ADDENDUM NO. 1

PROJECT: Reservation Road Desalination Plant Renovation Project, Phase 1

CIP NO.: GW-2404GN

FROM: District Engineer
Marina Coast Water District
920 2nd Avenue, Suite A
Marina, CA 93933

ISSUED: December 10, 2025

TO: **Prospective Bidders**

This Addendum forms a part of the Bidding Documents and will be incorporated into Contract Documents. Insofar as the Specifications or Drawings or both are inconsistent, this Addendum governs. Acknowledge receipt of the Addendum by inserting its number in Document 00 41 00 – Bid Form. **FAILURE TO DO SO WILL SUBJECT BID TO DISQUALIFICATION**.

PART 1 – BIDDER INFORMATION ITEMS

A. Bid Form: Replace in its entirety, see attached Exhibit A.

PART 2 - CHANGES TO PROJECT MANUAL (EXHIBIT B)

A. Cover sheet: Replace in its entirety, see attached Exhibit B.

B. Document 00 11 00:
   a. Revise the final line in the first paragraph of Document 00 11 00 to reflect the following:

      The Project generally consists of the following work, with a specific description of each Base Bid Item and Alternate Bid Item located in Section 01 20 00, Price and Payment Procedures, of the Technical Specifications:

   b. Revise Line 3.a. of the "CIP GW-2404GN BID ALTERNATIVES" section:

      a. Rehabilitation of two (2) existing groundwater monitoring wells located on the Owner's existing desalination plant property.

C. Document 00 21 00: Revise Paragraph 7.01 to reflect the following:

   *Questions received after **December 16, 2025** may not be answered.*

D. Document 00 41 00: Replace the bid form on Page 3 of Document 00 41 00, as described in Part 1 above, with the revised bid form provided in Exhibit A.

E. Document 00 43 00:
   a. Revise the final line in the first paragraph of Document 00 43 00 to reflect the following:

      The Project generally consists of the following work, with a specific description of each Base Bid Item and Alternate Bid Item located in Section 01 20 00, Price and Payment Procedures, of the Technical Specifications:

   b. Revise Line 3.a. of Paragraph B:

a. Rehabilitation of two (2) existing groundwater monitoring wells located on the Owner's existing desalination plant property.

F. Specification Section 01 11 00:

a. Replace Paragraph 1.1.B.3.a. with the following:
Rehabilitation of two (2) existing groundwater monitoring wells located on the Owner's existing desalination plant property. Refer to Specification 33 01 10.91.

G. Specification Section 01 20 00:

a. Replace Bid Item No. 1 – Mobilization/Demobilization, Paragraph D, Part 20, with the following:

20. Pressure testing of existing piping, as shown in the Plans and per the Specifications, including documentation of test pressure and results and submittal of documentation to Owner.

b. Add Part 21 to Bid Item No. 1 – Mobilization/Demobilization, Paragraph D, to include the following:

21. All other incidental work as specified in Division 01 of these Specifications, Project Supplementary Conditions, District Standard Specifications, referenced Caltrans standard specifications, permit requirements, and as necessary to complete Mobilization/Demobilization in accordance with the Contract Documents.

c. Replace Bid Item No. 6, in its entirety, with the following:

Bid Item No. 6 – Intake Well Access and Pad Grading

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Intake Well Access and Pad Grading.

D. Scope of bid item: Work for Intake Well Access and Pad Grading includes, but is not limited to, the following.

1. Rough and finish grading of as shown in the Plans and in compliance with these Specifications.

2. Furnish and install temporary matting as necessary to allow access to the existing intake well.

3. Control/management of groundwaters, where required.

4. Verification of adjacent utilities and potholing of potential conflicting utilities.

5. Protection of existing utilities.

6. All clearing and grubbing work defined in Specification 31 00 01, Paragraph 1.03.C.3, including disposal of removed objectionable material.

7. All other incidental work necessary to complete Intake Well Access and Pad Grading in accordance with the Contract Documents.

H. Specification Section 33 01 10.91:

a. Revise the first sentence of Paragraph 1.01.A as follows:

*"…and the **two** existing monitoring wells as shown in the Plans…"*

b. Add Paragraph 1.02.B.1.a.3), to include the following:

3) Contractor shall test all water pumped to discharge well for the following water quality requirements prior to pumping and disposal into discharge well:

a) TDS: less than 48,000 mg/L:

(1) TDS may be calculated from measured EC, compensated to a reference temperature of 25 degrees Celsius, and using a conversion factor "k" of 0.70. Refer to the Well Technical Specification.

b) pH: Measured pH values shall be within 6.5 – 8.3.

c) Turbidity: 10 NTU, or less.

c. Add Paragraph 1.02.B.2.d., to include the following:

d. Alternative basin geometry may be proposed in writing and implemented following approval of the Owner.

d. Add Paragraph 1.02.B.4., to include the following:

4. Alternative water disposal methodology may be proposed in writing and implemented following approval of the Owner.

e. Well Technical Specifications, replaced in its entirety, see attached Exhibit B.

I. All revised project manual documents are included in the attached **Exhibit B**.

PART 3 - CHANGES TO DRAWINGS (EXHIBIT C)

A. Sheet G-2.0: Remove "Engineer's Private Notice to Contractor". See Exhibit C.
B. Sheet C-1.0: Revise Detail Note 1 of Photo Detail 1: Intake Wellhead. See Exhibit C.
C. Sheet C-3.0:
   a. Revise alignment of Bid Alternate 1 and electrical work so that all improvements are installed within the existing pavement. See Exhibit C.
   b. Revise General Note 5. See Exhibit C.
D. Sheet C-4.1:
   a. Section View A: Replace in its entirety, see Exhibit C.
   b. Injection Well Site Plan: Replace in its entirety, see Exhibit C.
   c. Section View B: Remove Reference Note 53, see Exhibit C.
   d. Intake Well Site Plan: Replace in its entirety, see Exhibit C.
E. Sheet E-2.0: Replace in its entirety, see Exhibit C.
F. Sheet E-3.0: Replace in its entirety, see Exhibit C.

PART 4 – QUESTIONS RECEIVED

Q1 *What is the Engineer's estimate?*

A1 The Engineer's Estimate for the base bid is approximately $800,000.

Q2 *Which Bid Item should the pressure testing of the existing pipe be included in?*

A2 The Contractor shall include all costs associated with the pressure testing of the existing pipe, as specified in the Contract Documents, in Bid Item #1 – Mobilization/ Demobilization.

Q3 *What is the City of Marina Encroachment Permit Fee?*

A3 Encroachment permit fees are estimated to be approximately $2,135; this is based on published City of Marina fees. Final fees will be determined by the City of Marina during the permit application review. Contractor is responsible for all costs associated for procurement of the encroachment permit, and these costs shall be accounted for in Bid Item #1 – Mobilization/Demobilization.

Q4 *How many days advanced notice is required to perform beach work?*

A4 Minimum 7 calendar days advance notice is required prior to performing any and all work on the State beach property.

Q5 *Are there any photos available of the existing desalination facility?*

A4 The District will compile available photographs and post a link to them on the official bid web page.

END OF DOCUMENT

EXHIBIT A

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
CIP GW-2404GN					
1	Mobilization / Demobilization	1	LS		
2	Construction Survey	1	LS		
3	Erosion, Sediment, and Water Pollution Control	1	LS		
4	Traffic Control	1	LS		
5	Sheeting, Shoring, and Bracing	1	LS		
6	Intake Well Access and Pad Grading	1	LS		
7	Intake Well Pump, Vault, and Piping	1	LS		
8	Site Electrical Improvements	1	LS		
9	Connection to Existing Piping	2	EA		
10	6" HDPE Intake Piping	200	LF		
11	8" PVC Discharge Piping	150	LF		
12	Desalination Plant Yard Piping	1	LS		
13	Discharge Wellhead Piping	1	LS		
Total of All Lump Sum Bid Items					$
Total of All Unit Price Bid Items					$
Total Bid Price					$

BID ALTERNATIVES					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Bid Unit Price**	**Bid Price**
ALT 1	Remove and Replace 12" Intake Well Pipe	450	LF		
ALT 2	Remove and Replace 8" Brine Discharge Pipe	225	LF		
ALT 3	Well Rehabilitation	1	LS		

ALW = Allowance, CF = Cubic Foot, CY = Cubic Yard, DY = Day, EA = Each, HR = Hour, LF = Linear Foot, LS = Lump Sum, SF = Square Foot, SY = Square Yard

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Lump Sum and Unit Price Bids = Total Bid Price $ _____

EXHIBIT B

Bids to be opened at 2:00 P.M.
on December 23, 2025
at Marina Coast Water District
920 2nd Avenue
Marina, California 93933

SPECIFICATIONS

MARINA COAST WATER DISTRICT

RESERVATION ROAD DESALINATION PLANT RENOVATION PROJECT
CIP GW-2404GN

DISTRICT BOARD

Gail Morton, President

Jan Shriner, Vice President

Thomas P. Moore, Ph.D., Director

Brad Imamura, Director

Stacey Smith, Director

APPROVED BY:

_____

Jack Gao, PMP, Senior Project Manager, Marina Coast Water District

PREPARED BY:

Wallace Group
San Luis Obispo, California

November 20, 2025

MARINA COAST WATER DISTRICT
MARINA, CA
CIP #GW-2404GN
RESERVATION ROAD DESALINATION PLANT RENOVATION PROJECT

INVITATION TO BIDDERS

Sealed Bids for the construction of the **RESERVATION ROAD DESALINATION PLANT RENOVATION PROJECT** will be received by the Marina Coast Water District (herein after referred to as MCWD), at **920 Second Avenue, Marina, CA 93933,** until **2:00PM** local time on **Tuesday, December 23, 2025**, at which time the Bids received will be publicly opened and read. The Project generally consists of the following work, with a specific description of each Base Bid Item and Alternate Bid Item located in Section 01 20 00, Price and Payment Procedures, of the Technical Specifications:

CIP GW-2404GN:

1. Installation of Replacement Intake Well Pump, Piping, and Vault:
    a. Intake well pump shall be furnished by the District and installed in existing Intake Well by Contractor.
    b. Furnish and install replacement intake well vault, including all necessary earthwork and pre-cast vault base.
    c. Furnish and install replacement Schedule 80 PVC well discharge piping, including all fittings and appurtenances, as shown in the Plans and in compliance with the District Standard Specifications and these Technical Specifications.
2. Pipe Inspection and Testing:
    a. Inspection and pressure testing of existing intake supply and brine discharge piping.
3. Replacement Intake Well and Brine Discharge Piping:
    a. Furnish and install approximately 200 LF of 6” DR 13.5 HDPE pipe from the intake well piping to the connection with the existing 12” C900 PVC supply line, as shown in the Plans.
    b. Installation of approximately 15 LF of 6” Schedule 80 PVC at the existing Desalination Plant building.
    c. Installation of approximately 150 LF of 8” Schedule 80 PVC pipe from the existing brine discharge line to the existing discharge well, including all fittings, valves, appurtenances, and wellhead connection, as well as the location and condition assessment of existing brine discharge pipeline.
4. Replacement Electrical Systems:
    a. Removal of existing switchgear and installation of Owner-furnished replacement switchgear, including coordination with Owner for delivery of replacement switchgear to the Project Site.
    b. All conduit, condulets, pull boxes, cabling, pull wire, and associated appurtenances required to connect replacement intake well pump to replacement switchgear as shown in the Plans.
    c. All conduit, condulets, pull boxes, cabling, pull wire, and associated appurtenances as shown in the Plans, for the intake and discharge well level transducers, flow meter, pressure transducers, and pressure switch.
    d. Furnish and install level transducers in the rehabilitated intake and injection wells, as shown in the Plans.

CIP GW-2404GN BID ALTERNATIVES:

1. Full Replacement of Intake Supply Line:
    a. Abandon existing 12" C900 PVC intake well supply line and replace with 12" DR 13.5 HDPE water main in the alternative alignment shown in the Plans. Alternative alignment results in the installation of approximately 450 LF of 12" DR 13.5 HDPE pipe. This includes the utility location and potholing at all crossings.
2. Full Replacement of Brine Discharge Line:
    a. Remove and replace existing 8" brine discharge line with 8" Schedule 80 PVC pipe in the alternative alignment shown in the Plans. Alternative alignment results in the installation of approximately 225 LF of 8" Schedule 80 PVC pipe. This includes the utility location and potholing at all crossings.
3. Well Rehabilitation:
    a. Rehabilitation of two (2) existing groundwater monitoring wells located on the Owner's existing desalination plant property.
    b. Intake Well Rehabilitation in compliance with the Well Rehabilitation Plan incorporated into these Contract Documents, including the construction and maintenance of a temporary, unpaved access road to the existing intake well located on Marina State Beach property.
    c. Discharge Well Rehabilitation in compliance with the Well Rehabilitation Plan incorporated into these Contract Documents.

Bids will be received for a single prime Contract. Bids shall be on a lump sum and unit price basis, with additive alternate bid items as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is:

Marina Coast Water District – Engineering Office
920 Second Avenue, Suite A
Marina, CA 93933

Point of Contact:

Jack Gao
(831) 883 - 5962
jgao@mcwd.org

Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Thursdays between the hours of 8:00 a.m. to 5:00 p.m. and may obtain copies of the Bidding Documents from the Issuing Office online at www.mcwd.org.

Hard copies of the Bidding Documents are not available for purchase; the Bidding Documents are only available as a free download from the Issuing Office website at www.mcwd.org. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

A pre-bid conference, including a site visit, will be held at **10:00am** local time on **Tuesday, December 2, 2025** at the MCWD Engineering Office, **920 Second Avenue, Suite A, Marina, CA 93933**. Attendance at the pre-bid conference is non-mandatory.

Bid security shall be furnished in accordance with the Instructions to Bidders.

The right is reserved, as the interest of MCWD may require, to reject any or all bids, to waive any informality in bids, and to accept or reject any items of the bid. If the Contractor's bid is accepted, the MCWD will execute the Contract as governed by Public Contract Code 22030 through 22045. The award of the contract, if it is to be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed. Such award, if made, will be made within **60** days after the bid opening, unless an extension is agreed to by the lowest responsible bidder.

The bidder and any of his subcontractors must be licensed as a **Class A General Engineering** Contractor with the Contractors State License Board of the State of California Department of Consumer Affairs. Bids will not be considered from contractors not licensed as a **Class A** unless they hold a specialty license for the specific classification(s) to be performed.

To be qualified to bid on, be listed in a bid proposal or engage in the performance of any public work contract subject to Labor Code section 1720, contractors and subcontractors must be registered with the Department of Industrial Relations. Please see http://www.dir.ca.gov/Public-Works/PublicWorks.html for more information. No contract will be entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the project.

Public Works projects exceeding $1,000.00 require the payment of the general prevailing rate of per diem wages, copies of which are on file at the State of California, Department of Consumer Affairs Office. (Labor Code 1770, et seq.).

The MCWD contact person assigned to this project is: **Jack Gao**. All inquiries regarding the project shall be directed to MCWD at (831) 883-5962 (phone), (831) 384-0197 (fax), or jgao@mcwd.org (e-mail). Requests for information will be received in writing until **4:00p.m.** on **Tuesday December 16, 2025**.

Owner:	**Marina Coast Water District**
By:	**Jack Gao**
Title:	**Senior Project Manager**
Date:	**November 20, 2025**

+ + END OF INVITATION TO BIDDERS + +

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued, which is the MCWD Engineering Office, 920 Second Avenue, Suite A, Marina, CA 93933.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit with its Bid (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

A. Evidence of Bidder's authority to do business in the state where the Project is located.

B. Bidder's state or other contractor license number, if applicable.

C. Subcontractor qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors and Others."

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

B. Access to the existing intake well and MCWD facilities located on Marina Dunes State Beach requires coordination with both the Owner and the California Department of Parks and Recreation (State Parks).

C. Contractor shall coordinate with the Agency having jurisdiction (City of Marina and/or State Parks) over the area in which the Work is to be performed.

4.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:

a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.

b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

A. A site visit will be performed during the pre-bid meeting. If Contractor cannot attend the pre-bid meeting, Contractor shall coordinate a separate site visit with the Owner pursuant to Paragraph 4.03.C below.

B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.

D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;

B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;

D. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;

E. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

F. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

G. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;

H. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and

I. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

6.01 A non-mandatory pre-Bid conference will be held at the time and location stated in the invitation or advertisement to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Owner in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received after **December 16, 2025** may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 10% (ten percent) of Bidder's maximum Bid price (determined by adding the base bid and all alternates, if any) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract

Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 12 – SUBCONTRACTORS AND OTHERS

12.01 A Bidder shall be prepared to retain specific Subcontractors or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor or other individual or entity against which Contractor has reasonable objection.

12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner qualifications information for the Subcontractors proposed for the portions of the Work of which the Subcontractor will assume responsibility thereof.

If requested by Owner, such qualifications information shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.04 If the apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors or other individuals or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership's address for receiving notices shall be shown.

13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm's address for receiving notices shall be shown.

13.05 A Bid by an individual shall show the Bidder's name and address for receiving notices.

13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture's address for receiving notices shall be shown.

13.07 All names shall be printed in ink below the signatures.

13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID

14.01 Base Bid with Alternates

A. Bidders shall submit a Bid on a lump sum basis for the total base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.

B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

14.02 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

14.03 *Allowances*

A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

B. If the Owner includes reimbursement allowances, the allowance value will be pre-entered in the Bid Form.

ARTICLE 15 – SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.

15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the

notation "BID ENCLOSED." A mailed Bid shall be addressed to Marina Coast Water District, 920 Second Avenue, Suite A, Marina, CA 93933, ATTN: District Engineer.

15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.

16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.

19.03 Evaluation of Bids

A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors proposed for those portions of the Work for which the identity of Subcontractors must be submitted as provided in the Bidding Documents.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors.

19.06 Bid Protests

A. Any bid protest must be in writing and received by District's District Engineer at 920 Second Avenue, Suite A, Marina, CA 93933 at or before 4:00 p.m. (local time) two (2) working days after bid opening (the "Bid Protest Deadline") and must comply with the following requirements:

B. General. Only a bidder who has actually submitted a bid is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder but must timely pursue its own protest. For purposes of this Section 1.1, a "working day" means a day that District is open for normal business, and excludes weekends and holidays observed by District. Any untimely protest or protest submitted without the requisite bid protest fee will be returned to the protestor without further action.

C. Non-refundable Bid Protest Fee. The protesting bidder must submit the following non-refundable fee via cashier's check made payable to "Marina Coast Water District" to reimburse its costs to administer the bid protest:

1. Five Hundred Dollars ($500), where the protesting bidder's bid is less than $1,000,000;

2. One Thousand Dollars ($1,000), where the protesting bidder's bid is $1,000,000 or more but less than $5,000,000;

3. Two Thousand Dollars ($2,000), where the protesting bidder's bid is $5,000,000 or more.

This applicable fee must be submitted to District no later than the Bid Protest Deadline, unless otherwise specified in the District's bid solicitation documents. Failure to make timely payment shall result in the bid protest being rejected as being incomplete.

D. Protest Contents. The bid protest must state (a) all of the specific grounds for the protest, (b) the specific facts that support each ground, including but not limited to the specific provision(s) of the bid solicitation documents and the specific portion on

the face of the bid being protested that are the basis of the protest, and (c) must provide all supporting documentation. Additional grounds and supporting facts for the bid protest and documentation submitted after the Bid Protest Deadline will not be considered. The protest must include the name, address, email address, and telephone number of the person representing the protesting bidder. The protest must be signed and submitted under penalty of perjury.

E. Copy to Protested Bidder. The protesting bidder must be concurrently transmitted by fax or by email or by personal delivery by or before the Bid Protest Deadline, a copy of the protest and all supporting documentation to the bidder whose bid is being protested ("protested bidder") and to any other bidder who has a lower bid than the protesting bidder.

F. Response to Protest. The protested bidder may submit a written response to the protest, provided the response is received by District at or before 4:00 p.m., within two working days after the Bid Protest Deadline or after actual receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Documentation submitted after the Response Deadline will not be considered. The response must include the name, address, email address, and telephone number of the person representing the protested bidder. The response must be signed and submitted under penalty of perjury.

G. Copy to Protesting Bidder. A copy of the response and all supporting documents must be concurrently transmitted by fax or by email or by personal delivery, by or before the Response Deadline, to the protesting bidder and any other bidder who has a lower bid than the protesting bidder.

H. Exclusive Remedy. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of bid protest. A bidder's failure to comply with these procedures will constitute a waiver of any right to further pursue a bid protest, including filing a claim pursuant to the California Government Code or initiation of any other legal proceedings.

I. Right to Award. The District Engineer will review the bid protest for completion within a reasonable amount of time prior to the bid award. The District has the authority to issue a final determination on all bid protests. Possible actions by the District on any bid protest include (a) upholding the protest and awarding the bid to the next lowest responsible bidder, (b) rejecting the protest and awarding to the lowest responsible bidder, or (c) rejecting all bids. Nothing in this section shall be construed as a waiver of the District's right to reject all bids.

ARTICLE 20 – BONDS AND INSURANCE

20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver

the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – SALES AND USE TAXES (NOT USED)

ARTICLE 23 – RETAINAGE

23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Supplemental Conditions.

ARTICLE 24 – PREVAILING WAGE

24.01 Prevailing wage requirements are set forth in the Supplementary Conditions.

END OF DOCUMENT

BID FORM

CIP #GW-2404GN
RESERVATION ROAD DESALINATION PLANT RENOVATION PROJECT

TABLE OF CONTENTS

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Marina Coast Water District

920 Second Avenue, Suite A

Marina, CA 93933

ATTN: District Engineer

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

E. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

I. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
CIP GW-2404GN					
1	Mobilization / Demobilization	1	LS		
2	Construction Survey	1	LS		
3	Erosion, Sediment, and Water Pollution Control	1	LS		
4	Traffic Control	1	LS		
5	Sheeting, Shoring, and Bracing	1	LS		
6	Intake Well Access and Pad Grading	1	LS		
7	Intake Well Pump, Vault, and Piping	1	LS		
8	Site Electrical Improvements	1	LS		
9	Connection to Existing Piping	2	EA		
10	6" HDPE Intake Piping	200	LF		
11	8" PVC Discharge Piping	150	LF		
12	Desalination Plant Yard Piping	1	LS		
13	Discharge Wellhead Piping	1	LS		
Total of All Lump Sum Bid Items					$
Total of All Unit Price Bid Items					$
Total Bid Price					$

BID ALTERNATIVES					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Bid Unit Price**	**Bid Price**
ALT 1	Remove and Replace 12" Intake Well Pipe	450	LF		
ALT 2	Remove and Replace 8" Brine Discharge Pipe	225	LF		
ALT 3	Well Rehabilitation	1	LS		

ALW = Allowance, CF = Cubic Foot, CY = Cubic Yard, DY = Day, EA = Each, HR = Hour, LF = Linear Foot, LS = Lump Sum, SF = Square Foot, SY = Square Yard

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total of Lump Sum and Unit Price Bids = Total Bid Price $ _____

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The items listed in Document 00 43 93, Bid Submittal checklist, are submitted with and made a condition of this Bid.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

9.01 See next page for submittal form.

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

_____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Bidder's Contractor License No.: _____

(where applicable)

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name, and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:
Marina Coast Water District
920 Second Avenue, Suite A
Marina, CA 93933

BID

Bid Due Date: *Tuesday, December 23, 2025*

Description: The Work includes rehabilitation of existing desalination plant facilities within the Marina Coast Water District (MCWD) service boundary, in the specific locations shown in the Plans. This Work will include coordination with MCWD, the City of Marina, and the California Department of Parks and Recreation. The Project generally consists of the following work, with a specific description of each Base Bid Item and Alternate Bid Item located in Section 01 20 00, Price and Payment Procedures, of the Technical Specifications:

A. Scope of Work:

1. *Installation of Replacement Intake Well Pump, Piping, and Vault:*
    a. *Intake well pump shall be furnished by the District and installed in existing Intake Well by Contractor.*
    b. *Furnish and install replacement intake well vault, including all necessary earthwork and pre-cast vault base.*
    c. *Furnish and install replacement Schedule 80 PVC well discharge piping, including all fittings and appurtenances, as shown in the Plans and in compliance with the District Standard Specifications and these Technical Specifications.*
2. *Pipe Inspection and Testing:*
    a. *Inspection and pressure testing of existing intake supply and brine discharge piping.*
3. *Replacement Intake Well and Brine Discharge Piping:*
    a. *Furnish and install approximately 200 LF of 6" DR 13.5 HDPE pipe from the intake well piping to the connection with the existing 12" C900 PVC supply line, as shown in the Plans.*
    b. *Installation of approximately 15 LF of 6" Schedule 80 PVC at the existing Desalination Plant building.*
    c. *Installation of approximately 150 LF of 8" Schedule 80 PVC pipe from the existing brine discharge line to the existing discharge well, including all fittings, valves, appurtenances, and wellhead connection, as well as the location and condition assessment of existing brine discharge pipeline.*

4. *Replacement Electrical Systems:*
    a. *Removal of existing switchgear and installation of Owner-furnished replacement switchgear, including coordination with Owner for delivery of replacement switchgear to the Project Site.*
    b. *All conduit, condulets, pull boxes, cabling, pull wire, and associated appurtenances required to connect replacement intake well pump to replacement switchgear as shown in the Plans.*
    c. *All conduit, condulets, pull boxes, cabling, pull wire, and associated appurtenances as shown in the Plans, for the intake and discharge well level transducers, flow meter, pressure transducers, and pressure switch.*
    d. *Furnish and install level transducers in the rehabilitated intake and injection wells, as shown in the Plans.*

B. *Bid Alternates : As identified in the Bid Schedule, bid alternate items include:*
1. *Full Replacement of Intake Supply Line:*
    a. *Abandon existing 12" C900 PVC intake well supply line and replace with 12" DR 13.5 HDPE water main in the alternative alignment shown in the Plans. Alternative alignment results in the installation of approximately 450 LF of 12" DR 13.5 HDPE pipe. This includes the utility location and potholing at all crossings.*
2. *Full Replacement of Brine Discharge Line:*
    a. *Remove and replace existing 8" brine discharge line with 8" Schedule 80 PVC pipe in the alternative alignment shown in the Plans. Alternative alignment results in the installation of approximately 225 LF of 8" Schedule 80 PVC pipe. This includes the utility location and potholing at all crossings.*
3. *Well Rehabilitation:*
    a. *Rehabilitation of two (2) existing groundwater monitoring wells located on the Owner's existing desalination plant property.*
    b. *Intake Well Rehabilitation in compliance with the Well Rehabilitation Plan incorporated into these Contract Documents, including the construction and maintenance of a temporary, unpaved access road to the existing intake well located on Marina State Beach property.*
    c. *Discharge Well Rehabilitation in compliance with the Well Rehabilitation Plan incorporated into these Contract Documents.*

BOND

Bond Number:
Date:
Penal sum _____ $ _____
(10% (ten percent) of the Total Bid Value, in Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
Title	Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK INCLUDED

A. The Work includes construction of replacement raw water supply and brine discharge facilities, as well as replacement electrical equipment for the Marina Coast Water District (MCWD, District, or Owner) Reservation Road Desalination Plant (Plant), located at 11 Reservation Road, Marina, CA 93933. This work will require coordination with MCWD, the California Department of Parks and Recreation (State Parks), and the City of Marina (City). A summary of the Work is as follows:

1. Installation of Replacement Intake Well Pump, Piping, and Vault:
    a. Intake well pump shall be furnished by the District and installed in existing Intake Well by Contractor.
    b. Furnish and install replacement intake well vault, including all necessary earthwork and pre-cast vault base.
        1) All earthwork shall comply with Specification Section 31 00 00.
    c. Furnish and install replacement Schedule 80 PVC well discharge piping, including all fittings and appurtenances, as shown in the Plans and in compliance with the District Standard Specifications and these Technical Specifications.
2. Pipe Inspection and Testing:
    a. Inspection and pressure testing of existing intake supply and brine discharge piping.
3. Replacement Intake Well and Brine Discharge Piping:
    a. Furnish and install approximately 200 LF of 6” DR 13.5 HDPE pipe from the intake well piping to the connection with the existing 12” C900 PVC supply line, as shown in the Plans.
    b. Installation of approximately 15 LF of 6”AP Schedule 80 PVC at the existing Desalination Plant building.
    c. Installation of approximately 150 LF of 8” Schedule 80 PVC pipe from the existing brine discharge line to the existing discharge well, including all fittings, valves, appurtenances, and wellhead connection, as well as the location and condition assessment of existing brine discharge pipeline.
4. Replacement Electrical Systems:
    a. Removal of existing switchgear and installation of Owner-furnished replacement switchgear, including coordination with Owner for delivery of replacement switchgear to the Project Site.
    b. All conduit, condulets, pull boxes, cabling, pull wire, and associated appurtenances required to connect replacement intake well pump to replacement switchgear as shown in the Plans.
    c. All conduit, condulets, pull boxes, cabling, pull wire, and associated appurtenances as shown in the Plans, for the intake and discharge well level transducers, flow meter, pressure transducers, and pressure switch.

d. Furnish and install level transducers in the rehabilitated intake and injection wells, as shown in the Plans.

B. Bid Alternates: As identified in the Bid Schedule, bid alternate items include:
1. Full Replacement of Intake Supply Line:
a. Abandon existing 12" C900 PVC intake well supply line and replace with 12" DR 13.5 HDPE water main in the alternative alignment shown in the Plans. Alternative alignment results in the installation of approximately 450 LF of 12" DR 13.5 HDPE pipe. This includes the utility location and potholing at all crossings.
2. Full Replacement of Brine Discharge Line:
a. Remove and replace existing 8" brine discharge line with 8" Schedule 80 PVC pipe in the alternative alignment shown in the Plans. Alternative alignment results in the installation of approximately 225 LF of 8" Schedule 80 PVC pipe. This includes the utility location and potholing at all crossings.
3. Well Rehabilitation:
a. Rehabilitation of two (2) existing groundwater monitoring wells located on the Owner's existing desalination plant property. Refer to Specification 33 01 10.91.
b. Intake Well Rehabilitation in compliance with the Well Rehabilitation Plan incorporated into these Contract Documents, including the construction and maintenance of a temporary, unpaved access road to the existing intake well located on Marina State Beach property. Refer to Specification 33 01 10.91.
c. Discharge Well Rehabilitation in compliance with the Well Rehabilitation Plan incorporated into these Contract Documents. Refer to Specification 33 01 10.91.

C. The Work consists of items listed in the Base Bid Schedule. Refer to Section 01 20 00 for further definition.

D. All Work in this Contract shall be subject to the Contract Documents, applicable requirements of encroachment permits from the City of Marina, right-of-entry form State Parks, and environmental permitting requirements.
1. Contractor shall prepare and implement a Traffic Control Plan (TCP) as required by the City of Marina.

E. Project Coordination and Considerations:
1. Cooperate with Marina Coast Water District, State Parks, and the City of Marina staff, contractors, and sub-contractors, and all other agencies requiring such coordination/cooperation throughout the construction of the Work, including coordination of lay down and construction staging areas.
2. Complete all work required by Section 01 57 13 Temporary Erosion and Sediment Control and Section 01 57 23 Temporary Storm Water Pollution Control of these specifications.
3. Furnish, install, and maintain all ESA fencing as shown in the Plans and in compliance with the requirements of Section 01 50 00.

4. Establish a construction schedule and sequence of events in compliance with the provisions of Paragraph 1.9, this Section.
5. Complete all other legal and environmental requirements applicable to the Contractor's operations and construction work for the project.

1.2 SUBMITTALS

A. In accordance with Section 01 33 00 – Submittal Procedures, submit the following:
1. Construction Work Plan. Submit a detailed Construction Work Plan for review and approval by Owner and Engineer. Plan shall be of sufficient detail to adequately describe the elements of Work, timing and sequencing of tasks and subtasks and coordinated with Project Schedule (per Section 01 30 00); in particular, plan shall identify:
   a. Equipment, materials, and procedures for pressure testing and inspection of existing supply and discharge pipes,
   b. Pipeline flushing plan, including management of flush water, in compliance with Section 33 01 10.53,
   c. demolition, removal, and salvage procedures,
   d. management and disposal of well test water and all sediment and debris removed from the wells during rehabilitation efforts,
   e. coordination with all agencies,
   f. temporary erosion control and sediment control BMPs,
   g. staging/laydown areas and coordination thereof,
   h. and all other aspects of the Work.
2. Submit Construction Work Plan at the pre-construction meeting, or within 14 days following Notice to Proceed, whichever occurs first.
   a. Physical Work on the Project site shall not commence until such time this Work Plan is approved (except for pressure testing and disinfection plan which may be submitted a minimum of 14 days prior to such Work).
3. Pressure Testing and Disinfection Plan. Prior to performing any testing on installed water mains, the Contractor shall provide a detailed pressure testing, flushing, and disinfection plan clearly identifying the necessary equipment, materials, and procedures utilized to meet the requirements of District Standards and these Specifications. Refer to Section 33 01 10.53 – Flushing of Water Utility Piping, Section 33 01 10.58 - Disinfecting of Water Utility Piping, and MCWD Standard Specification 15042, Hydrostatic Testing of Pressure Pipelines. Contractor shall provide the Engineer and/or Owner at least 14 days to review and approve the submitted plans prior to the commencement of the work.
4. Well Access Plan. Prior to performing any work on the existing intake well, the Contractor shall provide a detailed Well Access Plan, identifying the necessary equipment, materials, and procedures utilized to access the intake well site. This plan shall include, but is not limited to, the items identified in Paragraph 1.03.A.2 of Specification 31 00 01, Earthwork Special Provisions.
5. Tie-In Plans. For each connection to existing pipelines, Contractor shall provide a detailed Tie-In Plan in accordance with Paragraph 1.9.B.7 herein.
6. Cutover Plan. Contractor shall provide to Owner, for review and approval, a cutover plan outlining the equipment, materials, and procedures followed for replacement of the existing switchgear with the replacement switchgear

furnished by the Owner. Information included in the Cutover Plan shall include, but is not limited to, the following:

a. Scheduled duration for the cutover
b. Coordination efforts between Contractor and PG&E for all de-energizing, energizing, and inspections, and when these events will take place during the cutover.

7. Traffic Control Plans. Submit the Traffic Control Plans at the pre-construction meeting, or within 21 days following receipt of Notice to Proceed, whichever occurs first.

1.3 WORK NOT INCLUDED

A. Except for such auxiliary work as is shown or specified or is necessary as a part of the construction, the following work is NOT included in this Contract.

1. Work shown but marked "NIC" (Not in Contract), or otherwise designated to be performed by others.
2. Procurement of items marked “OFCI” (Owner Furnished, Contractor Installed). Note that this does not relieve the Contractor of the requirements to install any OFCI items, and to perform the work as shown in the Plans and in compliance with these Specifications.

1.4 LOCATION OF PROJECT SITE

A. The Project is composed of existing infrastructure owned by Marina Coast Water District at their existing Reservation Road Desalination Plant, located at 11 Reservation Road, in Monterey County, in the incorporated area east of the City of Marina, as well as their existing intake supply well, which is located within easements granted to the District on property owner and operated by State Parks. Contractor’s attention is directed to the Project and Vicinity Maps provided in the Plans.

1.5 SPECIFICATIONS

A. The Specifications are those bound in the Project Manual and otherwise incorporated by reference. All sections of the Project Manual, including Notice Inviting Bids and Instructions to Bidders, are part of the Contract Documents for this Work. The Project Manual consists of the Notice Inviting Bids, Instructions to Bidders, General Conditions of the Contract for Construction, Supplementary Conditions of the Contract for Construction, including Division 01 through 43 of these Technical Specifications, MCWD Standard Specifications, and Caltrans 2025 Standard Specifications, where referenced.

1.6 SPECIAL PROVISIONS

A. Throughout these technical specifications, Division 01 through Division 43, where conflict exists between the Supplementary Conditions and these Technical Specifications, the requirements of the Supplementary Conditions shall prevail.

1.7 DRAWINGS

A. The Drawings consist of 18 sheets prepared by Wallace Group, dated November 19, 2025.

1.8 INTERRUPTION OF SERVICES

A. Contractor shall identify all planned interruptions of water service and system shutdowns in the Construction Work Plan and in all construction schedules.

B. Timing of any service disruption(s) shall be approved by Owner, and such Work shall be scheduled during dry periods with no rainfall in the forecast for the duration of the Work.

C. Contractor shall provide door tags or similar notices to residents impacted by any interruptions of services. Contractor shall coordinate with MCWD, if necessary, to define the language and contact information provided on the notices.

D. Interruptions to water service, if necessary, shall be limited to no more than 8 hours in duration, and service shall be restored to all affected residents prior to the end of the work day.

1.9 COORDINATION OF THE WORK/SEQUENCING OF WORK

A. Permits:
   1. City of Marina will require an encroachment permit for the rehabilitation of the desalination plant pipelines and conduits within the paved City right of way (Reservation Road). Contractor shall be responsible for securing this permit, including any permit fees, at no additional cost to Owner.
   2. Owner is obtaining right-of-entry from State Parks to provide access to the existing facilities located on the Marina State Beach property.

B. General Scheduling Requirements
   1. Contractor shall, as the preliminary work item, perform pressure testing on the existing intake supply and brine discharge piping. Contractor shall document the test results and submit to the Owner and Engineer for review and approval.
      a. If one of both portions of the existing piping fail the pressure test and leaking is detected, the Owner may direct to execute one of both alternative bid items summarized in Paragraph 1.1.B above.
      b. Contractor shall submit the pressure testing plan outlined in Paragraph 1.2.A for review and approval by Owner prior to commencement of pressure testing work.
   2. Well Rehabilitation: Contractor shall follow the task order identified in the Well Rehabilitation Plan in Specification Section 33 01 10.91. Any Contractor proposed variations to this task order shall be submitted to the Owner for review and approval.
   3. Discharge Well Renovations: All rehabilitation tasks for the existing discharge well, as identified in the Well Rehabilitation Plan in Specification Section 33 01 10.91, shall be performed prior to installation of replacement discharge wellhead piping.

4. Intake Well Renovations: All rehabilitation tasks for the existing intake well, as identified in the Well Rehabilitation Plan in Specification Section 33 01 10.91, shall be performed prior to installation of replacement intake well, vault, and piping.
5. Prior to installation of replacement pipelines and electrical and communication conduits, Contractor shall pothole all utilities and submit the resulting Potholing Report to Owner and Engineer, in compliance with Section 01 35 00, Special Project Procedures.
6. Contractor shall coordinate with MCWD and State Parks at least 7 days prior to accessing the existing intake well and MCWD facilities located on State Parks property.
7. For each connection to existing process water pipes, provide detailed tie-in and cut-over plans as required, detailing timing, equipment and requirements to tie into the existing MCWD water piping.
    a. Submit tie-in plan and method statement, a minimum of 14 days prior to commencing work.
    b. Contractor shall coordinate tie-in with Owner-designated representative a minimum of 14 days in advance of work.
8. Include and address the requirements of subsection 1.1.D. above in Contractor's Work Plan for review and approval by MCWD and Engineer.

C. At least 14 days prior to the commencement of Work, Contractor shall verify and confirm, to the Owner's Representative in writing, the existing grades, elevations, and conditions of the Project Site. Any discrepancies between existing conditions and the contract documents must be brought to the Owner's attention during that time frame.

D. At least 14 days prior to the commencement of Work, Contractor shall perform potholing of all underground utilities within the Project Site. Any discrepancies between existing conditions and the contract documents must be brought to the Owner's attention during that time frame. Refer to Section 01 35 00 for additional potholing requirements.

E. For the duration of the intake well and discharge well rehabilitation efforts, Contractor shall securely install a temporary wellhead cover on both the intake and discharge wells at the end of each working day. Temporary wellhead cover shall be fastened to the wellhead by anchor bolts, as shown in the Plans.

F. Prepare schedules as set forth in Section 01 30 00, Administrative Requirements.

1.10 HOURS OF WORK

A. Perform Work of this Contract on normal workdays and within normal work hours; 7:00 am to 5:00 pm Monday through Friday. After hours work and work on Saturdays, Sundays, and Owner holidays, may be permitted if approval is received from the Owner and from State Parks and/or the City of Marina at least 3 working days in advance, at no additional cost to Owner. When Contractor schedules Work on non-working days or after-hours work, the Contractor shall be responsible for the overtime costs incurred by the Owner for inspections and other related activities, unless such schedule was requested by Owner or Engineer.

B. Continuously keep existing drainage facilities, walks, and paved areas clean and free of mud and dirt, obstacles, etc., and protect against damage.

C. Closeout Timetable. Coordinate with Owner to establish dates for equipment, testing, acceptance periods (as required under the Contract). Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the Owner and their authorized representatives sufficient time to schedule attendance at such activities.

D. Final Submittals: Prior to requesting final payment, obtain and submit the following items to the Engineer for transmittal to the Owner:
   1. Written guarantees, where required.
   2. Operating manuals and instructions, where required.
   3. Completed record drawings per Section 01 70 00.
   4. Certificates of inspection and acceptance by local governing agencies having jurisdiction, including but not limited to, MCWD, State Parks and the City of Marina.
   5. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

1.11 TRAFFIC CONTROL

A. Prepare traffic control plans to address traffic control, work along, and ingress/egress to and from each of the project locations as described in Paragraph 1.4.A in accordance with the latest edition of the CA MUTCD, for approval by the City of Marina. Coordinate traffic control requirements with the Designated Representative, City of Marina.

B. Traffic control shall be permitted Monday through Friday, from 7am to 5pm. Contractor shall file with the County a separate Traffic Control Plan for any weekend or night work, if approved by the Owner.

C. One full lane of traffic, regulated by flaggers, shall be left open for traffic at all times.

D. Portable changeable message signs (PCMS) are not required for this Project.

1.12 SITE ACCESS

A. All Work, except for all work associated with the Intake Well and Intake Well Piping is in either the City right-of-way, permanent easements owned by MCWD, temporary construction easements, or right-of-entries granted from State Parks, and access shall be subject to requirements specified in these technical specifications.

B. Coordination with State Parks is required for the work associated with the existing intake well. All requests for access to State Park property shall be made at least 7 days in advance of the planned work.

1.13 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. Refer to Article 5 of the EJCDC General Conditions and other Division 01 Sections for Contractor responsibilities. Where conflicts between the General Conditions and these Technical Specifications occur, the provisions of these Technical Specifications shall prevail.

B. Damage to existing improvements caused by Contractor's operations, either on-site or on adjacent sites, shall be repaired to their original condition as approved by the County Engineer and the owner of the damaged property. Cost of such repair shall be borne entirely by Contractor.

C. Drawings indicate existing structures, drainage lines, water, gas, electrical and other similar items and utilities that are known to the Owner. Locate known existing structures and utilities before proceeding with construction. Maintain them in service, except as otherwise specified. Provide protection and repair damage to them caused by the Work at no increase in Contract price.

D. A geotechnical investigation was performed for the proposed work. This report will be provided to the Contractor for reference. This report may be used for the following purposes:
   1. In regard to the soils and road section conditions to be encountered in and around the project area, the data contained in the report may be used for information only as to the soil and pavement section conditions encountered at the location/address shown and on the date stated. The Contractor is solely responsible for satisfying itself as to the kind and type of soil, and characteristics of road sections to be encountered in the alignment of the work, and any water or other subsurface conditions which might affect the construction of the project.
   2. Only where specifically called out in these specifications, the report may be used for design parameters in the preparation of shop drawings for the Project.
   3. Conclusions and recommendations contained in the report, which are not specifically referenced in these specifications, are not a part of the Contract.

END OF SECTION

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 This Section describes the methods of measurement and payment for the specific bid items. All other provisions of the Contract Documents which relate to measurement and payment are applicable, except that where conflicts occur between this section and other provisions of the technical specifications or reference specifications, this measurement and payment section shall prevail.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 GENERAL

A. All work shown, described, or otherwise required by the Contract Documents, shall be included within the given bid items.

B. Payment for all bid items shall include full compensation for all equipment, materials, labor, tools, trucking, and all other incidental work necessary to construct complete and operational systems which conform to the Contract Documents.

3.02 MEASUREMENT AND PAYMENT FOR BID ITEMS

A. All lengths shall be measured in a horizontal plane (plan view dimensions), unless otherwise specified. All areas measured shall be based on the specified measurement definition included in each bid item description.

B. All work shown, described, or otherwise required by the Contract Documents, shall be included within the given bid items.

C. Basis for the submitted bid shall be on the quantities shown for the items on the Bid Sheet.

D. Unit definitions of Measurement and Payment

1. “Lump Sum”, or “LS”, shall mean a single Lump Sum Payment for the identified bid item. Partial payments may be made, based on the Engineer’s estimate of the percent completion of the specified item. Provide schedule of values for lump sum bid items in accordance with Para 3.03 of this Section.

2. "Each", or "EA", shall mean the actual number of identified bid items provided. Payment for the identified bid item will be based on providing each item, complete and in place in accordance with the contract documents.

3. Measurable units of quantity expressed in "Linear Feet" or "LF"; "Cubic Yard or CY"; "Ton"; "SF" or "SY" shall mean the number of indicated measurable quantities of the bid item. Payment for the identified bid item will be based on actual and measured quantities of the bid item complete and in place in accordance with the contract documents.

4. For extra work, and quantity changes for unit price work, refer to the General Conditions.

E. Final Pay Quantities.

1. The quantity shown on the bid sheet for a Final Pay Quantity shall be the final pay quantity used for the purpose of payments, unless the dimensions of any portion of the item are modified by the Engineer, or the item or any portion of the item is eliminated.

2. If the dimensions of any portion of a Final Pay Quantity bid item are changed, and the changes result in an increase or decrease in the quantity of the item, the final pay quantity will be revised by the change in quantity.

3. If a portion of a Final Pay Quantity item, or the item is eliminated, the final pay quantity will be adjusted by the quantity eliminated.

4. The estimated quantity shown on the bid sheet for a Final Pay Quantity bid item shall be considered as an estimate only and no guarantee is made that a quantity computed based on the details and the Plans, will equal the estimated quantity shown on the bid sheet. No allowance is made in the event that a computed quantity does not equal the estimate quantity.

5. In the case of a discrepancy between a quantity shown on the plans, and an estimated quantity shown on the bid sheet for a Final Pay Quantity item, payment will be based on the quantity shown on the bid sheet.

3.03 SCHEDULE OF VALUES

A. The Contractor shall submit to the Owner for acceptance, in the form directed by or acceptable to the Owner, a complete schedule of the values for each item in the bid schedule, breaking down the various portions of the Work, including quantities and unit prices, aggregating the Contract Price (except in cases and to the extent that accepted unit prices form the basis for payment).

B. The schedule shall subdivide the items of Work into component parts in sufficient detail to serve as the basis for progress payments during construction and to coordinate with the progress schedule required for this Work, and shall be supported by such data to substantiate its correctness as the Owner may require.

C. Each item in the schedule of values shall include its proper share of overhead and profit. An unbalanced breakdown providing for overpayment to the Contractor on items of Work which would be performed first will not be approved.

D. The schedule of values, when accepted by the Owner, shall be used only as a basis for the Contractor's applications for payment and not for additions to, or deductions from, the Contract Price. The initial submittal for the schedule of values shall be provided at the preconstruction conference or within 10 days following the Notice to Proceed, whichever comes sooner.

BASE BID

Bid Item No. 1 – Mobilization/Demobilization

A. Units: Lump Sum

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Mobilization/Demobilization.

1. Partial payment for Mobilization/Demobilization work will not be made until listed items in the schedule of values have been completed to the satisfaction of the Owner.
2. Mobilization/Demobilization shall not be more than 5% of the overall contract price.
3. Contractor shall be compensated no more than 70% of total bid value for Mobilization/Demobilization for mobilization; and 30% for mobilization/demobilization for demobilization following completion of Work.

D. Scope of bid item: Mobilization/Demobilization includes, but is not limited to the following:

1. Mobilization/demobilization.
2. Obtaining all required bonds, insurance, and permits.
3. Compliance with State Parks encroachment permit requirements, City of Marina encroachment permit requirements, and other agency permit requirements for the Work.
4. Posting all Cal-OSHA required notices and establishment of safety programs and injury and illness prevention plan (IIPP).
5. Maintaining project schedule.
6. Preparation of work plans required to complete all work.
7. All Contractor's facilities and equipment required for project operations.
8. Arranging for and erection of Contractor's work areas and storage yards and coordinating such work areas and storage yards with Marina Coast Water District staff, State Parks, the City of Marina, and other agencies as necessary.
9. Coordination with utility companies during construction activities adjacent to utility agency facilities.

10. Potholing utilities and providing pothole reports.
11. Coordinating with Marina Coast Water District, State Parks, the City of Marina, and other agencies during construction.
12. Providing and installing temporary communication facilities.
13. Providing and installing construction water and on-site sanitary facilities.
14. Providing temporary wellhead covers.
15. Designation of the Contractor's superintendent(s) who will be present at the job site full time.
16. Documenting construction progress, including pre- and post-construction photographs and videos, and progress photographs.
17. Preparing and submitting field record drawings, close-out submittals, including all locations of potholed utilities.
18. Removing equipment, personnel, temporary facilities, and other construction resources at job completion.
19. Site cleanup.
20. Pressure testing of existing piping, as shown in the Plans and per the Specifications, including documentation of test pressure and results and submittal of documentation to Owner.
21. All other incidental work as specified in Division 01 of these Specifications, Project Supplementary Conditions, District Standard Specifications, referenced Caltrans standard specifications, permit requirements, and as necessary to complete Mobilization/Demobilization in accordance with the Contract Documents.

Bid Item No. 2 - Construction Survey

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer’s determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Construction Survey.

D. Scope of bid item: Construction Survey includes, but is not limited to the following:
   1. Establishing horizontal control based on survey information provided in the Plans.
   2. All survey Work related to existing and proposed water main works, as described in Section 02 21 00 – Surveys and the Drawings.
   3. Re-setting monuments that may be damaged or need to be removed as part of the Work.
   4. Replacement of property corner markers, including proper recordation.

5. All other incidental work necessary to complete Construction Survey in accordance with the Contract Documents.

Bid Item No. 3 – Erosion, Sediment, and Water Pollution Control

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Erosion, Sediment, and Water Pollution Control.

D. Scope of bid item: Work for Erosion, Sediment, and Water Pollution Control includes, but is not limited to the following:

1. Proper management of storm water, dust, sediment, and erosion with best practices, where required, including pr. Refer to Section 01 57 13 – Temporary Erosion and Sediment Control and 01 57 23 Temporary Storm Water Pollution Control.
2. Complying with all reporting, monitoring, inspection and permitting requirements for protection of water quality.
3. All labor, equipment and materials to perform Erosion, Sediment, and Water Pollution Control activities.
4. All other incidental work necessary to complete Erosion, Sediment, and Water Pollution Control in accordance with the Contract Documents.

Bid Item No. 4 – Traffic Control

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Traffic Control.

D. Scope of bid item: Work for Traffic Control includes, but is not limited to the following:

1. Traffic control in accordance with City of Marina requirements, and as required for execution of the Work.
2. Required plans and submittals.
3. All other incidental work necessary to complete Traffic Control in accordance with the Contract Documents.

Bid Item No. 5 - Sheeting, Shoring and Bracing

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Sheeting, Shoring and Bracing.

D. Scope of bid item: Work for Sheeting, Shoring and Bracing includes, but is not limited to the following:

1. Required fees, permits, plans, and submittals, prepared by California registered civil or structural engineer.
2. Compliance with all requirements for Cal-OSHA construction safety in the excavation of trenches and pits, and other technical requirements in Division 31 specifications, and trench details on the plans.
3. Trench excavation plans, as required.
4. Providing adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which shall conform to the applicable construction safety orders.
5. All other incidental work necessary to complete Sheeting, Shoring and Bracing in accordance with the Contract Documents.

Bid Item No. 6 – Intake Well Access and Pad Grading

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Intake Well Access and Pad Grading.

D. Scope of bid item: Work for Intake Well Access and Pad Grading includes, but is not limited to, the following.

1. Rough and finish grading of as shown in the Plans and in compliance with these Specifications.
2. Furnish and install temporary matting as necessary to allow access to the existing intake well.
3. Control/management of groundwaters, where required.
4. Verification of adjacent utilities and potholing of potential conflicting utilities.
5. Protection of existing utilities.
6. All clearing and grubbing work defined in Specification 31 00 01, Paragraph 1.03.C.3, including disposal of removed objectionable material.
7. All other incidental work necessary to complete Intake Well Access and Pad Grading in accordance with the Contract Documents.

Bid Item No. 7 – Intake Well Pump, Vault, and Piping

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Intake Well Pump, Vault, and Piping.

D. Scope of bid item: Work for Intake Well Pump, Vault, and Piping includes, but is not limited to, the following.

1. Complete installation of OFCI stainless steel well pump, including the procurement and installation of pump discharge elbow, piping, valves, fittings, and appurtenances.
2. Provide fittings and fasteners required to make connection to 6" HDPE intake well piping.
3. Furnish and install precast polymer concrete vault structure, including base, riser, lid, access hatch, and penetration seals.
4. All earthwork required for placement of vault and piping, including all sub-grade preparation, excavation, scarification, backfill, and compaction, including removal, hauling, and disposal of all debris and deleterious materials.
5. Furnish and install pressure-treated lumber barricade, including all fasteners and Class B concrete footings.
6. Patching and rehabilitation of concrete wellhead structure and anchors.
7. All other incidental work necessary to complete Intake Well Rehabilitation in accordance with the Contract Documents.

Bid Item No. 8 – Site Electrical Renovations

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Site Electrical Renovations.

D. Scope of bid item: Work for Site Electrical Renovations includes, but is not limited to, the following.

1. Furnish and install all above-ground and underground conduit, including all fittings and conduit supports/hangers and pull rope, where shown on the Drawings.
2. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required, including providing and placing cement slurry backfill.
3. Install owner-furnished replacement switchgear.
4. Furnish and supply all paneling, cabinets, disconnects, and electrical equipment associated with the Owner-furnished replacement switchgear, as shown in the Plans.
5. Furnish, install, and land all cabling and conductors, including nylon string for pulling/fishing conductors through installed conduit runs as shown in the Plans.

6. Furnish and install all flow meter(s), pressure and level transducers, and pressure switch(es) in the quantity and location as shown in the Plans.

7. Provide adequate grounding conductors, rods, connectors, and other infrastructure to ground completely, and in compliance with local, state, and national codes, all electrical components.

8. Removal, hauling, and disposal of existing switchgear and any and all electrical waste resulting from work described herein. Dispose of materials in compliance with local ordinances and these Specifications.

9. All other incidental work necessary to complete Site Electrical Renovations in accordance with the Contract Documents.

Bid Item No. 9 – Connection to Existing Piping

A. Units: Each (EA)

B. Measurement: Each individual completed connection to existing water piping and facilities at the locations shown in the Plans.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Connection to Existing Piping.

D. Scope of bid item: Work for Connection to Existing Piping includes, but is not limited to the following:

1. Tie-in to existing water piping as shown on the Plans.

2. Verification of adjacent utilities.

3. Pipe, adapters, fittings, thrust blocks, all joints and restraints, and connections to existing pipes.

4. Furnish and install valves in accordance with the Plans and Specifications.

5. Removal of existing piping, temporary bulkheads, fittings, blow offs, thrust blocks and blind flanges, as required.

6. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.

7. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.

8. Removal and disposal of any vegetation within the point of connection, as shown in the Plans, including all labor, equipment, materials, and miscellaneous costs to perform this work

9. Coordination and notification requirements to water service providers and customers for temporary disruption of service.

10. Control/management of groundwaters and dewatering, as needed.

11. Disinfection of all wetted parts used to establish connections to existing mains, in accordance with these Specifications.

12. Potholing of any utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed connection(s).

13. All other incidental work necessary to complete Connection to Existing Piping in accordance with the Contract Documents.

Bid Item No. 10 – 6" HDPE Intake Piping

A. Units: Linear Feet (LF)

B. Measurement: Linear feet of water line constructed using open trench construction methods per the Contract Documents for this item, measured along horizontal projection along centerline axis of water main.

C. Payment: The payment quantity for 6" HDPE Intake Piping shall be on a unit price basis per lineal foot, and shall be full compensation for all materials, labor, tools equipment and incidentals to acceptably construct this item in accordance with the Plans and Specifications

D. Scope of Bid Item: 6" HDPE Intake Piping shall include, but is not limited to the following:

1. Furnish and install completely, in accordance with the Plans and Specifications, all pipe, adapters, fittings, valves, and associated appurtenances.

2. Furnish and install completely all Identification/warning tape and tracer wire.

3. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.

4. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.

5. Removal and disposal of any vegetation within the water main alignment, as shown in the plans, including all labor, equipment, materials, and miscellaneous costs to perform this work.

6. Potholing of any existing utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed water main(s).

7. Verification and protection of adjacent existing utilities.

8. Control/management of groundwaters.

9. Pressure testing and disinfection per MCWD Standard Specifications and these Specifications.

10. And all other incidental work necessary to implement 6" HDPE Intake Piping complete, in place, and in accordance with the Contract Documents.

Bid Item No. 11 – 8" PVC Discharge Piping

A. Units: Linear Feet (LF)

B. Measurement: Linear feet of water line constructed using open trench construction methods per the Contract Documents for this item, measured along horizontal projection along centerline axis of water main.

C. Payment: The payment quantity for 8" PVC Discharge Piping shall be on a unit price basis per lineal foot, and shall be full compensation for all materials, labor, tools equipment and incidentals to acceptably construct this item in accordance with the Plans and Specifications

D. Scope of Bid Item: 8" PVC Discharge Piping shall include, but is not limited to the following:

1. Furnish and install completely, in accordance with the Plans and Specifications, all pipe, adapters, fittings, valves, and associated appurtenances.
2. Furnish and install completely all Identification/warning tape and tracer wire.
3. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.
4. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.
5. Removal and disposal of any vegetation within the water main alignment, as shown in the plans, including all labor, equipment, materials, and miscellaneous costs to perform this work.
6. Potholing of any existing utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed water main(s).
7. Verification and protection of adjacent existing utilities.
8. Control/management of groundwaters.
9. Pressure testing and disinfection per MCWD Standard Specifications and these Specifications.
10. And all other incidental work necessary to implement 8" PVC Discharge Piping complete, in place, and in accordance with the Contract Documents.

Bid Item No 12 – Desalination Yard Piping

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Desalination Yard Piping.

D. Scope of bid item: Work for Desalination Yard Piping includes, but is not limited to the following:

1. Removal of existing piping, temporary bulkheads, fittings, and valves, as shown in the Plans.

2. Furnish and install completely, in accordance with the Plans and Specifications, all pipe, adapters, fittings, restraints, valves, and associated appurtenances.
3. Coating of above ground PVC piping as shown in Plans and in compliance with the Specifications.
4. Verification of adjacent utilities.
5. Potholing of any utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed piping.
6. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.
7. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.
8. Control/management of groundwaters and dewatering, as needed.
9. Pressure testing and disinfection per MCWD Standard Specifications and these Specifications.
10. All other incidental work necessary to complete Desalination Yard Piping in accordance with the Contract Documents.

Bid Item No 13 – Discharge Wellhead Piping

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Discharge Wellhead Piping.

D. Scope of bid item: Work for Discharge Wellhead Piping includes, but is not limited to the following:

1. Removal of existing piping, temporary bulkheads, fittings, and valves, as shown in the Plans.
2. Furnish and install completely, in accordance with the Plans and Specifications, all above ground pipe, adapters, fittings, restraints, support, valves, and associated appurtenances, including the proposed stainless steel wellhead cover and fasteners/anchors for the Discharge Well.
3. Coating of above ground PVC piping as shown in Plans and in compliance with the Specifications.
4. Verification of adjacent utilities.
5. Potholing of any utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed piping.
6. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.
7. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.

8. Control/management of groundwaters and dewatering, as needed.
9. Pressure testing and disinfection per MCWD Standard Specifications and these Specifications.
10. All other incidental work necessary to complete Discharge Wellhead Piping in accordance with the Contract Documents.

ALTERNATE BID ITEMS:

ALT 1 – Remove and Replace 12" Intake Well Pipe

A. Units: Linear Feet (LF)

B. Measurement: Linear feet of water line constructed using open trench construction methods per the Contract Documents for this item, measured along horizontal projection along centerline axis of water main.

C. Payment: The payment quantity for Remove and Replace 12" Intake Well Pipe shall be on a unit price basis per lineal foot, and shall be full compensation for all materials, labor, tools equipment and incidentals to acceptably construct this item in accordance with the Plans and Specifications

D. Scope of Bid Item: Remove and Replace 12" Intake Well Pipe shall include, but is not limited to the following:

1. Furnish and install completely, in accordance with the Plans and Specifications, all pipe, adapters, fittings, valves, and associated appurtenances.
2. Furnish and install completely all Identification/warning tape and tracer wire.
3. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.
4. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.
5. Removal and disposal of any vegetation within the water main alignment, as shown in the plans, including all labor, equipment, materials, and miscellaneous costs to perform this work.
6. Potholing of any existing utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed water main(s).
7. Verification and protection of adjacent existing utilities.
8. Control/management of groundwaters.
9. Pressure testing and disinfection per MCWD Standard Specifications and these Specifications.
10. And all other incidental work necessary to implement Remove and Replace 12" Intake Well Pipe complete, in place, and in accordance with the Contract Documents.

ALT 2 – Remove and Replace 8" Brine Discharge Pipe

A. Units: Linear Feet (LF)

B. Measurement: Linear feet of water line constructed using open trench construction methods per the Contract Documents for this item, measured along horizontal projection along centerline axis of water main.

C. Payment: The payment quantity for Remove and Replace 8" Brine Discharge Pipe shall be on a unit price basis per lineal foot, and shall be full compensation for all materials, labor, tools equipment and incidentals to acceptably construct this item in accordance with the Plans and Specifications

D. Scope of bid item: Work for Remove and Replace 8" Brine Discharge Pipe includes, but is not limited to the following:

1. Removal of existing piping, temporary bulkheads, fittings, and valves, as shown in the Plans.
2. Furnish and install completely, in accordance with the Plans and Specifications, all pipe, adapters, fittings, restraints, valves, and associated appurtenances.
3. Furnish and install completely all Identification/warning tape and tracer wire.
4. Coating of above ground piping as shown in Plans and in compliance with the Specifications.
5. Verification of adjacent utilities.
6. Potholing of any utilities, either shown on the plans or marked in the field, in advance of excavation that may conflict with the proposed piping.
7. Trenching, hand-digging, exposing, backfilling, compaction, and surface pavement and striping restoration, where required.
8. Hauling and disposing of all waste, unsuitable, and excess material in accordance with the Contract Documents.
9. Control/management of groundwaters and dewatering, as needed.
10. Pressure testing and disinfection per MCWD Standard Specifications and these Specifications.
11. All other incidental work necessary to complete Remove and Replace 8" Brine Discharge Pipe in accordance with the Contract Documents.

ALT 3 – Well Rehabilitation

A. Units: Lump Sum (LS)

B. Measurement: Partial payments based on Engineer's determination.

C. Payment: Payment includes full compensation for all work required to complete the contract requirements for Well Rehabilitation.

D. Scope of bid item: Work for Well Rehabilitation includes, but is not limited to, the following.

1. Mobilization and set up of all necessary equipment, materials, storage tanks, and temporary pumps.
2. Cleaning and flushing of existing intake and discharge well screen and casing, including acid/bio-dispersant treatment, hydro-jetting, and the removal of all accumulated sediment and debris.
3. Removal, hauling, and disposal of accumulated sediment and solids in compliance with local ordinances and these Specifications.
4. Zone pumping and specific capacity pump test of the intake and injection wells, including handling and disposal of all discharged well water.
5. Development of Well Access Plan and Well Water Disposal plan, as defined in Specification Sections 01 11 00 and 33 01 10.91.
6. Video survey, inspection, and report of rehabilitated intake and discharge wells.
7. Patching and rehabilitation of concrete well seal and wellhead, for both the injection well and intake well, including installation of new anchor bolts.
8. Furnish and install wellhead cover caps.
9. All monitoring well rehabilitation, including removal of sediment and debris, surging and bailing of monitoring wells, repairs to existing casings, and providing traffic-rated box and cover.
10. All other incidental work necessary to complete Well Rehabilitation in accordance with the Contract Documents.

END OF SECTION

SECTION 33 01 10.91

REHABILITATION OF GROUNDWATER WELLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section covers the Work and all necessary labor, materials, accessories, equipment, and supervision to rehabilitate the existing seawater intake, brine discharge/injection wells, and the two existing monitoring wells as shown in the Plans and described in these Project Technical Specifications. The Work includes cleaning and treatment of the well screens, removal of accumulated sediment and debris, disposal of sediment and debris, zone pumping/development, disposal of development water, and specific capacity testing, and all other work to make the well rehabilitations complete and functional as specified.

B. The work identified in this Section is included as an alternate Bid Item. Should the Owner elect to include this work into the Contract, the work shall be performed in accordance with the Contract Documents, including the Plans, these Technical Specifications, and all referenced District and State standard specifications.

C. The Well Rehabilitation Plan, prepared by Cleath-Harris Geologists (hereinafter referred to as Well Technical Specifications), is included at the end of this Section and all of the requirements contained therein shall be part of these Contract Documents, unless otherwise modified by this Section.

1.02 MODIFICATIONS AND CLARIFICATIONS TO THE WELL TECHNICAL SPECIFICATIONS

A. Disposal of Development and Capacity Test Water: As part of the Construction Work Plan, Contractor shall describe all labor, equipment, materials, and procedures for disposal of all well water pumped during the well rehabilitation tasks outlined in the Well Technical Specifications. This shall include the calculated volume of water pumped from the wells for the rehabilitation tasks and the proposed disposal location of the well water.

B. Potential disposal locations and methods include, but are not limited to, the following:
   1. Water may be discharged into the existing clarifiers located on the Owner's property.
      a. If disposed water within the clarifier has not percolated/evaporated after 14 calendar days, and all rehabilitation tasks for the discharge well are completed, then the Contractor shall pump remaining standing water into rehabilitated discharge well.
         1) Contractor shall provide sump pump, hoses, and all necessary equipment for disposal to discharge well.
         2) Sump pump inlet hose or nozzle shall be fitted with a fine mesh screen, minimum 100 mesh, to prevent sediment and debris from being pumped into the discharge well.

3) Water pumped to discharge well shall be tested and comply with the following water quality requirements prior to direct injection into discharge well:
   a) TDS: less than 48,000 mg/L:
      (1) TDS may be calculated from measured EC, compensated to a reference temperature of 25 degrees Celsius, and using a conversion factor "k" of 0.70. Refer to the Well Technical Specification.
   b) pH: Measured pH values shall be within 6.5 - 8.3.
   c) Turbidity: 10 NTU, or less.

2. A temporary percolation basin may be established on Owner property at the existing desalination plant. Final location of the basin shall be proposed by the Contractor and approved by the Owner or Owner's Representative. Minimum requirements for the temporary percolation basin include:
   a. Minimum basin infiltrative area: 6,000 SF
      1) Minimum basin infiltrative area is defined as the area of the bottom of the pond.
   b. Minimum basin depth: 5 ft
      1) Basin depth shall provide a minimum 2 ft of freeboard from the maximum water surface level to the top of the bank.
   c. Basin is removed and surface is restored to existing grade upon substantial completion of the Project.
   d. Alternative basin geometry may be proposed in writing and implemented following approval of the Owner.
3. Contractor may elect to dispose of all well rehabilitation water at a proper offsite disposal facility. The Contractor shall obtain all necessary haul route permits from the agency(s) having jurisdiction.
4. Alternative water disposal methodology may be proposed in writing and implemented following approval of the Owner.

C. Contractor is not allowed to discharge well rehabilitation water to surface water(s) at any time.

D. As part of the Construction Work Plan, Contractor shall identify locations for placement of all well rehabilitation equipment, including mixing tank, booster pump, storage tanks, and temporary piping/valving. Construction Work Plan shall identify how all well rehabilitation materials and equipment will be secured and stored when not in use.

E. Public access to the Marina State Beach shall be preserved during all well rehabilitation efforts. Public access points shall be coordinated with State Parks to minimize pedestrian and vehicular access to the Contractor's work area(s) located on State Park property.

PART 2 - PRODUCTS

2.01 PRODUCTS

A. See Well Technical Specifications.

PART 3 - EXECUTION

3.01 GENERAL

A. See Well Technical Specifications.

B. Refer to Division 01 Technical Specifications for property access, notification requirements, and construction scheduling/coordination requirements.

END OF SECTION

(CHG Well Rehabilitation Plan, 38 pages follow)

SCOPE OF WORK
MARINA DESALINIZATION WELL REHABILITATION PROJECT
WALLACE GROUP

Background

The Marina Coast Water District (MCWD) constructed a coastal desalinization plant at the west end of Reservation Road in 1997. This plant included an intake well, a disposal well, five monitoring wells, and an associated desalinization plant (Figure 1). Since the early 2000's, the plant has largely been on standby, and the plant has reached a state where it is no longer operational. During this time well infrastructure has also decayed. By 2007, coastal erosion had reached the intake well casing and the vault has been exposed in the bluff faces, making the intake well non-operational. Since then, the bluff face has eroded past the location of the intake well. In an effort to stabilize and save the well and improve safety, the district removed the uppermost portion of the well and placing a a bolt-on flange cover on the new top of casing. This flange now sits approximately five feet below the beach surface. The discharge well has suffered from a poor and degraded cap which has led to it being filled with sand and human debris (bottles, cans, ect). The closest three monitoring wells also have suffered damage to the wellheads and have significant sand infilling. Following the 2007 work on the intake well, the wells have only been opened for periodic inspections and water quality testing as part of ongoing monitoring of basin and site conditions.

As part of an effort to increase the resilience of the water supply, the MCWD had contracted with Wallace Group to rehabilitate the coastal desalinization plant and bring it back into production. This effort requires functioning intake, disposal and monitoring wells. As such, Cleath-Harris Geologists (CHG) has been contracted to provide hydrogeologic consulting services related to the rehabilitation of well-related infrastructure. This workplan provides an outline of the tasks required to rehabilitate the wells ahead of plant repair and recommissioning.

0 70 140 ft

N

Basemaps:
Google Satellite (2025)
Coordinate System:
State Plane Zone V, ft - NAD83

Explanation
- Well Sites
- Fence Lines
- Reservation Road

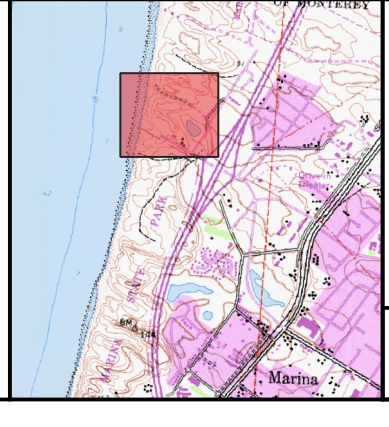


Figure 1

Well Site Map
Reservation Road
Desal Rehab Design

Marina, CA

CLEATH-HARRIS GEOLOGISTS

Scope of Work

The scope of work for this project includes the rehabilitation of the intake well, the discharge well, and monitoring wells DM-1, and MW-4 (Figure 1). This scope of work includes the following phases and tasks.

PHASE 1 – MOBILIZATION/DEMOBILIZATION

Task 1.1 – Mobilization/Demobilization and Site Safety Plan. The contractor shall mobilize and demobilize equipment needed for project; including workover rig, bailers, dispersant/swab tool, jetting tool, zone pump tool, mixing tank, booster pump, storage tanks (two, approximate 21,000-gallon tanks), and temporary piping/valving. A site-specific safety plan shall be prepared by the Contractor for Contactor use that addresses the chemical and physical hazards associated with the project. Note that at the end of each work day and for each phase of the workplan the wellsite and wellhead should be secured to prevent public access.

PHASE 2: MONITORING WELLS REHABILITATION (DMW-1, AND MW-4)

The monitoring wellhead repair and rehabilitation phase (Phase 2) involves repair and upgrades to the existing wellheads (DMW-1, and MW-4) to allow for their utilization as monitoring wells. Available data regarding the construction and design of monitoring wells DMW-1, and MW-4 is included in appendices A, and B.

Task 2.1- Fluid Management. Fluid management for Tasks 2.2-2.11 involves collection, storage, and transport of fluids from the wellheads being rehabilitated to designated disposal areas. This requires adequate on-site tanks for fluid storage, neutralization and settling of produced water Anticipated storage/treatment tanks would consist of one or two 21,000-gallon tanks (mobilization costs included in Task 1) depending on the configuration utilized for settling. The two existing and abandoned clarification tanks (Figure 1) lie with the historic treatment facility. These tanks have a storage capacity of approximately 500,000 gallons each. They have historically been utilized as discharge/percolation tanks during pumping tests and may serve as a discharge point for fluids produced during well rehabilitation. The storage/treatment tanks shall be configured to facilitate the settlement of solids and pH correction from the produced water.

Water pumped from the wells will be monitored at 5 min increments for flow and water quality. Storage/treatment tanks may be bypassed if water quality meets discharge standards. Documentation of discharge water discharge water quality and flow shall be maintained by the contractor and submitted at the completion of the phase.

Discharge to existing clarification tanks:

pH 8.6< >6

TDS 48,000 mg/l; may be calculated from EC at 25 C. TDS (mg/l) = EC (µS/cm), where k = 0.70

NTU < 50 NTU

Discharge to Discharge Well

pH 6.3< >8.3

TDS < 48,000 mg/l; may be calculated from EC at 25 C. TDS (mg/l) = EC (µS/cm), where k = 0.70

NTU < 10 NTU

Total pipe length needed for fluid management in Phase 2 is approximately 500 feet. A fluid capacity of up to 25 gallons per minute will be needed in Phase 2. Each monitoring well is anticipated to produce a total of 10,000 gallons or less during the rehabilitation process (30,000 gallons or less produced in Phase 2).

PHASE 2A – MONITORING WELL DMW-1

Task 2.2 – Rig-Up. Uncover wellheads. Move the work rig to the wellhead and set up. Ensure temporary fencing is in place to keep the public from the work area. Position equipment to allow for the workover of wells DWM-1. The two temporary storage tanks should be positioned to also allow for use in Phase 3.

Task 2.3 – Remove Fill/Debris Monitoring Well. Use air-lift pump to remove fill from the bottom of the well. Sound bottom of well before and after clean out to determine how much, if any, sediment remains in the well. Sediment should be cleared to the bottom of the well and the screens should be clear of sediment before proceeding to Task 2.4.

Task 2.4- Surge and Bail - Monitoring Wells. Surge and bail well for two hours. The estimated pumping rate is anticipated to be approximately 20 gallons per minute. However, based upon well performance in Tasks 2.3 and 2.4, a lower rate may be needed. This will be determined by the District Representative. If excess debris or turbidity is encountered during surge and bail operations it may be necessary to repeat Task 2.3. This decision will be made by the onsite District Representative during Task 2.4.

Task 2.5 – Repair Wellhead. Excavate as needed to replace broken/degraded casing near the well head. Reinstall new locking sealed well cap on DMW-1. Install a new traffic rated flush mounted box for each monitoring well. This box should be 8-inches in diameter or greater. The lid should be flush mounted and bolted down and the box should have a

plastic or fiberglass skirt to prevent corrosion of the box where in contact with the adjacent soil. An example traffic box is provided in Appendix F. This box (A0721-008) or an equivalent approved by the District Representative may be utilized.

PHASE 2B – MONITORING WELL MW-4

The wellhead repair and rework phase involves repair and upgrades to the existing MW-4 wellhead to allow for utilization as monitoring well. Based on historic documents, the existing well was drilled to a depth of 115 feet below ground surface. The well was subsequently cased in 2-inch PVC to 110 feet depth. Perforations are from 65-105 feet below ground surface. Subsequently a 1 ¼-inch liner was placed along with a ½-inch eductor pipe to allow for air lift. Based on site review it appears the liner and casing remain in place at this time. Known data regarding the well is included in Appendix B

Task 2.6- Prepare a Liner Removal Plan. Prepare and submit to the District Representative a written plan for removing the existing 1.25-inch liner within MW-4.

Task 2.7- Rig-up. Rig-up on MW-4 and position any necessary equipment for tasks 2.8-2.11.

Task 2.8 – Remove Liner . Utilizing the methods outlined in the plan from Task 2.6 remove the liner from the existing 2-inch PVC casing.

Task 2.9 – Remove Fill/Debris Monitoring Well. Use a bailer or air-lift pump to remove fill from the bottom of the well. Sound bottom of well before and after clean out to determine if sediment cleanout has been complete. Sediment should be cleared to the bottom of the well and all screens should be sediment free before proceeding to Task 2.10.

Task 2.10- Surge and Bail MW-4. Surge and bail well for two hours. The estimated pumping rate is anticipated to be approximately 20 gallons per minute. However, based upon well performance in Tasks 2.7 and 2.8, a lower rate may be needed. This will be determined by the District Representative. If excess debris or turbidity is encountered during surge and bail operations it may be necessary to repeat Task 2.7. This decision will be made by the onsite District Representative during Task 2.8.

Task 2.11 – Repair Wellhead. Excavate as needed to cut/clear the existing steel conductor casing to ground surface. . Reinstall new locking sealed well caps on each of the wells. Install a new traffic rated flush mounted box for MW-4. This box should be 8-inches in diameter or greater. The lid should be flush mounted and bolted down and the box should have a plastic or fiberglass skirt to prevent corrosion of the box where in contact with the adjacent soil. An example traffic box is provided in Appendix F. This box (A0721-008) or an equivalent approved by the District Representative may be utilized.

PHASE 3: DISCHARGE WELL REHABILITATION

The discharge well is located near DMW-1 (Figure 1). Known construction and design data for this well is included in Appendix C.

Task 3.1 – Mobilization. Ensure wellhead is fully exposed. Locate all necessary equipment at the worksite around the discharge well. Ensure temporary fencing is in place to keep the public from the work area.

Task 3.2 – Fluid Management. Fluid management involves collection, storage, and transport of fluids from the wellhead being rehabilitated to designated disposal areas. This requires adequate on-site tanks for fluid storage, neutralization and settling of produced water Anticipated storage/treatment tanks would consist of two 21,000-gallon tanks (mobilization costs included in Task 1). The two existing and abandoned clarification tanks (Figure 1) lie with the historic treatment facility. These tanks have a storage capacity of approximately 500,000 gallons each. They have historically been utilized as discharge/percolation tanks during pumping tests and may serve as a discharge point for fluids produced during well rehabilitation and testing. The storage/treatment tanks shall be configured to facilitate the settlement of solids and pH correction from the produced water.

Water pumped from the well will be monitored at 5 min increments for flow and water quality recorded. Storage/treatment tanks may be bypassed if water quality meets discharge standards. Documentation of treatment chemical quantities used, water discharge quality, and discharge flow shall be maintained by the contractor, and shall be available as needed during rehabilitation, and submitted at the completion of the phase.

Discharge to existing clarification tanks:

pH	8.3< >6
TDS	48,000 mg/l; may be calculated from EC at 25 C. TDS (mg/l) = EC (µS/cm), where k = 0.7
NTU	< 50 NTU

Total pipe length needed for fluid management in Phase 3 is approximately 200 feet. A fluid capacity of up to 300 gallons per minute will be needed in task 3.6 and 600 gallons per minute om Task 3.8. Total water produced during the Phase 3 rehabilitation of the Discharge Well is estimated to be less than 200,000 gallons.

Task 3.3 – Remove Fill/Debris Disposal Well. Use a suction-bailer or air-lift pump to remove fill from the bottom of the discharge well. Sound bottom of well before and after clean out. Fishing tools may be required if piping or other operational equipment is buried in the sediment. Remnants of the old discharge system and other debris have been observed in previous video logs of the well.

Task 3.4 – Acid/Bio-Dispersant. Use a blend of sulfamic modified granular acid (Bariod Aqua-Clear MGA or approved equivalent) and hydroxyacetic liquid acid enhancer (Baroid Aqua-Clear AE or approved equivalent) for the acid treatment program, and apply as directed by manufacturer, and summarized herein. Data sheets for these Chemicals are included in Appendix E. Mix the modified granular acid (MGA) with water at 1 pound per gallon of clean water in a mix tank. The liquid acid enhancer (AE) is then added to the MGA/water mixture at a ratio of 1 gallon AE for every 10 lbs of MGA used, and thoroughly mixed. The acid may be mixed in smaller batches to produce the total volume. For the discharge well approximately 1,500 gallons of acid/bio-dispersant solution is sufficient to displace groundwater in the screen, gravel pack, and some of the formation opposite the well screen.

Record the initial pH and EC of water in the well. Place a dispersing tool with swab at the top of the perforations (65 feet depth) and begin pumping acid solution through dispersant tool in the well at roughly 30 gallons per foot, swabbing the acid into the gravel pack at increments of 20 feet (pump in 600 gallons and swab 20 feet for approximately 30 minutes, then proceed to the next interval and repeat to the bottom of perforations). Once the acid has been swabbed in, sample the pH of the water in the casing again. Let the acid stand for 2 hours, then swab again through the screened intervals (40 total feet of perforation) for 30 minutes per interval (60 minutes total, without adding acid). Sample the pH prior to each swabbing event. The 2-hour resting period followed by 30-minute swabbing cycles should continue for at least 3 cycles (a period of approximately 9 hours including the initial swab-in) and allow the acid to stand for 24-hours prior to proceeding to Task 3.5.

Task 3.5 – Hydro-Jetting Use water jetting to clean discharge well screen from 65-105 feet depth in the intake well. This jetting tool should be of an appropriate size for cleaning a 16-inch inner diameter well screen. Work the jetting tool beginning at the top of the screen and, while rotating slowly, lower the tool at approximately 1 minute per foot to the bottom of the screen. From the bottom of the screen, rotate the tool slowly while being pulled upward at approximately 5 minutes per foot of well screen.

Task 3.6 – Zone Pump- Disposal Well. Install a submersible pump capable of a minimum discharge rate of 200-300 gallons per minute. The pump shall be set between two surge blocks within a 10-foot perforated pipe to allow focused zone pumping (this is the zone pumping tool). Using the zone pumping tool, pump and simultaneously swab each 20-foot screened section for 30 minutes, or until discharge water for each section is visually clear of all sediments/debris. Start at the top of the well screen interval and work

toward the bottom. Contain initial turbid discharge from each section into storage tanks for settling prior to disposal. After reaching the bottom section of screen, repeat zone pumping starting at top of screen, proceeding until a minimum of 30,000 gallons have been pumped to waste into the storage tanks. During zone pumping the produced water should be treated to neutralize the chemicals utilized in Task 3.4 as outlined in Task 3.2.

Produced water shall be stored in the on-site tanks after suspended solids have settled, the water will be then pumped through the temporary water line to the treatment plant for percolation and disposal in the plant clarification tanks. Heavy sediment shall be removed from the tanks with a vacuum truck for transport and disposal (see Task 3.10).

Task 3.7 – Video Survey. Perform a color video camera survey of well, using both vertical and side-scanning lenses to record a detailed inspection of the condition of the well casing and louvers. Prior to logging the well will be allowed to stand without operation for 24-hours to allow sediment and turbidity to settle. A video log of the report shall be submitted following the survey. Files may be emailed to the District Representative. Files larger than 10 MB will be provided on SD card or similar storage device or by link to cloud storage.

Task 3.8– Specific Capacity Test. Install a temporary pump (600 gpm) and a 1-inch minimum inner diameter sounding tube in the discharge well. The pump should be set at least 10 feet below the top of the screens. Install a calibrated flow meter on the discharge line for use in monitoring flow rates. Perform a four-hour constant rate pumping test (600 gpm). The pumping rate may be altered with the approval of the onsite District Representative if pumping conditions indicate the initial rate is unsustainable. Monitor pumping rate and depth (measured to the nearest 0.01 foot) to water every 5 minutes. Alternative data collection or pumping methodology may be proposed in writing and implemented following approval of the District Representative. At the end of the pumping test documentation for both the pumping rate and water level will be submitted to the District Representative.

Task 3.9–Wellhead Installation. Drill stainless steel threaded bolts in the pad surrounding the well to allow for future discharge equipment to be bolted to the wellhead. Using these bolt holes, install a temporary or new sealed cover cap for the well per plans.

Task 3.10 – Partial-Demobilization. Relocate redevelopment. Haul turbid water with settled solids from tank cleanouts and from well bailing for offsite disposal. Records of disposal (vacuum truck or other) shall be submitted at the end this phase. Restore the disposal well work site to the same conditions as it was at the start of the project.

PHASE 4: INTAKE WELL REHABILITATION

The intake well is located on the beach approximately 130 feet west of the parking lot (Figure 1). Known construction and design data for this well is included in Appendix D.

Task 4.1 – Mobilization./Rig-up Ensure wellhead is fully exposed and temporary shoring is sufficient for site activities. Locate all necessary equipment at the worksite around the intake well. Ensure temporary fencing is in place to keep the public from the work area.

Task 4.2 – Fluid Management. Fluid management involves collection, storage, and transport of fluids from the wellhead being rehabilitated to designated disposal areas. This requires adequate on-site tanks for fluid storage, neutralization and settling of produced water Anticipated storage/treatment tanks would consist of two 21,000-gallon tanks (mobilization costs included in Task 1). The two existing and abandoned clarification tanks (Figure 1) lie with the historic treatment facility. These tanks have a storage capacity of approximately 500,000 gallons each. They have historically been utilized as discharge/percolation tanks during pumping tests and may serve as a discharge point for fluids produced during well rehabilitation and testing. The storage/treatment tanks shall be configured to facilitate the settlement of solids and pH correction from the produced water.

Water pumped from the well will be monitored at 5 min increments for flow and water quality recorded. Storage/treatment tanks may be bypassed if water quality meets discharge standards. Documentation of treatment chemical quantities used, water discharge quality, and discharge flow shall be maintained by the contractor, and shall be available as needed during rehabilitation, and submitted at the completion of the phase.

Discharge to existing clarification tanks:

pH	8.3< >6
TDS	48,000 mg/l; may be calculated from EC at 25 C. TDS (mg/l) = EC (µS/cm), where k = 0.7
NTU	< 50 NTU

Discharge to Discharge Well

pH	6.3< >8.3
TDS	< 48,000 mg/l; may be calculated from EC at 25 C. TDS (mg/l) = EC (µS/cm), where k = 0.70
NTU	< 10 NTU

Total pipe length needed for fluid management in Phase 4 is approximately 1,100 feet. Total water produced during the Phase 4 rehabilitation of the Discharge Well is estimated to be less than 250,000 gallons. Documentation of discharge water quality and treatment chemical quantities used shall be provided to the District Representative by the Contactor at the end of rehabilitation and shall be available as needed during rehabilitation.

Task 4.3 – Remove Fill/Debris Intake Well. Use a suction-bailer or air-lift pump to remove fill from the bottom of the well. Sound bottom of well before and after clean out. Fishing tools may be required if piping or other operational equipment is buried in the sediment. Upon completion of sediment/debris removal the bottom of the well will be tagged to verify total depth of well.

Task 4.4 – Acid/Bio-Dispersant . Use a blend of sulfamic modified granular acid (Bariod Aqua-Clear MGA or approved equivalent) and hydroxyacetic liquid acid enhancer (Baroid Aqua-Clear AE or approved equivalent) for the acid treatment program, and apply as directed by manufacturer, and summarized herein. Data sheets for these chemicals are included in Appendix E. Mix the modified granular acid (MGA) with water at 1 pound per gallon of clean water in a mix tank. The liquid acid enhancer (AE) is then added to the MGA/water mixture at a ratio of 1 gallon AE for every 10 lbs of MGA used, and thoroughly mixed. The acid/bio dispersant mix may be mixed in smaller batches to produce the total volume. For the intake well approximately 600 gallons of acid/bio-dispersant solution is sufficient to displace groundwater in the screen, gravel pack, and some of the formation opposite the well screen.

Record the initial water well pH. Place a dispersing tool with swab at the top of the perforations (65 feet depth) and begin pumping acid solution through dispersant tool in the well at roughly 30 gallons per foot, swabbing the acid into the gravel pack at increments of 20 feet (pump in 600 gallons and swab 20 feet for approximately 30 minutes, then proceed to the next interval and repeat to the bottom of perforations). Once the acid has been swabbed in, sample the pH of the water in the casing again. Let the acid stand for 2 hours, then swab again through the screened interval for 30 minutes (without adding acid). Sample the pH prior to each swabbing event. The 2-hour resting period followed by 30-minute swabbing cycles should continue for at least 3 cycles (a period of approximately 8 hours including the initial swab-in) and allow the acid to stand for 24-hours prior to proceeding to Task 4.5.

Task 4.5 – Hydro Jetting. Use water jetting to clean well screen from 51-71 feet depth in the intake well. This jetting tool should be of an appropriate size for cleaning a 12-inch inner diameter well screen.Work the jetting tool beginning at the top of the screen and, while rotating slowly, lower the tool at approximately 1 minute per foot to the bottom of the screen. From the bottom of the screen, rotate the tool slowly while being pulled upward at approximately 5 minutes per foot of well screen.

Task 4.6 – Zone Pump-Intake Well. Install a submersible pump capable of a minimum discharge rate of 200-300 gallons per minute. The pump shall be set between two surge blocks within a 10-foot perforated pipe to allow focused zone pumping (this is the zone pumping tool). Using the zone pumping tool, pump and simultaneously swab each 20-foot screened section for 30 minutes, or until discharge water for each section is visually clear of all sediments/debris. Start at the top of the well screen interval and work toward the bottom. Contain turbid discharge from each section into storage tanks for settling prior to disposal. After reaching the bottom section of screen, repeat zone pumping starting at top of screen, proceeding until a minimum of 30,000 gallons have been pumped to waste into the storage tanks. During zone pumping the produced water should be treated to neutralize the chemicals utilized in Task 4.4 as outlined in Task 4.2.

After suspended solids have settled from produced water stored in the on-site tanks, the water will be pumped through the temporary water line to the treatment plant clarification tanks for percolation. Heavy sediment shall be removed from the storage (settling) tanks with a vacuum truck for transport and disposal (see Task 4.10).

Task 4.7 – Video Survey. Perform a color video camera survey of well, using both vertical and side-scanning lenses to record a detailed inspection of the condition of the well casing and louvers. Prior to logging the well will be allowed to stand without operation for 24-hours to allow sediment and turbidity to settle. A video log of the report shall be submitted following the survey. Files may be emailed to the District Representative. Files larger than 10 MB will be provided on SD card or similar storage device or by link to cloud storage.

Task 4.8 – Specific Capacity Test (6 hours). Install a temporary pump (600 gpm capacity) and a 1-inch minimum inner diameter sounding tube in the discharge well. The pump should be set at least 10 feet below the top of the screens. Install a calibrated flow meter on the discharge line for use in monitoring flow rates. Perform a four-hour constant rate pumping test (550 gpm). At the end of 4 hours the pump rate will be increased to 600 gpm for an additional 2 hours or until water levels reach the top of the screened interval. If flow reaches the top of the screen, the pumping rate will be reduced until a steady state level is achieved within 5 feet above the screen. For the duration of the pumping test, monitor pumping rate and depth (measured to the nearest 0.01 foot) to water every 5 minutes. Discharge water during specific capacity testing will be pumped directly to the discharge well (bypass settling tanks) if the water quality criteria outlined in 4.2 are met. If needed, a portion, or all, of the flow may be diverted to the clarification tanks. Alternative data collection or pumping methodology may be proposed in writing and implemented following approval of the District Representative. At the end of the pumping test documentation for both the pumping rate and water level will be submitted to the District Representative.

Task 4.9 –Close Well. Remove pumping equipment, re-install wellhead cover to seal the well.

Task 4.10 – Demobilize/Rig-Down. Remove redevelopment equipment and storage tanks. Haul turbid water with settled solids from tank cleanouts and from well bailing for offsite disposal. Records of disposal (vacuum truck or other) shall be submitted at the end of the rehabilitation project. Restore the intake well work site to the same conditions as it was at the start of the project.

APPENDIX A
DMW-1 DOCUMENTATION

ORIGINAL FC # 216096
File with DWR

Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 474423

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO. 14S/01E-24L52
LATITUDE LONGITUDE
APN/TRS/OTHER 14S/01E24L52

Owner's Well No. DMW-1
Date Work Began 1/19/96 Ended 1/19/96
Local Permit Agency Monterey County Environ Health
Permit No. _____ Permit Date _____

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	12	Brown dune sand.
12	30	Yel/Brown, med to crs sand
30	40	Reddish brown silt
40	110	Yel/Brown, med to crs sand
110	125	Dark brown silt
125	144	Sand & Gravel
144	162	Silty Sand; w/ layers of gravel
162	175	Sand & gravel
175	198	Olive gray silty clay
200	240	Gravel w/ sand & layers of silty clay

TOTAL DEPTH OF BORING 240 (Feet)
TOTAL DEPTH OF COMPLETED WELL 235 (Feet)

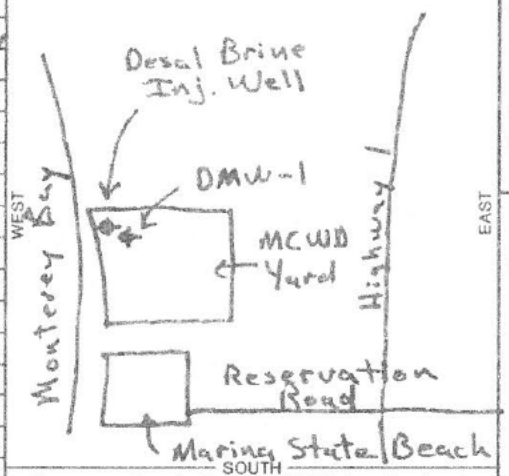
WELL OWNER

[redacted]

WELL LOCATION

Address 11 Reservation Rd
City Marina
County Monterey
APN Book _____ Page _____ Parcel _____
or
Township _____ Range _____ Section _____
or
Latitude _____ DEG. MIN. SEC. NORTH Longitude _____ DEG. MIN. SEC. W.

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE (✓)

✓ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Direct Rotary FLUID Guar Gum

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____
ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____
TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)
** May not be representative of a well's long-term yield.*

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	CASING(S) TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	190	6 3/4	✓				PVC, Sch 40	2	Sch 40	—
190	230	"		✓			"	"	"	0.020
230	235	"	✓				"	"	"	—

DEPTH FROM SURFACE Ft.	to Ft.	ANNULAR MATERIAL TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	170	✓			
170	240				Pea Gravel

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

NAME Eugro West, Inc / R.L. Redfearn Drilling (Bakersfield)
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

5855 Olivas Park Dr ADDRESS Ventura CITY CA STATE 93003 ZIP

Signed Michael S Burke WELL DRILLER/AUTHORIZED REPRESENTATIVE
1/20/96 DATE SIGNED
628851 C-57 LICENSE NUMBER

DWR 188 REV 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

APPENDIX B
MW-4 DOCUMENTATION

MW-4 Data

Table 1. Well Information Summary

Well Name	Reference Elevation	Drill Depth	Casing Depth	Perforations - Depth		Perforations - Elevation		Seal Depth
				Top	Bottom	Top	Bottom	
DMW-1	60	240	235	190	230	-130	-170	170
DMW-2	61	240	235	180	230	-119	-169	165
MW-2	60	100	100	85	95	-25	-35	75
MW-4	61	115	110	65	105	-4	-44	50
MW-5	61	110	105	60	100	1	-39	50

Notes: Depths are in feet
Elevations are in feet above/below mean sea level

Table 2. Inland Groundwater Monitoring Data, July 26, 2001

Well No.	Depth to Water (feet from top of casing)	Temperature (degrees Fahrenheit)	Field Electrical Conductance (µmhos/cm)	Lab Electrical Conductance (µmhos/cm)
MW-2	58.0	63	51,900	63,700
MW-4	60.1 61.2	63	48,700	60,900
MW-5	57.7	62	6,140	6,870
DMW-1	68.1	63	52,200	64,500
DMW-2	69.2	63	47,000	57,000

The efficiency of purging MW-4 can likely be improved by installing a PVC liner inside of the 2-inch well to serve as an eductor pipe. The liner should have a diameter of 1.25 inches, the bottom of which should be installed to a depth of approximately 3 feet above the bottom of the well. The top of the liner pipe should be constructed to house and support the existing ½-inch PVC, which would then serve as the airline for the eductor. The bottom of the airline should be positioned approximately 5 feet above the bottom of the eductor pipe. This suggested modification was discussed with District staff at the training session.

APPENDIX C
DISCHARGE WELL DOCUMENTATION

MARINA DESALIIZATION PLANT DISCHARGE WELL DATA

Location: Marina Beach State Park, Reservation Road, Marina, California

Latitude/Longitude: 36.70024, -121.80888

Wellhead: Square, concrete slab approximately 96-inches by 96-inches centered around the well. The wellhead sits 14-inches above the top of the slab. The casing is surrounded by a cylindrical cement surround which is 29-inches in diameter. The casing is flush with the top of the cement surround. A round steel plate (diamond plate) is bolted over the wellhead with four ¼-20 bolts/nuts that are set in the cement. Bolts are severely corroded and plate cover does not prevent sand/trash infiltration.

Total Depth: As-built 115 feet bgs, filled with sediment/debris below 87.5 feet bgs.

Seal: 50 foot, 10-sack sand slurry mix

Filter Media: Lone Star Medium Aquarium Mix, 50-120 feet bgs

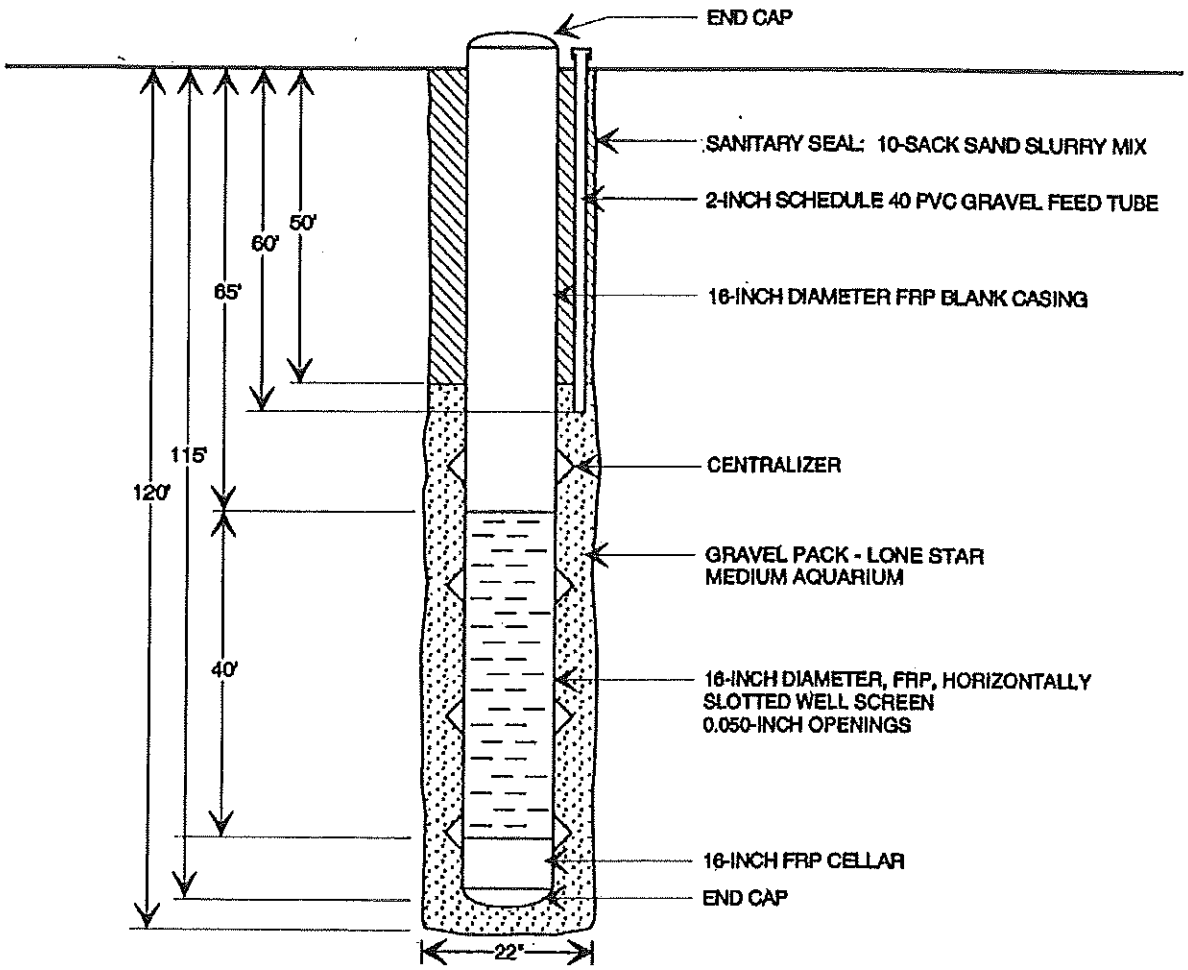
Casing Material: 16-inch inner diameter fiber would polymer casing with a 0.24-inch wall thickness.

Screen Material: 16-inch inner diameter fiber wound polymer, 0.050 inch horizontal slot.

Construction: 0-65 feet below top of casing, blank casing
65-105 feet below top of casing, screen
105-115 feet below top of casing, blank casing with end cap

Water Level: 58.13 feet below top of casing on 21 September 2025 at 10:45

Comments: Video was performed in November 2024 and in March 2025. The November video showed the remains of downhole components (pipe of unknown diameter) extending to sand which has infilled the well to approximately 87 feet below top of casing. This material was removed to the sand line (87 feet below top of casing) by the March 2025 video but there may be additional downhole assembly within the sand fill at the bottom of the well. Both videos showed buildup of sand on all the screen louvres and significant organic/biological buildup in the screens as well. Plastic bottles were observed floating at/near the water line and given sight conditions, glass bottles or other non-well related debris may be in the sand at the bottom of the well. Previous surveys indicated a discharge line was in the bottom of the well and may now be covered/buried in the debris.



NOT TO SCALE

BRINE INJECTION WELL
Marina Coast Water District

PLATE 3

APPENDIX D
INTAKE WELL DOCUMENTATION

MARINA DESALIIZATION PLANT INTAKE WELL DATA

Location: Marina Beach State Park, Reservation Road, Marina, California

Latitude/Longitude: 36.69857, -121.80952

Wellhead: The wellhead is located on the beach and is buried approximately 5 feet below the sand surface. The well lacks any sort of wellhead, but is instead covered with a flange which is epoxied onto the casing. The flange is 20-inches in diameter. This flange supports twelve 7/8-inch bolts which hold a cover onto the wellhead.

Total Depth: Unknown

Seal: As built, 50 feet. Currently

Filter Media: Lone Star Medium Aquarium

Casing Material: 12-inch inner diameter fiber would polymer casing with a 0.24 inch wall thickness.

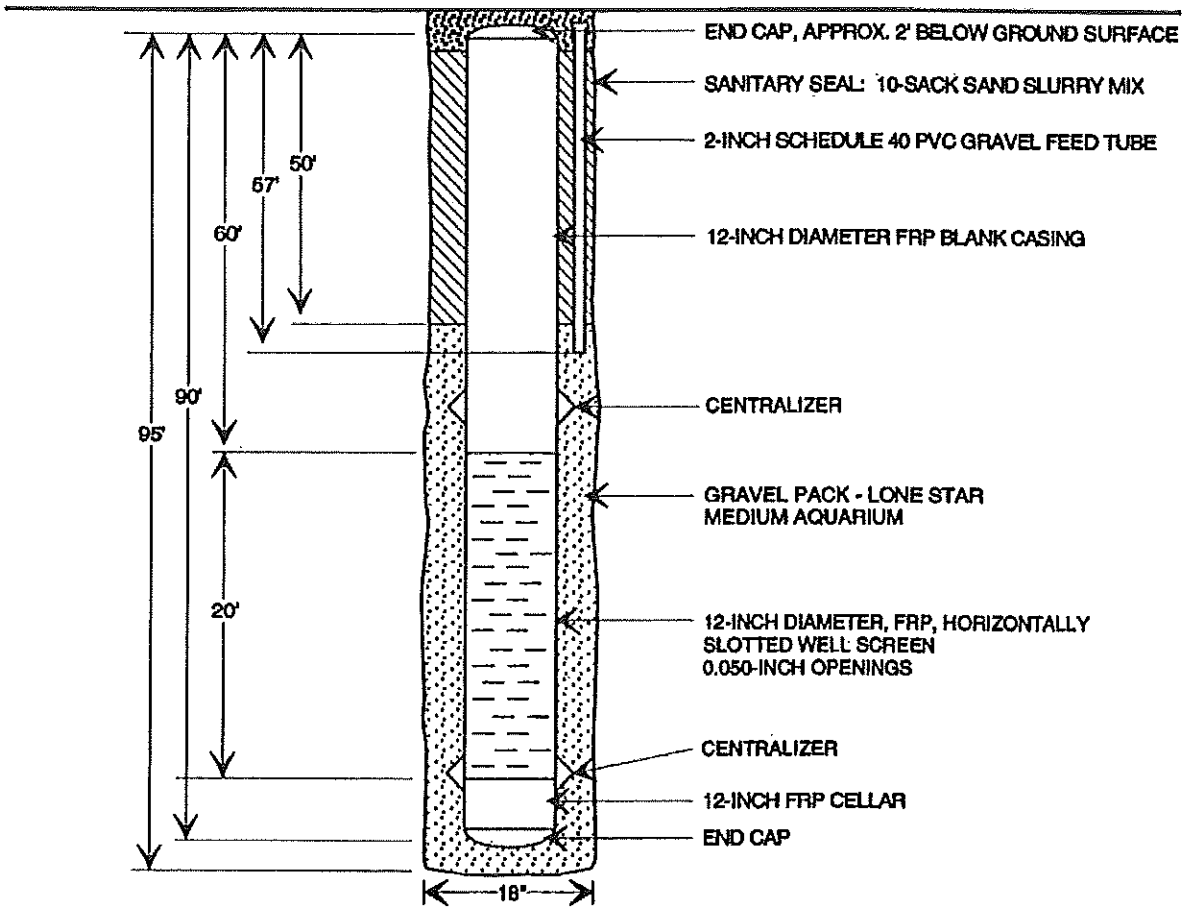
Screen Material: 12-inch inner diameter fiber wound polymer milled slot screen, 0.050 inch horizontal slot.

Construction(current not as built): 0-51 feet below top of casing, blank casing
51-71 feet below top of casing, screen
71-81 feet below top of casing, blank casing with end cap

Water Level: 15.74 feet below top of casing on 21 September 2025 at 14:00.

Comments: A video log was recorded in November 2024 and in March 2025. During the video logging run in 2024, spray equipment which was in casing at 53 feet was knocked to bottom of hole by camera. This and other downhole equipment are resting on and in the sand that has partially filled the well casing. Sand was tagged at 73.2 feet below the top of casing. During the video logs of the well sand and organic material was observed in the screen slots.

The topmost portion of the well was lost to coastal erosion. The original casing was removed and a flanged cover was installed. Based on the video and the as built diagrams, approximately nine feet, based on the original as-built diagrams and video logs, was removed. This leaves an approximately 40 foot-seal, but this has not been validated with downhole logs. The as build seal was 50-feet in depth.



NOT TO SCALE

SEAWATER INTAKE WELL
Marina Coast Water District

PLATE 2

ORIGINAL FC#21364
File with DWR

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

DWR USE ONLY — DO NOT FILL IN
14S/01E24L50
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
14S/01E24L50
APN/TRS/OTHER

Page 1 of 1
Owner's Well No. Seawater Intake Well (SIW) No. 474426
Date Work Began 1/24/96 Ended 1/24/96
Local Permit Agency Monterey County Environ. Health
Permit No. WSAL 95-331 Permit Date 12/21/95

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER 32 (FT.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	20	Brown dune sand.
20	42	Yellow/brown med. gr. sand
42	60	Gray/brown, med. gr. sand
60	83	Coarse sand.
83	95	Dark olive brown silt.

ENTERED

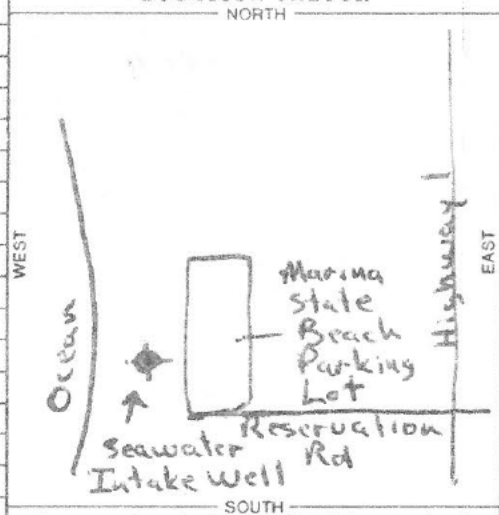
TOTAL DEPTH OF BORING 95 (Feet)
TOTAL DEPTH OF COMPLETED WELL 90 (Feet)

[redacted]

WELL LOCATION

Address 11 Reservation Rd (Marina State Beach)
City Marina
County Monterey
APN Book 033 Page 192 Parcel 001
or Township ___ Range ___ Section ___
or Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC.

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE (✓)
___ MONITORING
WATER SUPPLY
___ Domestic
✓ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Direct Rotary FLUID Guar Gum

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	60	18	✓				Fiberglass	12	0.24"	—
60	80	"		✓			"	"		0.050
80	90	"	✓				"	"		—

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	✓			
50	95				Lone Star
					Med A

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
NAME EuroWest, Inc./R.L. Redfearn Drilling (Bakersfield) (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
5855 Olivas Park Dr. ADDRESS Ventura CITY CA STATE 9300 ZIP
Signed Michael S Burke WELL DRILLER/AUTHORIZED REPRESENTATIVE 1/24/96 DATE SIGNED 62885 C-57 LICENSE NUMBER

DWR 188 REV. 7-90 IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

DWR USE ONLY – DO NOT FILL IN
14S/01E-24L5Ø
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. Seawater Intake Well (SIW) No. 474426
Date Work Began 1/24/96 Ended 1/24/96
Local Permit Agency Monterey County Environ. Health
Permit No. WSAI 95-331 Permit Date 12/21/95

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER 32 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	20	Brown dune sand.
20	42	Yellow/brown med gr. sand
42	60	Gray/brown, med gr. sand
60	83	Coarse sand.
83	95	Dark olive brown silt.

TOTAL DEPTH OF BORING 95 (Feet)
TOTAL DEPTH OF COMPLETED WELL 90 (Feet)

WELL OWNER

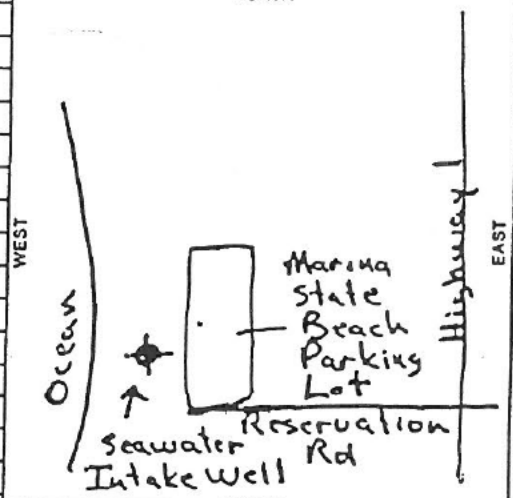
14S/01E-24L5Ø

[redacted]

WELL LOCATION

Address 11 Reservation Rd (Marina State Beach)
City Marina
County Monterey
APN Book 033 Page 192 Parcel 001
or Township ___ Range ___ Section ___
or Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

___ MONITORING
WATER SUPPLY
___ Domestic
✓ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Direct Rotary FLUID Guar Gum

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	60	18	✓				Fiberglass	12	0.24"	—
60	80	"		✓			"	"		0.050
80	90	"	✓				"	"		—

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50	✓			
50	95				Lone Star Med Aq.

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME FugroWest, Inc./R.L. Redfearn Drilling (Bakersfield)
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

5855 Olivas Park Dr. Ventura CA 93003
ADDRESS CITY STATE ZIP

Signed [signature] 1/24/96 628851
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

WR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

State No. 14S/01E-24L5

WELL DATA

DISTRICT MARINA

[redacted]

State No. 14S/01E-24L5
Other No.

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐
Location: County Monterey Basin No.
U.S.G.S. Quad. Quad. No.
¼ ¼ Section , Twp. , Rge. MD SB H Base & Meridian
Description Marina Coast Water District Desalination Plant Sea Water Intake Well located on the Marina State Beach.

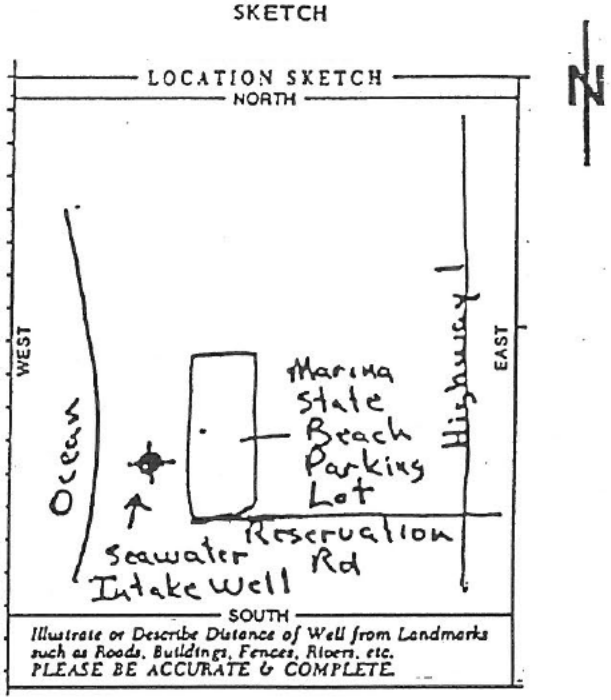
Reference Point description

which is ft. above below land surface. Ground Elevation ft.
Reference Point Elev. ft. Determined from
Well: Use Sea Water Intake Well Condition Depth 90 ft.
Casing, size 12 in., perforations 60 - 80 ft

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐
Chief Aquifer: Name Depth to Top Aq. Depth to Bot. Aq.
Type of Material Perm. Rating Thickness
Gravel Packed? Yes ☑ No ☐ Depth to Top Gr. Depth to Bot. Gr.
Supp. Aquifer Depth to Top Aq. Depth to Bot. Aq.
Driller Fugro West Inc./Redfairn Drilling (Bakersfield)
Date drilled Jan 24, 196 Log, filed Jan 24, 1996 open (1) confidential (2)
Equipment: Pump, type Submersible, ss make Grundfos
Serial No. Size of discharge pipe 6/12 in.
Power, Kind Electric Make Grundfos
H. P. 30 Motor Serial No.
Elec. Meter No. 435035 Transformer No. T-1776
Yield 520 G.P.M. Pumping level 56 ft.

Water Analysis: Min. (1) Son. (2) H.M. (3)
Water Levels available: Yes (1) No
Period of Record: Begin End
Collecting Agency:
Prod. Rec. (1) Pump Test (2) Yield (3)

SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

REMARKS

Recorded by: Manuel Saavedra
Date 5-30-97

APPENDIX E
CHEMICAL DATA SHEETS

AQUA-CLEAR® MGA

Modified Granular Acid

Description

AQUA-CLEAR MGA is a dry blend of granular acid and additives used in the removal of iron, manganese and carbonate scale. It retains strength longer than most liquid acids, which increases its cleaning capability.

Applications/Functions

- Disperse scale and incrustation
- Remove scale and incrustation from the water well screen, casing, gravel pack and pumping equipment
- Restore well production
- AQUA-CLEAR MGA can be used in combination with AQUA-CLEAR® AE to remove more difficult scale and incrustation

Advantages

- NSF/ANSI/CAN Standard 60 certified
- Safe to use on all plastics, rubber, and metals
- No harmful vapors
- Improves water quality (color, taste and appearance)
- Reduces equipment and piping failures due to scale build-up and corrosion
- Reduces pumping costs

Typical Properties

Appearance	Free-flowing, off-white granules
Specific gravity	2.00
pH (10% solution)	0.9
Solubility in water	Complete with slight to hazy turbidity

Recommended Treatment

To treat bacteria fouling and scale encrustation:

Rev. 11/2024 IDP 040

- Record initial well water pH.
- It is always recommended to mix acid formulations in pre-determined volumes of freshwater on the surface and ensure they are uniformly mixed prior to placement into the screened interval of the well.
- The preferred application method is to apply the mixture containing AQUA-CLEAR MGA into the screened interval through a dual disc surge tool that is perforated between the discs. This allows the user to uniformly treat the entire screened interval with the acid solution.
- Mix AQUA-CLEAR MGA with water at 1.0 pound per gallon of water or 120 kg/m^3 of water and apply directly into screened interval using a dual disc surge tool with perforations between the discs or a tremie pipe.
- When utilizing this method, the minimum calculated volume of water can be determined by using the borehole diameter and the length of the screened interval and double the calculated volume to account for the water present inside the screen, gravel pack and the formation interface.

Recommended Treatment (continued)

Note: The above concentration of* AQUA-CLEAR MGA *is recommended for a complete rehabilitation/reconditioning of an existing well.

- Displace solution into the well screen and formation, then surge, swab, agitate or jet well through screen and gravel pack for 20-30 minutes.
- Allow to stand in well for up to two hours and then repeat activity approximately every two hours for a period of 24 hours.
- Pump well water to captured waste until produced well water pH is within 0.5 of original well pH.

Note: Wastewater can be neutralized by adding soda ash or lime.

- Once turbidity specifications and pH requirements have been met then and only then can the well be chlorinated and reconnect to water distribution system.
- Remember in many locations it is required to capture and submit a water sample for bacterial analysis to confirm the water is safe before reconnecting to the distribution system.

Caution: Never mix chlorine and AQUA-CLEAR MGA in well.

Notes:

- **To optimize outcome, it is always recommended to begin by airlifting any biomass and debris from the well. To better prepare the well for rehabilitation, the second step is to remove as much encrustation and biomass mechanically from the interior of the**
- **To achieve the best rehabilitation outcome, it is always recommended to mix AQUA-CLEAR AE and AQUA-CLEAR MGA together to enhance penetration of scale and biomass materials.**

Safety

- AQUA-CLEAR MGA is safe to handle when in dry form, but when mixed with water it should be handled in accordance with recognized standard practices for handling corrosive and acidic materials (refer to Safety Data Sheet).
- Avoid skin and eye contact – flush with water.
- Do not ingest and avoid prolonged inhalation.
- When disposing of waste fluid make sure to comply with all federal, state and local regulations as applicable.

Packaging

AQUA-CLEAR® MGA is packaged in 5-gal (19-liter) pails containing 50 pounds (22.7 kg) or 550-lb (250 kg) drums.

Shipping

The following are required for commercial transport:

- Insurance policy must include an endorsement for transporting hazardous cargo.
- Vehicle driver must have a Hazmat endorsement on his/her Commercial Driver's License.
- Hazardous Materials Certificate of Registration issued by the U.S. Department of Transportation (renewable annually) is required.
- Consult the state in which operating for any additional requirements that may exist.
- No hazardous materials placard is required for shipments less than 1000 pounds.

Availability

AQUA-CLEAR MGA can be purchased through any Baroid Industrial Drilling Products Retailer. To locate the Baroid IDP retailer nearest you contact the Customer Service Department in Houston or your area IDP Sales Representative.

Baroid Industrial Drilling Products

Product Service Line, Halliburton

3000 N. Sam Houston Pkwy E.

Houston, TX 77032

Customer Service	(800) 735-6075 Toll Free	(281) 871-4612
Technical Service	(877) 379-7412 Toll Free	(281) 871-4613

AQUA-CLEAR® AE

Acid Enhancer/Antifoulant

Description

AQUA-CLEAR® AE is a liquid blend of acids and acid enhancers formulated to control bacterial slime contamination due to the presence of iron-related and sulphate-reducing bacteria.

Applications/Functions

- Remove the biomass matrix caused by bacterial fouling
- Reduce sulfur taste and odor in water
- Clean up well screens, pumps and distribution system
- Restore well productivity and reduce power and maintenance costs
- AQUA-CLEAR AE can be used in combination with AQUA-CLEAR® MGA and other acids such as, hydrochloric (muriatic), phosphoric and sulfamic to enhance their effectiveness and to remove more difficult scale and incrustation

Advantages

- NSF/ANSI/CAN Standard 60 certified
- Safe to use on all plastics, rubber and metals
- Cost effective, efficient extended life treatment
- Improves water quality and renews well production rate
- Mitigates corrosion and equipment failure
- Reduces pumping costs

Typical Properties

Appearance	Light amber colored liquid
Specific gravity	1.08
pH of solution	1.1

Recommended Treatment

To treat bacteria fouling and scale encrustation:

- Record initial well water pH.
- It is always recommended to mix acid formulations in pre-determined volumes of freshwater on the surface and ensure they are uniformly mixed prior to placement into the screened interval of the well.
- The preferred application method is to apply the mixture containing AQUA-CLEAR AE into the screened interval through a dual disc surge tool that is perforated between the discs. This allows the user to uniformly treat the entire screened interval with the acid solution.
- Mix AQUA-CLEAR AE with water at 9.5 gallon per 100 gallons of water or 95 L per m^3 of water and apply directly into screened interval using a dual disc surge tool with perforations between the discs or a tremie pipe.

Recommended Treatment (continued)

- When utilizing this method, the ***minimum*** calculated volume of water can be determined by using the borehole diameter and the length of the screened interval and double the calculated volume to account for the water present inside the screen, gravel pack and the formation interface.

Note: The above concentration of* AQUA-CLEAR AE *is recommended for a complete rehabilitation/reconditioning of an existing well.

- Displace solution into the well screen and formation, then surge, swab, agitate or jet well through screen and gravel pack for 20-30 minutes.
- Allow to stand in well for up to two hours and then repeat activity approximately every two hours for a period of 24 hours.
- Pump well water to captured waste until produced well water pH is within 0.5 of original well pH.

Note: Wastewater can be neutralized by adding soda ash or lime.

- Once turbidity specifications and pH requirements have been met then and only then can the well be chlorinated and reconnect to water distribution system.
- Remember in many locations it is required to capture and submit a water sample for bacterial analysis to confirm the water is safe before reconnecting to the distribution system.

Caution: Never mix chlorine and* AQUA-CLEAR AE *in well.

Notes:

- ***To optimize outcome, it is always recommended to begin by airlifting any biomass and debris from the well. To better prepare the well for rehabilitation, the second step is to remove as much encrustation and biomass mechanically from the interior of the casing and screen and then pump or airlift the debris to waste prior to treating with acid.***
- ***To achieve the best rehabilitation outcome, it is always recommended to mix AQUA-CLEAR AE and AQUA-CLEAR MGA together to enhance penetration of scale and biomass materials.***

Safety

- Use recognized standard practices for handling corrosive and acidic materials (refer to Material Safety Data Sheet).
- Avoid skin and eye contact – flush with water.
- Do not ingest and avoid prolonged inhalation.
- When disposing of waste fluid make sure to comply with all federal, state and local regulations as applicable.

Packaging

AQUA-CLEAR AE is packaged in a 5-gallon (19-liter) plastic container or in 55-gallon (208-liter) drums.

Rev. 11/12/2024

Shipping

- The following are required for commercial transport:
- Insurance policy must include an endorsement for transporting hazardous cargo.
- Vehicle driver must have a Hazmat endorsement on his/her Commercial Driver's License.
- Hazardous Materials Certificate of Registration issued by the U.S. Department of Transportation (renewable annually) is required.
- Consult the state in which operating for any additional requirements that may exist.
- No hazardous materials placard is required for shipments less than 1000 pounds.

Availability

AQUA-CLEAR AE can be purchased through any Baroid Industrial Drilling Products Retailer. To locate the Baroid IDP retailer nearest you, contact the Customer Service Department in Houston or your area IDP Sales Representative.

Baroid Industrial Drilling Products

Product Service Line, Halliburton

3000 N. Sam Houston Pkwy E.

Houston, TX 77032

Customer Service	(800) 735-6075 Toll Free	(281) 871-4612
Technical Service	(877) 379-7412 Toll Free	(281) 871-4613

Rev. 11/12/2024

APPENDIX F
EXAMPLE TRAFFIC BOX

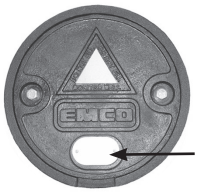
Monitoring Well Manholes

A0721 Monitoring Well Manholes

All Emco Wheaton Monitoring Well Manholes incorporate cast-in identification triangles in accordance with API recommendations and meet AASHTO H20 wheel loading.

- Painted ductile iron lid and rim
- Optional galvanized steel or polyethylene skirt
- Bolt-down units have water-tight lids
- Custom skirt heights available
- Heavy Duty (16 gauge hot rolled carbon steel) skirts available. 100% welded skirt and seam. To order, replace the first digit of the variant number with a 2.
- City of LA Approval BR800075
  A0721-001ID, A0721-008CEID, A0721-101ID, A0721-108ID

Built-in side handle on 18" models - one hand opening and positioning



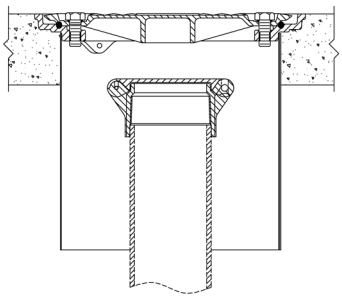
ID tag available on all models; large enough for all new regulatory requirements. To order, add "ID" to the end of the part number.

A0726-050ID ID Tag Kit
Includes tags and rivets for 50 units

A0720 Locking Cap & Collar

The Emco Wheaton A0720 locking cap and collar is used to limit access and seal monitoring wells and can be threaded or solvent welded onto a 4" PVC monitoring well pipe. It displays the monitoring well designation and includes a padlock. The cap and collar are both made of durable ABS plastic.

Model No.	Description	Pipe Size	Lbs.
A0720-001	Locking Cap and Collar, With Lock/Key	4"	1.3
A0720-001NL	Locking Cap and Collar, Without Lock/Key	4"	1.0



Replacement Parts
564029 Lock/Key Set A0720

A0721 Monitoring Well Manholes

Size	Model No.	Pallet Qty.	Lid Type	Skirt Style	Color	Overall Height	Clear Hole ID	Max. Dia.	Lbs.
5”	* **A0721-105**	100	Bolt-down	Galv. Steel	Black	8.5”	3.8”	6.0”	5.7
6”	* **A0721-106**	125	Bolt-down	Galv. Steel	Black	7.5”	4.5”	6.7”	6.3
	A0721-106A	100	Bolt-down	Galv. Steel	Black	9.5”	4.5”	6.7”	6.4
8”	* **A0721-008**	48	Bolt-down	Poly	Black	12.3”	6.0”	9.9”	11.7
	A0721-008CE	48	BD, Large Bolts	Poly	White	12.3”	6.0”	9.9”	11.1
	* **A0721-108**	48	Bolt-down	Galv. Steel	Black	12.0”	6.0”	9.9”	13.7
	A0721-108W	48	Bolt-down	Galv. Steel	White	12.0”	6.0”	9.9”	13.7
	* **A0721-188**	64	Bolt-down	Galv. Steel	Black	8.0”	6.0”	9.9”	12.8
	* **A0721-188L**	64	Lay-in	Galv. Steel	Black	8.0”	7.8”	9.9”	11.9
	*** A0721-208W****	48	BD, Welded w/Lugs	HD Steel	White	12.5”	6.0”	9.9”	12.7
	A0721-308	64	BD, 3 Bolts	Galv. Steel	White	7.7”	6.4”	9.4”	12.8
	A0721-308A	48	BD, 3 Bolts	Galv. Steel	White	11.7”	6.4”	9.4”	13.7
	** A0722-008	48	Bolt-down	Poly	Black	12.3”	6.0”	9.9”	12.4
12”	* **A0721-001**	27	Bolt-down	Poly	White	12.0”	9.4”	15.1”	23.0
	A0721-001CC	27	BD w/Rebar Tabs	Poly	White	12.0”	9.4”	15.1”	23.1
	A0721-001L	27	Lay-in	Poly	Black	12.0”	11.2”	13.8”	22.8
	* **A0721-101**	27	Bolt-down	Galv. Steel	White	12.0”	9.4”	15.1”	28.8
	A0721-101A	18	Bolt-down	Galv. Steel	White	18.0”	9.4”	15.1”	31.0
	A0721-101L	27	Lay-in	Steel	Black	12.0”	11.2”	13.8”	28.6
	A0721-119	18	Bolt-down	Galv. Steel	White	19.0”	9.4”	15.1”	36.3
	A0721-128	36	Bolt-down	Poly	White	8.1”	9.4”	15.1”	21.9
	A0721-128A	36	Bolt-down	Galv. Steel	White	8.0”	9.4”	15.1”	23.6
	** A0722-001	27	Bolt-down	Poly	White	12.0”	9.4”	15.1”	24.3
18”	* **A0721-018**	15	Bolt-down	Steel	Black	12.3”	13.8”	18.4”	58.5
	A0721-118	10	Bolt-down	Steel	Black	18.0”	13.8”	18.4”	69.5

* Most common variant
** Includes locking cap & collar
*** Heavy duty
**** Compliant with Wisconsin Administrative Code, Groundwater Monitoring Well Requirements, NR141.13, Subsection 4b

Lid Replacement Parts

Part No.	Lid	Description	Lbs.
569883	5”	Lid Ductile Bolt-down	3.0
569885	5”	Lid Gasket	
494263	5”	Bolt, 3/8” x 0.5”	
568692	6”	Lid Ductile Bolt-down	2.4
568820	6”	Lid Gasket	
568662	6”	Bolt, 5/16” x 0.75”	
571700	7”	Lid Ductile Bolt-down	3.3
571702	7”	Lid Gasket	
494261	7”	Bolt & Neoprene Washer, 3/8” x 1”	
569285	8”	Lid Ductile Lay-in	5.1
569106	8”	Lid Ductile Bolt-down	5.1
567150	8”	Lid Ductile Bolt-down, A0721-008CE	5.1
570767	8”	Lid Ductile Bolt-down, A0721-308 (3 bolt)	5.1
567146	8”	Lid Gasket	
494260	8”	Bolt & O-ring, 5/8” x 1”, 15/16" Hex, A0721-008CE	
494261	8”	Bolt & Neoprene Washer, 3/8” x 1”	

Part No.	Lid	Description	Lbs.
566419	8”	O-ring for 3/8” Bolt	
566334	8”	O-ring for 5/8” Bolt	
568715	8”	Neoprene Washer for 3/8” Bolt	
569723	12”	Lid Ductile Lay-in	11.6
563980	12”	Lid Ductile Bolt-down	11.0
563593	12”	Lid Gasket	
496257	12”	Bolt & O-ring, 5/8” x 1.25”, 15/16" Hex	
566334	12”	O-ring for 5/8” Bolt	
567712	18”	Lid Ductile Bolt-down	28.8
567995	18”	Lid Gasket	
494262	18”	Bolt & O-ring, 5/8” x 1.75”, 15/16" Hex	
494375	18”	Bolt & O-ring, 3/8” x 2”	
566419	18”	O-ring for 3/8” Bolt	
566334	18”	O-ring for 5/8” Bolt	
568715	18”	Neoprene Washer for 3/8” Bolt	

EXHIBIT C

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
ACP	ASBESTOS CEMENT PIPE
AVG	AVERAGE
BF	BLIND FLANGE
BLDG	BUILDING
BM	BENCH MARK
C	CURB
CL	CENTERLINE
CL	CLASS
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CP	CATHODIC PROTECTION
CPLG	COUPLING
CY	CUBIC YARD
DET	DETAIL
DI	DUCTILE IRON (PIPE)
DIA	DIAMETER
DIM	DIMENSION
D/W	DRIVEWAY
EA	EACH
ELE	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
EG	EXISTING GROUND
FCA	FLANGE COUPLING ADAPTOR
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOW LINE
FLG	FLANGE
FS	FINISH SURFACE
FT	FEET
G	GAS
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
ID	INSIDE DIAMETER
IN	INCHES
INV	INVERT
L	LENGTH
LAT	LATERAL
LF	LINEAR FEET
LP	LIGHT POLE
LS	LIFT STATION
LT	LEFT
M	METER
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MH	MANHOLE
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
PCC	PORTLAND CEMENT CONCRETE
PH	POTHOLE (UTILITY WAS POTHOLED)
POC	POINT OF CONNECTION
PP	POWER POLE
PSF	POUND PER SQURE FOOT
PSI	POUND PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT OF WAY
SS	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SHT	SHEET
SPEC	SPECIFICATIONS
SSFM	SANITARY SEWER FORCE MAIN
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
SV	SOLENOID VALVE
SW	SIDEWALK
T	TELEPHONE
TB	THRUST BLOCK
TB	TOP OF BANK
TC	TOP OF CURB
TF	TOP OF FOOTING
TG	TOP OF GRATE
TP	TOP OF PAVEMENT
TYP	TYPICAL
TW	TOP WALL
UON	UNLESS OTHERWISE NOTED
UTL	COMMON TRENCH UTILITIES
VAR	VARIES
VIC	VICTAULIC COUPLING
VERT	VERTICAL
W	WATER
WF	WIDE FLANGE
WL	WATER LINE
WM	WATER METER
WS	WATER SERVICE
WV	WATER VALVE
WWM	WELDED WIRE MESH
WW	WET WELL

*NOTE: THIS IS A STANDARD SET OF ABBREVIATIONS, NOT ALL ABBREVIATIONS SHOWN WILL APPLY TO THIS WORK.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
0.50% 2:1	0.50% 2:1	SLOPE
EG= 225.45	FG= 225.45	SPOT ELEVATIONS
SS		SEWER LATERAL
WL	WL	WATER SERVICE
WL	WL	WATER SERVICE MANIFOLD
		ABANDON UTILITY
		EXISTING EDGE OF PAVEMENT
CTV	CTV	UNDERGROUND CABLE TELEVISION LINE
ELE	ELE	UNDERGROUND ELECTRICAL LINE
GAS	GAS	UNDERGROUND GAS LINE
TCOM	TCOM	UNDERGROUND TELECOMMUNITCATIONS LINE
UTL	UTL	UNDERGROUND UTILITY LINE
SSFM		SEWER FORCE MAIN
SS	SS	GRAVITY SEWER LINE
	SD	STORM DRAIN
WL	WL	WATER LINE
SSFM	SSFM	SEWER FORCE MAIN
SS	SS	GRAVITY SEWER LINE
SD	SD	STORM DRAIN
WL	WL	WATER LINE
		22.5° ELBOW
		45° ELBOW
		90° ELBOW
		BALL VALVE
		BUTTERFLY VALVE
		CHECK VALVE
		COUPLING - RESTRAINED
		COUPLING - RESTRAINED FLANGE ADAPTOR
		EXPANSION JOINT
FIRE		FIRE HYDRANT
		GATE VALVE
		GLOBE VALVE
		PLUG VALVE
		REDUCING TEE
		REDUCER
CO	CO	SEWER CLEANOUT
SS	SS	SEWER MANHOLE
SD	SD	STORM DRAIN MANHOLE
		STORM DRAIN CURB INLET
		STORM DRAIN CATCH BASIN
		TEE
XX"-XXX-XXX	XX"-XXX-XXX	PIPE TAG

PIPE SIZE
MATERIAL INDICATOR
PROCESS

*NOTE: THIS IS A STANDARD SET OF SYMBOLS. NOT ALL SYMBOLS SHOWN WILL APPLY TO THIS WORK.

GENERAL NOTES

1. THESE PLANS ARE PART OF A SET OF CONTRACT DOCUMENTS AND SHALL NOT BE CONSIDERED THE SOLE SOURCE OF CONSTRUCTION INFORMATION. ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THE MARINA COAST WATER DISTRICT (MCWD/OWNER) AND THE CITY OF MARINA (CITY) STANDARD DRAWINGS AND SPECIFICATIONS, THE CONTRACT DOCUMENTS, AND WORK SHALL BE SUBJECT TO THE APPROVAL OF MCWD, THE COUNTY, AND STATE PARKS.
2. THE CONTRACTOR SHALL HAVE COPIES OF THE APPROVED CONTRACT DOCUMENTS FOR THIS PROJECT ON SITE AT ALL TIMES AND SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
3. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER AND OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, OR THIRD PARTY IN VIOLATION OF THE LAW OR IN TRESPASS. THE CONTRACTOR SHALL PRACTICE SAFETY AT ALL TIMES AND SHALL FURNISH, ERECT, AND MAINTAIN, SUCH FENCES, BARRICADES, LIGHTS, AND SIGNS NECESSARY TO GIVE ADEQUATE PROTECTION TO THE PUBLIC AT ALL TIMES.
4. INFORMATION PERTAINING TO EXISTING UNDERGROUND FACILITIES IS BASED ON RECORD INFORMATION AND IS AS SHOWN FOR INFORMATIONAL PURPOSES ONLY. UNDERGROUND FEATURES SHOWN IN PLAN VIEW ON THE PLANS ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT, AND MAY NOT APPEAR IN PROFILE OR SECTION VIEWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL AGENCIES INVOLVED AND SHALL LOCATE ALL FACILITIES PRIOR TO EXCAVATION IN ANY AREA. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA), TOLL FREE AT 1-800-642-2444, MCWD, THE CITY OF MARINA, AND STATE PARKS, A MINIMUM 5 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
5. THE CONTRACTOR SHALL CONTINUALLY REVIEW JOB SITE CONDITIONS. CONDITIONS REQUIRING CONSTRUCTION DIFFERENT FROM THAT SHOWN ON THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY AND PRIOR TO PROCEEDING WITH THE AFFECTED CONSTRUCTION.
6. THESE DRAWINGS REPRESENT THE FINISHED CONDITION AND UNLESS OTHERWISE INDICATED, THEY DO NOT SHOW THE METHOD OF CONSTRUCTION.
7. ALL IMPROVEMENTS SHOWN OR INDICATED ON THESE DRAWINGS ARE TO BE CONSTRUCTED AND/OR INSTALLED BY THE CONTRACTOR IN THIS PROJECT, UNLESS THEY ARE CALLED OUT AS: "EXISTING", "FUTURE", "NIC", "NOT A PART", OR HAVE SOME OTHER EXCLUDING NOTATION.

   7.1. TYPICALLY ALL LINE WORK DISPLAYED IN BOLD OR BLACK LINEWORK INDICATES NEW WORK, AND GRAY OR SCREENED LINE WORK INDICATES EXISTING WORK OR NEW WORK SCREENED BACK FOR CLARITY.
8. THE CONTRACTOR SHALL KEEP A SET OF PROJECT DRAWINGS ON WHICH RECORD INFORMATION SHALL BE PLACED NOTING DEVIATIONS FROM THE PLANS IN THE LOCATION, GRADE, SIZE, TYPE, AND SCOPE OF WORK WHICH IS CONSTRUCTED.
9. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) REQUIREMENTS AND STANDARDS SHALL BE OBSERVED AT THE JOB SITE AT ALL TIMES.
10. CONTRACTOR SHALL ORGANIZE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCEMENT OF WORK. THE MEETING SHALL INCLUDE (AT A MINIMUM) THE OWNER/REPRESENTATIVE, CONTRACTORS, SUBCONTRACTORS, ENGINEER OF RECORD, SOILS ENGINEER, PERTINENT UTILITY COMPANIES, AND SURVEYOR.
11. PARTIAL TOPOGRAPHIC INFORMATION HAS BEEN DELINEATED ON THESE PLANS.
12. NO CONSTRUCTION SHALL BE STARTED WITHOUT PLANS APPROVED BY MCWD AND IN COORDINATION WITH STATE PARKS. MCWD AND STATE PARKS SHALL BE NOTIFIED AT LEAST 5 WORKING DAYS PRIOR TO START OF CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS OR PRIOR NOTIFICATION TO MCWD AND STATE PARKS WILL BE REJECTED AND WILL BE AT THE CONTRACTOR'S RISK.
13. SOILS TESTS SHALL BE DONE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS. ALL TESTS MUST BE MADE WITHIN 15 DAYS PRIOR TO THE PLACEMENT OF MATERIAL. THE TEST RESULTS SHALL CLEARLY INDICATE THE LOCATION AND SOURCE OF THE MATERIAL.
14. COMPACTION TESTS SHALL BE MADE ON SUB-GRADE MATERIAL AND MATERIAL IN ACCORDANCE WITH THESE DRAWINGS AND THE SPECIFICATIONS. SAID TESTS SHALL BE MADE PRIOR TO THE PLACEMENT OF THE NEXT MATERIAL.
15. THE ENGINEER OF RECORD SHALL PERFORM PERIODIC REVIEWS OF COMPLETED WORK TO DETERMINE GENERAL CONFORMANCE WITH THE APPROVED PLANS. THE CONTRACTOR SHALL CORRECT ANY DIFFERENCES FOUND BY SUCH SURVEY AND WILL PROVIDE ALL CONTRACTOR'S RECORDS KEPT DURING THE COURSE OF CONSTRUCTION TO THE ENGINEER OF RECORD FOR PREPARATION OF RECORD DRAWINGS.
16. THE MCWD INSPECTOR ACTING ON BEHALF OF MCWD MAY REQUIRE REVISIONS IN THE PLANS TO RESOLVE UNFORESEEN PROBLEMS THAT MAY ARISE IN THE FIELD. ALL REVISIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER OF RECORD.
17. THE ENGINEER OF RECORD MUST VERIFY THAT THE IMPROVEMENTS, WHEN COMPLETED, ARE IN CONFORMANCE WITH THE PLANS PRIOR TO THE REQUEST FOR FINAL INSPECTION. RECORD DRAWINGS ARE TO BE PREPARED FOLLOWING THE REQUIREMENTS DEFINED IN THE TECHNICAL SPECIFICATIONS. THE CIVIL ENGINEER PREPARING THE RECORD DRAWING PLANS WILL BE PRESENT WHEN THE FINAL INSPECTION IS MADE.
18. ALL PERTINENT UTILITY COMPANIES SHALL BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION.
19. A CITY OF MARINA ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK DONE WITHIN ANY ROAD RIGHT-OF-WAY.

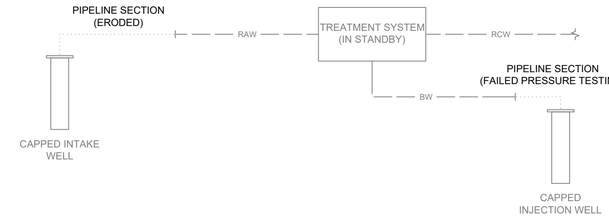
CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE HOURS OF 7:00AM TO 5:00PM MONDAY THROUGH FRIDAY UNLESS APPROVED BY MCWD,THE CITY, AND STATE PARKS.

ENGINEERS PRIVATE NOTICE TO CONTRACTOR

~~CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD WALLACE GROUP, AND IT'S EMPLOYEE'S, OFFICER'S, AND AGENT'S, HARMLESS AGAINST ANY AND ALL CLAIMS BY PARTIES ARISING FROM, OR RELATED TO, ANY AND ALL DAMAGES, INCLUDING LEGAL COSTS AND ATTORNEY FEES, RESULTING FROM INTERFERENCE WITH INTERRUPTION OF, DAMAGE TO, OR ANY AND ALL INJURIES WHICH RESULT FROM DAMAGE CAUSED TO SUBSURFACE INSTALLATION AS DEFINED IN GOVERNMENT CODE 4216.1(d), WHICH IS UNFORESEEN AND DESPITE ENGINEER'S EFFORT DURING THE DESIGN PROCESS WAS NOT LOCATED, EXCEPTING ONLY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ENGINEER IN PROVIDING ITS SERVICES.~~

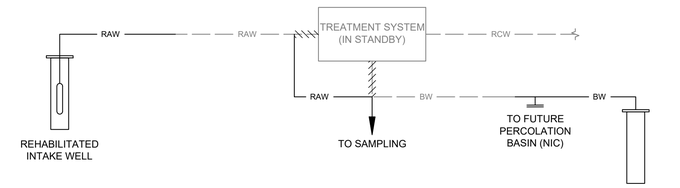
1

PROCESS FLOW DIAGRAM SCHEMATIC



EXISTING CONDITIONS

NOTE: DIAGRAM IS SCHEMATIC IN NATURE



PROPOSED IMPROVEMENTS

NOTE: DIAGRAM IS SCHEMATIC IN NATURE AND DOES NOT INCLUDE BID ALTERNATIVES

WALLACE GROUP®
CIVIL AND TRANSPORTATION ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING / GIS SOLUTIONS
WATER RESOURCES
612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

REGISTERED PROFESSIONAL ENGINEER
ZACHARY C. MARKOW
No. 92952
CIVIL
STATE OF CALIFORNIA

SIGNATURE

DATE SIGNED

MARINA COAST WATER DISTRICT
RESERVATION ROAD DESAL PLANT RENOVATION
ABBREVIATIONS, LEGEND, AND NOTES

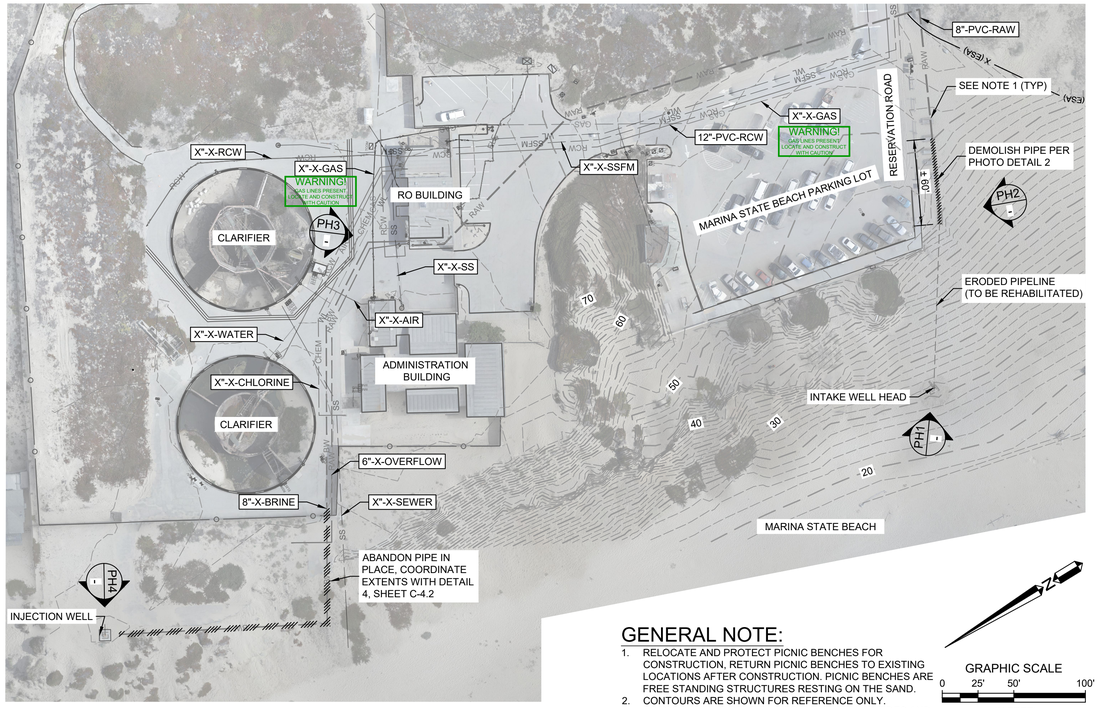
Know what's below. Call before you dig.

Rev.	Date	Description of Revisions	By
1	12/8/2025	BID ADDENDA 1	LJF

JOB #: 1045-11
DESIGNERS: ZCM
DRAWN BY: LJF
DATE: 12/07/25

DRAWING NO.
G-2.0
2 OF 18 SHEETS

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



DEMOLITION SITE PLAN

GENERAL NOTE:

1. RELOCATE AND PROTECT PICNIC BENCHES FOR CONSTRUCTION. RETURN PICNIC BENCHES TO EXISTING LOCATIONS AFTER CONSTRUCTION. PICNIC BENCHES ARE FREE STANDING STRUCTURES RESTING ON THE SAND.
2. CONTOURS ARE SHOWN FOR REFERENCE ONLY. TOPOGRAPHY IS SENSITIVE TO WEATHER AND TIDES AND SUBJECT TO CHANGE, CONTRACTOR SHALL SURVEY AS NEEDED.

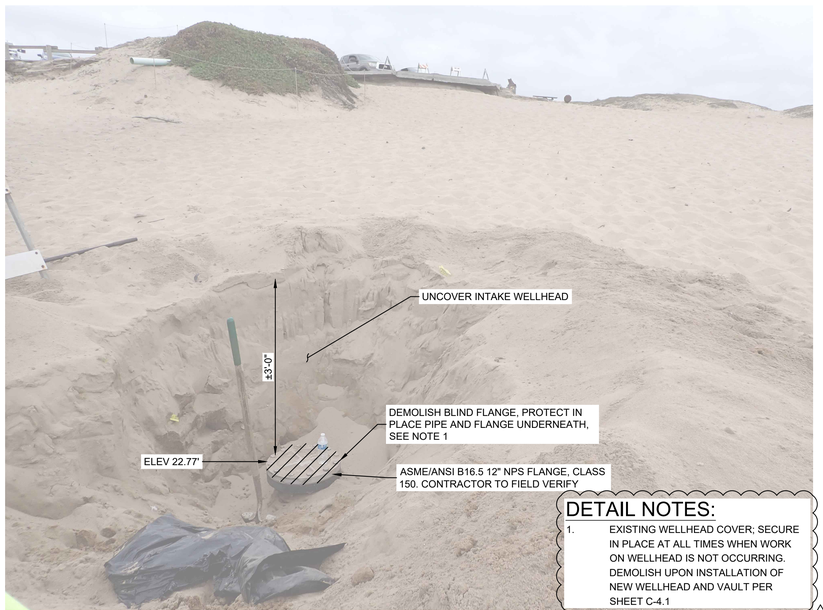
GRAPHIC SCALE
0 25' 50' 100'
(IN FEET)
1 IN = 50 FT

SCALE: 1" = 50'

DETAIL NOTES:
1. THE INJECTION WELL SHALL BE COVERED AND SECURED AT ALL TIMES. REFER TO SPECIFICATION 01 35 00. SEE SHEET C-4.3, DETAIL 7 FOR TEMPORARY HATCH COVER CONCEPT

PHOTO DETAIL 4: INJECTION WELL

SCALE: NTS



DETAIL NOTES:
1. EXISTING WELLHEAD COVER; SECURE IN PLACE AT ALL TIMES WHEN WORK ON WELLHEAD IS NOT OCCURRING. DEMOLISH UPON INSTALLATION OF NEW WELLHEAD AND VAULT PER SHEET C-4.1

PHOTO DETAIL 1: INTAKE WELLHEAD

SCALE: NTS

PHOTO DETAIL 2: INTAKE PIPE

SCALE: NTS

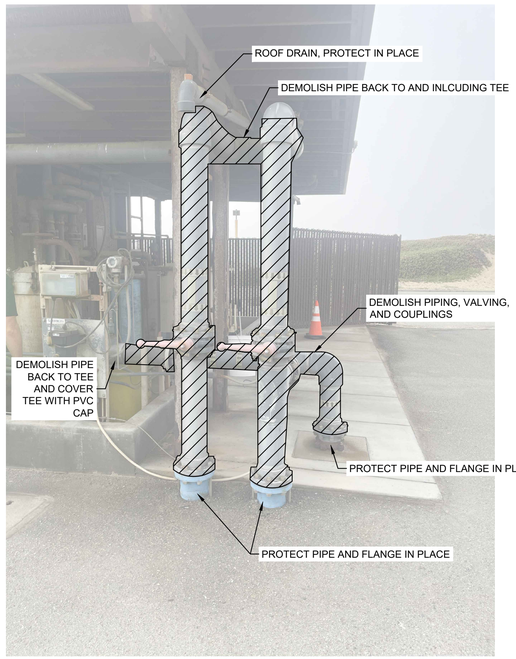


PHOTO DETAIL 3: RO PIPING

SCALE: NTS

811 Know what's below. Call before you dig.

Rev.	Date	Description of Revisions	By
1	12/8/2025	BID ADDENDA 1	LJF

WALLACE GROUP®
CIVIL AND TRANSPORTATION ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING / GIS SOLUTIONS
WATER RESOURCES

612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

REGISTERED PROFESSIONAL ENGINEER
ZACHARY C. MARKOW
No. 92952
CIVIL
STATE OF CALIFORNIA

SIGNATURE

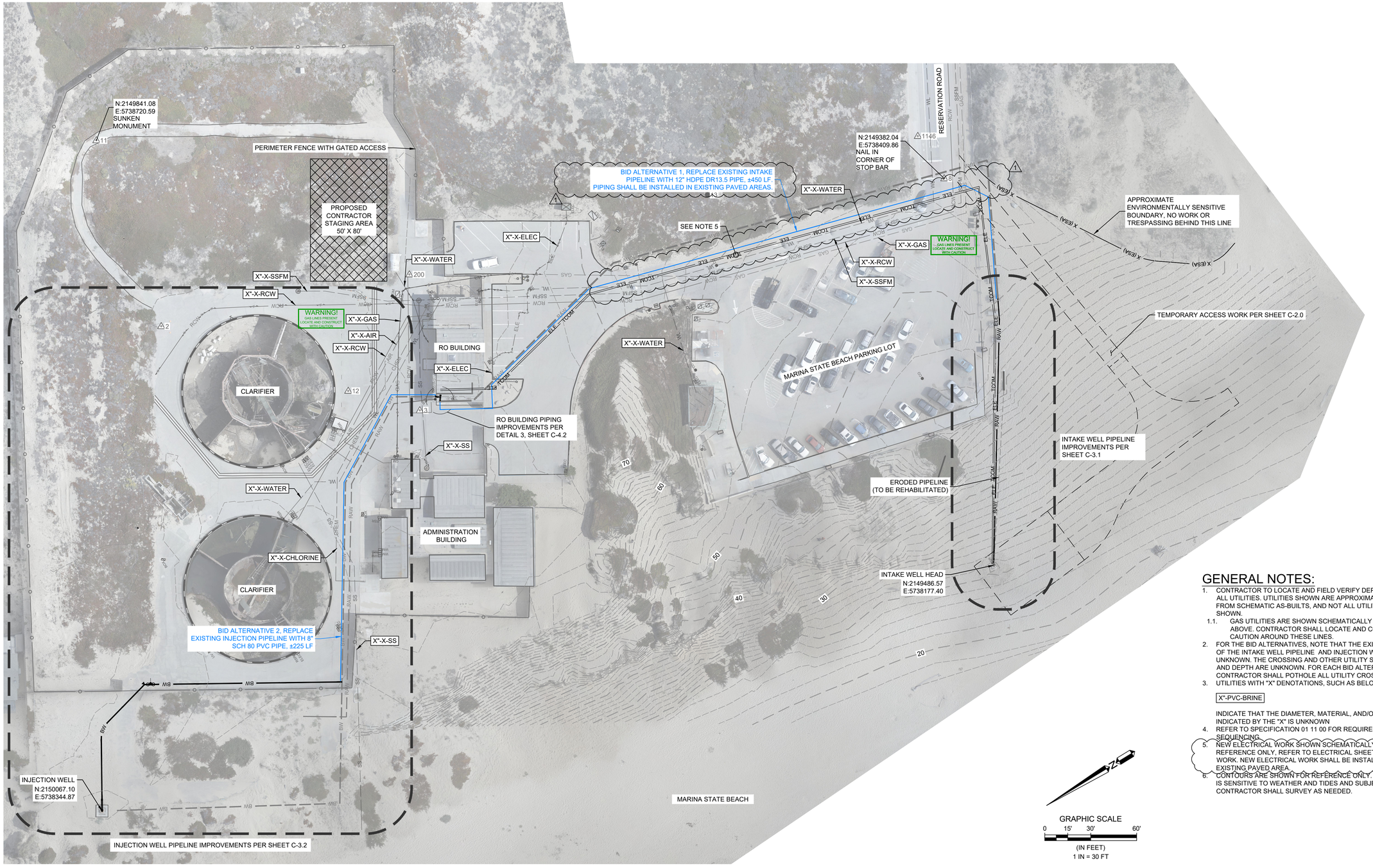
DATE SIGNED

MARINA COAST WATER DISTRICT
RESERVATION ROAD DESAL PLANT RENOVATION
DEMOLITION PLAN

JOB #: 1045-11
DESIGNERS: ZCM
DRAWN BY: LJF
DATE: 12/07/25

DRAWING NO.
C-1.0
3 OF 18 SHEETS

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



SITE PLAN

SCALE: 1" = 30'

GENERAL NOTES:

1. CONTRACTOR TO LOCATE AND FIELD VERIFY DEPTH AND SIZE OF ALL UTILITIES. UTILITIES SHOWN ARE APPROXIMATE IN LOCATION FROM SCHEMATIC AS-BUILTS, AND NOT ALL UTILITIES MAY BE SHOWN.
   1.1. GAS UTILITIES ARE SHOWN SCHEMATICALLY AS INDICATED ABOVE. CONTRACTOR SHALL LOCATE AND CONSTRUCT WITH CAUTION AROUND THESE LINES.
2. FOR THE BID ALTERNATIVES, NOTE THAT THE EXISTING DEPTH OF THE INTAKE WELL PIPELINE AND INJECTION WELL PIPELINE IS UNKNOWN. THE CROSSING AND OTHER UTILITY SIZES, LOCATION, AND DEPTH ARE UNKNOWN. FOR EACH BID ALTERNATIVE CONTRACTOR SHALL POTHOLE ALL UTILITY CROSSING.
3. UTILITIES WITH "X" DENOTATIONS, SUCH AS BELOW:

   X"-PVC-BRINE

   INDICATE THAT THE DIAMETER, MATERIAL, AND/OR PROCESS, INDICATED BY THE "X" IS UNKNOWN
4. REFER TO SPECIFICATION 01 11 00 FOR REQUIREMENTS SUCH AS SEQUENCING.
5. NEW ELECTRICAL WORK SHOWN SCHEMATICALLY FOR REFERENCE ONLY, REFER TO ELECTRICAL SHEETS FOR NEW WORK. NEW ELECTRICAL WORK SHALL BE INSTALLED IN EXISTING PAVED AREA.
6. CONTOURS ARE SHOWN FOR REFERENCE ONLY. TOPOGRAPHY IS SENSITIVE TO WEATHER AND TIDES AND SUBJECT TO CHANGE, CONTRACTOR SHALL SURVEY AS NEEDED.

Know what's below. Call before you dig.

Rev.	Date	Description of Revisions	By
1	12/8/2025	BID ADDENDA 1	ZCM

WALLACE GROUP®
CIVIL AND TRANSPORTATION ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING / GIS SOLUTIONS
WATER RESOURCES

612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

REGISTERED PROFESSIONAL ENGINEER
ZACHARY C. MARKOW
No. 92952
CIVIL
STATE OF CALIFORNIA

SIGNATURE

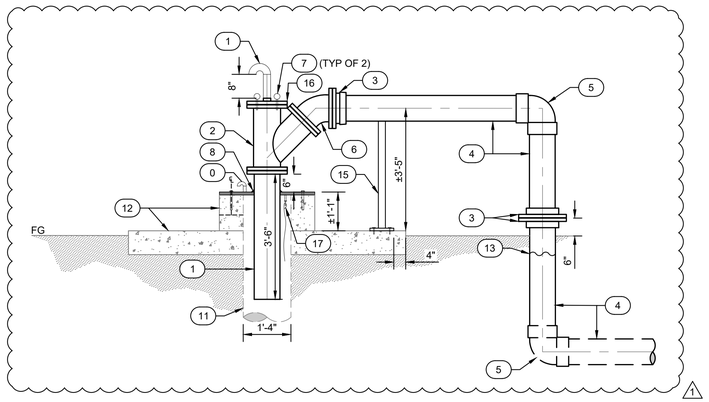
DATE SIGNED

MARINA COAST WATER DISTRICT
RESERVATION ROAD DESAL PLANT RENOVATION
SITE PLAN

JOB #: 1045-11
DESIGNERS: ZCM
DRAWN BY: LJF
DATE: 12/10/25

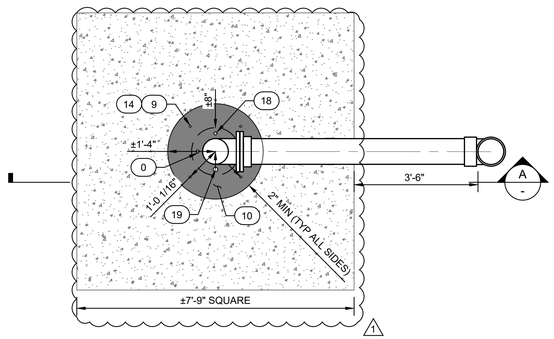
DRAWING NO.
C-3.0
5 OF 18 SHEETS

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3



A SECTION VIEW

SCALE: 6" = 1'-0"



INJECTION WELL SITE PLAN

SCALE: 6" = 1'-0"

REFERENCE KEYNOTES

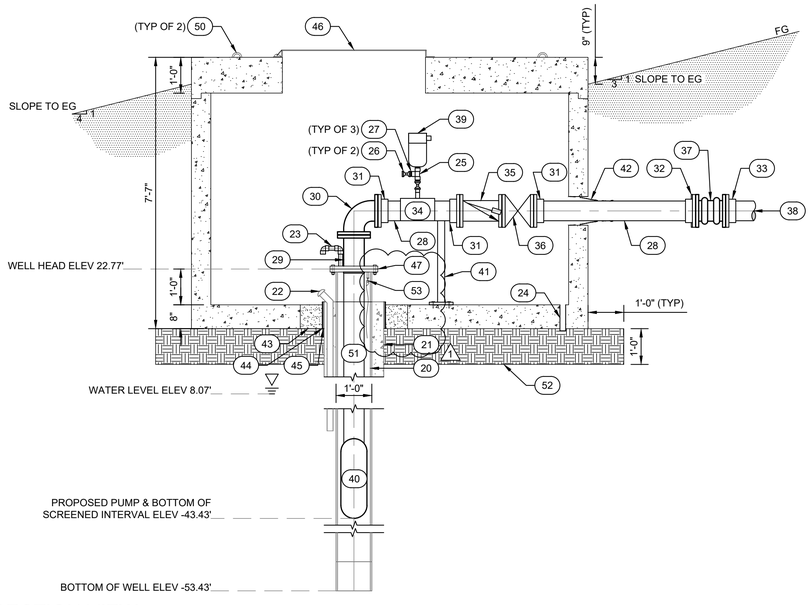
XX	DESCRIPTION
0	1" SST "CANDY CANE" STYLE VENT WITH BUG SCREEN
1	2" SST THREADED PIPE "CANDY CANE" STYLE VENT WITH BUG SCREEN
2	8" SCH 80 SST WYE, FLG X FLG X FLG
3	8" SCH 80 PVC FLANGE ADAPTER
4	8" SCH 80 PVC PIPE
5	8" SCH 80 PVC 45-DEGREE ELBOW
6	8" SCH 80 SST 45-DEGREE ELBOW, FLG X FLG
7	1/2" SST EYE BOLT
8	1/4" FILLET WELD, ALL AROUND
9	FOUR 1/2" SST 316 ADHESIVE CONCRETE ANCHORS, MINIMUM 6" EMBEDMENT, EQUALLY SPACED AROUND PIPE
10	1/2" SST 316 COVER PLATE
11	EXISTING WELL CASING
12	EXISTING CONCRETE
13	COAT PVC PIPE A MINIMUM OF 6" BENEATH GROUND SURFACE
14	COORDINATE TEMPORARY HATCH COVER, AS SHOWN IN SHEET C-4.3, DETAIL 7, AND REQUIREMENTS OF SPECIFICATION 01 35 00 WITH THE CONSTRUCTION AND BOLT HOLES OF THE STAINLESS STEEL COVER PLATE
15	316 SST ADJUSTABLE SADDLE PIPE SUPPORT
16	8" SST COMPANION FLANGE WITH 2" NPT CONNECTION
17	1/2" SST EYE BOLT WITH SST THREADED CABLE TO SUSPEND LEVEL TRANSDUCER
18	1" SST THREADED WELDOLET WITH SST THREADED PLUG
19	1 1/2" SST THREADED WELDOLET FOR LEVEL TRANSDUCER

1 SCALE: 6" = 1'-0"

REFERENCE KEYNOTES

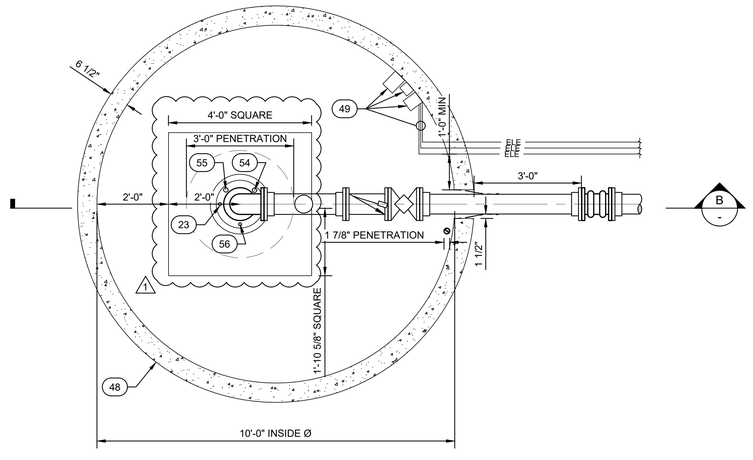
XX	DESCRIPTION
20	EXISTING 12" FRP WELL CASING
21	EXISTING CONCRETE SEAL
22	EXISTING 2" GRAVEL FEED TUBE
23	1" SST "CANDY CANE" STYLE VENT
24	1" SCH 80 PVC PIPE DRAIN PIPE
25	1" 316 SST TEE, THREADED
26	1" 316 SST BALL VALVE, THREADED
27	1" 316 SST NIPPLE, MNPT X MNPT
28	6" SCH 80 PVC PIPE
29	6" 316 SST PIPE, FLG X FLG
30	6" 316 SST 90-DEGREE BEND, FLG X FLG
31	6" PVC FLANGE ADAPTER
32	6" PVC VAN STONE FLANGE ADAPTER
33	6" HDPE WELD ON FLANGE WITH 316 SST BACKING PLATE
34	6" X 1" PVC SADDLE TAP
35	6" PVC SWING CHECK VALVE, FLG X FLG
36	6" PVC GATE VALVE, FLG X FLG
37	6" PROCO UG234L RUBBER EXPANSION JOINT OR APPROVED EQUAL
38	6" DR13.5 HDPE PIPE
39	VAL-MATIC RESILITE COMBINATION AIR VALVE, OR APPROVED EQUAL
40	SUBMERSIBLE VERTICAL TURBINE PUMP & MOTOR, OFCI
41	316 SST ADJUSTABLE SADDLE PIPE SUPPORT
42	KOR-N-SEAL PIPE BOOT, OR APPROVED EQUAL
43	NON-SHRINK GROUT
44	SPLIT PIPE SLEEVE
45	MIN 1/2" THICK LAYER OF SYNTHETIC RUBBER CAULKING
46	HATCH PER SHEET C-4.3, DETAIL 6
47	FURNISH AND INSTALL 316 SST WELLHEAD FLANGE ATTACHED TO EXISTING CASING FLANGE WITH FLANGED TOP AND THREADED BOTTOM FOR PIPING CONNECTIONS, PER MANUFACTURER'S RECOMMENDATION
48	POLYMER CONCRETE MANHOLE, INCLUDING BASE AND LID
49	ELECTRICAL INFRASTRUCTURE SHOWN SCHEMATICALLY FOR REFERENCE ONLY, REFER TO SHEET E-3.0
50	316 SST LIFTING EYES - PER MANUFACTURER'S RECOMMENDATION
51	6" 316 SST PIPE, THREADED
52	SCARIFY AND RE-COMPACT EXISTING SOIL TO A FLAT, LEVEL SURFACE AT 95% RELATIVE COMPACTION, AND PER POLYMER CONCRETE VAULT MANUFACTURER'S RECOMMENDATIONS
53	1/2" SST EYE BOLT WITH SST THREADED CABLE TO SUSPEND LEVEL TRANSDUCER
54	1 1/2" SST THREADED WELDOLET WITH SST THREADED PLUG
55	1 1/2" SST THREADED WELDOLET FOR LEVEL TRANSDUCER
56	1" SST THREADED WELDOLET WITH SST THREADED PLUG

1



B SECTION VIEW

SCALE: 6" = 1'-0"



INTAKE WELL SITE PLAN

SCALE: 6" = 1'-0"

DETAIL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ALL METAL HARDWARE AND APPURTENANCES SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED.
3. ALL ABOVEGROUND PVC PIPE, FITTINGS, AND APPURTENANCES SHALL BE COATED PER SPECIFICATION 09 90 00.

1 INJECTION WELL ASSEMBLY REHABILITATION

DETAIL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS
2. ALL METAL HARDWARE AND APPURTENANCES SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED
3. REHABILITATE AND FLUSH WELL PRIOR TO WELL HEAD AND PUMP CONSTRUCTION AND INSTALLATION PER SPECIFICATION 01 11 00.
4. WELL ELEVATIONS FROM THE EKI ENVIRONMENT & WATER, REVIEW OF AVAILABLE VIDEO LOGS AND OTHER DATA ON FORMER DESALINATION PLANT WELLS (EKI B6009.23), DATED 1/13/2024. WELL ELEVATIONS ARE SHOWN SCHEMATICALLY FOR REFERENCE ONLY, AND MAY NOT BE TO SCALE.

2 INTAKE WELL ASSEMBLY REHABILITATION

SCALE: 6" = 1'-0"

Know what's below. Call before you dig.

Rev.	Date	Description of Revisions	By
1	12/8/2025	BID ADDENDA 1	LJF

WALLACE GROUP®
CIVIL AND TRANSPORTATION ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING / GIS SOLUTIONS
WATER RESOURCES

612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

REGISTERED PROFESSIONAL ENGINEER
ZACHARY C. MARKOW
No. 92952
CIVIL
STATE OF CALIFORNIA

SIGNATURE

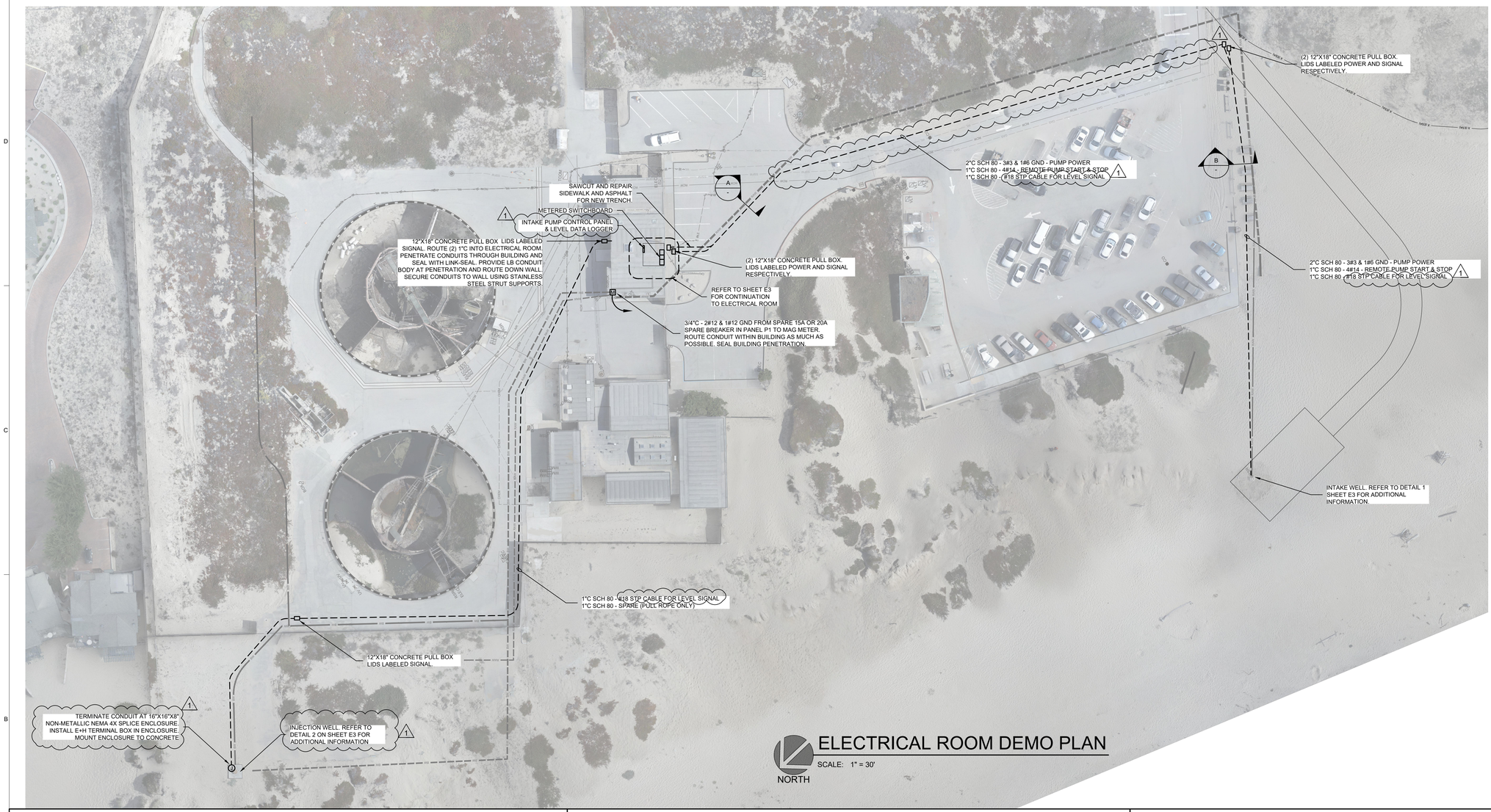
DATE SIGNED

MARINA COAST WATER DISTRICT
RESERVATION ROAD DESAL PLANT RENOVATION
CIVIL DETAILS, SHEET 1 OF 3

JOB #: 1045-11
DESIGNERS: ZCM
DRAWN BY: LJF
DATE: 12/07/25

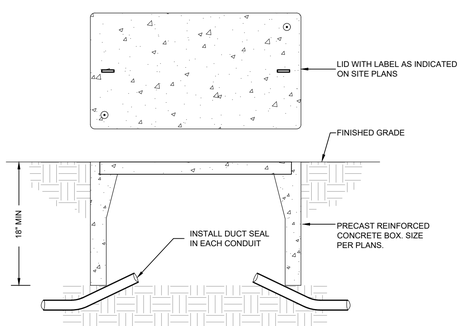
DRAWING NO.
C-4.1
9 OF 18 SHEETS

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
5



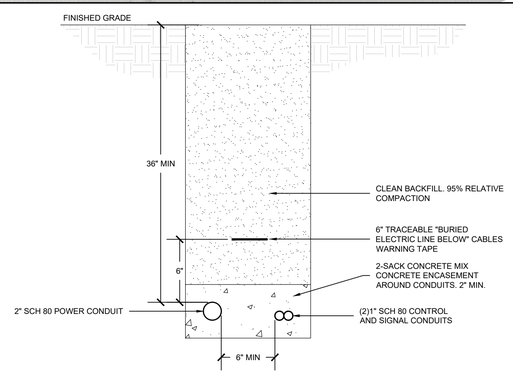
ELECTRICAL ROOM DEMO PLAN

SCALE: 1" = 30'



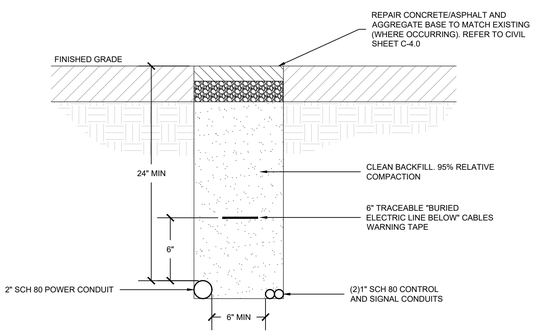
C TYPICAL PULL BOX DETAIL

SCALE: NTS



B TRENCH SECTION DETAIL B

SCALE: NTS



A TRENCH SECTION DETAIL A

SCALE: NTS

WALLACE GROUP®
CIVIL AND TRANSPORTATION ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING / GIS SOLUTIONS
WATER RESOURCES

612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

REGISTERED PROFESSIONAL ENGINEER
GARRETT OTTO
20833
EXP. 9-30-26
ELECTRICAL
STATE OF CALIFORNIA

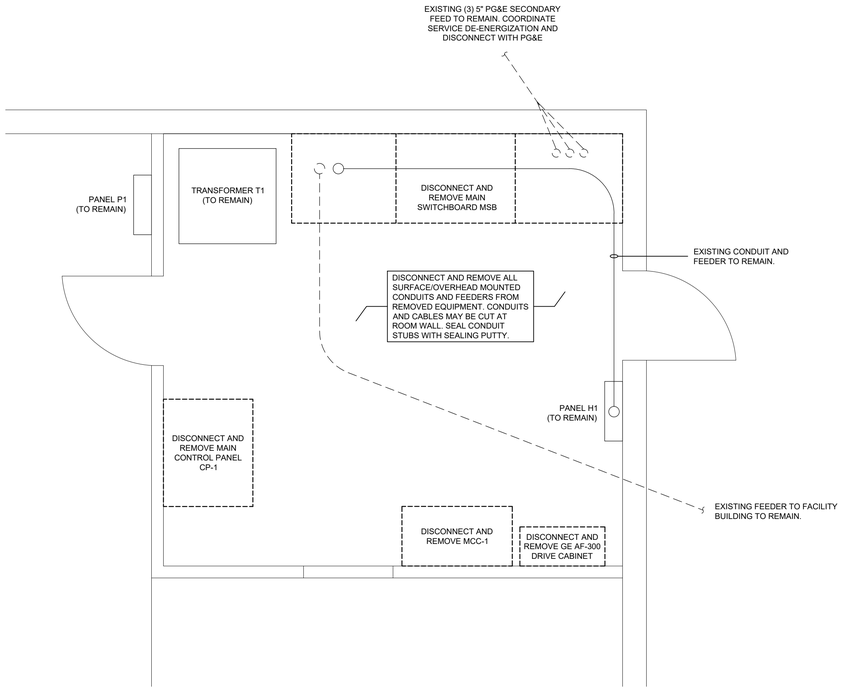
OTTO ELECTRICAL
OTTO ELECTRICAL, INC.
SAN LUIS OBISPO, CA
GOTTO@OTTOELECTRICAL.COM
805.459.4329

MARINA COAST WATER DISTRICT
RESERVATION ROAD DESAL PLANT RENOVATION
SITE ELECTRICAL PLAN

JOB #: 25-014
DESIGNERS: OTTO
DRAWN BY: OTTO
DATE: 12/10/2025

DRAWING NO.
E2
16 OF 18 SHEETS

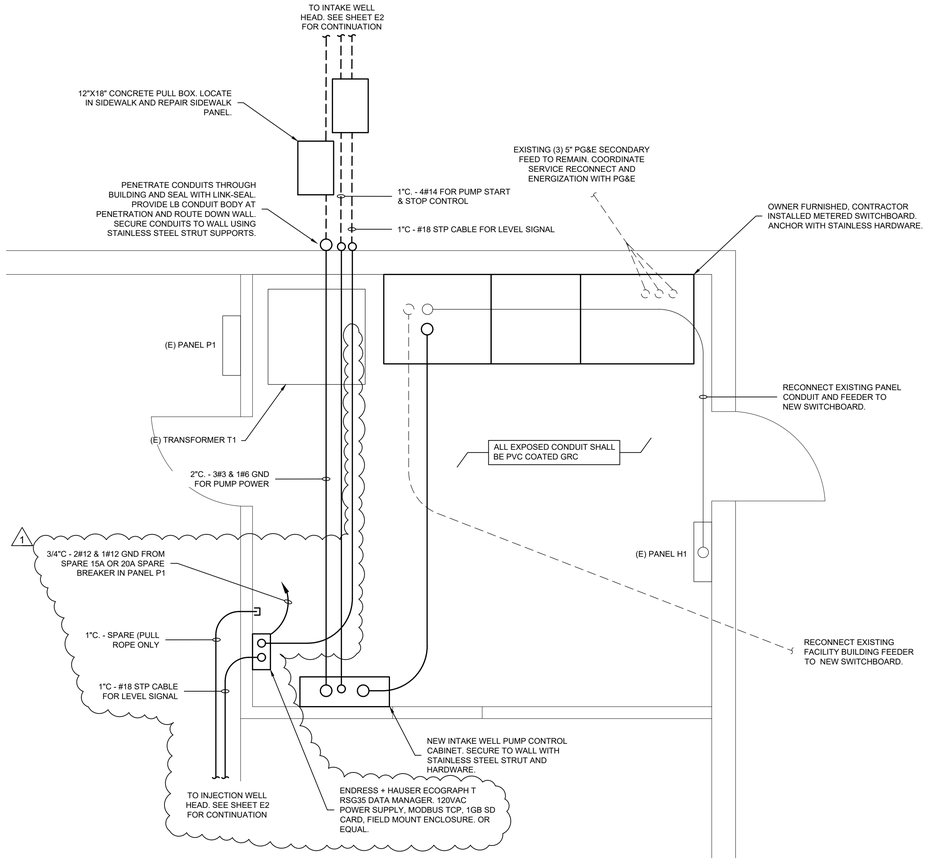
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
5



NORTH

ELECTRICAL ROOM DEMO PLAN

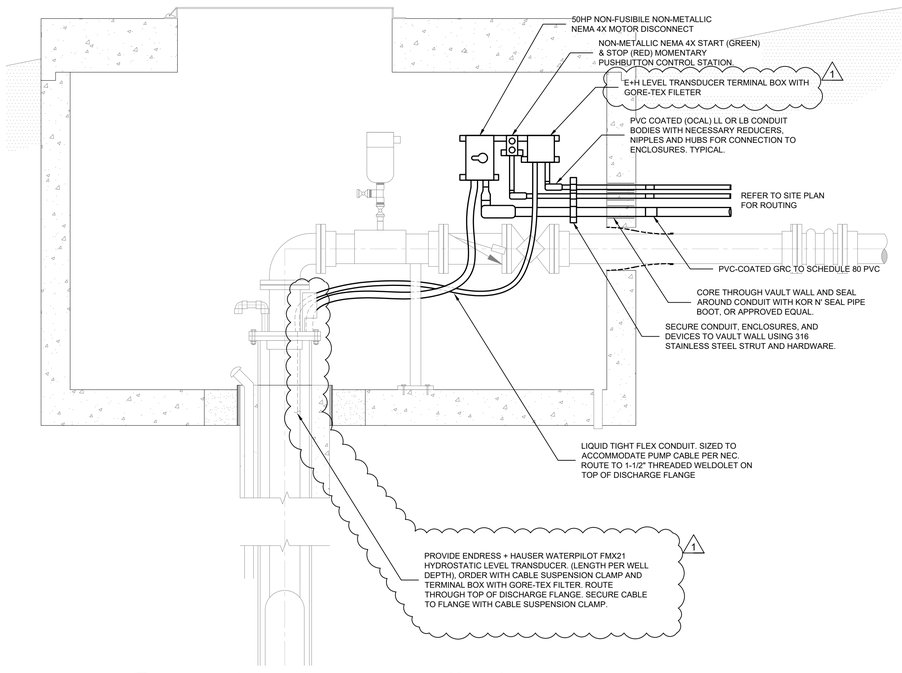
SCALE: 1/2" = 1'-0"



NORTH

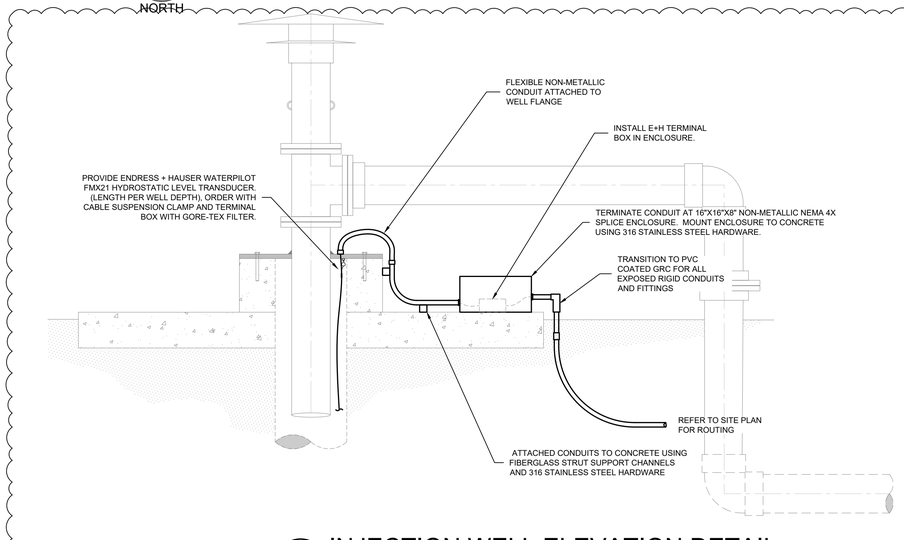
ELECTRICAL ROOM PROPOSED PLAN

SCALE: 1/2" = 1'-0"



1 INTAKE WELL ELEVATION DETAIL

SCALE: 3/4" = 1'-0"



2 INJECTION WELL ELEVATION DETAIL

SCALE: 3/4" = 1'-0"

WALLACE GROUP®
CIVIL AND TRANSPORTATION ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING / GIS SOLUTIONS
WATER RESOURCES

612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

REGISTERED PROFESSIONAL ENGINEER
GARRETT OTTO
20833
EXP. 9-30-26
ELECTRICAL
STATE OF CALIFORNIA

OTTO ELECTRICAL
OTTO ELECTRICAL, INC.
SAN LUIS OBISPO, CA
GOTTO@OTTOELECTRICAL.COM
805.459.4329

MARINA COAST WATER DISTRICT
RESERVATION ROAD DESAL PLANT RENOVATION
ELECTRICAL ROOM PLAN

JOB #: 25-014
DESIGNERS: OTTO
DRAWN BY: OTTO
DATE: 12/10/2025

DRAWING NO.
E3
17 OF 18 SHEETS