

BEAUMONT-CHERRY VALLEY WATER DISTRICT
WELL 14 PUMPING UNIT REPAIR AND WELL REHABILITATION
CONTRACT FOR PUBLIC WORK

1. Parties and Date

This Contract is entered into this ____ day of _____, 2021 between the BEAUMONT-CHERRY VALLEY WATER DISTRICT, a California Irrigation (Special) District ("District"), and _____ ("Contractor"), for the Work described as follows: Removing, Refurbishing, Furnishing, and Installing Well 14 Pumping Unit Rehabilitation.

2. Consideration

In consideration of the mutual covenants hereinafter contained, District and Contractor agree to comply with the terms of this Contract and to faithfully perform their duties hereunder.

3. Duties of Contractor

3.1 Contractor agrees to furnish all labor, tools, and equipment necessary to complete the work hereinafter described. Contractor hereby guarantees that all work to be performed by it hereunder will be performed in a good and workmanlike manner. The Work to be performed by Contractor is described on Exhibit "A" attached hereto and by this reference incorporated herein. Pursuant to Public Contract Code Section 3300, Contractor shall possess an active and current Contractor's License, Class A or C-57, which shall be maintained throughout the term of this Contract.

3.2 Contractor shall complete all work required herein on or before **June 17, 2021**.

3.3 Contractor shall furnish District with labor and material releases from all subcontractors performing work on, or furnishing materials for, the job prior to final payment by District.

3.4 ~~Contractor shall furnish a performance bond in the amount of the full contract price, a payment bond in the amount of 50% of the full contract price, and a maintenance bond in the amount of the full contract price issued in forms consistent with industry standards by United States Treasury authorized bonding companies as approved by District, prior to commencement of the Work. Bonds shall be furnished on the forms attached at the back of this Contract, if Additive Bid Item is exercised. Contractor hereby guarantees that all materials and workmanship furnished by him under the Contract will meet fully all requirements thereof as to quality or workmanship and of materials furnished by him. Contractor hereby agrees to replace all materials and pay for all installation costs made necessary by defects in materials or workmanship supplied by him that become evident within twelve (12) months after the date of final payment and to pay for all work necessary to remove, restore, and replace the materials to full serviceability and to full compliance with the requirements of the~~

~~Contract, including the test requirements for any part of the materials furnished hereunder which, during said twelve (12) month period, are found to be deficient with respect to any provision of the Contract. Contractor also agrees and does hereby hold District harmless from claims of any kind which may arise from injury or damage due to said defects. Contractor shall replace all defective materials promptly upon receipt of written orders for same from District. If Contractor fails to replace all defective materials promptly, District may secure the service of others to do this work, and Contractor and his surety shall be liable to District for the cost, including removal and replacement thereof. The guarantees, indemnifications and agreements set forth above shall continue to be secured following completion of the project by Contractor providing a maintenance bond in the amount of 100% of the full contract price on a form commonly used in the industry and acceptable to the District, and for this purpose said bond shall remain in force for a period of one (1) year after the date of the final payment.~~

3.5 Copies of the prevailing rate of per diem wages for each craft, classification or type of worker needed to execute this Contract are available to interested parties upon request. If the total amount of this Contract is \$1,000 or more, Contractor agrees to pay such prevailing rates to each workman needed to execute the work required under this Contract and further agrees to comply with the penalty provisions of Section 1775 of the Labor Code in the event of its failure to pay prevailing rates. Pursuant to Section 1727 of the Labor Code, all wages and penalties withheld for failure of Contractor to pay such per diem wages shall be transferred by District to the State Labor Commissioner for disbursement, should Contractor fail to bring suit for recovery within ninety (90) days after completion of the Contract or acceptance of the work.

3.6 Contractor shall pay travel subsistence payments to each workman needed to execute the work, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Section 1773.8 of the Labor Code.

3.7 When Contractor employs workmen in an apprenticeable craft or trade, Contractor shall comply with the provisions of Section 1777.5 of the Labor Code with respect to the employment of properly registered apprentices upon public works. The primary responsibility for compliance with said section for all apprenticeable occupations shall be with Contractor.

3.8 Contractor is advised that eight (8) hours labor constitutes a legal day's work. Pursuant to Section 1813 of the Labor Code, Contractor shall forfeit a penalty of \$25.00 per worker for each day that each worker is permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week, except when payment for overtime is made at not less than one and one-half (1-1/2) times the basic rate for that worker.

3.9 In accordance with the requirements of Labor Code Section 1776, Contractor shall keep accurate payroll records on forms provided by the Division of Labor Standards Enforcement, or keep payroll records containing the same information required by such forms, and shall make any such records available for inspection.

3.10 Contractor shall keep himself fully informed of all laws and regulations in any manner affecting the performance of the Contract work, and shall indemnify District and District's agents against any liability arising from violation of any such law or regulation.

3.11 Contractor shall at its own expense maintain at least the following insurance coverages throughout the performance of this Contract:

(a) Worker's compensation insurance coverages for all persons employed or to be employed in the performance of this Contract, which insurance shall at all times be maintained in strict accordance with the requirements of the current California Worker's Compensation Insurance Laws.

(b) General commercial liability insurance coverage of at least \$1,000,000 per occurrence and \$2,000,000 general aggregate insuring Contractor and naming District as an additional insured for all claims for bodily injury, personal injury and property damage, arising out of or in connection with any operations under this Contract.

(c) Automobile liability insurance coverage with a limit of liability of \$1,000,000 per accident Combined Single Limit.

(d) Course of construction insurance with a limit of liability equal to the full contract amount, unless waived in writing by District.

Prior to commencement of any work under this Contract, Contractor shall obtain and furnish to District a Certificate of Insurance as to each type of insurance required, which certificate shall be on the form provided to Contractor by District.

3.12 Contractor shall be responsible for all loss and damage which may arise out of the nature of the work agreed to herein, or from the action of the elements, or from any unforeseen difficulties which may arise or be encountered in the prosecution of the work until same is fully completed and accepted by District. However, Contractor shall be responsible for damage proximately caused by an act of God within the meaning of Section 4150 of the Government Code only to the extent of five percent (5%) of the contract amount.

3.13 Contractor shall indemnify and hold harmless District, its agents and employees, from and against all claims, damages, losses and expenses, including attorney's fees, arising out of or resulting from performance of work under this Contract and which are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, caused in whole or in part by any negligent or willful act or omission of the Contractor or anyone directly or indirectly employed by him or for whose acts he may be liable.

3.14 Contractor shall be responsible for securing and paying for all permits and licenses necessary to perform the work described herein.

3.15 If the work entails trenching of five (5) feet or more in depth, Contractor shall make adequate provisions for shoring, bracing, sloping, or other protection from the hazard of caving ground.

3.16 As required by Public Contract Code Section 7104, Contractor shall promptly, and prior to disturbance of conditions, notify District of (a) any material discovered in excavation that Contractor believes to be a hazardous waste that is required to be removed to a Class I, Class II, or Class III disposal site; (b) subsurface or latent physical conditions at the site differing from those indicated by District; and (c) unknown physical conditions of an unusual nature at the site, significantly different from those ordinarily encountered in such contract work. Upon notification, District will promptly investigate the conditions to determine whether a change order is appropriate. In the event of a dispute, Contractor shall not be excused from any scheduled completion date but will retain all rights provided by the Contract or by law for resolving the dispute.

4. District's Responsibilities

4.1 As consideration for performance of the work required herein, District agrees to pay Contractor the total contract amount of _____, (\$_____), provided that such amount shall be subject to adjustment pursuant to written change orders signed in advance by District.

4.2 Contractor shall submit progress payment invoices to District at the end of each calendar month during the term of the Contract. All progress payment invoices shall be subject to approval by the District prior to payment by the District. Such progress payment invoices shall be made in accordance with Section 20104.50 of the California Public Contract Code, requiring District to make a determination of suitability of the payment request within seven (7) days of receipt of such request and further requiring District to make payment on properly submitted progress payment invoices within thirty (30) days in order to avoid interest payments to the Contractor upon such amounts.

4.3 When the Contractor determines that he has completed the work required herein, Contractor shall so notify District in writing and shall furnish all labor and material releases required by Section 3.3 of this Contract. District shall thereupon inspect the work and, if acceptable, shall pay to Contractor the contract price, less any amount which District may be authorized or directed by law to retain. Payment of retention proceeds due to Contractor shall be made no later than sixty (60) calendar days after such final acceptance by District, in accordance with Section 7107 of the California Public Contract Code. Contractor is hereby alerted to provisions of Section 7107 of the California Public Contract Code, requiring Contractor to pay each of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received, within ten (10) calendar days from the time that all or any portion of such retention proceeds are received by Contractor from District. District will allow Contractor to substitute qualified securities, deposited with District or a qualified escrow agent, in lieu of contract retentions in accordance with provisions of California Public Contract Code, Section 22300. The escrow agreement used in such instance shall be substantially similar to that form set out in Section 22300 of the Public Contract Code. District will provide this form to the Contractor upon request.

4.4 To the extent required by Section 4215 of the Government Code, District shall compensate Contractor for the costs of locating and repairing damage to underground utility facilities not due to the failure of Contractor to exercise reasonable care, and removing or relocating underground utility facilities not indicated in the construction drawings and for equipment necessarily idled during such work. Contractor shall not be assessed liquidated damages for delay caused by failure of District to provide for removal or relocation of such utility facilities.

5. Contractual Relationship

It is expressly agreed that Contractor is an independent contractor, and neither Contractor nor any of its employees shall be deemed employees of District. Contractor shall have full supervision over all workers on the job, including equipment, drivers, and operators, and neither District nor any of District's agents shall be held responsible for any action of Contractor under this Contract. Should any question arise regarding the meaning or import of any of the provisions of this Contract or written or oral instructions from District, the matter shall be referred to District's General Manager, whose decision shall be binding upon Contractor.

6. Assignment Forbidden

Contractor shall not assign or transfer this Contract or any right, title or interest herein without the prior written consent of District. If contractor attempts an assignment of this Contract or any right or interest herein, District may, at its option, terminate and revoke the Contract and shall thereupon be relieved from any and all obligations to Contractor or his assignee or transferee.

7. Time of Essence

Time is of the essence in the performance of this Contract. Contractor will be assessed liquidated damages in the amount of \$100.00 per calendar day for each day of unauthorized delay in completing performance.

8. Termination

This Contract may be terminated by District at any time by giving Contractor seven (7) days advance written notice. In the event of termination by District for any reason other than the fault of the Contractor, District shall pay Contractor for all work performed up to that time as provided herein. In the event of breach of the Contract by Contractor, District may terminate the Contract immediately without notice, may reduce payment to the Contractor in the amount necessary to offset District's resulting damages, and may pursue any other available recourse against Contractor.

9. Dispute Resolution

Any separate demand by Contractor for the payment of money or damages shall be resolved in accordance with Public Contract Code Sections 20104 et seq., if they apply. Copies of those sections are available upon request and by this reference are incorporated herein.

10. Attorney's Fees and Costs

If any action is necessary to enforce or interpret the terms of this Contract, the prevailing party shall be entitled to recover from the losing party attorney's fees in an amount determined to be reasonable by the court, together with costs and necessary disbursements.

11. Notices

Any notice required to be given under the terms of this Contract shall be sufficient and complete upon depositing the same in the United States mail, with postage prepaid and addressed as follows:

DISTRICT
Beaumont-Cherry Valley Water
District
P.O. Box
2037560 Magnolia Avenue
Beaumont, CA 9223

Contractor

12. Counterparts

This Contract shall be executed in two (2) counterparts, each of which shall constitute an original.

13. Certification of License

Contractor certifies that as of the date of execution of this contract, Contractor has a current contractor's license of the classification indicated below Contractor's signature hereto.

IN WITNESS WHEREOF, each of the parties has caused this Contract to be executed on the day and year first above written.

ATTEST:

(Contractor)

Secretary

By:

Title:

Contractor's License Number & Classification

**BEAUMONT-CHERRY VALLEY
WATER DISTRICT**

ATTEST:

By:

Daniel K. Jagers
General Manager

Andy Ramirez
Secretary to the Board

CERTIFICATION

LABOR CODE – SECTION 1861

I, the undersigned Contractor, am aware of the provisions of Section 3700 et seq. of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the Code, and I, the undersigned Contractor, agree to and will comply with such provisions before commencing the performance of the work of this Contract.

Contractor

By:

Title:

**BEAUMONT-CHERRY VALLEY WATER DISTRICT
WELL 14 REPAIR AND REHABILITATION WORK**

Exhibit A

- 1. Instruction to Bidders**
- 2. Bid Schedule I - Well 14 Pumping Unit Repair Work**
- 3. Bid Schedule II - Well 14 Rehabilitation Work**
- 4. Well 14 Pumping Unit Rehabilitation and Well Rehabilitation Special Requirements**

EXHIBIT A INSTRUCTIONS TO BIDDERS

FOR WELL 14 PUMPING UNIT REPAIR AND WELL REHABILITATION

A. INSTRUCTIONS TO BIDDERS

1. Responsible Bidders

Bidders are advised that in selecting a Contractor, Owner reserves the right to consider the financial responsibility and general competency of each Bidder, his trustworthiness, quality, fitness, capacity, and experience to satisfactorily perform the public works contract, as well as his reputation within the industry. Owner expects each Bidder to fully and truthfully disclose all information required of the Bidder by the Bidding Documents. Each Bidder must be properly licensed and must sign and submit his Proposal.

2. Completion of Bid Proposal and Supporting Documents

Bidder shall submit to the Owner completed Bid Schedules I and II included in the Bidding Documents. Owner will not accept proposals submitted in form other than the Bid Schedule format included in the Request for Proposals.

Bidder shall complete the Bid Schedules and supporting documents including any addenda or bulletins issued before receipt of bids and public opening of same.

Bidder shall complete in ink each blank on each page. Each entry shall be printed. The completed forms shall be without alterations, erasures, or interlineations. Bidder shall correct errors by striking or lining out mistakes and entering and initialing corrections immediately thereabove.

Owner may, at its sole discretion, reject any bid to which the Bidder has added conditions, limitations, provisions, or any alterations or interlineations. Owner may also, at its discretion, reject any bid for which the Bidder has failed to supply all requested information or has misrepresented any such information or any matter whatever. Pursuant to Business and Professions Code Section 7028.15, Owner will consider non-responsive and reject any bid submitted by a Contractor not licensed as required by law.

3. Omissions and Discrepancies

Should a Bidder find purported discrepancies in, or omissions from the Special Requirements, Basic Specifications, or other documents bound herein, or should Bidder be in doubt as to their meaning, Bidder shall **immediately** notify Owner in writing. Owner may then send written instructions or notification to all Bidders.

4. Signature and Seal

If the bid proposal is made by an individual, it shall be signed and his full name and his address shall be given; if it is made by a partnership, it shall be signed with the partnership name by one of the partners, who shall sign his own name and, in addition, the name and address of each partner shall be given; if it is made by a corporation, the name of the corporation shall be signed by its duly authorized officer, or officers, attested by the corporation seal, and the names and titles of all current officers of the corporation shall be given.

5. Packaging and Delivery of Bid Proposal and Guarantee

Once the Bid Proposal and supporting documents herein have been completed and signed as set forth above, they shall be placed, along with any proposed sketches and brochures required by

these instructions, in an envelope, sealed and addressed and delivered or mailed, postage prepaid to :

Beaumont-Cherry Valley Water District

Street Address	Mailing Address	Email Address
560 Magnolia Avenue	560 Magnolia Avenue	james.beam@bcvwd.org
Beaumont, CA 92223	Beaumont, CA 92223	

(Due to COVID-19 restrictions and the guidance of the Centers for Disease Control CDC for social distancing and the temporary or reduced opening of public buildings, the District will accept emailed proposals as close as practical to the time and due date and time identified in the Notice Inviting Bids)

Said envelope shall also contain the following in the lower left-hand corner thereof:

Bid Proposal of _____ (Bidder's Name) _____
_____ for _____ (Project Name Appearing on Cover Sheet)

No consideration shall be given by the Owner to bid proposals received after the date and time set by the Notice Inviting Bids herein for the opening of bids.

6. Withdrawal of Bid Proposal

Any Bidder may, without prejudice, withdraw his bid proposal at any time prior to the date and time set by the Notice Inviting Bids herein for the opening of bids; provided that any request to withdraw is made in writing and duly executed by the Bidder or the Bidder's duly authorized representative and delivered to the District staff at the address set forth in Instruction 5 herein. A bid proposal shall be deemed withdrawn once it has been delivered by the Owner to the Bidder requesting withdrawal, either by personal delivery or deposit in the United States mail, addressed to the address originally given by the Bidder. After withdrawal, the Owner will not recognize modifications of bid proposals attempted by methods other than as set forth in Instruction 7 herein.

7. Modification of Bid Proposal

Any Bidder who may wish to modify the bid proposal previously submitted by him may do so only by (a) following the withdrawal procedure set forth in Instruction 7 hereof prior to the date and time set by the Notice Inviting Bids herein for the opening of bids, and (b) submitting a substituted bid proposal which conforms to the requirements set forth in Instruction 1, 2, 4, 5, and 6 hereof. A bid proposal shall be deemed withdrawn once it has been delivered by the Owner to the one requesting withdrawal, either by personal delivery or deposit in the United States mail, addressed to the address originally given by the Bidder. After withdrawal, the Owner will not recognize modifications of bid proposals attempted by methods other than as set forth in this Instruction 7.

8. Opening and Awarding of Bids

All bid proposals shall be publicly opened and read at the time and place set forth in the Notice Inviting Bids herein. Bidders and their authorized representatives are invited to be present. The award, if made, will be made within sixty (60) days of the opening. The Owner's policy is to award to the lowest responsible Bidder who can comply with the projected delivery and/or completion schedules. However, the Owner reserves the right to reject any and all bids, to waive any irregularity, or to award the subject contract to other than the lowest Bidder. Owner may, at its sole discretion, disregard any added conditions, limitations, provisions, or any interlineations or alterations. Notice of Award shall be made to a successful Bidder in writing and mailed to the address as set forth on the signature page of the Bidding Documents.

9. Supplemental Instructions to Bidders

- a. Bidder shall submit a proposal for each bid and subbid item. Award shall be based on the base bid schedule (Bid Schedule I). If award is made, Owner will award the Work to a single Bidder; however, Owner reserves the right to withhold award on certain bid or subbid items.
- b. All Work under these Contract Documents shall be completed in accordance with the Contract Completion Date.
- c. Bidder shall be licensed in accordance with the California Contractors State License Law of the Business and Professions Code (**License A or C-57**) and shall have a minimum of five (5) years experience in the type of Work specified. Subbidders, if any, shall also be licensed in accordance with the same law and shall also have a minimum of five (5) years experience in the type of Work specified.
- d. Bidder shall visit and inspect the work site.

EXHIBIT A**BEAUMONT-CHERRY VALLEY WATER DISTRICT
WELL 14 REPAIR AND REHABILITATION WORK****BID SCHEDULE I – WELL 14 PUMPING UNIT REPAIR**

The undersigned hereby proposes to furnish all labor, materials, equipment and methods necessary for constructing all Work specified in the Scope of Work-Fee Schedule amounts set forth below, and commence work within one (1) week of Notice to Proceed. The undersigned also acknowledges that all prices include sales tax and all other applicable taxes and fees. See attached data sheets for details related to well and pumping plant.

Item	Description	Qty	Unit	Unit Cost	Amount
101	Permits, insurance, and management.	1	L.S.	N/A	\$
102	Mobilize and demobilize well pump removal crew and equipment necessary to remove and reinstall existing well pumping unit and motor.	1	L.S.	N/A	\$
103	Remove and inspect pump column and column check valve. Tag well to determine presence/amount of fill. Haul column from the District's Well 14 site to the Contractor's yard for evaluation (as necessary). Inspect and provide comments and/or recommendations regarding conditions and serviceability of pump column.	400	L.F.	\$	\$
104	Remove pumping unit bowls and submersible motor, and all related work	1	L.S.	N/A	\$
105	Haul bowl assembly and motor (as required) to Contractor's yard for disassembly and evaluation. Disassemble and inspect pump bowl assembly, return existing electrical submersible motor to District Storage Yard per Item 106. Measure and record pump wear and damage. Provide report and recommendations to Owner. Return disassembled bowl to Contractor's yard for storage (if not rebuilt as part of this contract)	1	L.S.	N/A	\$
106	Haul Well 14's Franklin 50 horsepower franklin electric submersible motor to the District's Storage Yard, Well 2 site at 12 th St and Michigan Ave, Beaumont, CA	1	L.S.	N/A	\$
107 (See 107A Alternative Bid Item Below)	Furnish new replacement bowl assembly and Franklin 50 horsepower electric submersible motor. Pump shall be Grunfos pump bowl assembly to match existing unit.	1	L.S.	N/A	\$
108	Inspect and refurbish existing pump discharge elbow assembly as necessary, as required	1	L.S.	N/A	\$

EXHIBIT A**BEAUMONT-CHERRY VALLEY WATER DISTRICT
WELL 14 REPAIR AND REHABILITATION WORK****BID SCHEDULE I – WELL 14 PUMPING UNIT REPAIR**

The undersigned hereby proposes to furnish all labor, materials, equipment and methods necessary for constructing all Work specified in the Scope of Work-Fee Schedule amounts set forth below, and commence work within one (1) week of Notice to Proceed. The undersigned also acknowledges that all prices include sales tax and all other applicable taxes and fees. See attached data sheets for details related to well and pumping plant.

Item	Description	Qty	Unit	Unit Cost	Amount
109	Bail Well Clean. Payment will be based on actual time required to remove fill.	6	Hrs	\$	\$
110	Clarify water in preparation for video log. Perform color video log of well and provide comments and recommendations to District. Camera shall be capable of lateral (side) as well as axial viewing. Provide DVD (2 copies) to District. Survey shall be conducted by an independent party approved by District	1	L.S.	N/A	\$
111	Install pumping unit bowl assembly and submersible motor, and all related work	1	L.S.	N/A	\$
112	Install 400' of column discharge elbow, power cable, and appurtenances including leveling pumping unit (as required) and all related work	400'	L.F.	\$	\$
113	Provide coordination (as necessary) with District Staff of installation of District furnished discharge piping and/or hose (prior to offsite discharge). District to furnish piping as required	1	L.S.	N/A	\$
114	Provide start up and performance testing of all new and existing equipment, controls and instrumentation	1	L.S.	N/A	\$
115	Disinfect well in accordance with Specification Section 11320, State of California Department of Health Service requirements and in accordance with AWWA procedures	1	L.S.	N/A	\$

SUB TOTAL BID SCHEDULE I AMOUNT (Sum of Fee Items 101 through 115:

_____ Dollars \$ _____
(words) (figures)

Vendor hereby acknowledges that all bid prices **Bid Schedule I** include any amounts payable by District for taxes which may result from this proposal.

Vendor's Authorized Representative

Vendor (Company Name)

Signature

Name (Print)

Title (Print)

ALTERNATIVE BID ITEM 112

Item	Description	Qty	Unit	Unit Cost	Amount
107A (See 107 Alternative Bid Item Above)	Refurbish existing Grunfos pump bowl assembly and 50 horsepower submersible motor. Contractor shall anticipate that pumping unit rebuild will require new impellers, bearings, etc.	1	L.S.	N/A	\$

ADDITIVE BID SCHEDULE: PROJECT BOND

Item	Description	Qty	Unit	Unit Cost	Amount
301	Project Performance Bond equal to 100% of Full Contract Amount	1	L.S.	N/A	\$
302	Project Payment Bond equal to 50% of Full Contract Amount	1	L.S.	N/A	\$
303	Project Maintenance Bond equal to 100% of Full Contract Amount for a period of 12 months	1	L.S.	N/A	\$

ADDITIVE BID SCHEDULE: MISCELLANEOUS EQUIPMENT (TO BE PROVIDED AS REQUIRED)

Item	Description	Qty	Unit	Unit Cost	Amount
401	5 1/2" Column, 0.3125" Wall (21' nominal length)	21	EA.	\$	\$
402	5 1/2" Column Coupling	1	EA.	N/A	\$
403	Furnish and Install Submersible Power Supply Cable, #2x4 conductor cable	475	LF.	N/A	\$
404	3/4" Sch. 40 PVC Chlorination Pipe and stainless steel straps (10' O.C.)	425	LF.	\$	\$

EXHIBIT A

**BEAUMONT-CHERRY VALLEY WATER DISTRICT
WELL 14 REPAIR AND REHABILITATION WORK
BID SCHEDULE II – WELL 14 WELL REHABILITATION**

The undersigned hereby proposes to furnish all labor, materials, equipment and methods necessary for constructing all Work specified in the Scope of Work-Fee Schedule amounts set forth below, and commence work within one (1) week of Notice to Proceed. The undersigned also acknowledges that all prices include sales tax and all other applicable taxes and fees. See attached data sheets for details related to well and pumping plant.

Item	Description	Qty	Unit	Unit Cost	Amount
201	Permits, insurance, and management.	1	L.S.	N/A	\$
202	Mobilize and demobilize well rehabilitation crew and equipment necessary to rehabilitate Well 14	1	L.S.	N/A	\$
203	Wire brush 10" diameter well from ground surface to 643' (total depth of 10" diameter from 0' to 643' below ground surface) and bail well clean	16	Hrs.	\$	\$
204	Mechanically develop (swab) perforated area of well from top of perforations to total depth of well (10" diameter from 160' to 643') and bail well clean	24	Hrs	\$	\$
205	Clarify water in preparation for post brushing and development video log. Perform color video log of well and provide video inspection comments to District. Camera shall be capable of lateral (side) as well as axial viewing. Provide DVD (2 copies) to District. (Survey shall be conducted by an independent party approved by District)	1	L.S.	N/A	\$
206	Bail well clean. Payment will be based on actual time required to remove fill	4	Hrs	\$	\$

SUB TOTAL BID SCHEDULE II AMOUNT (Sum of Fee Items 201 through 206):

_____ Dollars \$ _____
(words) (figures)

Vendor hereby acknowledges that all bid prices for **Bid Schedule II** include any amounts payable by District for taxes which may result from this proposal.

Vendor's Authorized Representative

Vendor (Company Name)

Signature

Name (Print)

Title (Print)

EXHIBIT A

WELL 14 PUMPING UNIT REHABILITATION AND WELL REHABILITATION

SPECIAL REQUIREMENTS

1. The Work

I. Well 14

Remove, inspect, rehabilitate, and refurbish the existing submersible well pumping unit and column and possibly refurbish the existing bowl assembly or furnish a new bowl assembly (based upon existing equipment inspection), provide new 50 horsepower (hp) electric submersible motor, wire brush, mechanically develop and bail well clean, re-install the existing or new equipment for Well 14. Bidder (Contractor) shall complete all items included in Exhibit "A" Schedule I and II – Well 14, Scope of Work Fee Schedule. The Work will include all work listed in the Scope of Work-Fee Schedule and Alternate Work-Fee Schedule and as described herein.

District will notify Contractor of acceptance of total Project Amount with a "Notice to Proceed" letter for Well 14 work items.

- A. The Contractor shall furnish all materials, labor, equipment, tools, transportation and services for the removal of the District's existing Well 14 submersible pumping unit and column, inspection of said column, pumping unit, and pumping unit power cable, rehabilitation of pump bowl assembly (or re-equipping with new pump bowl assembly, as required) for Well 14.

Well 14 is located within an existing wooden wall building with a removable wood roof structure located within Edgar Canyon approximately 7,700 feet north Riverside/San Bernardino County line near the District's northern most diversions and well facilities. The entrance to Well 14 is made via an existing District access road that exits Oak Glen Road to the east approximately 1.85 miles north of the intersection of Wildwood Canyon Road and Oak Glen Road. A location map, Plan view of the Site, and Site Photographs are attached in Appendix "B" for Well 14.

- B. Well 14 consists of an existing well which the District installed a 10" steel liner from 0' to 643' below ground surface in 1998.
- C. The Work includes all work set forth on the Scope of Work-Fee Schedule and generally as described in the following items:

Work to be Performed by Contractor

- Provide temporary facilities as necessary for removal of pumping facilities
- Remove existing Well 14 submersible pumping unit equipment including 50 horsepower 480 volt 3 phase electric submersible motor, discharge head, 400'± of column and power cable, and Grundfos 475-500 SS pump. Tag well to determine presence of fill.

- Inspect and provide comments and/or recommendations regarding serviceability of the existing pump column and column couplings.
- Deliver the District's existing 50 hp submersible electric motor from the Well 14 project site to the Contractor's yard for inspection.
- Haul column, column couplings, submersible motor, and pump bowl assembly to Contractor yard for evaluation regarding condition and serviceability of the column, tube, and shaft.
- Recondition (as required) 400'± of existing 5-1/2" pump column.
- Disassemble and inspect pump bowl assembly. Measure and record wear and damage. Provide report and recommendations to District of bowl conditions and refurbishment options (this work is to be completed in order for the District to assess the existing bowl condition only, upon completion of this work, the District will then make the decision whether to rebuild the existing bowl assembly or replace said existing bowl assembly with a new bowl assembly). In the event the District elects to replace the existing bowl assembly, said existing bowl assembly shall be delivered from the Contractor's place of disassembly to the District's Well 2 site for storage subsequent to disassembly and inspection.
- Provide report and recommendations to District of column and column coupling conditions and serviceability.
- Bail well clean.
- Clarify water in preparation for initial (pre cleaning) video log. Perform color video log of well and provide comments and recommendations to District. Camera shall be capable of lateral (side) as well as axial viewing. Provide DVD (2 copies) to District. (Survey shall be conducted by an independent party approved by District).
- Wire brush well from ground surface to total depth of well (10" diameter liner from 0'6" to 643'6" below ground surface) and bail well clean. (483'6" of slotted casing and approximately 163' of blank casing).
- ~~If District elects to chemically rehabilitate the well, the Contractor shall chemically and mechanically rehabilitate the well as set forth in the specifications. Fee shall be based upon actual work performed.~~
- Clarify water in preparation for final (post cleaning) video log. Perform color video log of well and provide comments to District. Camera shall be capable of lateral (side) as well as axial viewing. Provide DVD (2 copies) to District. (Survey shall be conducted by an independent party approved by District).
- If District selects to replace the pumping unit bowl assembly, the Contractor shall furnish a new replacement bowl assembly to match existing pumping unit bowl assembly (Grundfos 475 500 SS pump end). Bowl assembly shall be furnished and installed to meet pumping unit requirements set forth in Specification Section 11325. Fee shall be based upon replacing the existing Grundfos 475 500 SS Pump End bowl assembly with a new Grundfos 475 500 SS Pump End bowl assembly, or approved equal
- Refurbish existing pump discharge head as necessary, as required.
- Furnish and install new 50 hp Franklin submersible electric motor at the Well 14 project site.
- Install pumping unit including refurbished or new bowls, existing 5-1/2" pump

column, couplings, discharge head and new 50 hp submersible electric motor and level discharge elbow, and meggar pumping unit.

- Coordinate installation of Owner furnished and installed fire hose to existing recharge ponds (for water clarification) directly north east of well site. Owner will furnish and install discharge hose for well startup water clarification prior to startup of Well 14.
- Start up and performance test new and existing equipment, controls and instrumentation; Contractor shall operate pump as required.
- Disinfect well in accordance with Specification Section 11320, State of California Department of Health Service requirements and in accordance with AWWA procedures.
- Clean up well site.

Work to be Performed by District's Staff

- District will perform bacteriological testing and assist Contractor with pumping unit startup and testing.
 - District will install temporary discharge hose for rehabilitation (if performed) and for well startup and testing water clarification prior to discharge.
- C. Payment for work related to the well as well as rehabilitation and equipping of the well (as required) will be based on actual quantities furnished, installed, or constructed based upon final project negotiated prices in accordance with the prices set forth on the Scope of Work-Fee Schedule for various lump sum or unit price items. If information indicates that the completion of the work at any time is not warranted, the District reserves the right to terminate all further work. In such an event, the Contractor will be paid for the value of his work completed to that time on the basis of prices stated in the bid schedule.
- D. All materials, supplies, equipment, and labor, except those services expressly stipulated to be furnished by the District, shall be supplied by the Contractor. The Contractor shall leave the premises in a neat and orderly condition.
- E. The Contractor shall record and notify the District of the commencement and completion of each contract operation and work item.

2. Disposal of Rehabilitation (if required), Disinfection and Testing Water

Disposal of rehabilitation, chlorinated water and testing water may be through a District furnished and installed discharge hose from each existing well site to a point of discharge into the District's existing recharge ponds located in the vicinity of each well site. Contractor shall coordinate well discharge with the District to ensure that existing properties are protected and that well discharge does not overtop said existing recharge ponds.

3. Authorization to Proceed

Owner will provide an Authorization to Proceed Letter for Well 14 to the Contractor. The Contractor will then be authorized to begin Contract Work submittal document submission,

material ordering, and construction scheduling.

4. Working Hours

Contractor shall perform all work between 7:00 AM and 5:00 PM, Monday through Friday. Contractor shall not work on Owner holidays. Said holidays are as follows:

New Year's Day
Martin Luther King Jr. Day
Presidents Day
Memorial Day
Independence Day
Labor Day
Veterans Day - November 11
Thanksgiving Day
Day after Thanksgiving Day
Christmas Day

When a legal holiday falls on a Saturday, it is observed on the preceding Friday, when it falls on a Sunday, it is observed on the following Monday.

5. Permits, Certificates, Laws, and Ordinances

Contractor shall, at his own expense, procure all permits, certificates, and licenses required of him by the State of California, County of Riverside, County of San Bernardino, California Regional Water Quality Control Board, South Coast Air Quality Management District, or any other authority or agency having jurisdiction for the execution of the Work. Contractor shall comply with all federal, state, and local laws, ordinances, or rules and regulations relating to the performance of said Work.

6. Records

The Contractor shall keep records providing the following information for those items of work that are performed:

- A. A complete daily log and record on the well shall be furnished to the District.
- B. Complete log of existing materials and equipment removed from the existing well
- C. Complete log of existing or new materials and equipment installed in existing well
- D. As-Built Drawings/Submittals documenting final construction.

7. Project Completion Date

Project completion date shall be thirty (30) days from the date of the Notice to Proceed Letter for the well site issued by the District. The thirty (30) day completion date will be adjusted as necessary to provide for material acquisition delays in the event the existing pumping unit is not refurbished and a new pumping unit bowl assembly is required.

8. Liquidated Damages for Delay

Contractor shall pay to Owner, as fixed and agreed, liquidated damages for each calendar day's delay in the completion of all the work beyond the time agreed upon, the amount of \$100.00.

9. Contract Information/Drawings

The following Appendices are made a part of these Contract Documents:

APPENDIX LIST

(Attached in the back of these Contract Documents)

<u>Title</u>	<u>Appendix No.</u>
Specification 11325 – Submersible Deepwell Vertical Turbine Pumping Unit Technical Specifications	A
Specification 11330- Technical Specifications Well Rehabilitation Specifications Rehabilitation of Well 14	
Well 14 Location Map, Site Plan Image and Photos	B
Well 14 SCE Test Data (2001), Well 14 Data	C
Sample Maintenance Bond	D

10. Right to Change Work

District reserves the right to direct Contractor to cease work upon the well at any phase and to determine payment for work performed in accordance with the bid unit prices. District also reserves the right to either increase or decrease other related work in accordance with the aforementioned unit prices. Payment for all work shall be predicated upon work completed.

11. Payment Requests

Contractor shall submit all partial payment requests and final payment request to District. Payment requests shall be submitted by the 18th day of the month preceding the month in which payment will be made. On approval by the District, partial payments will be made by the first day of the month following the month in which request for payment is made.

All payment requests shall show all Scope of Work-Fee Items and sub items for the Contract Work. In addition, said requests shall show the percentage of completion of each Fee Item and sub item and the amount thereof, said amounts being totaled to arrive at the value of the completed Work. The net partial payment amount shall equal 95% of said total.

12. Site Maintenance

- A. The Contractor shall at all times maintain the well site and discharge site in a neat and orderly fashion, free from trash and construction waste materials. All cleared and waste material shall become the property of the Contractor and shall be disposed of by him

outside the limits of the work in accordance with applicable ordinances and regulations of governmental agencies having jurisdictions.

- B. Unattended construction materials and equipment shall be left in a manner such that they do not constitute fire hazards, exposed to vandalism, or become a nuisance or danger due to forces of nature such as rain or wind.
- C. The Contractor shall secure well head (plate off) at all times when well work is not being actively performed with a securing system acceptable to the District.
- D. Existing improvements as designated by the District, whether on the construction site or on other property, shall be protected in place and shall be provided with adequate access.
- E. While construction is being conducted, the Contractor shall provide safety in the area of construction.
- F. Contractor shall remove any sediment deposited to city streets or storm water channels on a daily basis.

13. Data to be Submitted by Contractor

Contractor shall furnish District the following data and said data must be accepted by District prior to performing any Contract Work appurtenant to specific submittal items. Data (two copies) shall be submitted directly to the District for review and acceptance or rejection. Contractor shall submit five copies of accepted data to the District for distribution of same.

A. Material and Equipment Lists with Catalogs

Schedule I Pump shaft, line shaft, bearing, and coupling manufacturer's data sheets
Schedule I Pump column and coupling manufacturer's data sheets
Schedule II Pump column materials and couplings manufacturer's data sheets

B. Fabrication and Component Drawings with Diagrams

Schedule I Pumping unit bowl assembly and appurtenances
Schedule II Submersible pumping unit motor and bowl assembly and appurtenances

C. Construction Schedule

Construction Schedule

D. Well Chemical Rehabilitation Materials (if required)

~~Materials and Proposed Methods of Well Chemical Rehabilitation and Pump Development (if determined to be performed subsequent to initial well video).~~

14. Contractor Cooperation and Coordination

Contractor shall cooperate with District and all jurisdictional agencies. Contractor shall establish a work schedule sufficiently in advance of work to permit coordination of work with District and other agencies. Owner will have representatives on site to observe and verify compliance with Contract Documents. Contractor shall not operate any existing facilities, including opening or closing of pipeline valves.

15. Construction Water and Power

Owner will provide a reasonable quantity of construction water free of charge from Owner's existing potable water system. Vender is notified that water pressure near the well facilities consists of low pressure water supply and pumps will be necessary if high pressure water delivery is required. Contractor shall apply for an Owner supplied meter. Contractor shall furnish and install Owner approved backflow device (as necessary) and all necessary piping and appurtenances, including pumps and water trucks, necessary to convey water from Owner's meter to work location.

Contractor shall provide required power to perform all phases of work.

16. Specified Model Numbers

All model numbers used herein are provided for information only, to assist Contractor in selecting equipment that conforms to Specifications. In case of any conflict between model numbers given herein and the descriptive specifications or performance specified, the descriptive specifications and performance specified shall govern.

17. Well Protection

The Contractor shall protect open wells by installing a steel locking cover which shall be maintained in place at all times unless work within the well is actively in progress.

18. Well Disinfection

Unless otherwise stated, the Contractor shall use the following procedure to disinfect well and that the Contractor shall perform and assist District's Staff with disinfection and pump startup as described hereafter and as necessary to achieve well disinfection:

- A. Immediately prior to installation of permanent pumping equipment, Contractor shall disinfect pumping unit components with chlorine.
- B. Upon completion of well pumping unit installation, the Contractor shall disinfect the well and installed pumping unit with chlorine solution.
 - 1) Contractor shall dose the well by adding liquid chlorine solution to well to obtain required concentration of at least 100 parts per million.

- 2) Immediately after dosing the well, District and Contractor shall pump water to ground surface until chlorine is detected and shall then allow the water to return into the well. Contractor shall repeat said procedure twice at one hour intervals.
 - 3) The well will then be allowed to stand without pumping or agitation for 24 hours.
 - 4) The District and the Contractor shall then pump the well to waste until chlorine is no longer evident, and shall continue to pump the well to waste for 15 minutes thereafter.
 - 5) The District and the Contractor shall then allow the well to stand without pumping or agitation for 24 hours prior to sampling.
 - 6) The District will then secure two samples of water from the well in approved containers, and have said samples analyzed by a State certified analytical laboratory for total coliform (presence/absence), fecal coliform (presence/absence), and heterotrophic plate count. The District will secure the first sample within five minutes of starting the pump at the specified pumping rate, and the second sample thirty minutes thereafter.
 - 7) The well shall be deemed properly disinfected only if the sample analysis results indicate absence of total coliform bacteria, absence of fecal coliform bacteria, and a heterotrophic plate count of less than 500 colony forming units per milliliter (CFU/ml).
 - 8) If the sample analysis results do not indicate that the well was properly disinfected, the District and the Contractor shall repeat the entire disinfection procedure, including sampling, sample analysis, and reporting of sample analysis results.
- C. After 24 hours, the Contractor will assist the District, as necessary, to secure two samples of water from the well in approved sealed containers. District will have said samples analyzed by a State certified analytical laboratory for chlorine residual, total coliform (presence/absence), *e. coli* (presence/absence), and heterotrophic plate count. The District will secure the first sample within five minutes of starting the pump at the specified pumping rate, and the second sample thirty minutes thereafter.
- D. The well shall be deemed properly disinfected only if the sample analysis results indicate absence of total coliform bacteria, absence of *e. coli* bacteria, and a heterotrophic plate count of less than 500 colony forming units per milliliter (CFU/ml).

APPENDIX A

**Specification Section 11325
Submersible Deep well Vertical Turbine
Pumping Unit Technical Specification**

**Specification Section 11330
Technical Well Rehabilitation Specification
Rehabilitation of Well 14**

APPENDIX A

SECTION 11325

SUBMERSIBLE DEEPWELL VERTICAL TURBINE PUMPING UNIT TECHNICAL SPECIFICATIONS

PART 1 - GENERAL

1.01 GENERAL

This Specification is for submersible deep well vertical turbine pumps including surface plate, column pipe, submersible motor, pumping unit, submersible cable, and appurtenances. All equipment furnished under this section shall be new and of current manufacture and shall be guaranteed free from defects in material, design, or workmanship. All parts of the pump and motor exposed to water shall be of stainless steel, brass, heavy cast iron, or equivalent corrosion-proof material. Unless otherwise specified herein, all applicable provisions of ANSI/AWWA, latest edition, for Submersible Vertical Turbine Pumps, E-101, Part A, latest edition, for Vertical Turbine Pumps, are hereby made a part of these Specifications.

In the event the existing pumping unit is deemed non re-buildable Contractor shall provide one (1) new submersible deepwell vertical turbine pumping unit (bowl assembly and motor) to meet the specific project pumping unit requirements described in Section 1.02, below.

1.02 SPECIFIC PROJECT PUMPING UNIT REQUIREMENTS (if existing submersible pumping unit bowl assembly is deemed non-re-buildable)

A. General

The Contractor shall provide a complete new submersible deepwell pump bowl assembly (bowls, bearings, impellers, etc.) consisting of a type 304 stainless steel assembly to meet pumping unit performance requirements specified herein for Well 14 as necessary.

Well 14's existing pumping unit consists of a Grundfos 475-500 SS submersible deepwell vertical turbine pumping unit with a 50 horsepower Franklin Submersible Motor. All new pumping unit components shall meet the performance requirements of this specification section, as listed below.

Bidders shall submit fabrication drawings for the new bowl assembly, motor assembly, and pump performance curves per Section 1.04 herein.

B. Well No. 14 Pump

1. Performance (Pump preliminary performance criteria set forth is based on the existing Grundfos 475-500 pumping unit) as follows:

Well 14 Pumping Unit Performance:

Discharge Capacity (GPM)	Bowl Head (Feet)	Minimum Bowl Efficiency	Maximum Net Positive Suction Head Required (Feet)
Shutoff Head	xxx (min)	NA	NA
50	500	NA	x
100	480	38%	11
200	440	64%	12
300*	400	76%	14
400	350	78.5 %	18
500	280	74 %	24
600	200	180 %	33

* Design condition

2. Pumping unit shall be of the water lubricated, enclosed impeller deepwell vertical turbine unit design.
3. Maximum Horsepower - Speed – Maximum Thrust Factor: 50hp - 3450rpm - N/A for Maximum Thrust Factor

At no point on the pump curve shall the existing driving equipment be overloaded.
4. Bowl Assembly Diameter: 8" maximum.
5. Column Piping: Wire brush, steam clean, scrape, and reuse 400' of existing 5-1/2" diameter column piping from Well 14'. In the event some of the pump column is deemed unsuitable for service, Vendor shall contact District for approval of replacement of column with new column piping quoted in Bid Schedule I.
6. Refurnish and install 400'± of existing refurbished 5-1/2" diameter column piping.
7. Discharge elbow: Refurbish, reuse and reinstall existing discharge elbow as required for reinstallation of pumping unit. Vendor shall re-plumb and reinstall pump all piping associated with above grade facilities removed during pumping unit removal.
8. Pump manufacturer shall coordinate pumping unit selection regarding pump and verify performance in the event the existing pumping unit is non-rebuildable. Selected pump shall be approved by District. District notes that a Grundfos 385S or 300S may be considered as an alternative as a replacement to the existing pumping unit.
9. Existing pump: Grundfos –475-500 SS (See Appendix C for specific information)

E. Existing Submersible Motor

1. Horsepower: 50 Hp Franklin Submersible Motor

Brake Horsepower (Field) shall not exceed nameplate rating within entire operating range.

2. Power: 3 phase, 60 hertz, 460 volts.
3. Speed: 3450 RPM (no load).
4. Starting Characteristics: Full Voltage Contactor

The pumps shall be manufactured by Grundfos or District approved equal.

1.03 UNIT RESPONSIBILITY

All combinations of manufactured equipment which are approved under this specification shall be entirely compatible and the Contractor and the listed manufacturer shall be responsible for the compatible and successful operation of the various components of the units conforming to the specified requirements. All necessary mountings, couplings, and appurtenances shall be included with each unit. All materials employed in the pump equipment shall be suitable for the intended application and shall be high grade commercial quality, free from all defects and imperfections that might affect the serviceability of the product for the purpose for which it is intended.

1.04 SUBMITTALS

Submittals shall be provided to the Engineer for approval prior to beginning manufacture/construction of the pumping units in accordance with the General Conditions. Submittals shall include:

A. Shop Drawings including the following information:

1. Pump name and identification number.
2. Pumping unit outline diagrams.
3. Pump detailed description and specification.
4. Electrical data including control and wiring diagrams.
5. Assembly and installation drawings including surface plate anchor bolt plan, part nomenclature, materials list, outline, dimensions, and shipping weight.

- B. pump curves showing head versus capacity, bowl efficiency versus capacity; NPSH and BHP requirements, and thrust and moment of inertia characteristics. Each curve shall be continuous over the full operating range from zero (0) flow up to the maximum flow permissible through each pump, and shall be based upon the RPM listed. Each curve shall state the RPM speed of

the pumping unit, and shall be furnished full-size on 8-1/2" x 11" paper. The Contractor shall provide pumps capable of meeting all aspects Section 1.02 and as shown on the Drawings.

- C. Operation & Maintenance Manuals. Sets of printed instructions relating to proper maintenance and parts lists indicating the various parts by name, number and diagram where necessary shall be furnished in duplicate with each unit or set of identical units as required by the General and/or Special Conditions. Recommended spare parts lists shall be included and local supplier's name where spare parts are available.

1.04 OPERATING CONDITIONS.

The capacities, heads, efficiencies, and horsepower requirements are for completely assembled units and are specified in the Detailed Submersible Well Pump Specification section. Each pumping unit shall meet the requirements and design points as specified therein.

PART 2 - PRODUCT

2.01 PUMP ASSEMBLY CONSTRUCTION

A. Surface Plate (Not Required). The pump surface plate shall be of fabricated steel. The plate shall incorporate a long radius elbow welded securely to a 24" square steel base flange which shall rigidly support the entire weight of the motor, bowl assembly, column pipe, cable, and water column. The cable outlet shall have a cable seal of adequate size to accommodate the cable size. Threaded penetration couplings shall be provided for chlorination pipe and airline tubing specified herein.

B. Steel Column Pipe. Where specified, the steel column pipe shall be of ASTM A53 grade B steel pipe or ASTM A120 in interchangeable sections not over 21 feet in length and with the ends of each section faced parallel and machined with 8 straight threads per inch permitting the ends to butt and insuring alignment when connected by standard mill steel couplings. The weight of the column pipe shall be no less than that stated in ANSI Specification E101, Section 5.1 "Standard Specifications for Discharge Column Pipe". Unless specified otherwise, the column size shall be such that friction loss will not exceed 5' per 100', based on the rated capacity of the pump. Where possible, the column size shall also be such as to provide a velocity of not less than 5' per second at the rated capacity.

C. PVC Column Pipe. Where specified, PVC column pipe shall be constructed to ASTM D1784, ASTM D1785 Schedule 80, and ASTM D2837. Piping shall be of interchangeable sections not over 20 feet in length. The ends of each section shall be of a groove and spline design with PVC couplings. Piping shall be easily adaptable to solvent weld fittings (tees, elbows, flanges, etc). PVC column pipe, couplings, and fittings shall be NSF61 listed. Coupling joints use high strength thermoplastic splines to provide full 360° restraint with evenly distributed loading and shall include elastomeric sealing gaskets for water tight seal. Unless specified otherwise, the column size shall be such that friction loss will not exceed 5' per 100', based on the rated capacity of the pump. Where possible, the column size shall also be such as to provide a velocity of not less than 5' per second at the rated capacity. PVC column pipe and joint couplers shall be Certa-Lok as manufactured by CertainTeed Corporation or approved equal.

D. Submersible Motor. The motor shall be of the submersible type, capable of continuous operation at the nameplate rating under water at a maximum temperature of 77 degrees F, and if specified for Variable Frequency Duty rating shall be suitable for Variable Frequency Starting, with a maximum ramp time

of no more than 5 seconds.

The motor shall be constructed of carbon steel and/or stainless steel, stainless steel and/or cast iron fitted, exterior shell shall be 304 stainless steel. All exposed fasteners, plugs, and shafting shall be of stainless steel construction.

The motor shall be rated for the horsepower and RPM specified in the Detailed Submersible Well Pump Specification Section 1.02, 3 phase, 60 Hz, 480 volt, with a minimum service factor of 1.15.

The motor shall be of the water filled "wet winding" type. It shall be filled with a 50/50 solution of water and propylene-glycol. The motor winding insulation shall consist of an epoxy enamel layer over the copper conductor, covered by a denatured polypropylene insulation layer with an external nylon sheath. The motor shall be totally enclosed, utilizing an elastomer expansion diaphragm for the equalization of the internal and external pressure.

The motor shall be equipped with a double rubber type shaft seal, to seal the motor at the point that the shaft extends through the casing. The motor shall be equipped with thrust bearings capable of carrying the weight of all rotating elements plus the hydraulic thrust of the pump at shut off head or at the design flow and head, whichever is greater. The motor shall have replaceable sleeve type radial bearings located at each end of the rotor.

The motor shall be provided with one set of three separate continuous power leads with a minimum length of 15 feet. The leads shall be internally splice directly to the stator windings.

Unless specified otherwise in Section 1.02, Submersible motor shall be as manufactured by Franklin, Hitachi, Pleuger, or approved equal.

E. Pump Bowls. The bowls shall be constructed of Type 304 Stainless Steel and must be accurately machined and fitted to close tolerances. They shall be capable of withstanding a hydrostatic pressure equal to twice the pressure at rated flow or 1.5 times shut-off head, whichever is greater. All intermediate bowls shall be of identical design for interchangeability. All the bowls shall be fitted with sleeve type bearings of bronze alloy C89835. A discharge bowl shall be used to connect bowl assembly to the discharge pipe. The bearing shall have a threaded cap or plug at the top to protect the bearing from abrasives. The hub of the discharge bowl should be such that the bearing can be easily removed through the top of the hub. A thrust ring shall be above the top impeller to prevent excessive vertical upthrust.

F. Pump Impellers. Impellers shall be the totally enclosed type. The impellers shall be constructed from Stainless Steel or ASTM B584 Silicon Bronze and statically balanced. They shall be free from defects and must be accurately cast, machined, balanced, and filed for optimum performance and minimum vibration. Impellers shall be smoothly finished on all surfaces to reduce friction losses to a minimum. Impellers shall be balanced to grade G6.3 of ISO 1940 as minimum. They shall be securely fastened to the bowl shaft with taper locks of 416 SS.

G. Pump Shaft. The pump shaft shall be constructed of ASTM A582 grade 416 stainless steel and shall be accurately machined to a sufficient dimension to provide smooth operation and to easily withstand torsional loads and other stresses encountered within the pump. The pump shaft shall have adequate bearing support at every bowl section with water lubricated bronze bearings.

H. Wear Ring. Pumps shall be fitted with replaceable wear rings of bronze material in the motor adapter and intermediate bowls. Wear rings shall have the minimum practical clearance to the mating cylinder surface of the impeller to provide adequate sealing independent of the impellers.

I. Motor Coupling. The shaft coupling shall be of stainless steel and be capable of transmitting the total torque and total thrust of the bowl assembly in either direction of rotation.

J. Motor Adapter. The inlet motor adapter shall be of :Type 304 stainless steel or ASTM A536 Gr. 60-40-18 ductile iron and shall contain an extra long bronze bearing. The inlet area shall have a net open area of at least four times the eye of the impeller and shall be protected with a 304 stainless steel screen. The openings on the screen shall not be more than 75% of the minimum opening of the water passage through the bowl or the impeller.

K. Submersible Cable. The submersible cable shall conform to U.L. standard 44 or 83 for submersible cable, shall have three continuous conductors rated for 600 volt. The individual conductors shall be class "B" stranded THHN/THWN insulated rated 75 degree C (wet), or better, The three conductor or four conductor cables shall be contained in a flat jacket composed of synthetic rubber or thermo plastic with non-hygroscopic fillers between the conductor cables. The cable shall be of sufficient length to allow easy connection in the terminal box at the well head. The cable shall be securely attached to the column pipe.

L. Pump Nameplate. The pump shall be supplied with an easy-to-read, corrosion resistant nameplate. It shall contain complete pump information including: pump manufacturer's name, serial number, pump model number, number of stages, speed, T.D.H. and capacity in GPM at the middle design point, year manufactured, etc. **Said nameplate shall be mounted on the pump surface plate.**

M. Motor Shroud. When specified in the Specification Section 1.02, a stainless steel or PVC shroud shall be installed to allow the well water to flow across the motor prior to entering the pump intake impeller to provide cooling for the motor.

When specified, the stainless steel shroud shall have a minimum wall thickness of 0.125", sized to provide an acceptable velocity across the motor at the rated flow, and adequately fit within the well casing.

When specified, the PVC shroud shall be sized to provide an acceptable velocity across the motor at the rated flow, and adequately fit within the well casing.

The shroud shall be attached to the bowl assembly per the manufactures recommendation and shall be equipped with a center device to properly center the motor inside the shroud. All fasteners shall be stainless steel.

2.02 JOINTLESS CHLORINATION PIPE. A 3/4" dia. jointless dual purpose air line / chlorination pipe of polyethylene flexible tubing shall be furnished of sufficient length to extend from the surface to the top of the bowl assembly. The tubing shall be attached to the column assembly with 1 inch wide stainless steel hose clamps spaced a maximum of 10 feet apart. Stub-up and cap-off tubing 6" above the pump surface plate.

2.03 JOINTLESS AIR LINE TUBE. A 3/8" jointless airline of polyethylene flexible tubing shall be furnished of sufficient length to extend from the surface to the top of the bowl assembly. . The tube shall be attached to the column assembly with 1 inch wide stainless steel hose clamps spaced a maximum of 10 feet apart. Stub-up and cap-off pipe 6" above the pump base plate.

PART 3 - EXECUTION

3.01 PUMPING UNIT - PUMP DEALER REQUIREMENTS. Pump supplier shall have complete office/shop facilities located within 100 miles of the job site, and shall have a 10 years minimum successful experience record for pump sales/service.

3.02 DELIVERY. The Contractor shall order the pump at the earliest possible time to allow time for the preparation, submittal, approval of shop drawings, and subsequent manufacture and installation of the pump in a timely manner.

3.03 PREPARATION. Sets of instructions for field procedures for erection, adjustments, inspection, and testing shall be provided prior to installation of the pumps, as required by the General or Special Conditions.

3.04 EQUIPMENT TESTING. The purpose of equipment testing is to demonstrate that the pump units meet the specified requirements.

A. Tests shall be performed on the actual assembled unit over the entire operating range on the certified performance curve. Prototype model tests will not be acceptable.

B. All pumps 10 to 50 horsepower shall be factory-tested in accordance with the above specifications. Pumps larger than 50 horsepower may be subject to a "factory witness test" attended by a District representative. The District shall be notified at least 2 weeks in advance such that a representative can witness the pump testing. Certified test results shall be submitted to the Engineer for approval prior to shipment.

C. Pump curves shall reflect data secured during actual test runs and shall be signed by a responsible representative of the pump manufacture. Test reports and procedures shall conform to applicable requirements of the Hydraulic Institute Standards.

3.05 INSTALLATION. The Contractor shall install all pumping equipment in strict accordance with the manufacturer's instructions. Care shall be used in handling to avoid bumping, twisting, dropping, or otherwise damaging the equipment.

All pump manufacturers shall furnish the services of factory-trained personnel as required to examine the installation, supervise start-up of equipment installed, and repair the equipment at no additional expense to the District.

3.06 FIELD ACCEPTANCE TEST. The contractor under this specification shall have full responsibility for the proper installation and performance of said pumping equipment, including furnishing the services of a pumping equipment Field Service startup personnel to inspect equipment installation, and to adjust, if necessary, any portion of the pumping equipment required herein. The manufacturer's Field Service startup personnel shall assist the District in the proper conduct of pumping unit field acceptance tests. The pump units shall perform in the field as shown on the certified pump curves furnished by the Contractor. Tests shall also demonstrate operation without cavitation, vibration, overheating of moving parts, and excessive noise. The

Contractor and pump manufacturer shall make necessary corrections to achieve smooth pump operation. In the event the tests reveal noncompliance of the workmanship or equipment, the Contractor shall either make alterations as necessary or replace the pumps in order to meet the requirements of the specifications at no additional cost to the District.

3.07 CERTIFICATION OF INSTALLATION. The Contractor shall submit a letter to the District confirming that all pumping equipment was inspected, operation checked, and installation approved in writing by the respective pumping equipment supplier.

3.08 WARRANTY. All pumping equipment shall carry an extended warranty for a two year period from the date of **acceptance**. All warranties shall be turned into the District prior to project completion.

END OF SECTION 11325

APPENDIX A

SECTION 11330

TECHNICAL WELL REHABILITATION SPECIFICATIONS REHABILITATION OF WELL 14

INCLUDES ADDITIVE BID ITEM FOR CHEMICAL WELL REHABILITATION

PART 1 - GENERAL

1.01 General

If selected as an Additive Bid Item, the Vendor shall furnish all labor, equipment, materials, and services to rehabilitate wells as specified in the bidding sheets (or Scope of Work, as applicable) including removal of pumping unit, inspection of pumping unit, removal of oil from the surface of the water, wire brushing, cleaning debris from the bottom of the well, chemical treatment, disinfection, and installation of pumping unit. All work will be performed during normal working hours as set forth in the Special Requirements.

PART 2 - REHABILITATION OF WATER WELL

2.01 Removal of Pumping Unit

Vendor shall furnish all labor, equipment, materials, and services to remove and reinstall the motor, pump discharge head, column pipe, tube, shaft, and pump for the Well. All connecting appurtenances and equipment removed from the Well shall be properly lubricated and sealed from dirt, dust, water, condensation, and any other form of contamination.

Vendor shall inspect and make recommendations for repair of pumping unit bowl assembly, column for cracking/defects and tubing for defects/oil leakage.

2.02 Removal of Oil from Well (if pumping unit is an oil lubricated pump)

- (a) Vendor shall furnish all labor, equipment, materials and services to remove the line shaft turbine pump oil from the water table surface following the completion of the pump removal. The oil shall be gently bailed from each well and placed in suitable leak proof containers.
- (b) Vendor shall properly dispose of oil removed from each well. Disposal shall be in accordance with all federal, state and local regulations.

2.03 Video Logging of Wells

The successful bidder will provide two (2) color video logs for the well; one before and one after rehabilitation. The Vendor shall provide equipment that is capable of producing a clear video image of the well casing both submerged and out of the water. The camera must be capable of providing a clear video image of the Well and must be capable of displaying a right angle, side-scan view of the Well casing at the direction of the District. The equipment shall indicate digitally on screen the depth of the camera within one (1) foot of its actual location at one-foot intervals. The District must be present during the video scan. The successful bidder will provide a written field log of the observations from each video scan. Two DVD Copies of each inspection scan shall be provided to the District upon completion of each video-logging run. The successful bidder will schedule the video loggings with the District at least two (2) Working Days in advance. Prior to performing videologs, water shall be added to the well in sufficient quantity and for sufficient duration to clarify the water in the well.

2.04 Bailing Well Clean

Vendor shall remove the debris from the bottom of the Well using a bottom bailer or an District-approved bailing method to depths specified for the Well.

2.05 Wire Brushing of Well

The well shall be cleaned using a **rotary brush method**. The brush shall be a minimum of five (5) feet in length and have 100% contact for the length of the brush with the well casing. The brush shall turn no less than ten (10) revolutions per minute. The rate of brushing shall be no more than forty (40) feet per hour. The bristle material shall be manufactured of stainless steel, low carbon steel, or nylon. Nylon bristles shall be used for wire-wrap screens. As the well casing is cleaned, the scale and encrustation being removed will be allowed to settle to the bottom of the Well. Actual method and tool must be submitted to the District for approval prior to the start of work. The successful bidder is responsible for safely controlling all fluid and debris around and exiting the site.

2.06 Chemical Treatment of Well (Additive Bid Item)

- A. At the District's discretion subsequent to performance of the first video log (pre rehabilitation) the District will determine if it will exercise the chemical treatment of the well additive bid item. Vendor shall furnish all labor, equipment, materials, and services to chemically treat the well. Care shall be taken to follow all Federal, State, and local regulations pertaining to the handling and disposal of the waste chemicals.
- B. Prior to commencing the Work, Vendor shall supply to the District a copy of the manufacturer's Safety Data Sheets (SDS) for all well treatment and neutralizing chemicals for the District's approval and a shop drawing of the snug fitting

double surge block assembly. A Certificate of Analysis (COA) from the manufacturer/supplier must be provided for the acid used. In addition, the Vendor shall provide their proposed program to apply the chemicals, method of neutralizing the acid, method of disposal, Emergency Response Plan, and list of staff qualified to handle the above chemicals. Said list shall include training and certifications received by each individual pertinent to their duties.

All individuals involved in handling well treatment chemicals shall possess all certifications, authorizations and licenses required by local, state and federal authorities to perform the work.

C. Vendor shall chemically treat the well utilizing the method specified below.

1. The well shall be pretreated to disrupt the fouling mechanisms existing within the well column. Pretreatment shall consist of wire brushing of the entire wetted portion of the well as specified herein, followed by bailing the well clean.
2. A treatment solution consisting of the following chemicals shall be mixed above-ground and injected into the existing perforated sections of the casing starting from the bottom of the lower perforated casing to the top of the perforated casing using a double packer tremie method:
 - a. Hydrochloric acid (approximately 30% activity): 9% of Total Well Volume
 - b. Biodispersant (Johnson Screens NW-310 or equivalent): 3% of Total Well Volume
 - c. Nonionic surfactant (Johnson Screens NW-400 or equivalent): 0.1% of Total Well Volume
2. Total Well Volume shall mean 1.5 X the volume of standing water within the well casing.
3. Immediately following the injection of the treatment solution, the Vendor shall swab the perforated sections of the casing with a minimum 20 foot long, snug fitting double surge block. Swabbing shall begin at the bottom of the lower perforated casing and work continuously upwards to the top of the upper perforated casing. After the upper most portion of the well is swabbed, Vendor shall secure a water sample to verify the pH. The sample may be secured by air lifting, submersible pumping, or thief sampling. **If the pH is above three (3), additional treatment solution will be added to the well at the discretion of the District.** If additional treatment solution is needed, the solution will be added and swabbed into place using the double surge block. Sampling and treatment solution addition shall continue until pH is equal to three (3) or less.

4. Vendor shall then wire-brush the well as specified in Section 2.05 above.
 5. The well will then be allowed to stand for 12 hours. Immediately after 12 hours the Vendor shall swab each 20 foot perforated section for 15 minutes with the double surge block. Swabbing shall begin at the top of the upper perforated casing and work continuously downward to the bottom of the lower perforated casing.
- D. Vendor shall remove and dispose of the treatment chemicals as outlined below.
1. After completion of swabbing as described above, the Vendor shall remove five (5) volumes of wastewater from the well into an above-ground portable tank, such as a Baker Tank. The wastewater will be removed continuously from the well by air lifting or pumping. Air lifting or pumping shall begin at the bottom of the well and work upward to the top of the upper perforated casing interval. The well should be continually purged until the pH has stabilized to a normal background level and the turbidity of the discharge has dissipated.
 2. At the discretion of the District, water samples will be secured from the well after removal of the treated water to determine pH after removal. The total number of samples will not exceed four (4) in order to determine pH. Should the pH be greater than nine (9) or less than six (6), the Vendor will remove additional wastewater from the well at the direction of the District and dispose of same.
 3. After removal of the wastewater, and at the direction of the District, Vendor shall bail the well clean.
 4. Prior to disposal, Vendor shall neutralize the pH of the wastewater in the above-ground tank by adding sufficient soda ash (powder), magnesium hydroxide (slurry), potassium hydroxide (liquid), or other pre-approved neutralizing agent. **Neutralization will not be allowed in the well casing.**
 5. All wastewater and residual solids from chemical treatment shall be disposed of by the Vendor in a manner and at the facility designated by the Vendor and approved by the District, in accordance with the attached Scope of Work.
 6. Vendor shall discharge the neutralized wastewater onsite at a controlled rate to avoid erosion, as directed by District.
- E. Vendor has the option of submitting in writing to District alternative methods of chemically treating the well, such as the use of available proprietary chemical

well treatment systems. Alternative methods may only be used if approved by District in advance of bid opening by issuance of a Contract Addendum.

- F. All chemicals used in treating the well shall be of food-grade quality. All biocidal dispersants, surfactants and additives, both proprietary and non-proprietary, shall be NSF approved for potable well use.

2.07 Well Disinfection

After wire brushing and removal of debris, the well shall be disinfected with a chlorine solution. Unless otherwise permitted, Vendor shall use the following procedure to disinfect the well:

- a. Before dosing, the Vendor shall check the pH of the well to determine if buffering of the chlorine will be necessary. If the pH is above 7.5 a chlorine enhancing chemical such as Johnson Screen's "NW-410," Layne-Christensen's "Oximate," or other District pre-approved equivalent must be used to lower the pH and enhance the effectiveness of chlorination. The chlorine enhancing chemical shall be used at a rate of 1.5 gallons per 1,000 gallons of disinfectant solution for a target pH of 6.5 to 7.5 during chlorination.
- b. Vendor shall prepare a disinfectant solution consisting of water, sodium hypochlorite solution, and, if necessary, chlorine enhancing chemical, above-ground for addition to the well. The disinfectant solution shall have a free chlorine concentration of 300 parts per million (ppm). To achieve 300 ppm of chlorine, approximately 2.4 gallons of 12.5% Sodium Hypochlorite solution will be required per 1,000 gallons of disinfectant solution. The sodium hypochlorite solution used shall not have been stored more than 60 days.
- c. Vendor shall dose the well by adding two times the Well Casing Volume of disinfectant solution to the well. The method used to introduce the disinfectant solution into the well shall ensure that the disinfectant solution reaches all portions of the well in which contamination might have occurred during construction.
- d. Immediately after dosing the well, Vendor shall agitate the chlorinated water within the well by swabbing the well.
- e. After the well has been swabbed, Vendor shall secure a water sample to verify the chlorine concentration. The sample may be secured by air lifting, submersible pumping, or thief sampling. If the chlorine concentration is less than 100 ppm, additional disinfectant solution will be added to the well, at the discretion of the District. Sampling and disinfectant solution addition shall continue until the chlorine concentration is between 100 and 300 ppm. **A chlorine concentration of greater than 500 ppm is not permitted.**

- f. Vendor shall repeat the agitation, sampling, and disinfectant solution addition procedure twice at one hour intervals.
- g. Vendor shall then allow the well to stand without pumping or agitation for at least 6 hours.
- h. Vendor shall then reinstall the permanent pumping unit into the well, and shall pump the chlorinated water from the well into an above-ground portable tank, such as a Baker Tank until chlorine is no longer evident and shall continue to pump until 15 minutes thereafter.
- i. Vendor shall then allow the well to stand without pumping or agitation for 24 hours prior to sampling.
- j. District will then secure two samples of water from the well in approved containers, and have said samples analyzed by a State Certified analytical laboratory for total coliform (presence/absence), fecal coliform (presence/absence), and heterotrophic plate count. District will secure the first sample within five minutes of starting the pump at the specified pumping rate, and the second sample thirty minutes thereafter. District will furnish results of said analyses to Vendor within 48 hours of sampling.
- k. The well shall be deemed properly disinfected only if the sample analysis results indicate absence of total coliform bacteria, absence of fecal coliform bacteria, and a heterotrophic plate count of less than 500 colony forming units per milliliter (CFU/ml).
- l. If the sample analysis results do not indicate that the well was properly disinfected, the Vendor shall repeat the entire disinfection procedure, including sampling, sample analysis, and reporting of sample analysis results. Vendor shall continue to repeat the entire disinfection procedure until sample analysis results indicate that the well has been properly disinfected.
- m. The chlorinated water shall be dechlorinated to less than 0.1 ppm of chlorine prior to disposal. Dechlorination shall take place within the above-ground portable tank. The dechlorinated water shall be discharged off site at a controlled rate to avoid erosion, as directed by District.

PART 3 - CLEANUP

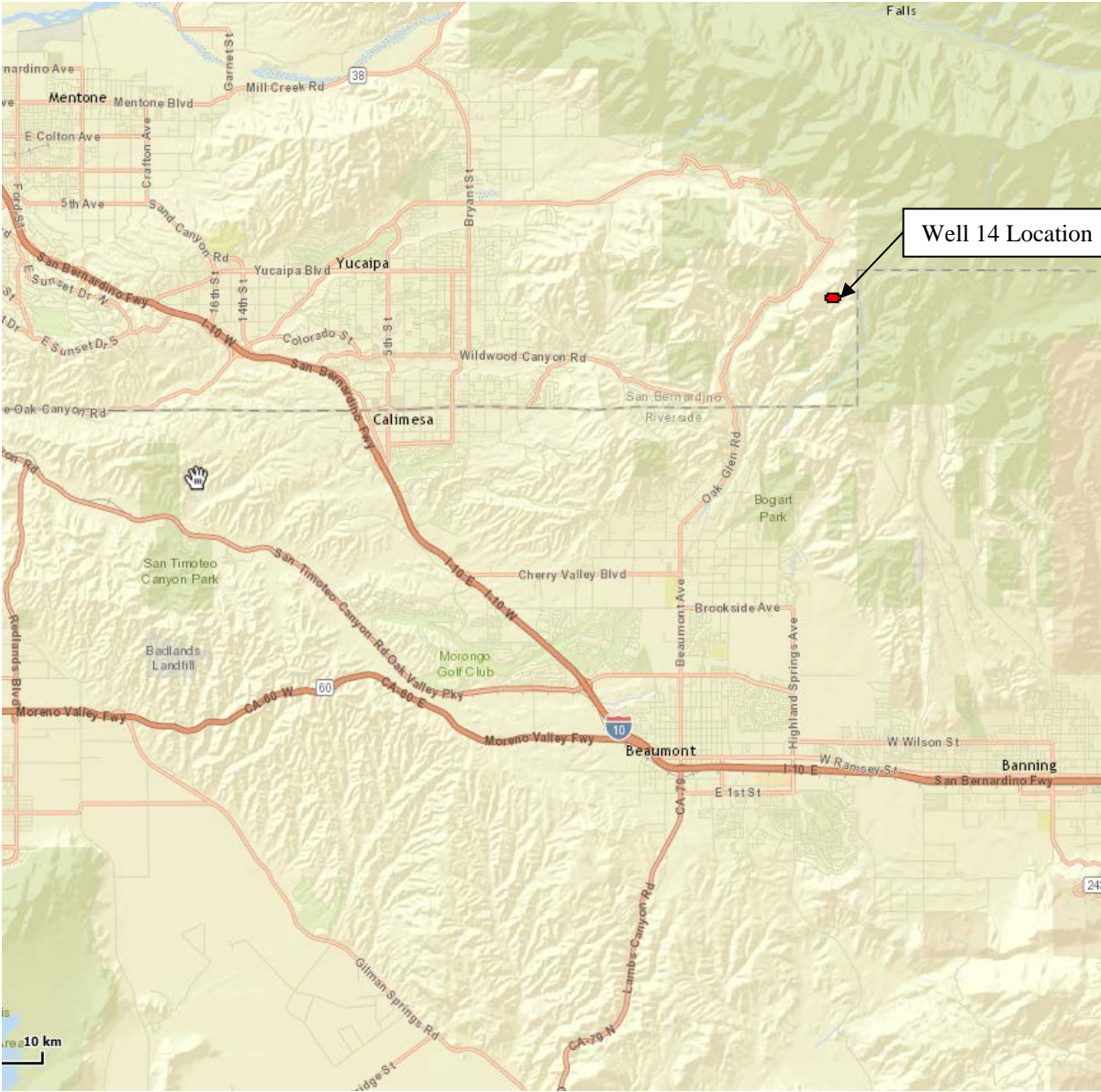
3.01 Cleanup

Vendor shall clean and restore all areas occupied by him in connection with the Work to preconstruction condition. Cleanup shall include, but shall not be limited to, removal and disposal of equipment, rubbish, excess materials, temporary structures, deposited sediments, and excavated materials and restoration of equipment, fences, pavements, trees, shrubs, piping, and ground surface. All parts of work site shall be left in a neat and presentable condition, all to satisfaction of District.

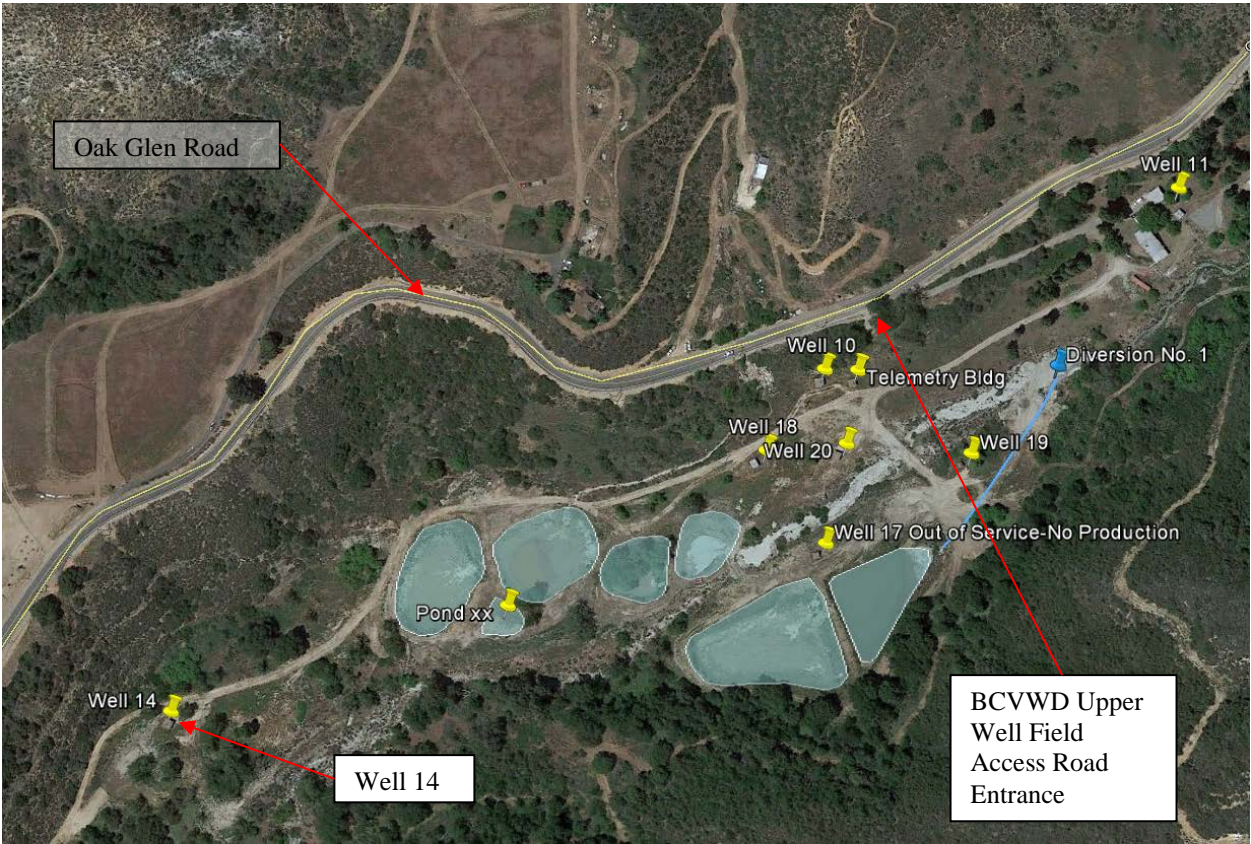
APPENDIX B

Well 14 Location Map, Site Plan Image, and Photos

Well 14 Location Map



Well 14 Site Plan Image



Well 14 Photos



Well 14 Building



Well 14 Exterior Discharge Piping



Well 14 Discharge Elbow and Piping



Well 14 Discharge Elbow and Piping

APPENDIX C

Well 14 SCE Pump Test Data (2001)

CONFIDENTIAL/PROPRIETARY INFORMATION

August 6, 2001

TONY LARA
BEAUMONT CHERRY VALLEY WATER DIST.
560 MAGNOLIA AVE.
BEAUMONT, CA 92223

SUBJECT: HYDRAULIC TEST RESULTS - WELL#14
EDGAR CANYON
CUST #: 0-000-0808 SERV ACCT #: 014-3302-04
DATE OF TEST: July 17, 2001

In accordance with your request, a test was made on your submersible well pump on the date listed above. If you have any questions regarding the results which follow, please contact TONY JIMENEZ at (909)820-5629.

EQUIPMENT

PUMP: N/A NO: N/A
MOTOR: N/A NO: N/A 50 HP
METER: 0728-3314
HYDRAULIC TEST REFERENCE NUMBER: 27355

TEST RESULTS

Discharge Pressure, PSI	16.0
Standing Water Level, Ft.	391.1
Drawdown, Ft.	15.0
Discharge Head, Ft.	37.0
Pumping Water Level, Ft.	406.1
Total Head, Ft.	443.1
Capacity, GPM	99.0
GPM per Ft. Drawdown	6.6
Acre Ft. Pumped in 24 Hrs.	0.438
kW Input to Motor	34.5
HP Input to Motor	46.3
Motor Load (%)	80.5
kWh per Acre Ft.	1893
Overall Plant Efficiency (%)	23.9
Customer Meter, GPM	125.0

The pump appeared to be breaking suction.

DAN JOHNSON
Manager
Hydraulic Services

CONFIDENTIAL/PROPRIETARY INFORMATION

August 6, 2001

TONY LARA
BEAUMONT CHERRY VALLEY WATER DIST.
560 MAGNOLIA AVE.
BEAUMONT, CA 92223

SUBJECT: PUMPING COST ANALYSIS
HP: 50 - PLANT: WELL#14
CUST #: 0-000-0808 SERV ACCT #: 014-3302-04
HYDRAULIC TEST REFERENCE NUMBER: 27355

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed July 17, 2001 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 62.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY PA-2 Current Rate	IMPROVED PLANT EFFICIENCY PA-2 Current Rate	Savings
Total kWh	237360	91666	145694
kW Input	34.5	13.3	21.2
kWh per Acre Ft.	1893	731	1162
Acre Ft. per Year	125.4	125.4	
Avg. Cost per kWh	\$0.08		
Avg. Cost per Acre Ft.	\$155.19	\$59.93	\$95.26
Overall Plant Eff. (%)	23.9	62.0	
-----	-----	-----	-----
TOTAL ANNUAL COST	\$19,463.52	\$7,516.64	\$11,946.88

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact TONY JIMENEZ at (909)820-5629.

DAN JOHNSON
Manager
Hydraulic Services

APPENDIX C

Well 14 Well and Pumping Unit Information

TRIPPLICATE
Owner's Copy

Page 1 of 1

Owner's Well No. 14

Date Work Began 5/29/98, Ended 6/15/98

Local Permit Agency Environmental Health Dept. San Bernardino

Permit No. 05219801

Permit Date 5/21/98

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 448089

DWR USE ONLY - DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

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.

WELL OWNER

Name Beaumont Cherry Valley Water District

Mailing Address P.O. Box 2037

Beaumont CA 92223

CITY STATE ZIP

WELL LOCATION

Address Oak Glen Road

City Cherry Valley

County San Bernardino

APN Book Page Parcel 325-061-01

Township 2S Range 1W Section 2

Latitude DEG. MIN. SEC. NORTH Longitude DEG. MIN. SEC. WEST

LOCATION SKETCH

NORTH

ACTIVITY ()

NEW WELL

MODIFICATION/REPAIR

Deepen

XX Other (Specify)

Install lines

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S)

()

MONITORING

WATER SUPPLY

Domestic

XX Public

Irrigation

Industrial

"TEST WELL"

CATHODIC PROTECTION

OTHER (Specify)

SOUTH

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

DRILLING METHOD

FLUID

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL 68' (Ft.) & DATE MEASURED 6/29/98

ESTIMATED YIELD 500 (GPM) & TEST TYPE Turbine

TEST LENGTH 24 (Hrs.) TOTAL DRAWDOWN 128 (Ft.)

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING (Feet)

TOTAL DEPTH OF COMPLETED WELL 643 (Feet)

DEPTH FROM SURFACE			BORE-HOLE DIA. (Inches)	CASING(S)					ANNULAR MATERIAL					
				TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE		
Ft.	to	Ft.		BLANK	SCREEN	CON- DUCTOR	FILL PIPE					CE- MENT (✓)	BEN- TONITE (✓)	FILL (✓)
0	160		X					STEEL	10"	.250				
160	643			X				STEEL	10"	.250	.125			

DEPTH FROM SURFACE			ANNULAR MATERIAL			
			TYPE			
Ft.	to	Ft.	CE- MENT (✓)	BEN- TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	50		X			
50	643					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 SoCal Pump & Well Service, Inc.

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

P.O. Box 5488 Riverside Ca 92517

ADDRESS CITY STATE ZIP

Signed [Signature] 7/15/98 510836

WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED

C-57 LICENSE NUMBER

RO COE MOSS COMP NY

4360 WORTH STREET
LOS ANGELES, CAL.

WELL CONTRACTORS

RENTAL TOOLS

Log of Well No. 314 Drilled for Beaumont Irrigation District
of Beaumont, California.

Exact Location Edgar Canyon

Started Work May 15, 1950

Completed Work July 24, 1950

Total depth 711 Size of shoe

262 ft. of 16 inch 8 for gauge casing used and left in Well

453 " " 12 " 8 single ply sections and

" " " " " " " " " " " "

Top of 12 inch pipe 187' " " " " " "

" " " " " " " " " " " "

" " " " " " " " " " " "

" " " " " " " " " " " "

Type of Perforator used

Perforated 11 12" pipe was pre-perforated Holes per inches

" " " " " " " " " " " "

" 187 " 4-2 60 " 12 "

" " " " " " " " " " " "

" " " " " " " " " " " "

" " " " " " " " " " " "

Make diagram of perforation in square, showing dimensions.

Diameter of Perforations inches

Length of Perforations "

Depth at which water was first found 187 ft.

Standing level before perforating 75 "

Standing level after perforating "

Note below your observation of any change in water level while drilling

Water dropped from 187' to 75'.

Water level when first started Test 85 ft.

Draw down from standing level 14 "

No. of gallons per minute pumped when Test first started 265

No. of gallons per minute pumped when Test completed 693

Draw down at completion of Test 360 ft.

Hours Testing Well 10 1/2

Formation: Mention size of water gravel—

0 ft. to 10 ft. Sand gravel and boulders

10 " " 24 " Clay and boulders

24 " " 202 " Hard sandy clay

202 " " 711 " Fault formation.

" " " " " " " " " " " "

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6/19 10 hrs. Drilling well 501 to 510' formation decomposed granite.
6/20 10 hrs. Drilling well 510' to 522' formation decomposed granite.
6/21 11 hrs. Drilling well 522' to 535' formation decomposed granite.
6/22 11 hrs. Drilling well 535' to 547' formation decomposed granite.
6/23 11 hrs. Drilling well 547' to 560' formation decomposed granite. 16" casing left at 202'. Water level 72'.
6/24 7 hrs. Drilling well 560' to 568' formation decomposed granite.
6/26 11 hrs. Drilling well 568' to 576' formation decomposed granite.
6/27 11 hrs. Drilling well 576' to 588' formation decomposed granite.
6/28 11 hrs. Drilling well 588' to 595' formation decomposed granite. Ran 15" scow in well and it stopped at 425' could not get it any deeper.
6/29 11 hrs. Drilling well 595' to 605' formation decomposed granite.
6/30 11 hrs. Drilling well 605 to 611' in fault formation.
7/1 7 hrs. Drilling well 611 to 615' in fault formation.
7/3 11 hrs. Drilling well 615' to 620' in fault formation. Ran 13 1/4" scow with 14 1/4" shoe to bottom of well.
7/4 11 hrs. Drilling well 620' to 628' in fault formation.
7/5 11 hrs. Drilling well 628' to 635' in fault formation.
7/6 11 hrs. Drilling well 635' to 642' in fault formation. Hole is caving a small amount. Water level is 74 feet.
7/7 5 hrs. Changing main line in order to continue drilling and re-drilling hole that had caved in.
7/8 4 hrs. Hole caving badly and cannot get back to bottom. Will have to set casing.
7/9 to 7/13 inclusive waiting for manufacture of 12" No. 8 gauge single sectionized casing to set in hole.
7/14 9 hrs. Set in 455' of 12" No. 8-gauge single pre-perforated casing. Casing went to 605' and we will have to drill thereon as hole had caved back to that point.
7/15 8 hrs. Re-drill 606' to 619'.
7/17 19 hrs. Running two shifts. Re-drill well 619 to 630' and swedging top of 12" casing.
7/18 20 hrs. Drill well 630 to 650' and swedging out top of 12" casing.
7/19 20 hrs. Drilling well 650' to 675' in fault formation.

251 hours. Forwarded.....Amount Forward... \$ 6,230.72

7/20 20 hrs. Drilling well 675' to 695' fault formation.
7/21 20 hrs. Drilling well 695' to 707' fault formation.
7/22 20 hrs. Drilling well 707' to 711' fault formation and driving casing to 642'. Water level 75'.

311 hours.....@ 10.00 per hour.....\$3,110.00

Returned to the
Lumber Co. owned by H. C. G.

APPENDIX D

Maintenance Bond Example

MAINTENANCE BOND
FOR PUMPING EQUIPMENT
(By Supplier)
(Example)

KNOW ALL MEN BY THESE PRESENTS, that we, _____,
as Surety, hereinafter called Surety, are held and firmly bound unto Beaumont-
Cherry Valley Water District, hereinafter called District, in the penal sum of \$_____,
for the payment whereof (Supplier) and Surety bind themselves, their heirs, executors,
administrators, successors, and assigns, jointly and severally, firmly by these present.

WHEREAS, Supplier has provided pumping equipment for District project _____
_____ in accordance with the Specifications.

NOW, THEREFORE, the condition of the obligation is such that, if Supplier shall
remedy any defects due to faulty materials or workmanship which shall appear within a
period of 1 year from the date the project is accepted as provided for in the
specification, then this obligation is to be void, otherwise to remain in full force and
effect.

PROVIDED, HOWEVER, that the District shall give Supplier and Surety notice of
observed defects with reasonable promptness.

Signed and sealed this _____ day of _____, 20____

Supplier (SEAL)

Surety (SEAL)

Title

Title