to the Sample City Invoice materials in **Appendix B – Sample City Invoice with Cashflow Forecast** and use the format shown.
  - c) See also the "Cashflow Forecast Example" at the location below:

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

**6-4.2 Extensions of Time.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. The Contract Time shall not be modified except by Change Order.
2. You shall notify the City in writing within **1 Working Day** after the occurrence and discovery of an event that impacts the Project Schedule.
  - a) If you believe this event requires a Change Order, you shall submit a written Change Order request with a report to the City that explains the request for Change Order within **5 Working Days**. The Change Order request must include supporting data, a general description of the discovery, the basis for extension, and the estimated length of extension. The City may grant an extension of time, in writing, for the Change Order request if you require more time to gather and analyze data.
3. The Engineer shall not grant an extension of Contract Time in accordance with 6-1.5, "Excusable Delays" unless you demonstrate, through an analysis of the critical path, the following:
  - a) The event causing the delay impacted the activities along the Project's critical path.



- b) The increases in the time to perform all or part of the Project beyond the Contract Time arose from unforeseeable causes beyond your control and without your fault or negligence and that all project float has been used.
- 4. Any modifications to the Contract Time will be incorporated into the weekly document that the Engineer issues that stipulates the Contract Time. If you do not agree with this document, submit to the Engineer for review a written protest supporting your objections to the document within **30 Calendar Days** after receipt of the statement. Your failure to file a timely protest shall constitute your acceptance of the Engineer's weekly document.
  - a) Your protest will be considered a claim for time extension and shall be subject to 2-10.1, "Claims".

**ADD:**

**6-6.1.1 Environmental Document.**

- 1. The City of San Diego has prepared a **Notice of Exemption** for **Bayview Reservoir Yard Piping Rehab, Project No. 21004864**, as referenced in the Contract Appendix. You shall comply with all requirements of the **Notice of Exemption** as set forth in **Appendix A**.
- 2. Compliance with the City's environmental document shall be included in the Contract Price, unless separate bid items have been provided.

**SECTION 1001 – CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs)**

**1001-1 GENERAL.** To the "WHITEBOOK", ADD the following:

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

**1001-3.7 Payment.** To the "WHITEBOOK", item 3, subsection "g", **DELETE** in its entirety and **SUBSTITUTE** with the following:

- g) BMP Inspection, Maintenance, Repair, and Construction BMP Maintenance Log.

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

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

### **PART 1 - GENERAL**

#### 1.1 WORK OF THIS SECTION

- A. Provide all labor, materials, tools, and incidentals to install a cathodic protection system for the existing yard piping associated with the Bayview reservoir. The work includes the provision and installation of one deep anode ground bed and rectifier, trenching for wiring runs, anode hole logging, and all accessories required for a complete and operable system. The final system activation and testing shall be performed by the CITY.
- B. If the products installed as part of this Section are found to be defective or damaged or if the WORK of this Section is not in conformance with these Specifications or current industry standards, whichever is more stringent, then the products and WORK shall be corrected at the CONTRACTOR's expense.

#### 1.2 DEFINITIONS

- A. CONTRACTOR: The licensed prime installer selected by the CITY to install the pipeline.
- B. CITY: The City of San Diego.
- C. CORROSION ENGINEER: A qualified Corrosion Engineer retained by the Contractor who is either a Registered Professional Corrosion Engineer or NACE-International Certified Cathodic Protection Specialist.
- D. ENGINEER: The City of San Diego's Resident Engineer or designated representative.
- E. CITY'S CORROSION ENGINEER: The Engineer's appointed representative from the City's Corrosion Section.

#### 1.3 CONTRACTOR QUALIFICATIONS

- A. All work must be conducted by qualified, experienced personnel working under continuous, competent supervision. Qualified Contractors must demonstrate at least five years of experience with cathodic protection installations. The drilling subcontractor and well drilling foreman must have at least five years of experience with the installation of deep well anodes. The Contractor doing the electrical installations and well drilling work shall have proper valid State of California C-10 and C-57 licenses, respectively.

#### 1.4 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Commercial Codes and Standards (latest editions):
  - ANSI C34.2
  - ASSHTO H-20
  - ASTM B3                      Soft or Annealed Copper Wire
  - ASTM A1064/A1064M Carbon-Steel Wire and Welded Wire Reinforce-

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

	ment, Plain and Deformed, for Concrete
ASTM A615	Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM D1248	Polyethylene Plastics Extrusion Materials for Wire and Cable
ASTM D7380	Soil Compaction Determination at Shallow Depths Using 5-lb (2.3 kg) Dynamic Cone Penetrometer
CA Bulletin 74-90	California Well Standards
NACE SP0169	Standard Practice, Control of External Corrosion on Underground or Submerged Metallic Piping Systems
NACE SP0572	Design, Installation, Operation, and Maintenance, of Impressed Current Deep Groundbeds
NEMA MR 20	Semiconductor Rectifiers Cathodic Protection Units
NEMA TC 2	Electrical Polyvinyl Chloride (PVC) Tubing and Conduit
NEMA WC 5	Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
NEMA WC 7	Cross-Linked-Thermosetting-Polyethylene-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
NEC (NFPA 70)	National Electrical Code
UL 651	Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings
Green Book	Standard Specifications for Public Works Construction, 2018 edition
White Book	Standard Specifications of Public Works Construction, City of San Diego, 2018 edition
	Standard Drawings for Public Works Construction latest edition
	County of San Diego, San Diego County Code of Regulatory Ordinances,
	Title 6 - Health and Sanitation, Division 7 - Water and Water Supplies,
	Chapter 4 – Wells

### 1.5 CONTRACTOR SUBMITTALS

- A. Catalog Cuts: Submit manufacturer's catalog cuts for each item listed. The catalog cuts shall include the manufacturer's name, shall be identified by reference to the applicable specifications paragraph and/or drawing number, and shall provide

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

sufficient information to show that the materials meet the requirements of the Drawings and Specifications. Where more than one item or catalog number appears on a catalog cut, clearly identify the item proposed. Catalog cuts of the following items shall be submitted for approval:

- a. Rectifier
  - b. Rectifier Enclosure
  - c. Ancillary Equipment Panel Assembly
  - d. GPS Interrupter with Relay and Heatsink
  - e. Impressed Current Anodes
  - f. Anode Centralizer
  - g. Coke Backfill
  - h. Vent Pipe
  - i. Well Sealing Materials
  - j. Deep Anode Well Head Vault
  - k. Surface Vent Pipe
  - l. Galvanic Anodes
  - m. Conduit and Fittings
  - n. Wire, Leads, and Cable
  - o. Wire Splices
  - p. Cable Warning Tape
- B. Drilling and Anode Resistance Logs: Record and submit to the ENGINEER the following information obtained during the drilling and anode loading of the hole. All data shall be typed on white 8 1/2" x 11" paper.
1. Drillers Log
  2. Identification of water bearing strata
  3. Initial hole resistance log versus depth
  4. Individual anode final depths
  5. Individual anode current outputs before and after backfilling with coke
- C. As-Built Drawings: Maintain as-built drawings showing the exact locations of the deep anode ground bed and wire trenching runs. Location changes shall be clearly indicated in red on a blue-line copy of the design drawings. These drawings shall be submitted to the ENGINEER before the work is considered complete.
- D. Anode Well Permits: Submit copies of the completed and approved County of San Diego, Department of Environmental Health, Cathodic Protection Well Permit.

### 1.6 PACKAGING AND SHIPPING

- A. Coil wires, secure and package anodes as required to prevent damage during shipment.

### 1.7 NOTIFICATION FOR TESTING AND INSPECTION

- A. Notify the ENGINEER at least seven days in advance of the deep anode ground bed drilling and the installation of associated wiring. Well loading and completion

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

shall be done in the presence of the ENGINEER. The ENGINEER shall witness all corrosion control installations at their discretion.

### 1.8 INTERFERENCE AND EXACT LOCATIONS

- A. The locations of cathodic protection equipment as indicated are approximate only. Exact locations shall be determined by the CONTRACTOR in the field and be subject to approval of the ENGINEER.
- B. Field verify all data and final locations of work done under other Sections of the Specifications required for placing all electrical work.
- C. In case of interference with other work or erroneous locations with respect to equipment or structures, furnish all labor and materials necessary to complete the WORK in an acceptable manner.

## PART 2 - PRODUCTS

### 2.1 RECTIFIER ASSEMBLY

- A. Construction: The rectifier shall be mounted in a freestanding ornamental enclosure and installed on a slide-out metal shelf to provide maintenance access. The rectifier shall bear evidence of UL Approval on the front panel. The rectifier shall be Universal air-cooled standard line Model ASAI 60-30 ABCFHMRP or approved equal.
- B. Electrical Characteristics:
  - 1. Rectifier shall have a 120/240 Volt single phase AC input and have a rated DC output of 60 Volt 30 Amp, satisfying the requirements of NEMA MR-20, ANSI C34.2 and NFPA 70. Rectifiers shall be capable of operating continuously at the rated output current at any voltage from zero to 110% without damaging any rectifier components. Full rated DC output voltage shall be adjustable by not less than 30 equal steps from approximately 5% of rated voltage to full rated output. This adjustment may be accomplished with studs and link-bars or tap switches and shall 5 coarse and 6 fine adjustments, at minimum. If tap switches are used, they shall not carry over 50% of the nominal current rating assigned by the manufacturer. The rectifier shall have a faceplate mounted 120 V convenience outlet.
  - 2. Rectifiers shall be designed to operate continuously at rated maximum voltage and current in ambient temperature of 122°F without damage to the rectifier components. Cooling shall be accomplished by natural convection. Fan cooling is not acceptable for unattended equipment.
  - 3. Silicon stacks shall be equipped with silicon diodes rated a minimum of 800 peak inverse volts. Heat sinks shall be sized to keep diode junction and case temperatures from exceeding 212°F under 113°F ambient temperature conditions.
  - 4. Rectifier shall be equipped with efficiency filter chokes.

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- C. Transformers: Transformers shall be isolation type with a grounded electrostatic shield between the primary and secondary windings. Dielectric strength of all insulating materials shall not be less than 2,000 V RMS as tested for one minute when applied between windings and the transformer core. Magnet wire insulation and layer insulation shall be rated no less than 311°F. The transformer efficiency shall not be less than 85%. The transformer voltage regulation shall not exceed 3% from full rated load to 1/4 of rated load.
- D. Output Monitoring: Separate voltmeter and ammeter display units shall be provided for monitoring the rectifier's output. Minimum meter width shall be 3.5 inches round or rectangular with minimum scale length of 2-7/8 inches. Meter movement shall be jewel and pivot D'Arsonval type. Meter accuracy shall be a minimum of plus or minus 2% of full scale at 80°F and shall be temperature compensated to vary no more than 1% per 10°F temperature variation. Scale faces shall be metal or plastic. Ammeter shunt shall be block type mounted on the front panel for easy access. Current and millivolt ratings shall be clearly stamped on the shunt. Shunt accuracy shall be at least plus or minus one percent. Output meters shall have on/off switches.
- E. Overload Protection: All rectifiers shall have overload protection. Protection from overload on the input shall be accomplished by molded case fully magnetic circuit breakers on the incoming power lines. These circuit breakers shall hold at 100% of load and may trip between 101% and 124% of rated load. They shall trip at 125% of rated load. The trip point shall be unaffected by changes in ambient temperature. Trip handles of individual pole breakers shall be mechanically linked to open all lines when an overload occurs. Units shall be equipped with silicon stacks, overload protection shall be provided by a quick opening fuse in the transformer secondary. The rectifier shall have secondary breakers for AC and DC outputs.
- F. Surge Protection: Voltage surge protection for units equipped with silicon stacks shall be supplied by AC and DC lightning arresters.
- G. Testing: Electrical tests shall be performed at the factory and recorded as listed below:
  - 1. AC Volts Input
  - 2. AC Amperes Input
  - 3. Apparent Watts Input
  - 4. True Watts Input
  - 5. Power Factor
  - 6. DC Volts Output
  - 7. DC Amperes Output
  - 8. DC Watts Output
  - 9. Conversion Efficiency
  - 10. Dielectric Strength

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11. Transformer Primary to Ground
  12. Transformer Secondary to Ground
  13. Transformer Primary to Secondary
  14. Stack AC to Ground
  15. Stack DC to Ground
  16. Ripple Voltage at Full Output
- H. Results of the tests shall be furnished to the ENGINEER with the Owner's Manual.
- I. Rectifier Warranty: The manufacturer shall warrant the rectifier for one year against failures due to defective parts and/or faulty workmanship.
- J. Rectifier Spare Parts: The rectifier unit shall be equipped with three spare fuses for each of the fuses used in the unit. The spare fuses shall be secured inside the rectifier cabinet and shipped with the unit.

### 2.2 ORNAMENTAL ENCLOSURE

- A. The enclosure for the rectifier, ancillary equipment panel, AC disconnect, AC outlet, GPS interrupter, relay and heat sink shall be a freestanding, pad-mounted, aluminum enclosure manufactured from 0.125" thick type 5052-H32 aluminum with a white powder coat finish inside and out. The enclosure shall accommodate all necessary components and have the following minimum dimensions:
- Height: 57.5 inches
  - Width: 30 inches
  - Depth: 17 inches
- B. The enclosure shall be a Myers Model MSX NEMA 3R or equal.
- C. Provide stainless steel door handles, hinges, and hardware with provisions for padlocks and louvered vents with filters. Main door lock shall be a Corbin #1548-1 keyed to the City of San Diego Master. Provide a slide-out shelf for mounting the rectifier assembly.
- D. Mount the ornamental enclosure on a 12-inch thick reinforced concrete pad. The top of the concrete pad shall be 4 inches above finished grade and be at least 12 inches larger in length (depth) and width than the ornamental enclosure. Reinforcing steel for concrete pad shall be No.4 rebar spaced 12 inches on center or as shown on the drawings, or 4x4-4.0xW4.0.

### 2.3 ANCILLARY EQUIPMENT PANEL

- A. Panel: Provide and fabricate the ancillary equipment panel that is to be mounted on the back panel of the enclosure from 1/2-inch thick micarta or Grade XX phenolic material. Use 1-inch standoffs when mounting the panel inside enclosure.
- B. AC Disconnect: Provide a 60 A, 240 V non-fused AC disconnect.

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

- C. AC Outlet: Provide a conveniently located 120V/20A receptacle with its own 20-amp breaker and circuit.
- D. GPS interrupter, relay, and heat sink
  - 1. GPS Interrupter: Provide a GPS interrupter equipped with an external antenna. The interrupter shall be an American Innovations MicroMax GPS 300 or approved equal.
  - 2. Relay: The relay for use in the GPS Interruption circuit shall be a solid state, normally open, 40 Amp DC relay. The relay shall be an NTE Electronics, Inc. Model No. RS3-1D40-41M or approved equal.
  - 3. Heat Sink: The relay shall be mounted on an aluminum heat sink. Heat sink shall be a Crydom Model HS202 or approved equal
- E. Fasteners and Hardware: All fasteners shall be brass or copper as shown on drawings. The copper busbar shall be fabricated from 1" x 1/8" stock.
- F. Shunts: Anode shunts shall be 0.01 ohm, Holloway Type JB or equal. Cathode shunts shall be 0.001 Holloway Type SS or equal.
- G. Cathode Resistors: Provide variable tubular ceramic resistors having an ohmic range of 0.10 – 18 ohms and rated for 200 Watts. The variable resistor shall be an Ohmite EVRT170 or an approved equal.

### 2.4 IMPRESSED CURRENT ANODES

- A. Description: Tubular mixed metal oxide anode that is dimensionally stable, tubular titanium anodes with a mixed metal oxide coating and having the dimensions listed below:
  - Length: as noted on the drawings.
  - Outside Diameter: 1 inch, minimum.
  - Manufacturer: De Nora Lida "One" Anodes, or approved equal.

### 2.5 ANODE CENTRALIZERS

- A. Centering devices shall consist of two metal or plastic assemblies that can be securely attached to the anodes and vent pipe to center them in the drilled hole. Centralizers shall not block the hole or impair installation of the anode, anode wire, or calcined coke. Centralizers shall be LIDA Ventralizers or approved equal.

### 2.6 COKE BACKFILL

- A. Calcined Petroleum Coke: Lubricated, low resistance, calcined petroleum coke shall be provided, suitable for pumping and with the following composition:
  - 17. Bulk Density: 64 to 74 pounds per cubic foot.
  - 18. Fixed Carbon: 98% to 99.8%.
  - 19. Ash: 0.6% to 0.13%.
- B. Manufacturers, or approved equal:



## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

20. Loresco SC-3, Asbury 251, or approved equal.

### 2.7 DEEP ANODE GROUND BED CONSTRUCTION MATERIALS

- A. Vent Pipe: 2-inch, Schedule 40 PVC pipe with screwed and glued joints, with 0.006-inch longitudinal slots, 3-inches long, cut completely through both sides of the pipe at 4-inch centers in the active anode column area. Loresco All-Vent, or approved equal.
- B. Ground Bed Sealing Material: Cement grout, bentonite-gelatinous mud, or neat cement, in accordance with the applicable state and local regulations.
- C. Deep Anode Well Head Vault: The wellhead vault shall be H-20 traffic rated cast iron frame and lid. The lid shall be approximately 14 inches in diameter and shall have precast ½-inch high letters that say “CITY OF SAN DIEGO – CATHODIC PROTECTION – ANODE WELL”. The well head vault shall be model SBF 1243 as manufactured by Southbay Foundry or equal.
- D. Surface Vent Pipe: 1-inch diameter schedule 80 PVC with two 90-degree schedule 80 PVC bends to form a gooseneck and bug screen at the top.

### 2.8 STANDARD POTENTIAL MAGNESIUM ANODES

- A. Capacity: Standard potential magnesium anodes shall have a theoretical energy content of 1,000 ampere-hours per pound and have a minimum useful output of 500 ampere-hours per pound.
- B. Chemical Composition
  - aluminum 5.3 – 6.7%
  - zinc - 2.5 – 3.5%
  - manganese 0.15 - 0.70%
  - silicon 0.10% MAX
  - copper 0.02% MAX
  - nickel 0.002% MAX
  - iron 0.003% MAX
  - others, total 0.30% MAX
  - magnesium remainder
- C. Open Circuit Potential: The open circuit potential of all anodes, buried in the soil, shall be between 1.50 and 1.60 volts DC versus a copper-copper sulfate reference electrode.
- D. INGOT SIZE AND WEIGHT. Anodes shall be pre-packaged and sized as shown on the drawings.
- E. ANODE CONSTRUCTION. Anodes shall be cast magnesium with a galvanized steel core rod recessed on one end to provide access to the rod for connection of the lead wire. Silver braze the lead wire to the rod and make the connection mechanically secure. Insulate the connection to a 600 volt rating by filling the

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

recess with epoxy and covering any exposed bare steel core or wire with heat shrinkable tubing. The insulating tubing shall extend over the lead wire insulation by not less than 1/2-inch. The anode lead wire shall be stranded copper and shall be connected directly to the anode steel core as described above. There shall be NO wire splices between the anode steel core and the tag end at the test station.

- F. ANODE PRE-PACKAGED BACKFILL MATERIAL. The anodes shall be completely encased and centered within a permeable cloth bag in a special low resistivity backfill mix with the following composition:

Gypsum	75%
Powdered bentonite	20%
Anhydrous sodium sulfate	5%

Backfill grains shall be such that 100 percent is capable of passing through a screen of 100 mesh. Backfill shall be firmly packed around the anode such that the ingot is approximately in the center of the backfill. The resistivity of the backfill shall be no greater than 50 ohm-cm when tested wet in a soil box. Total prepackaged weight shall be approximately 45 pounds.

### 2.9 CONDUIT, FITTINGS, AND ACCESSORIES

- A. All below-grade wire shall be run in schedule 40 PVC electrical conduit meeting the requirements of NEMA TC2 and UL 651. All above-grade conduit shall be rigid galvanized steel.
- B. Fittings: Metal fittings for use as pull box junctions with rigid steel conduit or PVC electrical conduit shall be epoxy coated and lined ferrous metal, with gasket covers. Fittings for use with either rigid nonmetallic conduit shall be PVC and shall have solvent weld-type conduit connections.
- C. Elbows and bends: All buried conduit elbows and bends shall be long radius ell type sweeps.
- D. Liquid tight fitting: Anode lead wires ingressing or egressing conduit being used as vent pipe shall be fitted with liquid tight cord grips as manufactured by Heyco, model M3321GCM-SM, or equal.

### 2.10 WIRES AND CABLE

- A. General: Conform to applicable requirements of NEMA WC 5, WC 7, and ASTM B3. All wires shall be single conductor, stranded copper unless otherwise specified.
- B. Impressed Current Anode Lead Wires:
1. Construction: The wire attached to the anodes shall be AWG stranded, single conductor, copper, insulated for 600 V. Wire size shall be No. 8 AWG Halar/HMWPE, PVDF/HMWPE, or approved equal. The inner insulation shall be 0.020-inch minimum, radiation-cross linked polyvinylidene fluoride. The outer insulation shall be 0.065-inch minimum HMWPE per ASTM D1248. Connection of wire to the anode shall have a pulling strength, which shall exceed the tensile strength of the wire. Any damage to the wire insulation or anode shall require complete replacement of the

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

wire and anode.

Anode wires shall be of one continuous length without splices from the anode connection to the Anode Shunt Panel. Anode wires with the attached anode shall be shipped to the job site with the wire wound on a reel. The minimum core diameter of the reel shall be 7½-inches. The anode wire insulation shall be free of nicks, abrasions and scratches throughout the entire length of the wire. Precaution shall be taken during fabrication, transportation and installation of the anodes to see that the wire is not kinked or sharply bent. Bends sharper than 2½-inches in radius are not permissible.

2. Resistance Testing: The anode manufacturer shall conduct and report resistance tests performed on each anode wire connection to assure the finished connection does not exceed 0.004 ohms. These resistance tests shall be performed with a Kelvin bridge circuit or equal. Anode wire connections that have a resistance value of greater than 0.004 ohms shall not be acceptable. An accurate record of tests shall be submitted to the Engineer. The records shall include the following information, as a minimum:
  - a. Anode numbering system to identify anode under test
  - b. Anode wire length
  - c. Resistance value as indicated by test
  - d. Test equipment
  - e. Description of test method
3. The anode manufacturer shall mark the reel holding the anode wire for shipment to the job site with the same anode numbering system used on the test records and the total length of attached anode wire.

### 2.11 CONCRETE

- A. Reinforcing steel: ASTM A615, Grade 60 deformed bars and welded wire fabric.
- B. Welded Wire Fabric: ASTM A1064/A1064M.
- C. Formwork: Plywood, earth cuts may be used.
- D. Concrete with minimum 4,000 psi compressive strength at 28 days.

### 2.12 ANCILLARY MATERIALS

- A. Electrical Tape: Linerless rubber high-voltage splicing tape and vinyl electrical tape suitable for moist and wet environments. Use Scotch 130C and Scotch 88 as manufactured by 3M Products.
- B. Wire Connectors: One-piece, tin-plated crimp-on lug connector as manufactured by Burndy Co., Thomas and Betts.

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

### 2.13 CABLE WARNING TAPE

- A. Inert polyethylene, impervious to known alkalis, acids, chemical reagents, and solvents likely to be encountered in soil.
- B. Thickness: Minimum 4-mils.
- C. Width: 6-inches.
- D. Identifying Lettering: Minimum 1-inch high, permanent black lettering imprinted continuously over entire length.
- E. Color: Red with black lettering as follows: “CAUTION CATHODIC PROTECTION CABLES BURIED BELOW.”

## **PART 3 - PART 1 – EXECUTION**

### 3.1 GENERAL

- A. Work not specifically described herein shall conform to NACE SP0169, NACE SP0572, the Standard Specifications for Public Works Construction (Greenbook) and City Supplement White Book and the latest revision to the Standard Drawings.

### 3.2 DEEP ANODE GROUND BED

- A. No specific alternate deep anode ground bed sites are provided however, if bedrock is reached prior to the design depth, then alternate well locations may be designated by the ENGINEER. The following anode bed design changes shall apply depending upon the actual well depth achieved:
  - 1. Bedrock depth greater than 110-feet to full design depth of 160-feet: Install all 5 anodes with active anode column length as shown in the detail drawings.
  - 2. Bedrock depth greater than 100-feet but less than 110-feet: Install as shown in the drawings except with 4 anodes.
  - 3. Bedrock depth greater than 90-feet but less than 100-feet: Install as shown in the drawings except with 3 anodes.
  - 4. Bedrock depth greater than 80-feet but less than 90-feet: Install as shown in the drawings except with 2 anodes. Install a second anode bed within the City’s Easement or public right of way, but no closer than 15-feet of the first well location with direction from the ENGINEER. Install the 3 remaining anodes in the second well.
- B. Notify the ENGINEER immediately if rock is encountered. Drilling shall continue to the design well depth until specifically instructed otherwise by the ENGINEER.
- C. The CONTRACTOR’S base price quotation shall be based upon the assumption that the deep anode ground bed will be drilled to the full design depth and shall include 2-hours of rock-drilling.

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- D. Inspection and Notification: The drilling, preparation, loading of anodes and calcined coke shall be done in the presence of the ENGINEER and the CORROSION ENGINEER. Give the ENGINEER a 7-day notice before drilling and installation.
- E. Location and Responsibility: The final location of the deep anode ground bed shall be determined in the field by the CONTRACTOR and shall be approved by the ENGINEER. The well location can be adjusted to accommodate positioning of the drill rig such that there will be minimum impact on traffic. The CONTRACTOR is responsible to locate and avoid all utilities prior to drilling. The CONTRACTOR shall retain his responsibility regardless of the approval of the drilling site by the ENGINEER.
- F. Drilling: Anode well drilling shall be done in the presence of the ENGINEER and the CORROSION ENGINEER and shall be done by means of a rotary drill rig using circulating water base drill mud or by rotary air drilling. It is the CONTRACTOR'S responsibility to provide the proper drilling method with the knowledge that rock or cobble may be encountered. Holes shall be nominal 8-inches in diameter and shall be drilled essentially straight and plum. Drilling mud shall be circulated from a portable sump or tank provided by the CONTRACTOR.
- G. It is the CONTRACTOR responsibility to dispose of drilling spoils and byproducts at a suitable disposal site at no additional cost to the City. Drilling fluid may be considered hazardous and must be disposed of in accordance with Local, State, Federal, and US EPA approved methods.
- H. When the hole has been drilled to specified depth, fresh water shall be circulated from the bottom of the hole to clear the hole of drilling mud and cuttings. The hole shall be flushed until fluid is thinned as much as possible without danger of cave-in. The degree to which the hole is flushed shall be determined by the Engineer. The hole shall be maintained full to the top with fresh water throughout the entire loading operations.
- I. Rock Drilling:
  - 1. Notify the ENGINEER immediately if a rock strata is encountered. Drilling shall be stopped until authorized by the ENGINEER to proceed.
  - 2. Rock drilling shall be defined as a condition where the rate of drilling drops below 6-feet per hour (1-foot every 10-minutes). It is assumed that the drillers' equipment is suitable for the intended purpose and can achieve a 50 to 90-feet per hour rate in good drilling conditions.
  - 3. Rock drilling shall commence only upon the approval and direction of the ENGINEER and shall cease upon direction of the ENGINEER.
- J. Loading:
  - 1. Preparation for the loading of anodes and other equipment in the hole shall be done in the presence of the ENGINEER. A minimum of 7-day notice before anode loading shall be given by the CONTRACTOR to the ENGINEER. Loading of the anode hole shall be begun early enough in the day to insure completion of all loading, including backfilling, during regular working hours. Loading shall not be started later than 1:00 p.m.

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

unless prior approval has been obtained by the CONTRACTOR from the ENGINEER.

2. Anode assemblies, with centralizers attached and secured to the vent pipe, shall be lowered into the hole supported by the attached lead wires and vent pipe. Anode vent pipes shall be lowered to the depth indicated. The ENGINEER shall visually inspect the insulation on the anode lead wire for abrasion or other damage to the insulation and wire as the anode is lowered into place. The ENGINEER will reject all anodes with damaged insulation or wire, and they shall not be installed. Splices and/or any form of wire repair shall not be allowed on the anode lead wire from the point of connection at the anode to the top of the deep anode well hole. In the event that an anode must be retrieved after it has been lowered into the hole, the entire length of the anode lead wire shall be inspected by the ENGINEER for abrasion or other forms of damage to the insulation and wire. Anodes with damaged wires shall be rejected by the ENGINEER and shall not be reinstalled.
  3. When an anode has been placed at specified depth, it shall be securely fixed in that position by tying the anode lead wire to a rack, sawhorse, etc., placed over or adjacent to the anode hole. That portion of the device to which the anode wire is tied shall be smooth and round and shall have a diameter of not less than 3-inches so as to prevent kinking or sharply bending the wire.
  4. All anodes shall be loaded before calcined coke backfill is loaded. No anodes shall be covered until the ENGINEER has inspected the placement of the anodes and given permission to backfill.
  5. The vent pipe shall be installed simultaneously with the anodes. The ENGINEER will approve the attachment of the anodes before the vent pipe is lowered into the hole. Joints shall be made up as the anode assembly, with the vent pipe attached, is lowered into the hole.
- K. Calcined Coke:
1. The coke backfill shall be slurried above-grade and then pumped into the hole after the anodes are installed. The backfill shall be pumped from the bottom of the hole up using an approximately 1 inch diameter tremme pipe that is the length of the anode hole. The pipe used to pump the backfill into the hole shall not be the vent pipe. The 1 inch pipe shall be raised as the anode column is filled with backfill. The 1 inch pipe shall be removed from the hole after the backfill installation operation is completed. A sufficient amount of backfill shall be used such that the coke backfill column extends a minimum of 10 feet above the top of the topmost anode.
  2. Settling of the backfill and coverage of the anodes shall be determined by the ENGINEER by observing the CONTRACTOR'S measurement of anode current output through a 12V DC power source circuit. During backfill placement, continuous monitoring of the current output of the lowermost uncovered anode shall be made. Coverage of the anode will be indicated

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by a rapid increase in current output, normally by at least 50%. As soon as coverage of a lower anode is indicated, the circuit shall be attached to the next higher anode in the hole and so on until coverage of all anodes has been verified. The CONTRACTOR shall record the anode current output of each backfilled anode on the same form used for recording the initial current output of the anode. After coverage of the top anode has been verified, sufficient coke shall be placed in the hole to insure backfilling a minimum of 10-feet above the uppermost anode. The coke backfill shall be allowed to settle for at least 2 hours after the last additions have been made. After 2 hours, the level of the coke shall be tested using a weighted tape measure to measure the depth of the top of the coke column.

- L. Well Sealing:
  - 1. Fill the hole above the coke column with either cement grout, bentonite-gelatinous mud, or neat cement. Seal the top 50-feet of the hole with premixed grout as specified in California State Bulletin Number 74-90 and as shown on the drawings.
  - 2. Begin well sealing operations above the calcined coke column no sooner than 2 hours, nor later than 24 hours, after indications that the uppermost anode had been covered with calcined coke, verified by logging its resistance-to earth during the backfilling process, and final required depth of cover has been obtained. Once well sealing has begun, it shall continue to completion all the way to the wellhead.
- M. Wellhead Vault: Set the cast iron frame and cover for the wellhead vault at the top of the anode hole as shown on the drawings. From the top of the anode hole, route the anode leads to the rectifier enclosure as shown on the drawings. Use pull boxes per NEC as required.
- N. Individual anode leads shall terminate on the anode shunt panel and be permanently marked with cable identifiers to their respective position in the anode hole as indicated. Modify the anode shunt panel per the drawings to accept the additional anode leads. Liquid tight cord grips shall be used where the anode lead wires enter and exit the conduit be the rectifier and the new anode well.

### 3.3 MAGNESIUM ANODES

- A. INSPECTION. Inspect all lead wires to ensure that the lead wire is securely connected to the anode core and that no damage has occurred to the lead wire insulation. If such damage is noted, replacement of entire anode and lead wire is required at the CONTRACTOR's expense.
- B. PRE-PACKAGED ANODE INSPECTION. Each anode shall be inspected to ensure that the backfill material completely surrounds the anode and that the cloth bag containing the anode and backfill material is intact. If the prepackaged anodes are supplied in a waterproof container or covering, that container or covering shall be removed before installation.

## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

- C. LOCATION. Install anodes in augured holes as shown in the drawings. Anode positions can be adjusted slightly to avoid interference with existing structures. Alternate anode positions must be approved by the Engineer.
- D. HANDLING. Ensure that the anode is never lifted, supported, transported, or handled by the lead wire. Lower all anodes into the hole using a sling or a rope.
- E. ANODE HOLE SIZE AND DEPTH. Place anodes vertically in the bottom of an augured hole. Size the hole to facilitate the installation without damaging the prepackaged anode's cloth bag.

### 3.4 WIRE, CABLES AND CONDUITS

- A. Wire runs shall be laid straight with no kinks or sharp bends. Each wire run shall be continuous in length and free of joints and or splices. Care shall be taken during installation to avoid punctures, cuts, or other damage to the wire insulation. Replace of entire length of wire is required at the CONTRACTOR's expense if wire insulating damage noted.
- B. Route wire and conduit as shown on the drawings. Alternate routing is acceptable where there is a compelling reason and provided it is within existing City of San Diego property or permanent easement. All changes to the wire routing shown on the drawings shall be approved by the ENGINEER.
- C. Install all buried wire e in conduit at a minimum depth of 36 inches or as shown on the drawings. The bottom of the finished trench shall be backfilled with stone-free earth. Place the first three inches of backfill material directly on the conduit. Backfill and tamp the remainder of the trench with stone-free earth with lifts not exceeding 6 inches. Compact trenches to 90% of its maximum compaction per ASTM D7380. Place cable warning tape 12" above all conduit runs.

## PART 4 - TESTING AND INSPECTION

### 4.1 General

- A. The CP system shall be activated and adjusted by the City's CORROSION ENGINEER. The CONTRACTOR is required to contact the City's Corrosion Section at least 5 days in advance of all corrosion control/cathodic protection facility installations. The ENGINEER shall witness all testing and installations at their discretion. All test data shall be submitted to the ENGINEER within seven (7) days of the completion of the testing. All deficiencies found to be due to faulty materials or workmanship shall be repaired or replaced by the CONTRACTOR and at his/her expense.

### 4.2 ANODE LEAD WIRE INSPECTION

- A. Responsibility: The City's CORROSION ENGINEER will inspect each anode lead wire at the anode well site. The CONTRACTOR shall assist the City's CORROSION ENGINEER and is responsible for inspecting/testing the anode lead wire insulation prior to storing and shipping.



## SECTION 13111 – IMPRESSED CURRENT CATHODIC PROTECTION

- B. Test Method: Inspection shall be visual and by feel, or by using a Holiday Tester. The ENGINEER shall inspect and run his or her hand along the full length of each anode lead wire cable just prior to installation in the well.
- C. Acceptance: All anode lead wires shall be free of cuts, nicks, and abrasions. Cables with damage shall be rejected.

### 4.3 WIRE TRENCHING AND BACKFILL

- A. Responsibility: The ENGINEER, at their discretion, shall inspect wire trenches and backfill material and methods.
- B. Test Method: The depth, trench bottom padding, and backfill material shall be visually inspected before backfilling.
- C. Acceptance: Conformance with specifications.

### 4.4 CATHODIC PROTECTION PERFORMANCE

- A. Responsibility: The cathodic protection system shall be activated and tested by the City's CORROSION ENGINEER in the presence of the CONTRACTOR.

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

**APPENDIX A**

**NOTICE OF EXEMPTION**

**NOTICE OF EXEMPTION**

(Check one or both)

TO:  RECORDER/COUNTY CLERK  
P.O.BOX 1750, MS A-33  
1600 PACIFIC HWY, ROOM 260  
SAN DIEGO, CA 92101-2422

FROM: CITY OF SAN DIEGO  
PUBLIC UTILITIES DEPARTMENT  
9192 TOPAZ WAY  
SAN DIEGO, CA 92123

\_\_\_\_ OFFICE OF PLANNING AND RESEARCH  
1400 TENTH STREET, ROOM 121  
SACRAMENTO, CA 95814

**PROJECT NO.:** N/A **PROJECT TITLE:** BAYVIEW RESERVOIR YARD PIPING CATHODIC PROTECTION SYSTEM REHAB

**PROJECT LOCATION-SPECIFIC:** Cathodic protection of the Bayview Reservoir yard piping is located within the City-owned property of the Bayview Reservoir. The main driveway is off Bahia Lane in the La Jolla Community Planning Area, District 1.

**PROJECT LOCATION-CITY/COUNTY:** City of San Diego/San Diego County

**DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT:** Cathodic protection systems are used to protect buried steel pipelines from external corrosion and eliminate related pipeline leaks and failures. This project proposes the installation of one rectifier, one deepwell anode bed, a galvanic anode bed, and associated electrical conduit. This project includes the installation of a 250-foot deepwell anode bed 8-inches in diameter that will be energized by a rectifier to be installed as part of this project.

Five galvanic anode beds will be installed. Depending upon the location, this will require 2 or 4 holes to be either augured or vacuum excavated to a depth of 15 feet. This effort will require approximately 125 feet of electrical conduit to be installed at a depth 24 to 36 inches below grade. Trench widths are expected to be no more than 12 inches wide. The project is located within and surrounded by developed land.

**NAME OF PUBLIC AGENCY APPROVING PROJECT:** City of San Diego

**NAME OF PERSON OR AGENCY CARRYING OUT PROJECT:** City of San Diego - Public Utilities Department Engineering and Program Management; 9192 Topaz Way, San Diego, CA 92123; Project Manager: Lindsey Frick (858) 292-6459.

**EXEMPT STATUS: (CHECK ONE)**

- MINISTERIAL (SEC. 21080(b)(1); 15268);
- DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a));
- EMERGENCY PROJECT (SEC. 21080(b)(4))
- CATEGORICAL EXEMPTION: 15301 (B) - EXISTING FACILITIES
- STATUTORY EXEMPTIONS:

**REASONS WHY PROJECT IS EXEMPT:** The cathodic protection system will replace the existing system as the maximum life expectancy of the existing system is expected to be reached. Cathodic protections are used to protect buried steel pipelines from external corrosion and eliminate related pipeline leaks and failures. The cathodic protection system lasts about 15 years before replacement is needed. These actions do not involve an expansion of use and will not result in significant impacts to sensitive biological or archaeological resources because all disturbances would be confined to the existing developed area. Excavation for both deepwells and trenches would total 22 cubic yards of soil removal which does not exceed the threshold for impacts to paleontological resources and mitigation would not be required. The project does not trigger any of the exceptions to the exemptions listed in the CEQA Guidelines § 15300.2 in that no cumulative impacts were identified; no significant effects on the environment were identified; the project is not adjacent to a scenic highway; no significant effects to historical resources would be affected by the action; and the project was not identified on a list of hazardous wastes sites pursuant to

Section 65962.5 of the Government Code. Therefore, the project meets the criteria set forth in CEQA Section 15301 which allows for maintenance to existing facilities, infrastructure, and appurtenances.

**LEAD AGENCY CONTACT PERSON:**

Dirk Smith, Senior Planner, Public Utilities Department, Telephone: (858) 614-5722

**IF FILED BY APPLICANT:**

1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.
2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?  
( ) YES ( ) NO

**IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM CEQA**

 , SENIOR PLANNER

MARCH 6, 2020

\_\_\_\_\_  
SIGNATURE/TITLE

\_\_\_\_\_  
DATE

**CHECK ONE:**

- (X) SIGNED BY LEAD AGENCY  
( ) SIGNED BY APPLICANT

DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR:

**APPENDIX B**

**SAMPLE CITY INVOICE**



**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 **Ahrens Mechanical**, herein called "Contractor" for construction of Bayview Reservoir Yard Replacing ; Quote No. M-21-0024; in the amount of **One Hundred Eighty Three Thousand Five Hundred Dollars and Zero Cents (\$183,500.00)**, which is comprised of the Base Quote.

IN CONSIDERATION of the payments to be made hereunder and the mutual undertakings of the parties hereto, City and Contractor agree as follows:

1. The following are incorporated into this contract as though fully set forth herein:
  - (a) Faithful Performance and Payment Bonds.
  - (b) Proposal included in the Quote documents by the Contractor.
  - (c) Reference Standards listed in the Instruction to Bidders and the Supplementary Special Provisions (SSP).
  - (d) That certain documents entitled **Bayview Reservoir Yard Piping Rehabilitation**, on file in the office of the Public Works Department as Document No. **21004864**, 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 **Bayview Reservoir Yard Piping Rehabilitation, Minor Contract Number: M-21-0024**, 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.

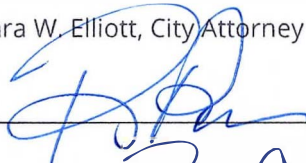
**CONTRACT AGREEMENT (continued)**

**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: 

Mara W. Elliott, City Attorney  
By: 

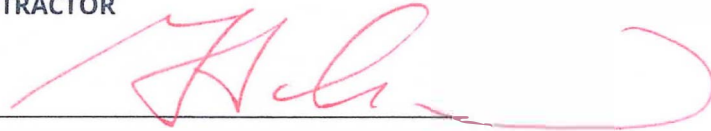
Print Name: Stephen Samara  
Principal Contract Specialist  
Engineering & Capital Projects Department

Print Name:   
Deputy City Attorney

Date: 11/4/2020

Date: 

**CONTRACTOR**

By: 

Print Name: Gregory S. Ahrens

Title: President

Date: 09 September 2020

City of San Diego License No.: B2010037845

State Contractor's License No.: 957287

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000000554

## CERTIFICATIONS AND FORMS

**The Bidder, by submitting its electronic quote, 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 quote are true and correct.**

## **Bidder's General Information**

To the City of San Diego:

Pursuant to "Notice Inviting Quotes", 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 quote is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the quote 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 quote, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham quote, 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 quote price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the quote 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 quote are true; and, further, that the bidder has not, directly or indirectly, submitted his or her quote 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, quote depository, or to any member or agent thereof to effectuate a collusive or sham quote.

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 quote 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 QUOTE  
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 quote that the quote is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the quote 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 quote, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham quote, 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 quote price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the quote 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 quote are true; and further, that the bidder has not, directly or indirectly, submitted his or her quote 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, quote depository, or to any member or agent thereof to effectuate a collusive or sham quote.

## **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 5-1.3, "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

---

### AMERICAN 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 American With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 5-1.2, "California Building Code, California Code of Regulations Title 24 and 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 quote, 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 5-1.4, ("Contractor Standards and Pledge of Compliance"), 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

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### **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**

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### **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.

## **ELECTRONICALLY SUBMITTED FORMS**

**THE FOLLOWING FORMS MUST BE SUBMITTED IN PDF FORMAT WITHIN 3 WORKING DAYS OF THE NOTICE OF INTENT TO AWARD (NOI)**

The following forms are to be completed by the bidder and submitted electronically.

- A. CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS**
- B. MANDATORY DISCLOSURE OF BUSINESS INTERESTS FORM**
- C. LIST OF SUBCONTRACTORS (INCLUDING TIER)**
- D. DEBARMENT AND SUSPENSION CERTIFICATION FOR PRIME CONTRACTORS**
- E. DEBARMENT AND SUSPENSION CERTIFICATION FOR SUBCONTRACTORS, SUPPLIERS, AND MANUFACTURERS**

**Quotes will not be accepted until ALL the above-named forms are submitted.**

**CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS**


As part of its quote, 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: Ahrens Mechanical

Certified By Gregory S. Ahrens Title President  
Name  
  
Signature Date 09 September 2020

**USE ADDITIONAL FORMS AS NECESSARY**



### LIST OF SUBCONTRACTORS (INCLUDING TIER)

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. 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. In addition, the bidder is to list below the name address, license number, DIR registration of any known tiered subcontractors who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract. It is the responsibility of the Contractor to notify the City of any additional subcontractors, including tiered, that are utilized on the project as soon as it is known.

If no subcontractors are being utilized for this contract, please fill in form using "N/A" (not applicable) and submit accordingly. Use of "N/A" for work that exceeds 0.5%, or failure to list a subcontractor for work that exceeds 0.5% of the Contractor's total Bid indicates the Contractor will self-perform the work.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	SUB TYPE (C or D*)	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	IDENTIFICATION OF SUB TIER LEVEL (1 <sup>ST</sup> , 2 <sup>ND</sup> , 3 <sup>RD</sup> , ETC.) **	NAME OF CONTRACTOR REPORTING TO
Name: <u>CorrPro</u> Address: <u>6445 Marindustry Dr.</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92121</u> Phone: <u>858-824-1992</u> Email: _____	C	1000002963	764878	Cathodic Protection	\$72, 730.40	1 <sup>st</sup>	Ahrens Mechanical
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

\*C - Constructor (builder)

\*D - Designer (Preparing or modifying designs for construction projects)

\*\* 1<sup>st</sup> tier means subcontractor is reporting directly to the prime contractor. 2<sup>nd</sup> tier means the subcontractor is reporting to the 1<sup>st</sup> tier subcontractor, and so on.

**\*\* USE ADDITIONAL FORMS AS NECESSARY \*\***

**DEBARMENT AND SUSPENSION CERTIFICATION**

EFFECT OF DEBARMENT OR SUSPENSION
To promote integrity in the City's contracting processes and to protect the public interest, the City shall only enter into contracts with responsible bidders and contractors. In accordance with San Diego Municipal Code §22.0814 (a): <i>Bidders</i> and <i>contractors</i> who have been <i>debarred</i> or <i>suspended</i> are excluded from submitting bids, submitting responses to requests for proposal or qualifications, receiving <i>contract</i> awards, executing <i>contracts</i> , participating as a <i>subcontractor</i> , employee, agent or representative of another <i>person</i> contracting with the City.

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 Names of the Principal Individual owner(s).

The names of all persons interested in the foregoing proposal as Principals are as follows:

NAME	TITLE
Gregory S. Ahrens	President

**IMPORTANT NOTICE:** If Bidder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Bidder or other interested person is an individual, state first and last names in full.

The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State or local agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State or local agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Contractor Name: Ahrens Mechanical

Certified By Gregory S. Ahrens Title President

 Name  
 \_\_\_\_\_ Date 09 September 2020

Signature

**NOTE:** Providing false information may result in criminal prosecution or administrative sanctions.

**DEBARMENT AND SUSPENSION CERTIFICATION**  
**SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS**  
**\*TO BE COMPLETED BY BIDDER\***  
**IF NONE PLACED N/A ON FORM**

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor, supplier, and/or manufacturer:**

SUBCONTRACTOR                       SUPPLIER                       MANUFACTURER

NAME	TITLE
Corrpro Companies, Inc.	Cathodic Protection Subcontractor
6445 Marindustry Dr.	
San Diego, CA 92121	
Wes Johnson	Senior Vice President

SUBCONTRACTOR                       SUPPLIER                       MANUFACTURER

NAME	TITLE

SUBCONTRACTOR                       SUPPLIER                       MANUFACTURER

NAME	TITLE

SUBCONTRACTOR                       SUPPLIER                       MANUFACTURER

NAME	TITLE

Contractor Name: Corrpro Companies, Inc.

Certified By Rebecca Bickmore Title Project Manager

 Name  
 \_\_\_\_\_ Date 09/14/2020  
 Signature

**\*USE ADDITIONAL FORMS AS NECESSARY\***



**SHEET INDEX**

SHEET NO.	DISCIPLINE CODE	TITLE
1	G-1	TITLE SHEET
2	CP-1	SITE PLAN
3	CP-2	ICCP DETAILS - I
4	CP-3	ICCP DETAILS - II
5	CP-4	ICCP DETAILS - III
6	CP-5	GACP DETAILS

# BAYVIEW RESERVOIR - YARD PIPING CATHODIC PROTECTION REHABILITATION

**CONSTRUCTION STORM WATER PROTECTION NOTES**

- TOTAL SITE DISTURBANCE AREA (ACRES) .0235  
 HYDROLOGIC UNIT/ WATERSHED PENASQUITOS (MISSION BAY/LA JOLLA WMA)  
 HYDROLOGIC SUBAREA NAME & NO. SCRIPPS 906.30
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE  
 WPCP or MWPCP  
 THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100  
 SWPPP  
 THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT ORDER 2009-0009-DWQ AS AMENDED BY ORDER 2010-0014-DWQ AND 2012-0006-DWQ  
 TRADITIONAL: RISK LEVEL  1  2  3  
 LUP: RISK TYPE  1  2  3
- CONSTRUCTION SITE PRIORITY  
 ASBS  HIGH  MEDIUM  LOW

**MONUMENTATION/SURVEY NOTES**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LICENSED LAND SURVEYOR OR LICENSED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING IN THE STATE OF CALIFORNIA SHALL FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR ANY EARTHWORK, DEMOLITION OR SURFACE IMPROVEMENTS. IF DESTROYED, A LICENSED LAND SURVEYOR SHALL REPLACE SUCH MONUMENT(S) WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILLED WITH THE COUNTY SURVEYOR. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

**SYMBOLS**

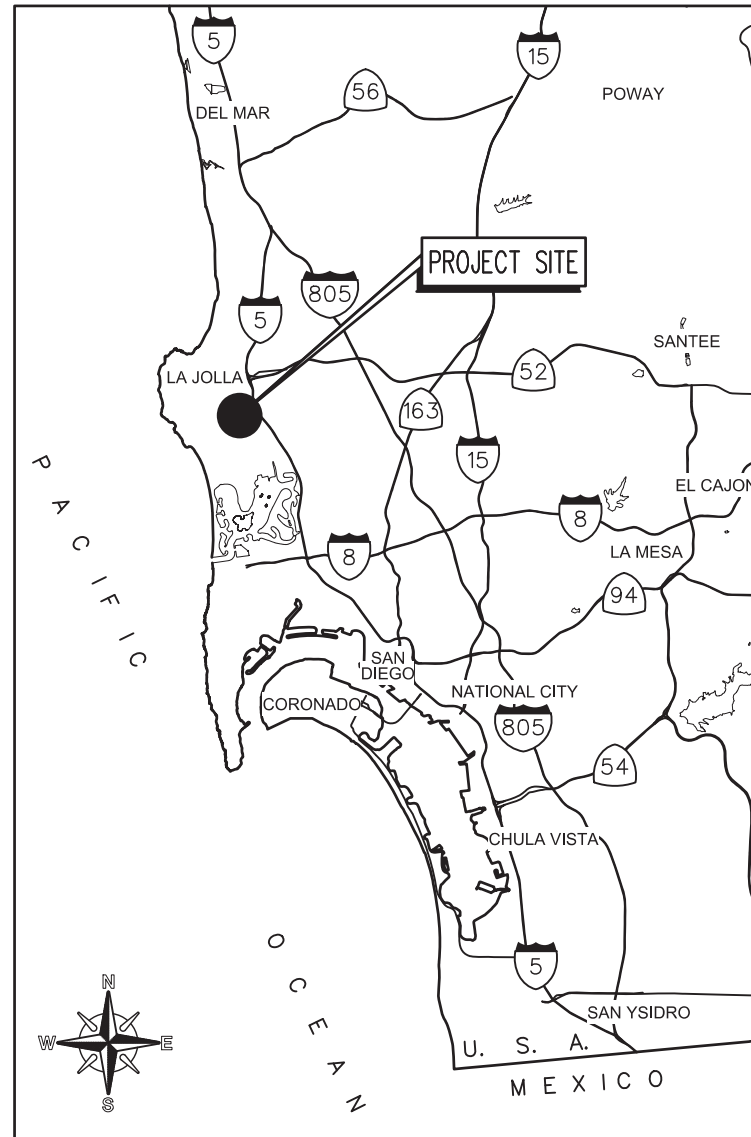
- CENTERLINE
- WATER
- STORM DRAIN
- EDGE OF PAVEMENT
- EXISTING TEST STATION
- NEW ANODE DEEP WELL
- NEW RECTIFIER

**STANDARD DRAWINGS & SPECIFICATIONS:**

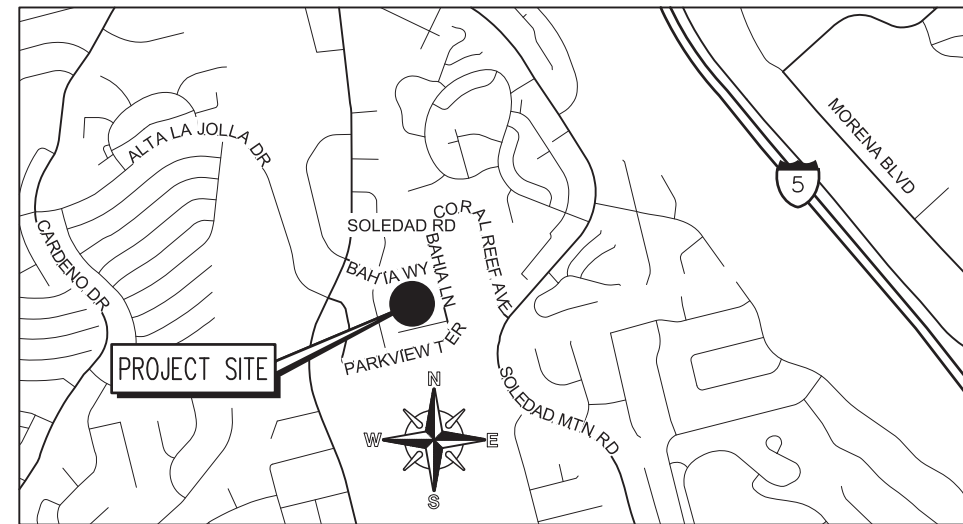
DOC. NO.	FILED	DESCRIPTION
PITS0504091	05-09-04	STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION (THE GREEN BOOK) 2018 EDITION
PITS090110-1		CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS (THE WHITE BOOK), 2018 UPDATE
A3C1230163		CITY OF SAN DIEGO STANDARD DRAWINGS INCLUDING ALL REGIONAL DRAWINGS

**ABBREVIATIONS NOT LISTED IN STD DWGS**

4W-BOND	4-WIRE BOND	ICCP	IMPRESSED CATHODIC PROTECTION
4W-IJ	4-WIRE INSULATING JOINT TEST STATION	ID	IDENTIFICATION
A	AMPERES	LB	POUND
AC	ALTERNATING CURRENT	LN	LANE
Al	ALUMINUM	Mg	MAGNESIUM
CML&C	CEMENT MORTAR LINED AND COATED	Mn	MANGANESE
CP	CATHODIC PROTECTION	NAD	NORTH AMERICAN DATUM
CTS	CORROSION TEST STATION	Ni	NICKEL
Cu	COPPER	NO.	NUMBER
DC	DIRECT CURRENT	RD	ROAD
DR	DRIVE	REQ	REQUIRED
Fe	IRON	SCH	SCHEDULE
GACP	GALVANIC ANODE CATHODIC PROTECTION	Si	SILICON
HALAR	ETHYLENE CHLOROTRIFLUOROETHYLENE	STR	STRANDED
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE	THHN	THERMOPLASTIC HIGH HEAT-RESISTANT NYLON-COATED
		THHW	THERMOPLASTIC HEAT AND WATER-RESISTANT NYLON-COATED
		V	VOLT
		WY	WAY
		Zn	ZINC



**CITY OF SAN DIEGO**  
VICINITY MAP



**BAHIA LN**  
LOCATION MAP

**CONTRACTOR RESPONSIBILITIES**

- PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
- NOTIFY SDG&E AT LEAST 10 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (I.E., 69 KV & HIGHER)
- THE LOCATIONS OF EXISTING FACILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE. EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE SPECIFICATIONS SECTION 5-UTILITIES. RECORDS ARE AVAILABLE TO THE CONTRACTOR AT THE PUBLIC UTILITIES DEPARTMENT, 2797 CAMINITO CHOLLAS.
- VERIFY THE LOCATION OF ADJACENT STRUCTURES AND UTILITIES AND FOR AVOIDING DAMAGE TO, AND CONFLICT, WITH THESE STRUCTURES OR UTILITIES.
- UNLESS OTHERWISE NOTED DRAWINGS ARE NOT SHOWN TO SCALE.
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, CITY STANDARDS AND THE TECHNICAL SPECIFICATIONS.
- NOTIFY THE ENGINEER AT LEAST 7 DAYS PRIOR TO ANY INSTALLATIONS OR TRENCHING. COMPLY WITH INSPECTION REQUIREMENTS AS INDICATED IN THE SPECIFICATIONS. THE INSTALLATION AND DRILLING OF THE DEEP ANODE GROUND BED MUST BE IN THE PRESENCE OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- NO ANODE WIRE SPLICES ARE PERMITTED.
- DOCUMENT ALL CHANGES FROM THESE DRAWINGS AND SUBMIT 'AS-BUILT' DRAWINGS TO THE ENGINEER PRIOR TO COMPLETION OF THE WORK.
- ALL IMPROVEMENTS AND LANDSCAPING DISTURBED BY CONTRACTOR SHALL BE REPLACED IN KIND TO ORIGINAL OR BETTER. REPLACE IN KIND ANY SENSORS OR EQUIPMENT DAMAGED DURING CONSTRUCTION.
- THE THICKNESS OF AND SUBSURFACE COMPOSITION OF EXISTING PAVEMENT IS UNKNOWN.
- STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
- ALL ADVANCE METERING INFRASTRUCTURE (AMI) DEVICES ATTACHED TO THE WATER METER OR LOCATED IN OR NEAR WATER METER BOXES, COFFINS, OR VAULTS SHALL BE PROTECTED AT ALL TIMES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

**SUMMARY OF WORK**

- INSTALL NEW RECTIFIER AND DEEP ANODE GROUND BED. ROUTE NEW ANODE LEADS/VENT PIPE TO RECTIFIER. INTERCEPT AC POWER SOURCE IN ADJACENT PRV AND ROUTE TO RECTIFIER.
- INTERCEPT STRUCTURE LEADS AT TEST STATIONS, SPLICE, AND ROUTE TO RECTIFIER IN ELECTRICAL CONDUIT.
- INSTALL NEW GACP GROUND BEDS.

**PLANS FOR THE CONSTRUCTION OF BAYVIEW RESERVOIR - YARD PIPING CATHODIC PROTECTION REHABILITATION**  
TITLE SHEET

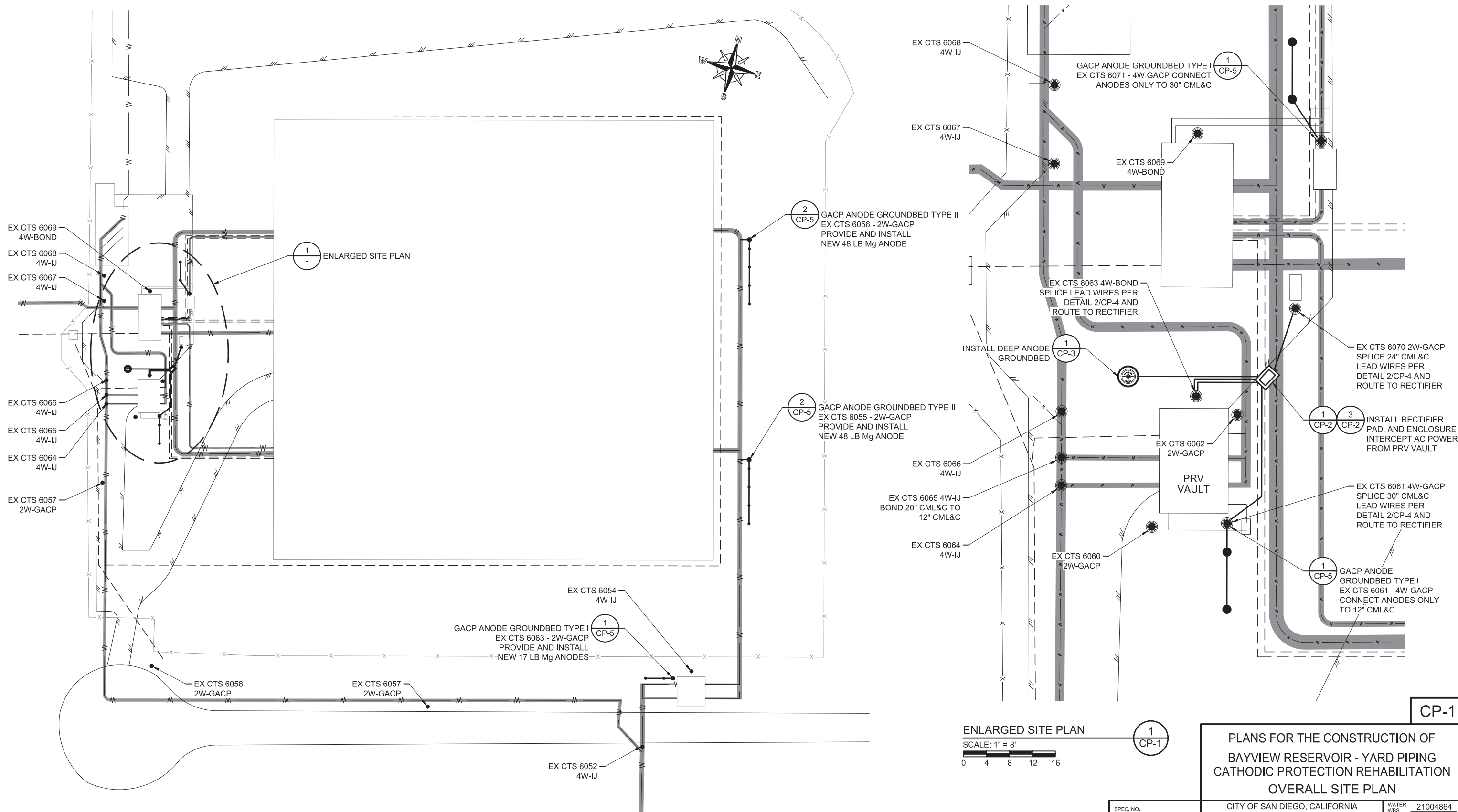
G-1

AS-BUILT INFORMATION		CITY OF SAN DIEGO, CALIFORNIA PUBLIC UTILITIES DEPARTMENT SHEET 1 OF 6 SHEETS	
MATERIALS	MANUFACTURER / MODEL	WATER WBS	21004864
RECTIFIER	-	SEWER WBS	-
ICCP ANODES	-	APPROVED FOR CITY ENGINEER	07-20-20
FINAL ICPP ANODE WELL DEPTH	-	DATE	10/3
GACP ANODES	-	PRINT DCE NAME	1063
-	-	PROJECT ENGINEER	E FERNANDEZ
-	-	CHECKED BY	S FOX
CONTRACTOR	-	DESCRIPTION	237-1695
INSPECTOR	-	SRF	CCS27 COORDINATE
		ERF	1878-6257
		DATE STARTED	CCS83 COORDINATE
		DATE COMPLETED	41782-1-D

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

**WARNING**  
0 1  
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.





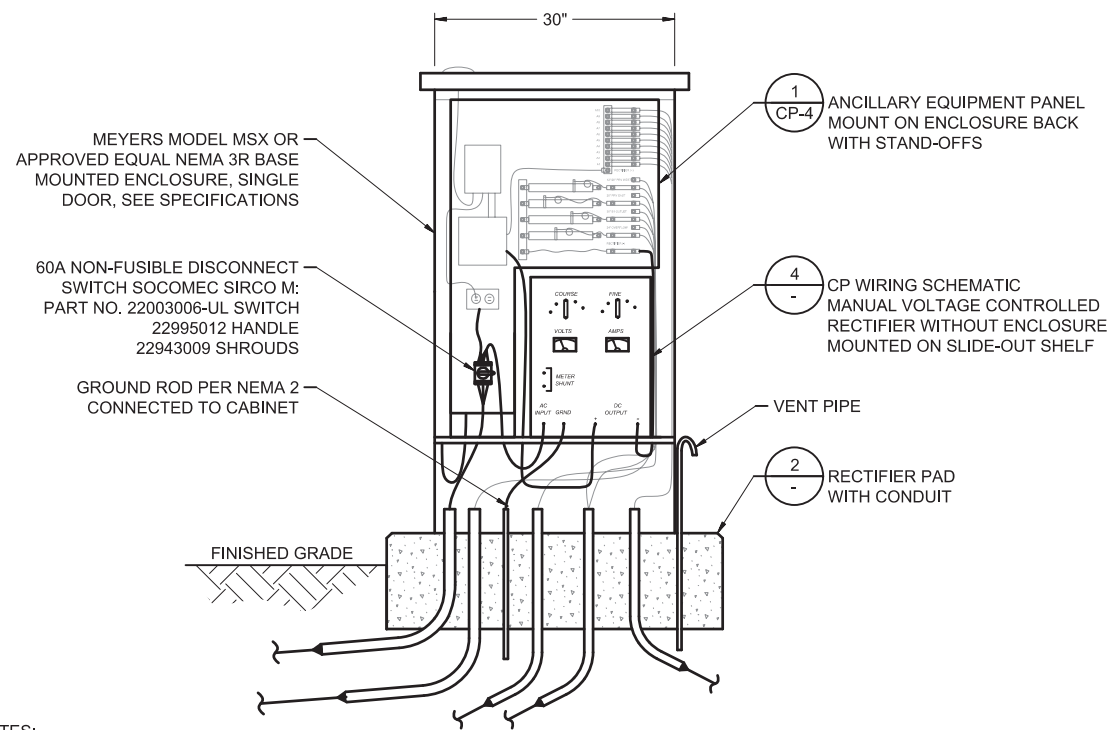
**WORK AREA**  
SCALE: 1" = 50'

**ENLARGED SITE PLAN**  
SCALE: 1" = 8'

CP-1

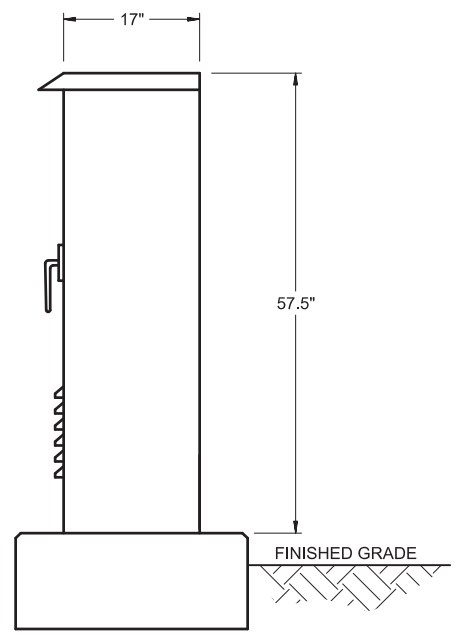
PLANS FOR THE CONSTRUCTION OF  
BAYVIEW RESERVOIR - YARD PIPING  
CATHODIC PROTECTION REHABILITATION  
OVERALL SITE PLAN

	SHEET 2 OF 6 SHEETS		WATER WBS	21004864
	CITY OF SAN DIEGO, CALIFORNIA PUBLIC UTILITIES DEPARTMENT		SEWER WBS	-
APPROVED FOR CITY ENGINEER ERNESTO FERNANDEZ PRINT DCE NAME	DATE 07/20/20	DATE 10/23	PROJECT MANAGER E FERNANDEZ	PROJECT ENGINEER S FOX
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SRF	ERF	07/20	-/-
CONTRACTOR		DATE STARTED		41782-2-D
INSPECTOR		DATE COMPLETED		



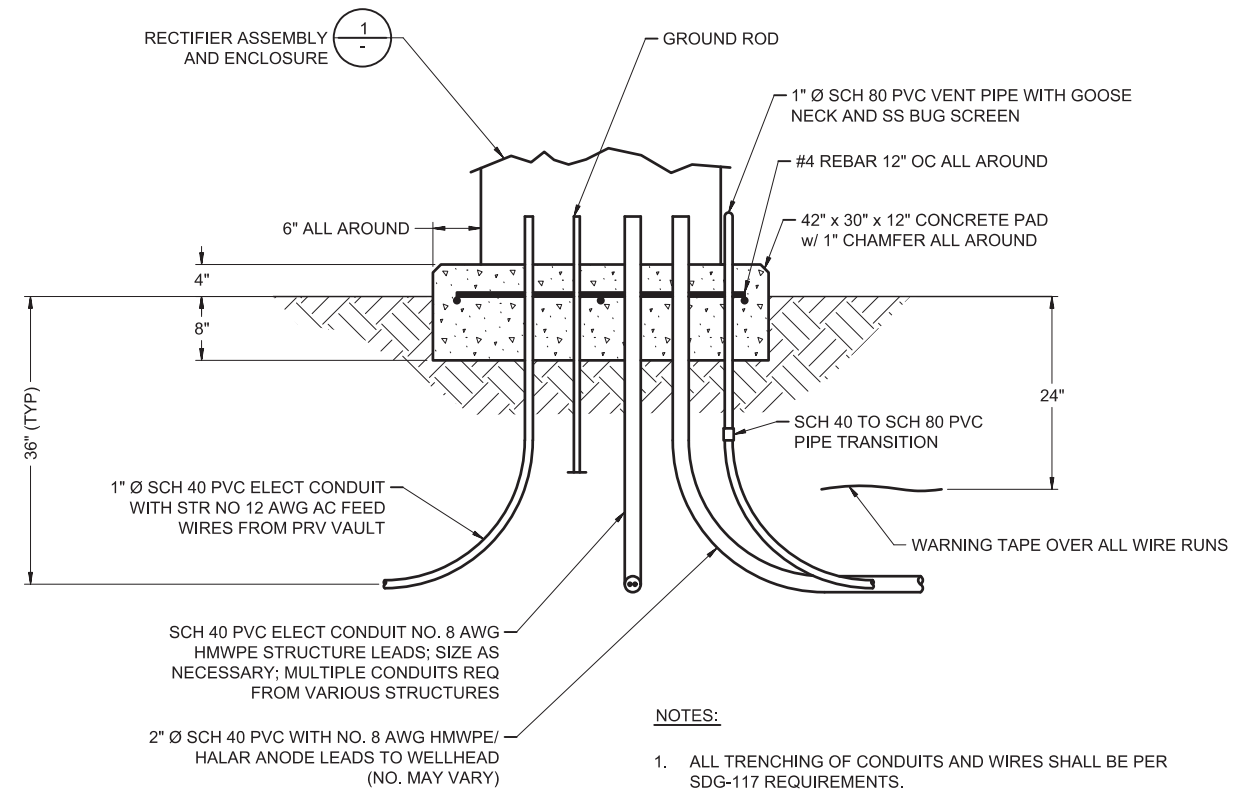
- NOTES:**
1. CENTER ENCLOSURE IN CONCRETE PAD.
  2. GROUND ROD-TO-EARTH RESISTANCE SHALL NOT EXCEED 5 OHMS.

FRONT VIEW



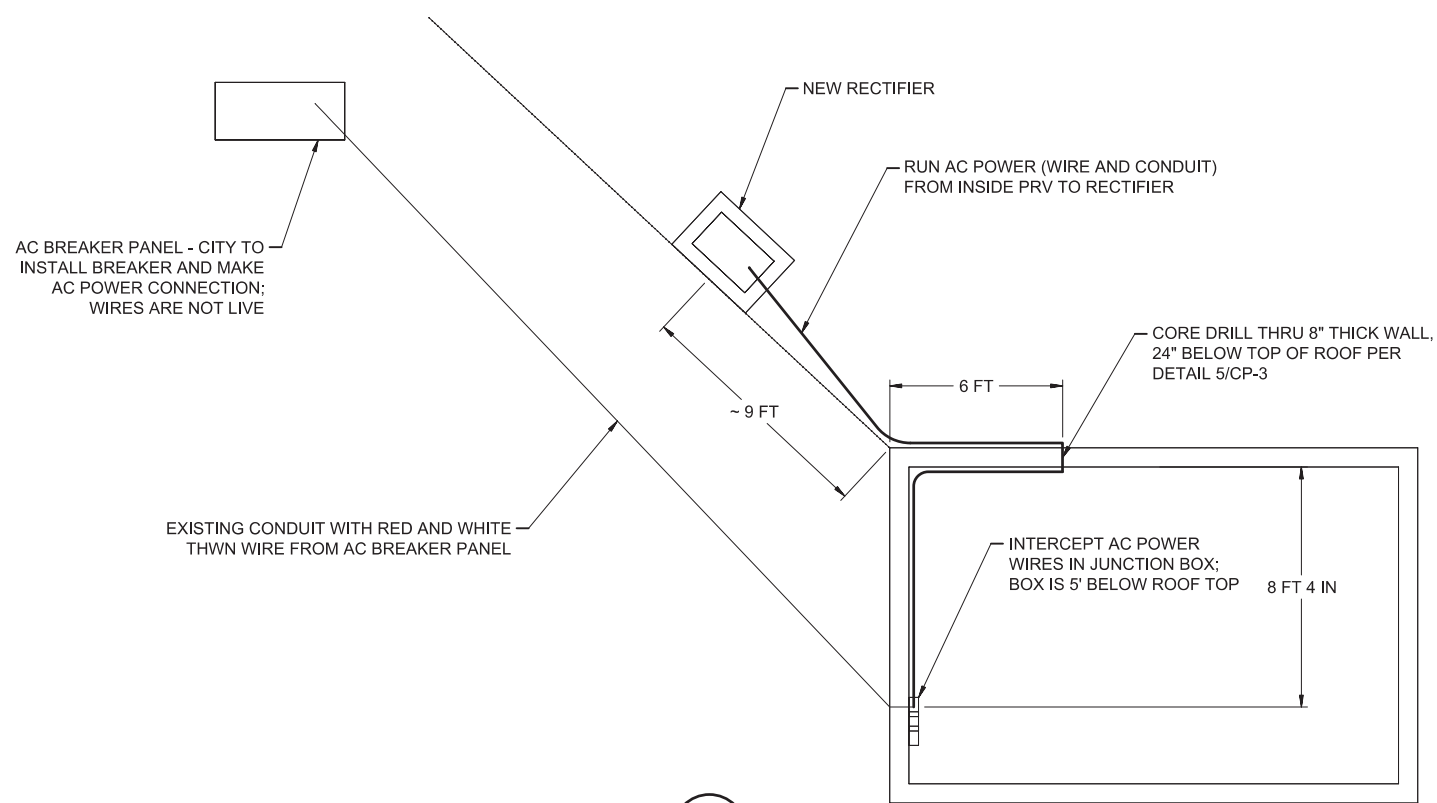
SIDE VIEW

**RECTIFIER ASSEMBLY AND ENCLOSURE** 1 CP-1  
NOT TO SCALE

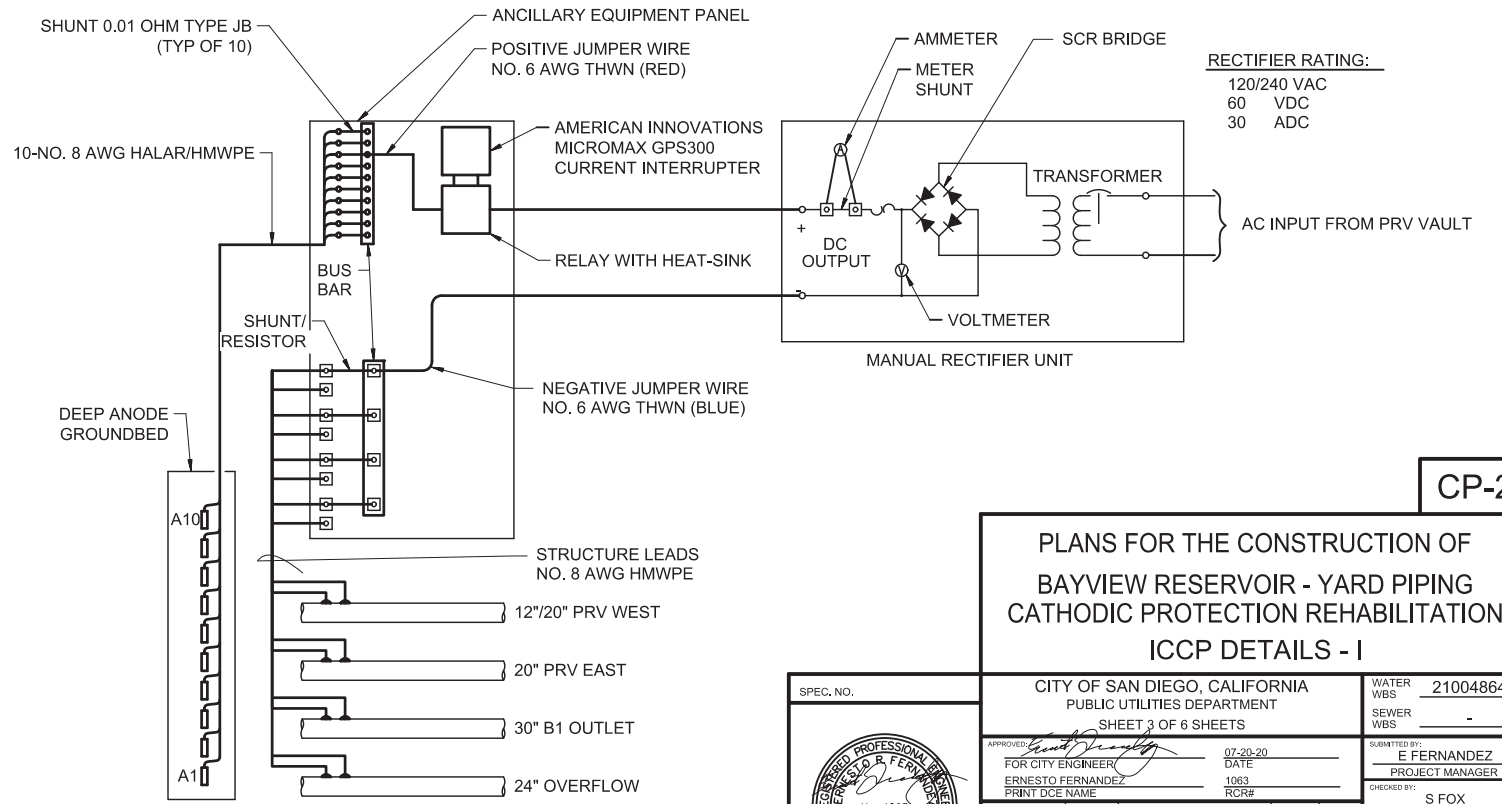


- NOTES:**
1. ALL TRENCHING OF CONDUITS AND WIRES SHALL BE PER SDG-117 REQUIREMENTS.

**RECTIFIER PAD WITH CONDUIT** 2 CP-2  
NOT TO SCALE



**AC POWER SOURCE** 3 CP-1  
NOT TO SCALE



**CP WIRING SCHEMATIC** 4 CP-2  
NOT TO SCALE

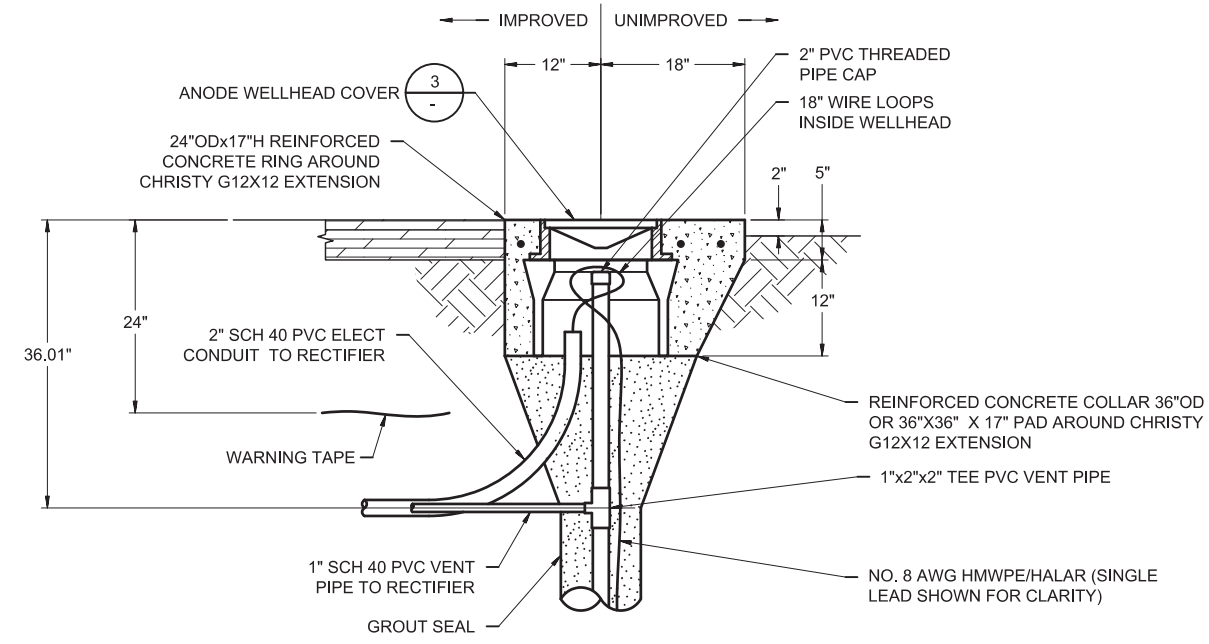
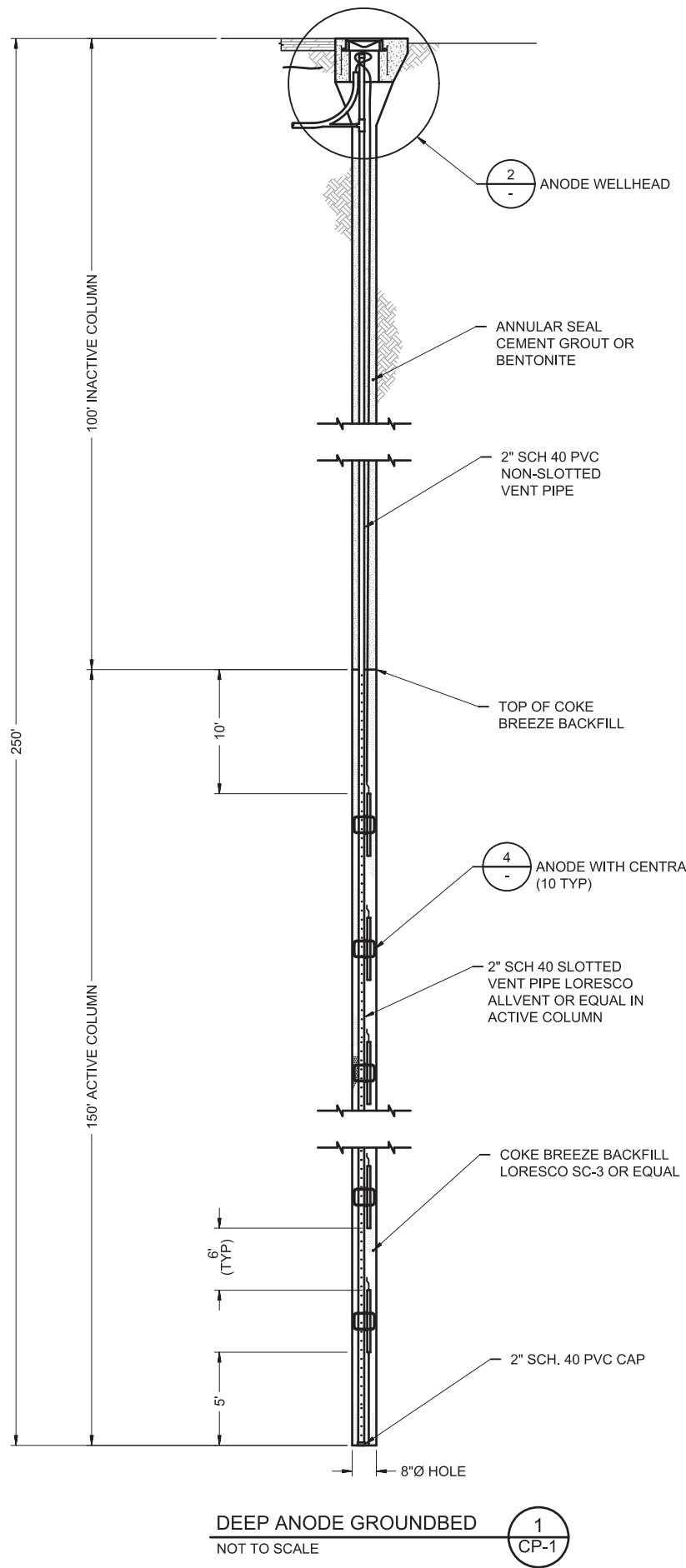
**PLANS FOR THE CONSTRUCTION OF BAYVIEW RESERVOIR - YARD PIPING CATHODIC PROTECTION REHABILITATION ICCP DETAILS - I**

SPEC. NO.		CITY OF SAN DIEGO, CALIFORNIA PUBLIC UTILITIES DEPARTMENT SHEET 3 OF 6 SHEETS		WATER WBS 21004864 SEWER WBS -
APPROVED: <i>[Signature]</i> FOR CITY ENGINEER ERNESTO FERNANDEZ PRINT DCE NAME		DATE 07-20-20 1063 RCR#	SUBMITTED BY: E FERNANDEZ PROJECT MANAGER CHECKED BY: S FOX PROJECT ENGINEER	
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SRF	ERF	07/20	-/-
CONTRACTOR		DATE STARTED		CCS27 COORDINATE
INSPECTOR		DATE COMPLETED		CCS83 COORDINATE
7/20/20				41782-3-D

DATE PLOTTED: 7/21/2020 7:24:03 AM FILE: Bayview\_Yd\_Piping\_CP.dgn

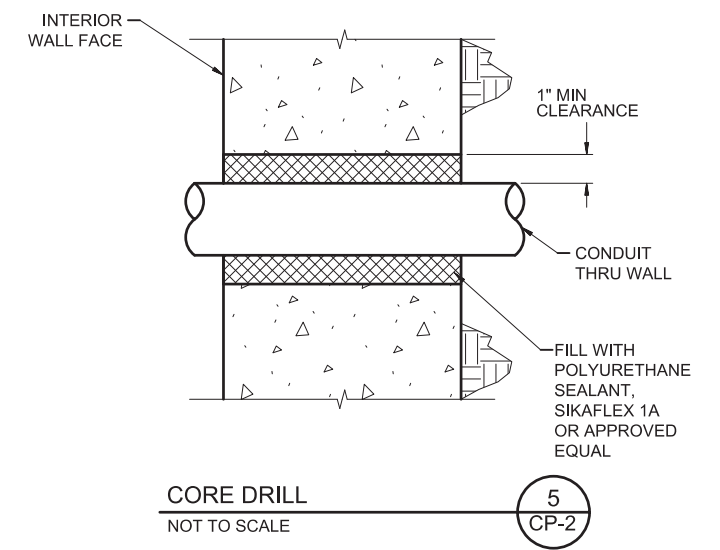
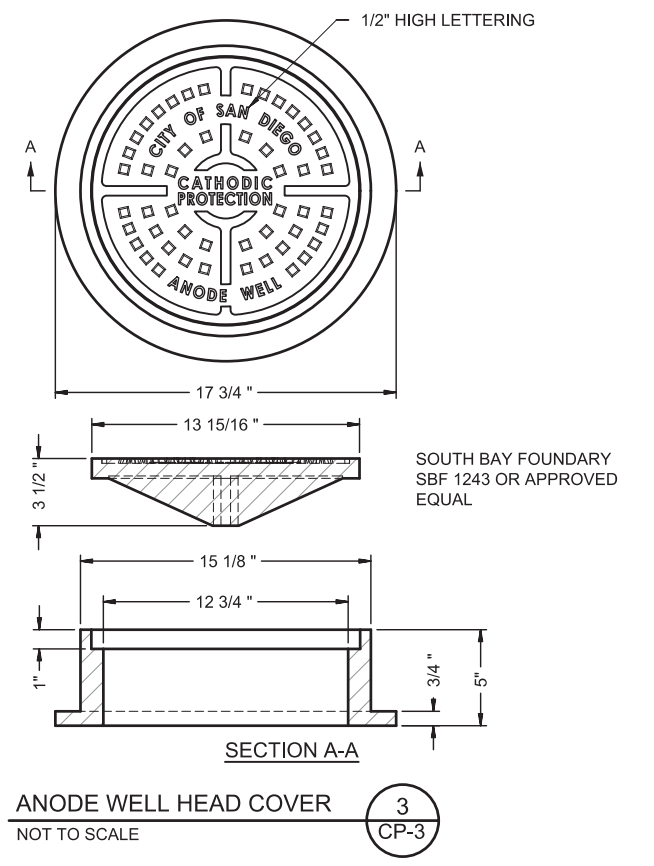
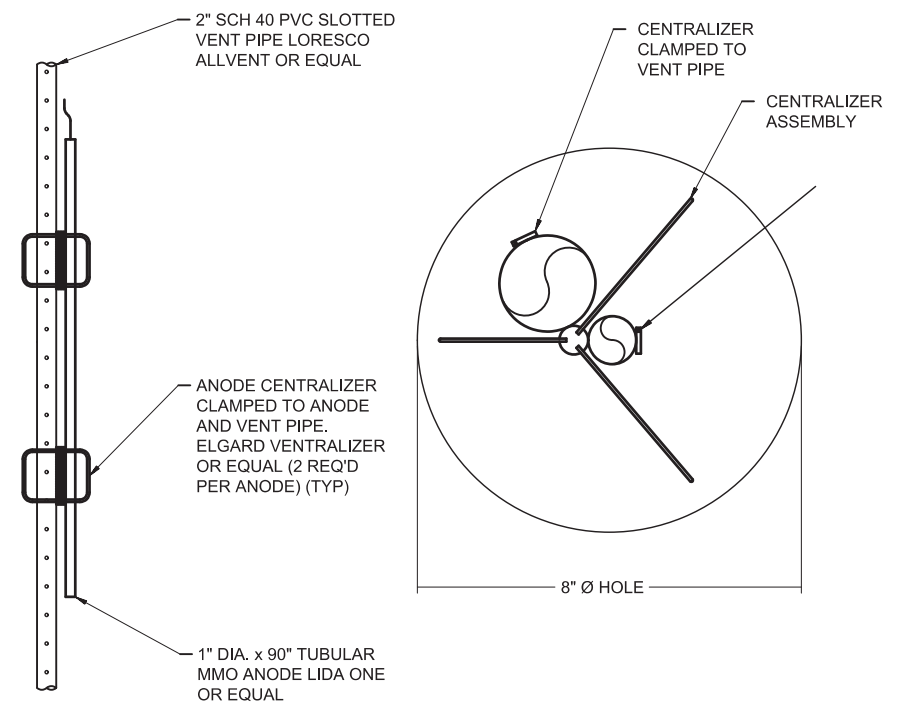
BAYVIEW RESERVOIR - YARD PIPING CATHODIC PROTECTION REHABILITATION

DATE PLOTTED: 7/21/2020 7:05:59 AM FILE: Bayview\_Yd\_Piping\_CP.dgn



NOTES:

1. ALL TRENCHING OF CONDUITS AND WIRES SHALL BE PER SDG-117 REQUIREMENTS.

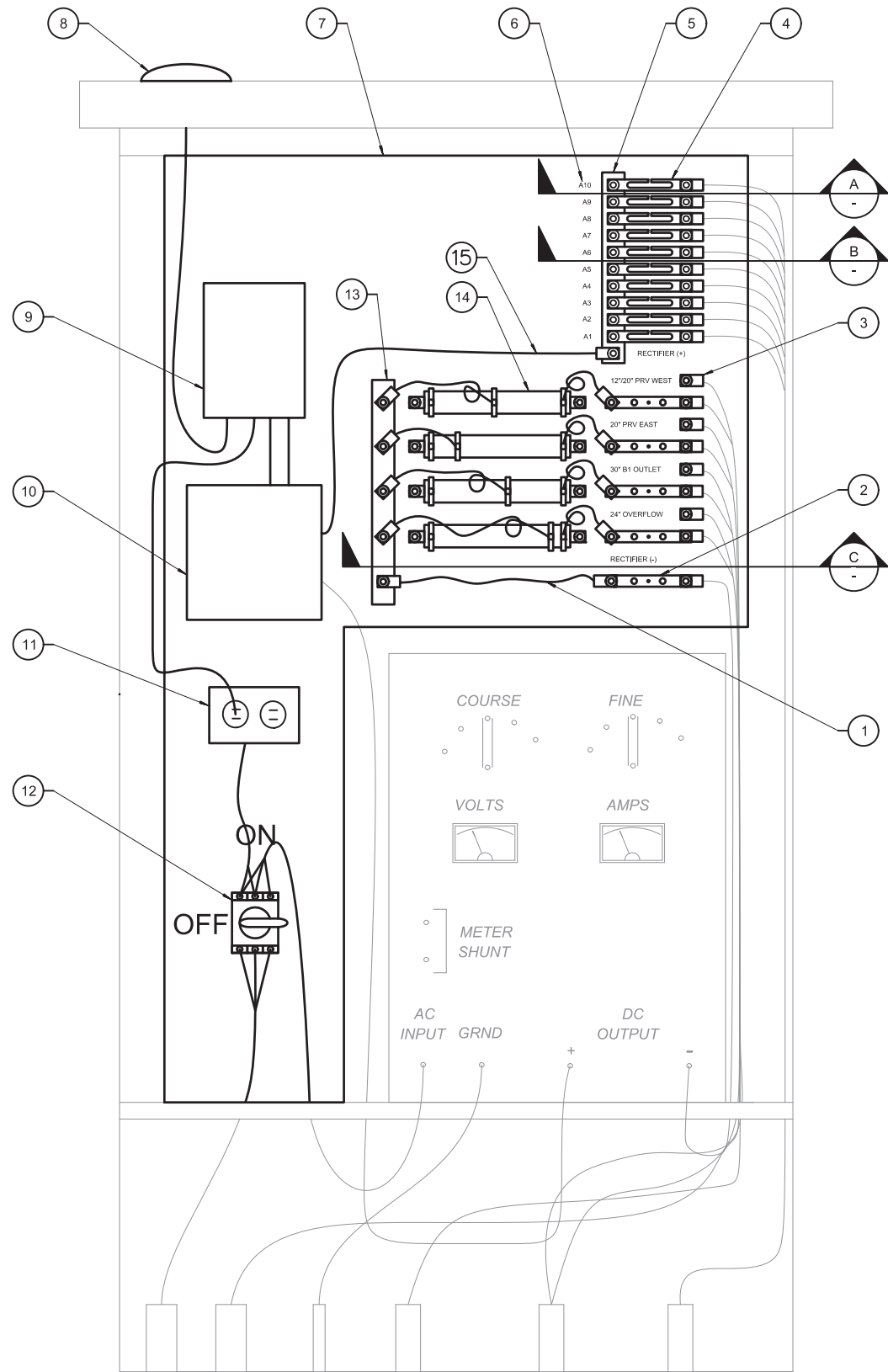


CP-3

PLANS FOR THE CONSTRUCTION OF  
BAYVIEW RESERVOIR - YARD PIPING  
CATHODIC PROTECTION REHABILITATION  
ICCP DETAILS - II

SPEC. NO.		CITY OF SAN DIEGO, CALIFORNIA PUBLIC UTILITIES DEPARTMENT SHEET 4 OF 6 SHEETS		WATER WBS 21004864 SEWER WBS -	
APPROVED: <i>[Signature]</i> FOR CITY ENGINEER ERNESTO FERNANDEZ PRINT DCE NAME		DATE 07-20-20 DATE 10/23 RCR#		SUBMITTED BY: E FERNANDEZ PROJECT MANAGER CHECKED BY: S FOX PROJECT ENGINEER	
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	SRF	ERF	07/20	-/-	
					CCS27 COORDINATE
					CCS83 COORDINATE
CONTRACTOR 7/20/20		DATE STARTED		41782-4-D	
INSPECTOR		DATE COMPLETED			

BAYVIEW RESERVOIR - YARD PIPING CATHODIC PROTECTION REHABILITATION

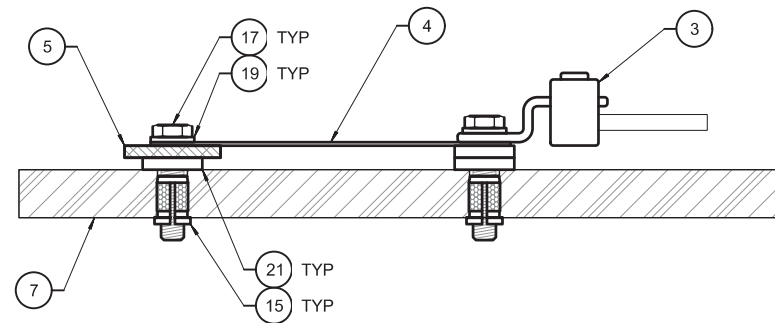


**ANCILLARY EQUIPMENT PANEL**  
NOT TO SCALE

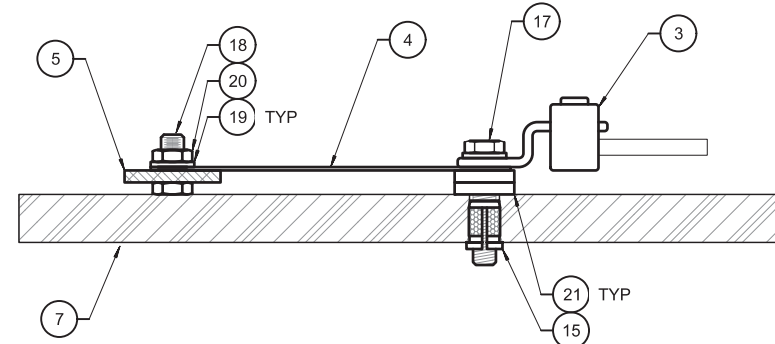
1  
CP-2

**ITEM LIST**

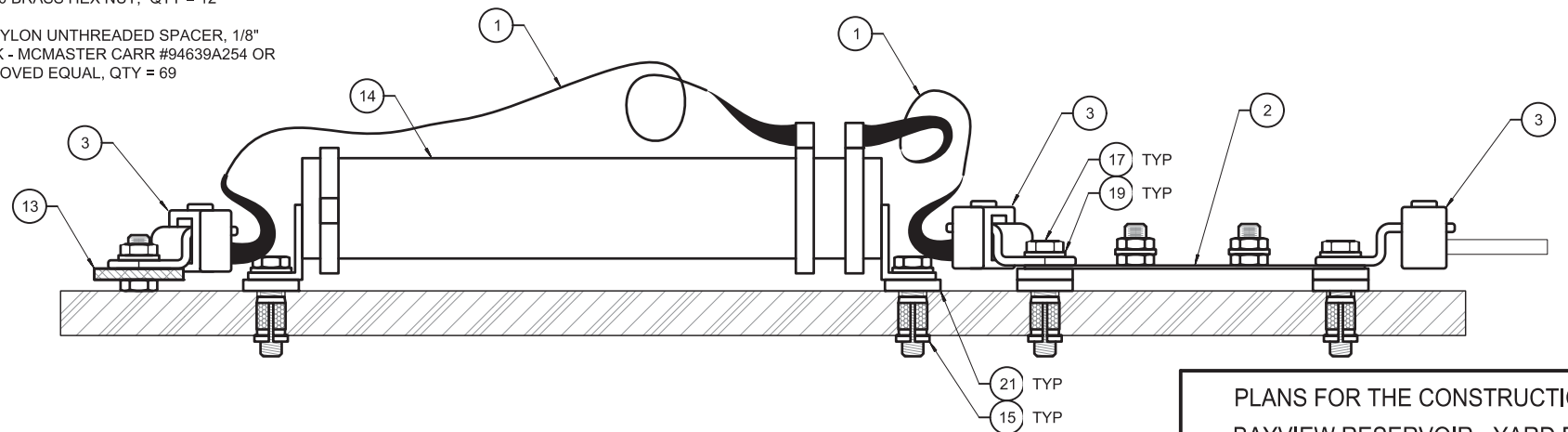
- 1 NO. 8 AWG STR WIRE W/THHN BLUE
- 2 0.001 OHM SHUNT 25 mV = 25 A HOLLOWAY SS OR EQUAL, QTY = 5
- 3 COPPER MECHANICAL WIRE LUG ILSCO SAU-70 OR EQUAL, QTY = 30
- 4 0.01 OHM SHUNT 10 mV = 1 A HOLLOWAY JB OR EQUAL, QTY = 10
- 5 1" X 1/8" X 8.5" COPPER BUS BAR, QTY = 1
- 6 THERMAL PRINTED LABEL W/1/4" LETTERING
- 7 1/2" PHENOLIC GRADE XX BACK BOARD WITH CABINET STANDOFFS
- 8 GPS ANTENEA
- 9 AMERICAN INNOVATIONS MICROMAX GPS300
- 10 NORMALLY OPEN, 40A DC SOLID STATE RELAY (NTE ELECTRONICS RS31D40-41M OR APPROVED EQUAL) AND HEAT SINK (CRYDOM MODEL HS202 OR APPROVED EQUAL)
- 11 20 A AC GFI OUTLET
- 12 AC DISCONNECT, SEE DETAIL 1, CP-2
- 13 1" X 1/8" X 10" COPPER BUS BAR, QTY = 1
- 14 ADJUSTABLE RESISTOR VISHAY ASE0180 WITH SLIDER 74 AND PUSH-ON MOUNTING BRACKETS, OR APPROVED EQUAL, QTY = 4
- 15 NO. 8 AWG STR WIRE W/THHN RED
- 16 1/4"-20 REVERSE SLOT, BRASS THREADED INSERT FOR PLASTIC - EZLOK 260-4-RS OR APPROVED EQUAL, QTY = 36
- 17 1/4"-20 BRASS HEX CAP BOLT - 1 1/4", QTY = 36
- 18 1/4"-20 BRASS HEX CAP BOLT - 1/2", QTY = 12
- 19 1/4" BRASS WASHER, QTY = 48
- 20 1/4"-20 BRASS HEX NUT, QTY = 12
- 21 1/4" NYLON UNTHREADED SPACER, 1/8" THICK - MCMASTER CARR #94639A254 OR APPROVED EQUAL, QTY = 69



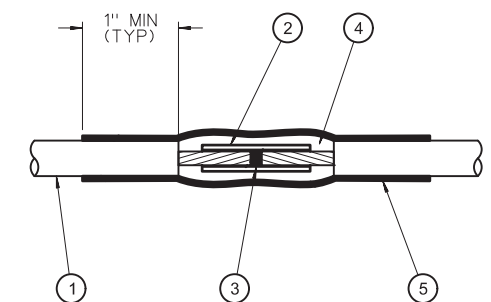
**SECTION A**  
NOT TO SCALE



**SECTION B**  
NOT TO SCALE



**SECTION C**  
NOT TO SCALE



**ITEM LIST**

- 1 WIRE
- 2 ILSCO TYPE CT HIGH COMPRESSION COPPER SLEEVE
- 3 SILVER SOLDER
- 4 SCOTCH 130C RUBBER SPLICING TAPE
- 5 3M EPS-400 HEAT SHRINK TUBING

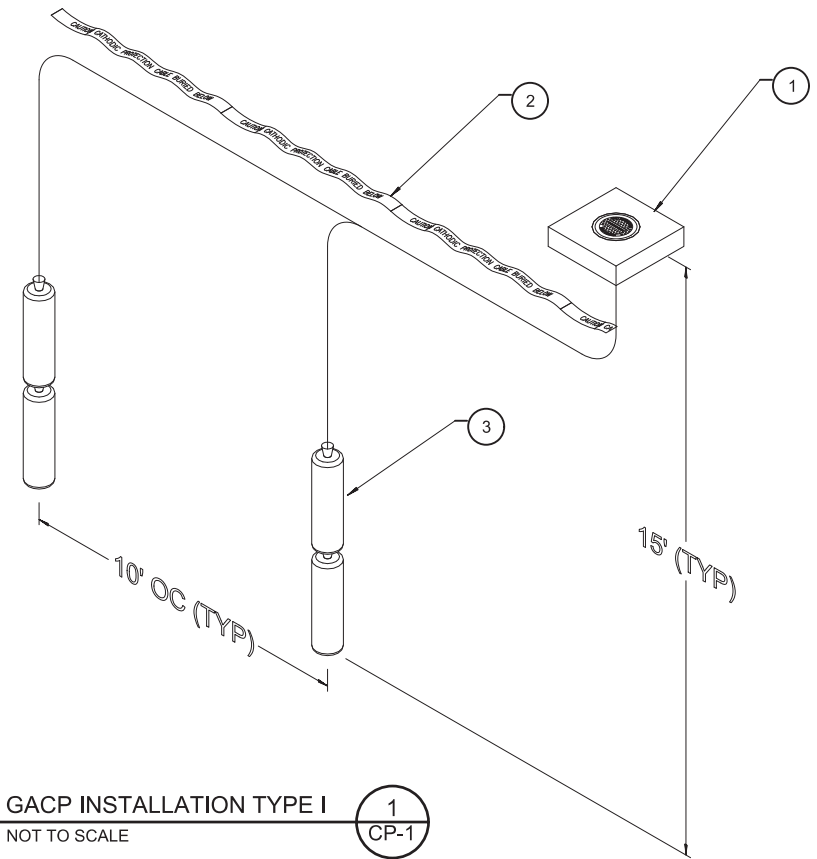
**WIRE SPLICE**  
NOT TO SCALE

2  
CP-1

CP-4

**PLANS FOR THE CONSTRUCTION OF  
BAYVIEW RESERVOIR - YARD PIPING  
CATHODIC PROTECTION REHABILITATION  
ICCP DETAILS - III**

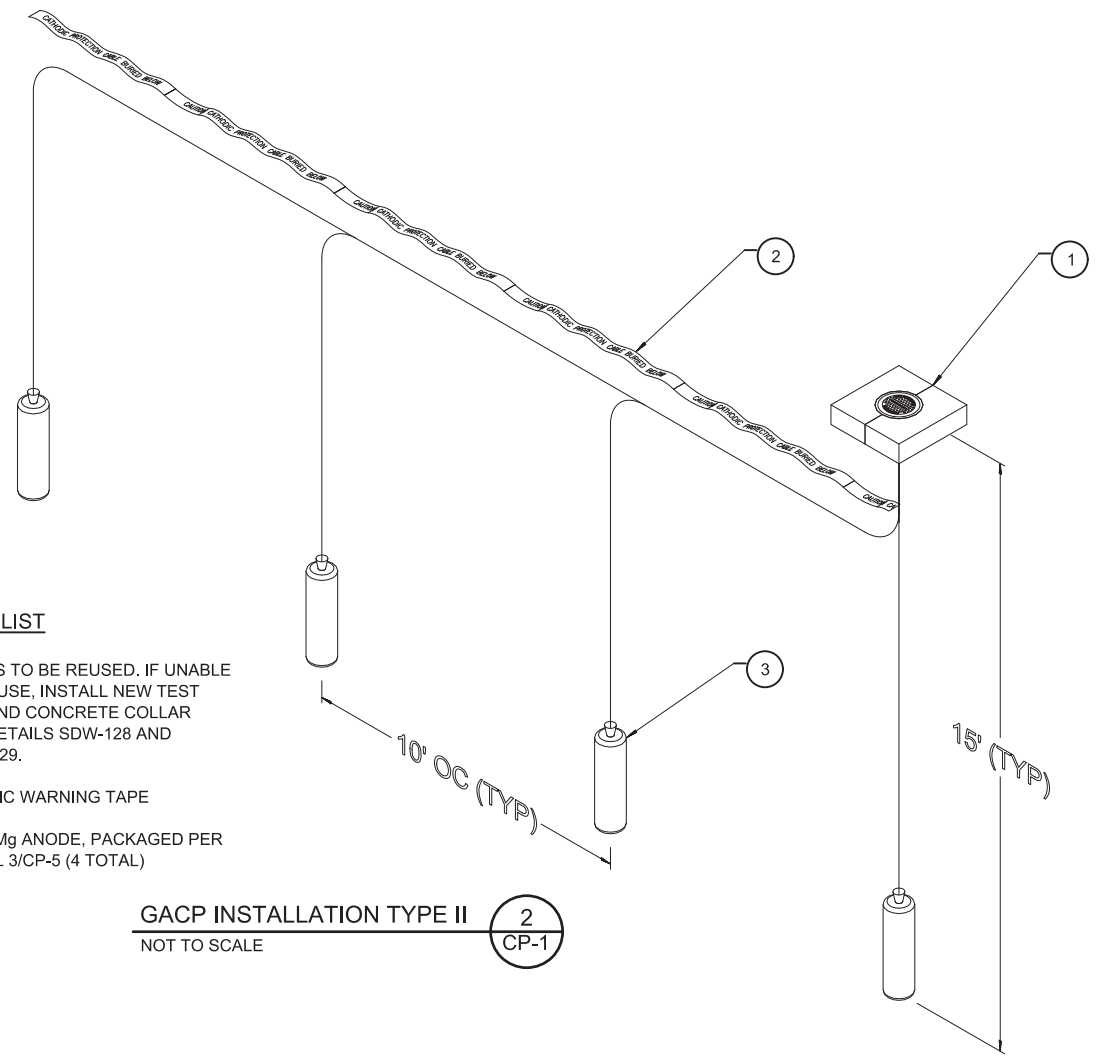
SPEC. NO.		CITY OF SAN DIEGO, CALIFORNIA PUBLIC UTILITIES DEPARTMENT SHEET 5 OF 6 SHEETS		WATER WBS 21004864
APPROVED: <i>[Signature]</i> FOR CITY ENGINEER ERNESTO FERNANDEZ PRINT DCE NAME		DATE 07-20-20	DATE 10/23	1063 RCR#
SUBMITTED BY: E FERNANDEZ PROJECT MANAGER		CHECKED BY: S FOX PROJECT ENGINEER		
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SRF	ERF	07/20	-/-
				CCS27 COORDINATE
				CCS83 COORDINATE
CONTRACTOR		DATE STARTED		41782-5-D
INSPECTOR		DATE COMPLETED		



**ITEM LIST**

- 1 EX CTS TO BE REUSED. IF UNABLE TO REUSE, INSTALL NEW TEST BOX AND CONCRETE COLLAR PER DETAILS SDW-128 AND SDW-129.
- 2 PLASTIC WARNING TAPE
- 3 17 LB Mg ANODE, PACKAGED PER DETAIL 3/CP-5 (4 TOTAL)

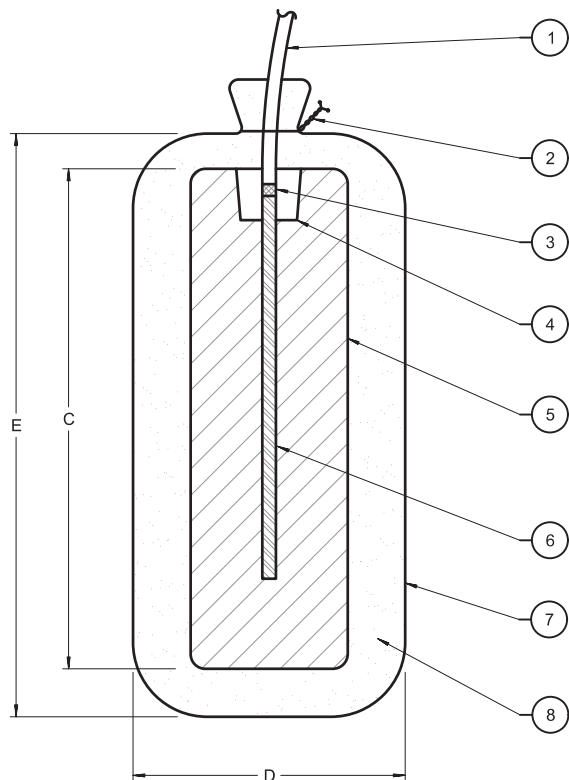
**GACP INSTALLATION TYPE I**  
NOT TO SCALE



**ITEM LIST**

- 1 EX CTS TO BE REUSED. IF UNABLE TO REUSE, INSTALL NEW TEST BOX AND CONCRETE COLLAR PER DETAILS SDW-128 AND SDW-129.
- 2 PLASTIC WARNING TAPE
- 3 48 LB Mg ANODE, PACKAGED PER DETAIL 3/CP-5 (4 TOTAL)

**GACP INSTALLATION TYPE II**  
NOT TO SCALE



**ITEM LIST**

- 1 ANODE LEAD WIRE NO. 12 AWG. STR COPPER WIRE W/WHITE THWN INSUL.
- 2 SECURE WITH TIE WIRE
- 3 SILVER SOLDERED CONNECTION
- 4 EPOXY
- 5 MAGNESIUM ALLOY INGOT (SEE ALLOY SPECIFICATIONS)
- 6 GALV. STEEL CORE
- 7 CLOTH BAG
- 8 BACKFILL (SEE BACKFILL COMPOSITION)

STD. POTENTIAL ALLOY  
MAGNESIUM SPECIFICATIONS

ELEMENT	AMOUNT BY WT.
AL	5.3 - 6.7%
Zn	2.5% - 3.5%
Mn	0.15% TO 0.70%
Si	0.10% MAX
Cu	0.02% Max
Ni	0.002% Max
Fe	0.003% Max
OTHER	0.30% Max
Mg	REMAINDER

**BACKFILL COMPOSITION**

75% GYPSUM  
20% BENTONITE  
5% SODIUM SULPHATE

Anode Size	Bare Weight	Pkg Weight	Bare			Packaged	
			A	B	C	D	E
17D3	17	45	4"	3-1/2"	25-1/2"	6-1/2"	29"
20D2	20	70	2-3/4"	2-3/4"	56-3/4"	6-1/2"	62"
32D5	32	70	6"	5-3/4"	21"	8-1/2"	28"
48D5	48	105	5-3/4"	5-3/4"	30-1/2"	7-3/4"	38"
60D4	60	126	4-1/2"	4-1/2"	60-1/2"	7"	64"

**STD POTENTIAL Mg ANODE**  
NOT TO SCALE

**GENERAL NOTES:**

- IF THE SACRIFICIAL ANODE IS SHIPPED IN A PLASTIC BAG, REMOVE IT BEFORE BURYING IT. DO NOT REMOVE THE CLOTH OR PAPER BAG WHICH CONTAINS THE PACKAGED BACKFILL.
- ANODES SHALL BE INSTALLED IN 10" DIA. X 15 FT. DEEP AUGERED HOLES.
- SOAK ANODES W/ 10 GAL. WATER BEFORE BACKFILLING HOLE.
- INSTALL HORIZONTAL ANODE LEAD WIRE RUNS 36" BELOW GRADE AND INSTALL PLASTIC WARNING TAPE 12" ABOVE LEAD WIRES IN SAME TRENCH.

CP-5

**PLANS FOR THE CONSTRUCTION OF  
BAYVIEW RESERVOIR - YARD PIPING  
CATHODIC PROTECTION REHABILITATION  
GACP DETAILS**

SPEC. NO.	CITY OF SAN DIEGO, CALIFORNIA PUBLIC UTILITIES DEPARTMENT SHEET 6 OF 6 SHEETS	WATER WBS 21004864 SEWER WBS -		
APPROVED: <i>[Signature]</i> FOR CITY ENGINEER ERNESTO FERNANDEZ PRINT DCE NAME	DATE 07-20-20 1063 RCR#	SUBMITTED BY: E FERNANDEZ PROJECT MANAGER CHECKED BY: S FOX PROJECT ENGINEER		
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SRF	ERF	07/20	-/-
CONTRACTOR	DATE STARTED			
INSPECTOR	DATE COMPLETED			
				41782-6-D

## *Ahrens Mechanical*

5959 Mission Gorge Road, Ste #204, San Diego, CA 92120

Ph: 619.487.9036, Fx: 619.487.9195

[Estimating@ahrensmechanical.com](mailto:Estimating@ahrensmechanical.com)

Certified DVBE and SB - State of California #1544620

Certified SDVOSB - Department of Veteran Affairs

Certified SLBE City of San Diego - #12AM0557

Public Works Contractor Registration No. 1000000554 exp: 6/30/22

CSLB #957287 / A, B, C4, C10, C16, C20, C34, C36 and C46 Exp:2/28/21

7 August 2020

Betelham Taffese  
City of San Diego  
525 B. Street  
San Diego, CA 92101-4409  
Email: BTaffese@sandiego.gov

Subject : Bayview Reservoir - Yard Piping Cathodic Protection Rehabilitation  
City of San Diego

Cathodic Protection Rehabilitation per attached "Request For Quote - Minor Repair".

**Price:** \$ 183,500.00

Price is valid through 7 November 2020.

AHRENS MECHANICAL



Gregory S. Ahrens, PE  
President