

As a matter of proper business decorum, the Board of Commissioners respectfully request that all cell phones be turned off or placed on vibrate. To prevent any potential distraction of the proceeding, we request that side conversations be taken outside the meeting room.

**REGULAR BOARD MEETING**  
**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY**  
**VICTORVILLE CITY HALL, CONFERENCE ROOM D**  
**14343 CIVIC DRIVE, VICTORVILLE CA 92392**  
**Thursday, August 17, 2023**  
**Closed Session 7:30 a.m. Open Session 8:00 a.m.**

*VVWRA is committed to protecting public health and the environment in the Victor Valley by providing effective and fiscally responsible wastewater collection, treatment, and recycling.*

**Call to Order**

**Nassif**

**Roll Call**

**Casteel**

**Public Comments- Closed Session Agenda Items**

**Nassif**

**CLOSED SESSION:** During the course of conducting the business set forth on this agenda as a regular meeting of the Board, the Chair may convene the Board in closed session to consider matters of pending real estate negotiations, pending or potential litigation, or personnel matters, pursuant to Government Code Sections 54956.8, 54956.9, 54957 or 54957.6, as noted. Reports relating to (a) purchase and sale of real property; (b) matters of pending or potential litigation; or (c) employment actions, or which are exempt from public disclosure under the California Public Records Act, may be reviewed by the Board during a permitted closed session and are not available for public inspection. At such time the Board takes final action on any of these subjects, the minutes will reflect all required disclosures of information. Closed Session is scheduled to commence at 7:30 a.m.. If the matters discussed in closed session require additional time beyond 8:00 a.m., in deference to the public, the Board may continue the Closed Session discussion after Open Session is concluded. In that case, Closed Session will resume after the Commissioners Comments section and any reportable action will be reported after the continued Closed Session has concluded and before adjournment.

**Closed Session**

**Item 1-Personnel Issues (two)**

**Item 1.a. (Gov. Code Sections 54957/54957.6/ 54954.5 (f)/ 54956.9)-Pending Litigation**  
**Cloutier v. VVWRA, State Case No. 36632**

**Item 1.b. (Gov. Code Sections 54957/54957.6/ 54954.5 (f)/ 54956.9)-Pending Litigation**  
**- Wilson v. VVWRA, Case No. CIVSB2214882, San Bernardino Superior Court.**

**Call to Order & Pledge of Allegiance**

**Nassif**

**Report from Closed Session**

**Legal**

**Public Comment (Government Code Section 54954.3)**

**Nassif**

Opportunity for members of the public to directly address the Board on items of public interest within its jurisdiction. The public may also address the Board on items being considered on this agenda. VVWRA requests that all public speakers complete a speaker's card and provide it to the Secretary. Persons desiring to submit paperwork to the Board of Commissioners shall provide a copy of any paperwork to the Board Secretary for the official record. We request that remarks be limited to five minutes or less. Pursuant to Government Code Section 54954.3, if speaker is utilizing a translator, the total allotted time will be doubled.

**Possible Conflicts of Interest**

**Nassif**

**Consent Calendar**

**Nassif**

All matters placed on the Consent Calendar are considered as not requiring discussion or further explanation and unless any particular item is requested to be removed from the Consent Calendar by a Commissioner, staff member or member of the public in attendance, there will be no separate discussion of these items. All items on the Consent Calendar will be enacted by one action approving all motions and casting a unanimous ballot for resolutions included on the consent calendar. All items removed from the Consent Calendar shall be considered in the regular order of business.

**Item 2. Receive, Approve and File Minutes**

**Poulsen**

- Regular Board Meeting 07/20/2023

**Item 3. Receive, Approve and File July 2023 Disbursement**

- Warrant Summary Disbursements

**Board Action Required**

Staff Recommendation: Approve as presented

**Action Items**

*The Executive Leadership Team will provide brief updates on existing matters under their purview and will be available to respond to any questions thereof.*

**Item 4. Recommendation to Award a Contract to Parada Painting for the Regional UV Channels Coating**

**Adams**

It is recommended that the Board of Commissioners authorize the General Manager to award a contract, pending legal review, to coat the Regional Plant UV Channels to Parada Painting for \$120,240.00 plus a 10% contingency, to cover unforeseen costs, totaling \$142,164.00

**Board Action Required**

Staff Recommendation: Approve as presented

**Item 5. Recommendation to Authorize the General Manager to Award A Contract for the Regional Plant Ultraviolet Engineering Feasibility Study in the Amount of \$76,540.00 to Hoch Consulting Inc**

**Adams**

It is recommended that the Board of Commissioners authorize the General Manager to award a contract for the regional plant ultraviolet engineering feasibility study project in the amount of \$76,540.00 to Hoch Consulting inc., pending legal review and approval of the agreement

**Board Action Required**

Staff Recommendation: Approve as Presented

**Item 6. Recommendation to Purchase Composite Water-Resistant Manhole Covers and Frames from TITUS® WASTEWATER SOLUTIONS, INC for the Amount of \$132,087.58**

**Laari**

It is recommended that the Board of Commissioners authorize the general manager to purchase composite on a sole source basis 75 water-resistant manhole covers, frames and related tools from TITUS® WASTEWATER SOLUTIONS, INC for the amount of \$132,087.58

**Board Action Required**

Staff Recommendation: Approve as Presented

**Item 7. Recommendation to Award a Contract to Christensen Brothers Engineering to Construct the AVWRP Reclaim Bypass Line**

**Adams**

It is recommended that the Board of Commissioners authorize the General Manager to award a contract, pending legal review, to repair the Regional Plant paved roads to Christensen Brothers Engineering for \$451,516.45 plus a 5% contingency, to cover unforeseen costs, totaling \$474,092.27

**Board Action Required**

Staff Recommendation: Approve as Presented

**Item 8. Recommendation to Purchase Arcserve Total Backup Solution Via Their Distributor BlueAlly Inc for the Amount of \$136,850.26**

**Laari**

It is recommended that the Board of Commissioners authorize the general manager to purchase ArcServe total backup solution and related services via their distributor BlueAlly Inc for the amount of \$136,850.26

**Board Action Required**

Staff Recommendation: Approve as Presented

## Staff Reports

<b><u>Item 9.</u> General Managers Report</b> - Medical Benefit Update	<b>Poulsen</b>
<b>Report Range</b>	<b>Board Meeting Date (Thursday)</b>
4 <sup>th</sup> Quarter October 2022- December 2022	February 16, 2023
1st Quarter January 2023-March 2023	May 18, 2023
2 <sup>nd</sup> Quarter April 2023-June 2023	September 21, 2023
3 <sup>rd</sup> Quarter July 2023- September 2023	November 16, 2023
4 <sup>th</sup> Quarter October 2023- December 2023	February Board 2024

## Adjournment

**Nassif**

The board will adjourn to a regular board meeting



## **American Disabilities Act Compliance Statement**

*Government Code Section 54954.2(a)*



*Any request for disability-related modifications or accommodations (including auxiliary aids or services) sought to participate in the above public meeting should be directed to the VVWRA's Secretary at (760) 246-8638 at least 72 hours prior to the scheduled meeting. Requests must specify the nature of the disability and the type of accommodation requested.*

### **Agenda posting**

*Government Code Section 54954.2*

*This agenda has been posted in the main lobby of the Authority's Administrative offices not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the Board Secretary.*

### **Agenda items received after posting**

*Government Code Section 54957.5*

*Materials related to an item on this agenda submitted after distribution of the agenda packet are available for public review at the VVWRA office located at, 20111 Shay Road, Victorville CA 92394. The materials will also be posted on the VVWRA website at [www.vvwra.com](http://www.vvwra.com).*

### **Items Not Posted**

*Government Code Section 54954.2(b)*

*In the event any matter not listed on this agenda is proposed to be submitted to the Board for discussion and/or action, it will be done as an emergency item or because there is a need to take immediate action, which came to the attention of the Board subsequent to the posting of the agenda, or as set forth on a supplemental agenda posted in the manner as above, not less than 72 hours prior to the meeting date.*

### **Items Continued**

*Government Section 54954.2(b)(3)*

*Items may be continued from this meeting without further notice to a Committee or Board meeting held within five (5) days of this meeting*

### **Meeting Adjournment**

*This meeting may be adjourned to a later time and items of business from this agenda may be considered at the later meeting by Order of Adjournment and Notice*

*VVWRA's Board Meeting packets and agendas are available for review on its website at [www.vvwra.com](http://www.vvwra.com). The website is updated on Friday preceding any regularly scheduled board meeting.*

**MINUTES OF A REGULAR MEETING  
REGULAR MEETING OF THE BOARD OF COMMISSIONERS  
VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY (VWVRA)  
July 20, 2023**

**CALL TO ORDER:** Chair Art Bishop called the meeting to order at 7:37 AM; in Conference Room D at Victorville City Hall, located at 14343 Civic Drive, Victorville California, with the following members present:

<b>TOWN OF APPLE VALLEY</b>	<b>Art Bishop, Chair</b>
<b>CITY OF VICTORVILLE</b>	<b>Debra Jones, Vice-Chair</b>
<b>CITY OF HESPERIA</b>	<b>Larry Bird, Secretary</b>
<b>ORO GRANDE (CSA 42) AND SPRING VALLEY LAKE (CSA 64)</b>	<b>Dakota Higgins , Treasurer ABSENT</b>

**VWVRA Staff and Legal Counsel:**

**Darron Poulsen, General Manager**  
**Kristi Casteel, Executive Assistant**  
**Piero Dallarda, Legal Counsel (BB&K)**  
**David Wylie, Safety & Communications Officer**  
**Brad Adams, Director of O&M**

**Guests**

**Keith Metzler, City of Victorville**

**CLOSED SESSION**

**PUBLIC COMMENTS- CLOSED SESSION AGENDA**

**NONE**

**Moved: Commissioner Jones                      Second: Commissioner Nassif**  
**Motion to enter into Closed Session**

**Motion passed by a 3-0 roll call vote with Commissioner Higgins Absent**

**REGULAR SESSION**

**CALL TO ORDER & PLEDGE OF ALLEGIANCE**

Chair Bishop called the meeting to order at 8:40 AM.

**REPORT FROM CLOSED SESSION-      NONE**

**PUBLIC COMMENTS- REGULAR SESSION AGENDA - NONE**

**POSSIBLE CONFLICT OF INTEREST - NONE**

**VVWRA Regular Meeting Minutes**

**Thursday, July 20, 2023**

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**CONSENT CALENDAR:**

- 3. Receive, Approve and File Minutes, June 15, 2023 Regular Meeting**
- 4. Receive, Approve and File June 2023 Disbursement**

**Moved: Commissioner Jones**

**Second: Commissioner Bird**

**Approval of the Consent Calendar Items 4 and 5 with Chair Nassif abstaining from any disbursements to Napa Auto Parts on item 5.**

**Chair Bishop- Yes**

**Commissioner Jones - Yes**

**Commissioner Bird - Yes**

**Motion passed by a 3-0 roll call vote with Commissioner Higgins absent**

**ACTION ITEM:**

- 5. Recommendation to approve VVWRA Non-Represented Employees' Compensation and Benefits Plan Changes**

The Board will consider approval of the proposed changes VVWRA Non-Represented Employees Compensation and Benefits Plan

**Moved: Commissioner Jones**

**Second: Commissioner Bird**

**Approval of the proposed changes VVWRA Non-Represented Employees Compensation and Benefits Plan with the changes as noted- on page 5-4 of the agenda, item 4 should read "each management full time employee" also will strike out "June 17, 2023" because it is an annual payment at the Boards discretion. Also, the second sentence should say "annual payment" not one time payment and strike out "June 2023"**

**Chair Bishop- Yes**

**Commissioner Jones - Yes**

**Commissioner Bird - Yes**

**Motion passed by a 3-0 roll call vote with Commissioner Higgins absent**

**VWRA Regular Meeting Minutes**

**Thursday, July 20, 2023**

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**6. Recommendation to Adopt Resolution 2023-12 Amend Surplus Property List of Unused Equipment and Scrap**

The Board will consider adoption of Resolution No. 2023-12 to amend the Surplus Property List and authorize the General Manager to approve the disposition of surplus equipment that no longer has any present or prospective use

**Moved: Commissioner Jones**

**Second: Commissioner Bird**

**Approval of adoption of Resolution No. 2023-12 to amend the Surplus Property List and authorize the General Manager to approve the disposition of surplus equipment that no longer has any present or prospective use**

**Chair Bishop- Yes**

**Commissioner Jones - Yes**

**Commissioner Bird - Yes**

**Motion passed by a 3-0 roll call vote with Commissioner Higgins absent**

**7. Recommendation to Adopt Resolution 2023-13 a Grant Policy**

The Board will consider approval to adopt Resolution 2023-13 a Grant Policy

**Moved: Commissioner Jones**

**Second: Chair Bishop**

**Approval to Adopt Resolution 2023-13 a Grant Policy**

**Chair Bishop- Yes**

**Commissioner Jones - Yes**

**Commissioner Bird - Yes**

**Motion passed by a 3-0 roll call vote with Commissioner Higgins absent**

8. Recommendation to Amend the 2023 Board Schedule

It is recommended that the Board of Commissioners Amend the 2023 Board Schedule

**Moved: Commissioner Bird                      Second: Commissioner Jones**  
**Approval to Amend the 2023 Board Schedule**  
**Chair Bishop- Yes**  
**Commissioner Jones - Yes**  
**Commissioner Bird - Yes**  
**Motion passed by a 3-0 roll call vote with Commissioner Higgins absent**

**CLOSED SESSION (If Closed Session is continued)**

**Closed session**

**ADJOURNMENT**

**The board will adjourn to a regular board meeting on August 17, 2023 at 7:30 a.m.**

**APPROVAL:**

**DATE: \_\_\_\_\_ BY:**

\_\_\_\_\_  
Approved by Larry Bird, Secretary  
VWRA Board of Commissioners



**Victor Valley Wastewater Reclamation Authority**

*A Joint Powers Authority and Public Agency of the State of California*

Administrative Offices

20111 Shay Road, Victorville, CA 92394

Telephone: (760) 246-8638

Fax: (760) 948-9897

e-mail: mail@vwwra.com

**DATE:** August 17, 2023  
**TO:** Darron Poulsen  
 General Manager  
**FROM:** Xiwei Wang  
 Accounting Supervisor  
**SUBJECT:** Cash Disbursements Register

**RECOMMENDED ACTION**

It is recommended that the Board of Commissioners approve the cash disbursements and payroll register for the Victor Valley Wastewater Reclamation Authority.

**BACKGROUND**

The Cash Disbursements Register totals represented below are for the month of JULY 2023, check numbers 125227-125263 and ACH's.

<i>Accounts Payable</i>				
<i>Checks</i>	<i>ACH's and EFT's</i>	<i>Payroll</i>	<i>CalPers Net Pension Liability</i>	<i>Total</i>
<i>\$177,581.14</i>	<i>\$749,759.06</i>	<i>\$442,064.53</i>	<i>\$584,474.00</i>	<i>\$1,953,878.73</i>

**Victor Valley Wastewater Reclamation Authority**  
**Cash Disbursement Register**  
**From 7/1/2023 through 7/31/2023**

Vendor Name	Payment #	Date	Total
Airgas Usa, Llc	125227	07/12/2023	\$ 433.78
Burrtec Waste Ind., Inc.	125228	07/12/2023	\$ 274.40
City Of Victorville / Sanitation	125229	07/12/2023	\$ 17,141.08
Dell Inc.	125230	07/12/2023	\$ 2,295.58
Guardian	125231	07/12/2023	\$ 1,015.65
Heritage Environmental Services, L.L.C.	125232	07/12/2023	\$ 298.00
Industrial Hearing & Pulmonary Mgmt	125233	07/12/2023	\$ 2,875.00
Mcr Technologies	125234	07/12/2023	\$ 437.18
Multi W Systems, Inc	125235	07/12/2023	\$ 15,150.31
Ponton Industries, Inc.	125236	07/12/2023	\$ 7,932.88
Quill Corporation	125237	07/12/2023	\$ 1,148.67
Roto-Rooter Plumbers	125238	07/12/2023	\$ 823.00
Safety-Kleen Systems Inc.	125239	07/12/2023	\$ 1,669.45
Southern Counties Lubricants	125240	07/12/2023	\$ 1,487.60
Verizon Wireless	125241	07/12/2023	\$ 3,796.18
Answering 365	125242	07/21/2023	\$ 179.65
Big Sky Electric	125243	07/21/2023	\$ 48,713.00
Brown Bear Corp	125244	07/21/2023	\$ 21,641.32
Dezurik C/O C.S.-Amsco	125245	07/21/2023	\$ 4,304.33
Hesperia Unified School District	125246	07/21/2023	\$ 127.19
High Desert Backflow - Aaa Action Backflow, Llc	125247	07/21/2023	\$ 194.85
Learn Cpr 4 Life	125248	07/21/2023	\$ 935.00
United Rentals Northwest, Inc	125249	07/21/2023	\$ 4,400.60
Alpha Omega Septic Service	125250	07/27/2023	\$ 389.00
Answering 365	125251	07/27/2023	\$ 204.65
Arthur Bishop	125252	07/27/2023	\$ 100.00
Bird, Larry	125253	07/27/2023	\$ 100.00
Dell Inc.	125254	07/27/2023	\$ 10,390.50
Harrington Industrial Plastics	125255	07/27/2023	\$ 404.43
Hi-Desert Communications	125256	07/27/2023	\$ 150.00
Jones, Debra	125257	07/27/2023	\$ 100.00
Konica Minolta Business Solutions	125258	07/27/2023	\$ 233.55
Multi W Systems, Inc	125259	07/27/2023	\$ 5,537.68
Roto-Rooter Plumbers	125260	07/27/2023	\$ 971.00
Shredyourdocs.Com	125261	07/27/2023	\$ 114.00
Swains Electric Motor Service	125262	07/27/2023	\$ 7,917.44
United Rentals Northwest, Inc	125263	07/27/2023	\$ 13,694.19
		<b>Total Checks</b>	<b>\$ 177,581.14</b>
A.D.S. Corp.	20914	07/12/2023	\$ 7,700.00
Adt Commercial	20915	07/12/2023	\$ 253.88
Aerzen Usa	20916	07/12/2023	\$ 5,857.45
Alliant Insurance Services	20917	07/12/2023	\$ 13,215.00
Applied Maintenance Supplies & Solution	20918	07/12/2023	\$ 2,372.09

**Victor Valley Wastewater Reclamation Authority**  
**Cash Disbursement Register**  
**From 7/1/2023 through 7/31/2023**

<b>Vendor Name</b>	<b>Payment #</b>	<b>Date</b>	<b>Total</b>
Bargain Byte	20919	07/12/2023	\$ 7,803.01
Blue Ally Technology Sol. (Prev. Virtual Graffiti)	20920	07/12/2023	\$ 11,143.20
Brenntag Pacific, Inc	20921	07/12/2023	\$ 34,037.45
Cdw Government, Inc	20922	07/12/2023	\$ 527.40
Cintas Corporation	20923	07/12/2023	\$ 1,376.22
Crane Pro Services	20924	07/12/2023	\$ 3,598.79
Culligan Water Conditioning	20925	07/12/2023	\$ 611.48
Graham Equipment	20926	07/12/2023	\$ 4,450.00
Grainger	20927	07/12/2023	\$ 7,006.68
Haaker Equipment Company	20928	07/12/2023	\$ 326.25
Hach Company	20929	07/12/2023	\$ 535.05
High Desert Affordable Landscaping	20930	07/12/2023	\$ 5,034.00
John Robinson Consulting, Inc	20931	07/12/2023	\$ 49,720.00
Labor Finders	20932	07/12/2023	\$ 1,269.53
Mcgrath Rentcorp	20933	07/12/2023	\$ 6,012.82
Mcmaster-Carr Supply Co.	20934	07/12/2023	\$ 70.06
Ndk Chem, Inc.	20935	07/12/2023	\$ 2,000.00
Netgain Networks, Inc	20936	07/12/2023	\$ 4,459.02
Orkin	20937	07/12/2023	\$ 188.99
Planetbids, Inc	20938	07/12/2023	\$ 11,457.72
Poulsen, Darron	20939	07/12/2023	\$ 105.00
Pro Automation Co.	20940	07/12/2023	\$ 60,761.72
Prudential Overall Supply	20941	07/12/2023	\$ 1,887.90
Quinn Company	20942	07/12/2023	\$ 32.00
Reliant Water Technologies	20943	07/12/2023	\$ 280.14
Saddleback Environmental Equipment, Inc.	20944	07/12/2023	\$ 74,983.13
Tecsolutions Consultants Llc	20945	07/12/2023	\$ 15,703.50
T-Mobile	20946	07/12/2023	\$ 196.56
U.S.A. Bluebook	20947	07/12/2023	\$ 2,854.61
Underground Service Alert Of Southern California	20948	07/12/2023	\$ 60.75
Veteran Janitorial, Llc	20949	07/12/2023	\$ 2,730.00
Wageworks, Inc	20950	07/12/2023	\$ 167.96
American Express	20951	07/13/2023	\$ 17,321.36
U.S. Bank	20952	07/13/2023	\$ 15,518.55
2G Energy Inc.	20953	07/21/2023	\$ 876.82
Adt Commercial	20954	07/21/2023	\$ 516.06
Anthony, Donna	20955	07/21/2023	\$ 420.00
Billings, Richard	20956	07/21/2023	\$ 420.00
Biogas Engineering	20957	07/21/2023	\$ 1,200.00
Ceden0,Martin	20958	07/21/2023	\$ 310.07
Correia, Linda	20959	07/21/2023	\$ 420.00
Culligan Water Conditioning	20960	07/21/2023	\$ 611.48
D.K.F. Solutions Group, Llc	20961	07/21/2023	\$ 350.00
Dagnino, Roy	20962	07/21/2023	\$ 420.00
Davis, Tim	20963	07/21/2023	\$ 420.00



**Victor Valley Wastewater Reclamation Authority**  
**Cash Disbursement Register**  
**From 7/1/2023 through 7/31/2023**

<b>Vendor Name</b>	<b>Payment #</b>	<b>Date</b>	<b>Total</b>
Dudek	20964	07/21/2023	\$ 53,832.75
Fha Services, Inc.	20965	07/21/2023	\$ 3,378.37
Flint, Terrie Gossard	20966	07/21/2023	\$ 269.02
G & M Automotive Center	20967	07/21/2023	\$ 5,473.77
Grainger	20968	07/21/2023	\$ 531.02
Gyurcsik, Darline	20969	07/21/2023	\$ 269.02
Haaker Equipment Company	20970	07/21/2023	\$ 5,662.41
Hinojosa, Thomas	20971	07/21/2023	\$ 420.00
Keagy, Chieko	20972	07/21/2023	\$ 415.50
Keniston, Olin	20973	07/21/2023	\$ 269.02
Labor Finders	20974	07/21/2023	\$ 1,285.60
Main, Randy	20975	07/21/2023	\$ 420.00
Mcgee, Mark	20976	07/21/2023	\$ 420.00
Montgomery, Lillie	20977	07/21/2023	\$ 148.68
Nalian, L. Christina	20978	07/21/2023	\$ 148.68
Nave, Patrick	20979	07/21/2023	\$ 420.00
Netgain Networks, Inc	20980	07/21/2023	\$ 28,226.92
Smartcover Systems	20981	07/21/2023	\$ 224.00
Watereuse Association	20982	07/21/2023	\$ 750.00
Applied Maintenance Supplies & Solution	20983	07/27/2023	\$ 24.10
Best, Best & Krieger, L.L.P.	20984	07/27/2023	\$ 37,202.82
Blackline Safety Corp	20985	07/27/2023	\$ 210.00
Brenntag Pacific, Inc	20986	07/27/2023	\$ 576.40
California School Veba	20987	07/27/2023	\$ 674.93
Cdw Government, Inc	20988	07/27/2023	\$ 719.99
D.K.F. Solutions Group, Llc	20989	07/27/2023	\$ 350.00
Evoqua Water Technologies Llc	20990	07/27/2023	\$ 11,625.40
Fastenal	20991	07/27/2023	\$ 119.71
Grainger	20992	07/27/2023	\$ 2,153.12
Hach Company	20993	07/27/2023	\$ 2,301.15
Labor Finders	20994	07/27/2023	\$ 1,671.28
Luhdorff And Scalmanini	20995	07/27/2023	\$ 352.50
Michael'S Auto Detail	20996	07/27/2023	\$ 940.00
Misco - T.W. Associates	20997	07/27/2023	\$ 27,909.35
Netgain Networks, Inc	20998	07/27/2023	\$ 10,348.11
Orkin	20999	07/27/2023	\$ 669.98
Procurement Consulting Services, Llc.	21000	07/27/2023	\$ 3,665.50
Prudential Overall Supply	21001	07/27/2023	\$ 1,891.98
Qed Environmental Systems, Inc.	21002	07/27/2023	\$ 2,145.00
Quinn Company	21003	07/27/2023	\$ 48.00
Sulzer Electro-Mechanical Services (Us) Inc.	21004	07/27/2023	\$ 314.61
Victor Valley Wastewater Employees Assoc	21005	07/27/2023	\$ 1,100.00
Waxie Sanitary Supply	21006	07/27/2023	\$ 951.64
Southwest Gas Company	DFT04062	07/05/2023	\$ 41,759.77
Southwest Gas Company	DFT04063	07/05/2023	\$ 37,941.07

**Victor Valley Wastewater Reclamation Authority  
Cash Disbursement Register  
From 7/1/2023 through 7/31/2023**

<b>Vendor Name</b>	<b>Payment #</b>	<b>Date</b>	<b>Total</b>
Spectrum (Prev. Charter Communications)	DFT04064	07/05/2023	\$ 6,748.30
Ups	DFT04065	07/05/2023	\$ 36.32
Hesperia Water District	DFT04066	07/17/2023	\$ 645.45
Liberty Utilities	DFT04067	07/17/2023	\$ 125.38
Liberty Utilities	DFT04068	07/17/2023	\$ 75.68
Liberty Utilities	DFT04069	07/17/2023	\$ 559.03
Flyers Energy, Llc	DFT04070	07/17/2023	\$ 1,650.39
Town Of Apple Valley	DFT04071	07/17/2023	\$ 188.24
Southwest Gas Company	DFT04072	07/17/2023	\$ 58.02
Southwest Gas Company	DFT04073	07/17/2023	\$ 25.00
Ups	DFT04074	07/17/2023	\$ 51.64
Konica Minolta Business Solutions	DFT04075	07/17/2023	\$ 427.50
Lincoln Financial Group	DFT04076	07/17/2023	\$ 5,786.82
Lincoln Financial Group	DFT04077	07/17/2023	\$ 74.66
Principal Life Ins. Co.	DFT04078	07/24/2023	\$ 6,897.66
Southern California Edison	DFT04079	07/24/2023	\$ 3,123.87
Southern California Edison	DFT04080	07/24/2023	\$ 20,177.50
Southern California Edison	DFT04081	07/24/2023	\$ 31,701.98
Southern California Edison	DFT04082	07/24/2023	\$ 866.42
Ups	DFT04083	07/24/2023	\$ 316.33
Ca Dept. Of Tax And Fee Admin.	DFT04085	07/27/2023	\$ 398.00
<b>Total EFT's and ACH</b>			<b>\$ 749,759.06</b>

**Approved**  
*Xiwei Wang*  
Xiwei Wang (Aug 4, 2023 09:08 PDT)

<b>Total Checks</b>	<b>\$ 177,581.14</b>
<b>Total EFT's and ACH</b>	<b>\$ 749,759.06</b>
<b>Total Payroll - July 2023</b>	<b>\$ 442,064.53</b>
<b>CalPers Net Pension Liability</b>	<b>\$ 584,474.00</b>
<b>Total</b>	<b>\$ 1,953,878.73</b>







# 1. Cash Disbursement Memo July 2023

Final Audit Report

2023-08-04

Created:	2023-08-04
By:	Cyle Palazzo (cpalazzo@vwwra.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAJkla-0U40fiiiPy8OycySN0vsDJ2QrcI

## "1. Cash Disbursement Memo July 2023" History

-  Document created by Cyle Palazzo (cpalazzo@vwwra.com)  
2023-08-04 - 3:59:19 PM GMT
-  Document emailed to xwang@vwwraca.gov for signature  
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-  Signer xwang@vwwraca.gov entered name at signing as Xiwei Wang  
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-  Document e-signed by Xiwei Wang (xwang@vwwraca.gov)  
Signature Date: 2023-08-04 - 4:08:36 PM GMT - Time Source: server
-  Agreement completed.  
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**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY**  
**Board of Commissioners Staff Report**

---

**For Action**       **Fiscal Impact:      \$ 142,164**  
 **Information Only**     **Account Code: 01-02-535-9000-9999 R159**

**TO:**                                 VWRA Board of Commissioners  
**FROM:**                          Darron Poulsen, General Manager  
**SUBMITTED BY:**              Brad Adams, Plant Superintendent  
**DATE:**                           8/17/2023  
**SUBJECT:**                      Recommendation to award a contract to Parada Painting for the Regional UV Channels Coating.  
 **Funds Budgeted/ Approved**

---

**STAFF RECOMMENDATION**

It is recommended that the Board of Commissioners approve the General Manager to award a contract, pending legal review, to coat the Regional Plant UV Channels to Parada Painting for \$120,240 plus a 10% contingency, to cover unforeseen costs, totaling \$142,164.

**PREVIOUS ACTION(S)**

None

**BACKGROUND INFORMATION**

The Regional Plant UV channel walls are deteriorating exposing the aggregate and steel rebar. This exposed material allows for bacteria buildup on the walls which causes higher levels of turgidity, high coliform test results and jeopardizes our ability to stay in compliance. The sections of the channels that are deteriorating were not coated as part of the original installation. The floors of the channels were coated and are in excellent condition. It is Staff’s opinion that coating the walls will result in a similar level of performance and will help the Regional Plant stay in compliance.

On July 19, 2023, VWRA contacted numerous coating contractors and solicited bids through a request for proposal posted on our bidding software, Planet Bids. The request for bids provided a specific scope of work for the coating of the Regional Facility UV Channels at 20111 Shay Rd. Victorville, CA 92394. The scope of work for the project required the contractor to furnish all labor, equipment, materials, and supervision to perform necessary work which will include:

- Parada will clean and prep one channel at a time.
- They will evaluate and apply the necessary coating to each channel.
- Once a channel is done, it will cure and then be put back online.

All received bids have been reviewed for accuracy and compliance with the RFP and Addendums. All bid requirements were evaluated and found to be complete.

Bids received are as follows:

- Parada Paining - \$120,240.00
- Applied Restoration Inc. - \$196,420.00

Parada Painting, Inc. is a Union painting contractor since 1996, who specializes in painting, special coatings, waterproofing, damp-proofing, membrane waterproofing and T-Lock plastic liner in Wastewater Treatment Plant and Water Treatment Plant projects. The Prada Painting Inc. bid is attached as Exhibit 1.

It is recommended that the Board of Commissioners approve the General Manager to award a contract, pending legal review, to coat the Regional Plant UV Channels to Parada Painting for \$120,240 plus a 10% contingency, to cover unforeseen costs, totaling \$142,164.

### **ATTACHMENTS**

#### **Exhibit 1 – Parada Painting Bid**

# EXHIBIT 1



LICENSE: CA 742112 • AZ ROC188614 • NV 0072066  
 DIR No. 1000004724  
 www.paradapainting.com

**Scope of Work - QUOTE**

Page 1 of 2

Date: 8/1/23  
 To: VVWRA  
 Attn: Raymond Lopez  
 Re: VVWRA Request for Proposal RFP-2024-2  
 Regional Plant UV Channel Coating

---

Parada Painting is submitting a QUOTE for the above referenced project. This QUOTE is limited to the following:

**Work Detail**

Prep and coat UV Channel as per spec section 098740

**Quote Price: \$120,240.00**

**Exclusions: Grinding, Shop Coatings, Buried Metal, Concrete Repair, Pipe ID**

**Bond Rates are attached on page 2 of 2 and are not included in above Total Quote Price.**

Quote is based on all non-submerged ferrous metal being shop primed with a primer that is compatible with the finish coats.

Should you have any questions, please contact me at 858-602-6037 or email [davidparadair@yahoo.com](mailto:davidparadair@yahoo.com)

Sincerely,

David Parada Jr  
 Superintendent

*Mailing Address:* 27860 Vista Road, Romoland, CA 92585  
*Office - Admin:* (P) 951-878-7051, (F) 951-878-7052  
*Estimating:* (P) 858-602-6036, (F) 951-878-7052

### Bond Premium Rates

**Bond Base Premium Rates** are as follows and are not included in the bid/quote price:

Tier 1	First \$100K	= 1.1000%	<u>Durations Included:</u> 1. Warranty of one (1) yr. 2. Contract Completion Time of 24 mos., 731 calendar days, or less.
Tier 2	Next \$400K	= 0.8810%	
Tier 3	Next \$2M	= 0.7690%	
Tier 4	Next \$2.5M	= 0.6630%	
Tier 5	Next \$2.5M	= 0.5500%	
Tier 6	Next \$7.5M	= 0.4940%	

**\*\*Additional Surcharges may apply\*\***

*The Surety surcharges the Bond Base Premium due to risk(s) associated with an extended duration. Completion Time and Warranty that extend beyond durations included above will be subject to additional Surcharges as noted below.*

**Warranty Surcharge** is applied for contract that have durations beyond one (1) year.

Warranty Surcharge is calculated by multiplying Tier Contract Amount times the Rate, then multiply by # of years over the one year.

Tier 1	First \$100K	= 0.275%
Tier 2	Next \$400K	= 0.25%
Tier 3	Next \$2M	= 0.219%
Tier 4	Next \$2.5M	= 0.194%
Tier 5	Next \$2.5M	= 0.163%
Tier 6	Next \$7.5M	= 0.156%

**Completion Surcharge** is applied for contracts that have durations beyond 24 months.

Completion Surcharge is calculated by multiplying Tier Base Premium Rate by 1%, then multiplying by the # of months over 24 months.

**\*\*IMPORTANT\*\***

**Bond Rates are not included in the aforementioned Quote/Bid Price.**

If the full subcontract amount includes an estimated bond premium, the bond premium should be separated out from Quote/Bid Parada provided prior to issuance of final subcontract and processing of bonds. The Surety is required to bond the contract according to the specific requirements of said subcontract. The required Performance/Payment Bonds guarantee Parada will perform the contract and the bond premium is calculated by the bond company based on the total subcontract amount. That additional bond premium will be the Contractor's responsibility as per said subcontract.

Mailing Address: 27860 Vista Road, Romoland, CA 92585  
Office - Admin: (P) 951-878-7051, (F) 951-878-7052  
Estimating: (P) 858-602-6036, (F) 951-878-7052



Parada Painting Inc. T&M/Extra Work Labor and Equipment Rates Effective 07/01/2022 to 06/30/2023

Below rates do not include applicable mark up for Overhead and Profit.

\*\*\*Parada Painting, Inc. reserves the right to change these rates at Parada's discretion, and without notice, due to but not limited to: Union wage and fringe benefit increases, Union market recovery surcharge(s), Supplier price increase(s), Supplier material surcharge(s), Supplier environmental surcharge(s) .\*\*\*

Labor (straight time)	Rate per Hour	
Journeyman		\$120.00
Journeyman - Foreman		\$125.00
Journeyman - Superintendent		\$130.00
Apprentice 8th Period		\$96.00
Apprentice 7th Period		\$93.00
Apprentice 6th Period		\$91.00
Apprentice 5th Period		\$85.00
Apprentice 4th Period		\$82.00
Apprentice 3rd Period		\$79.00
Apprentice 2nd Period		\$78.00
Apprentice 1st Period		\$75.00
Equipment (based on 8-hour day, includes fuel as applicable)	Rate per Hour	Rate per Day
Truck	\$ 28.75	\$ 230.00
Generator Portable (Gas)	\$ 12.76	\$ 102.06
Generator 3,500 kw ( tow behind)	\$ 28.66	\$ 229.31
Generator 6,000 kw	\$ 27.72	\$ 221.72
Generator 10,000 kw	\$ 51.86	\$ 414.86
Compressor 375	\$ 84.30	\$ 674.36
Compressor 185	\$ 56.80	\$ 454.37
Gas Spray Rig (gas not diesel)	\$ 21.74	\$ 173.94
King Pump ( + 185 compressor)	\$ 17.97	\$ 143.75
Gas Compressor (10 hp)	\$ 16.53	\$ 132.25
Pneumatic Bristol Blaster (+185 compressor)	\$ 14.38	\$ 115.00
Blast Pot	\$ 13.48	\$ 107.81
Blast Pot Setup (pot/hoses/nozzel/hood)	\$ 21.56	\$ 172.50
Airless Electric	\$ 17.94	\$ 143.50
2 Gallon Spray Pot/Hose/Nozzel	\$ 7.19	\$ 57.50
Compressor Air Hose 3/4" 50ft	\$ 2.70	\$ 21.58
Electric MH Blower & Duct (rental)	\$ 9.63	\$ 77.05
Welding Gun	\$ 8.99	\$ 71.88
Torch	\$ 3.59	\$ 28.75
Spark Tester	\$ 8.99	\$ 71.88
Pressure Washer	\$ 14.56	\$ 116.44
Temporary Power Cord	\$ 3.59	\$ 28.75
Temporary Power Box	\$ 2.70	\$ 21.56
Chipping Gun	\$ 3.59	\$ 28.75
Grinder	\$ 1.80	\$ 14.38
Conventional Sprayer/Pot	\$ 3.59	\$ 28.75
Shop Vac	\$ 4.49	\$ 35.94
Sniffer	\$ 8.99	\$ 71.88
Scaffolding (varies) minimum	\$ 13.48	\$ 107.81
Needle Gun	\$ 1.80	\$ 14.38
Blower	\$ 6.29	\$ 50.31
Tri-Pod & Wench	\$ 3.59	\$ 28.75
Genie Lift 30'	\$ 35.94	\$ 287.50
JLG Lift 40' (+Truck)	\$ 35.94	\$ 287.50
218 Slurry Pump (+185 compressor)	\$ 26.95	\$ 215.63
Urethane Trailer	\$ 35.94	\$ 287.50
Trailer	\$ 14.38	\$ 115.00
<i>Items not listed will be billed at actual current rental rates plus fuel, delivery and pick-up, taxes and/or surcharges as applicable.</i>		



**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY  
Board of Commissioners Staff Report**

**TO:** VVWRA Board of Commissioners  
**FROM:** Darron Poulsen, General Manager  
**SUBMITTED BY:** Brad Adams, Director of Operations & Maintenance  
**DATE:** 8/17/2023

**SUBJECT: RECOMMENDATION TO AUTHORIZE THE GENERAL  
MANAGER TO AWARD A CONTRACT FOR THE REGIONAL  
PLANT ULTRAVIOLET ENGINEERING FEASIBILITY STUDY IN  
THE AMOUNT OF \$76,540.00 TO HOCH CONSULTING INC**

---

<input checked="" type="checkbox"/>	<b>For Action</b>	<input checked="" type="checkbox"/>	<b>Fiscal Impact</b>	<b>\$ 76,540.00</b>
<input type="checkbox"/>	<b>Information Only</b>	<input checked="" type="checkbox"/>	<b>Account Code:</b>	<b>01-02-535-9000-9999 R161</b>
		<input checked="" type="checkbox"/>	<b>Funds Budgeted/ Approved:</b>	

---

**STAFF RECOMMENDATION**

It is recommended that the Board of Commissioners authorize the General Manager to award a contract for the regional plant ultraviolet engineering feasibility study project in the amount of \$76,540.00 to Hoch Consulting inc., pending legal review and approval of the agreement.

**PREVIOUS ACTION(S)**

None

**BACKGROUND INFORMATION**

In 2009, VVWRA designed and installed the current WEDECO TAK55 UV disinfection system at the regional plant. The system design includes two large open channels with multiple UV modules per channel. This system’s goal was to achieve a maximum flow of 20 MGD and a required disinfection level at the minimum dose per the Ultraviolet Disinfection Guidelines for Recycled Water. After 14 years of use, Staff has determined that this specific disinfection system is cost prohibitive to maintain and its open channel design is susceptible to violations of NPDES coliform limits requirements.

In consultation with Xylem Water Solutions USA, Inc. Staff learned that the new WEDECO LBX 1500 is a closed vessel system specifically designed for water and wastewater applications and has the following major benefits over the existing WEDECO TAK55 UV system disinfection system:

1. It includes the latest low-pressure, high-intensity Ecoray lamps which have a guaranteed life of 14,000 hours and are a more efficient lamp with a lower power consumption

requirement. In addition, from a maintenance standpoint, the Ecoray lamps are more robust and easier to remove and replace.

2. It has the latest sensor technology – germicidal UV sensor of reference sensor quality (ÖNORM approved) providing the highest accuracy in UV system monitoring and control.
3. Automatic wiping system that prevents fouling of the quartz sleeve with easy replacement of wipers.
4. And finally, WEDECO’s established and proven TotalCare Program will provide VVWRA with proactive services all designed to minimize the cost of ownership to operate and maintain a UV system.

Prior to any capital expenditures, Staff recommends retaining a reputable engineering firm to perform an ultraviolet engineering feasibility study with the following specific goals:

1. Engineering Firm to provide engineered design to accommodate the new LBX System
  - a. Cost options to use existing gravity feed to LBX System
  - b. Cost options to use pumping feed to LBX System
2. Continue existing automation.
3. Provide downtime requirements to continue operation with one Channel Online
4. Provide modifications requirements to meet all current and future regulatory Permits.
5. Review reusable UV Infrastructure/Supporting equipment.

On March 23<sup>rd</sup> ,2023, VVWRA solicited proposals through a request for proposal (RFP) for the regional plant ultraviolet engineering feasibility study project. Per the RFP scope of work (Exhibit 1) the Consultant will furnish all labor, equipment, materials, and supervision to safely complete the project.

Bids received on 5/02/2023 were reviewed for accuracy and compliance with the RFP. The Bids tabulation sheet is detailed below for reference. All other bid requirements were evaluated and found to be complete.

The bids received are as follows:

<b>Company</b>	<b>Total Cost</b>
<b>Hoch Consulting Inc</b>	\$56,010.00
<b>Dudek</b>	\$59,995.00

Following an in-depth review of all proposals, Staff selected the proposal from Hoch Consulting Inc. (Exhibit 2), who has an excellent reputation and the ability to perform the work of this contract, as the most qualified low bidder. Staff also chose to retain Hoch Consulting for the additional optional tasks identified in their bid, namely: Task 4.4: Alternatives, Task 5 Permitting Support and Task 6 Grant Support , these additional services will amount to \$20,530.00

Staff recommends that the Board of Commissioners approve the General Manager to award a contract for the regional plant ultraviolet engineering feasibility study project in the amount of \$76,540.00 per fiscal year 23-24 to Hoch Consulting inc. Pending legal review and approval of the agreement.

**Attachments:**

**Exhibit 1- Services Scope of Work**

**Exhibit 2 – Hoch Consulting Inc**

**Exhibit 1- Services Scope of Work**

1. Use Xylem CONTRACTOR SCOPE OF SUPPLY
2. Submit Request for Proposal via Planet Bids to gather a proposal to meet new UV Upgrade.
  - a. Planet Bids for three weeks
  - b. Bids to be reviewed in May.
3. Feasibility Study to include:
  - a. Engineering Firm to provide engineered design to accommodate new LBX System
    - i. Cost options to use existing gravity feed to LBX System
    - ii. Cost options to use pumping feed to LBX System
  - b. Continue existing automation.
  - c. Provide downtime requirements to continue operation with one Channel Online
  - d. Job walk.
  - e. Provide modifications requirements to meet Discharge Permit
  - f. Review reusable UV Infrastructure/Supporting equipment.
  - g. Final outcome is to have a feasibility study cost, engineering study, demolition requirements to best options.
4. During Job Walk
  - a. Provide drawings of TAK-55 to contractor
  - b. Stakeholders to join in Engineer site walk.
5. System integration to SCADA
  - a. Automate following Xylem control strategy.
  - b. Automate Clean in Place System

# EXHIBIT 1

## Regional Plant UV Upgrade RFP Work Scope

1. Use Xylem CONTRACTOR SCOPE OF SUPPLY
2. Submit Request for Proposal via Planet Bids to gather a proposal to meet new UV Upgrade.
  - a. Planet Bids for three weeks
  - b. Bids to be reviewed in May.
3. Feasibility Study to include:
  - a. Engineering Firm to provide engineered design to accommodate new LBX System
    - i. Cost options to use existing gravity feed to LBX System
    - ii. Cost options to use pumping feed to LBX System
  - b. Continue existing automation.
  - c. Provide downtime requirements to continue operation with one Channel Online
  - d. Job walk.
  - e. Provide modifications requirements to meet Discharge Permit
  - f. Review reusable UV Infrastructure/Supporting equipment.
  - g. Final outcome is to have a feasibility study cost, engineering study, demolition requirements to best options.
4. During Job Walk
  - a. Provide drawings of TAK-55 to contractor
  - b. Stakeholders to join in Engineer site walk.
5. System integration to SCADA
  - a. Automate following Xylem control strategy.
  - b. Automate Clean In Place System

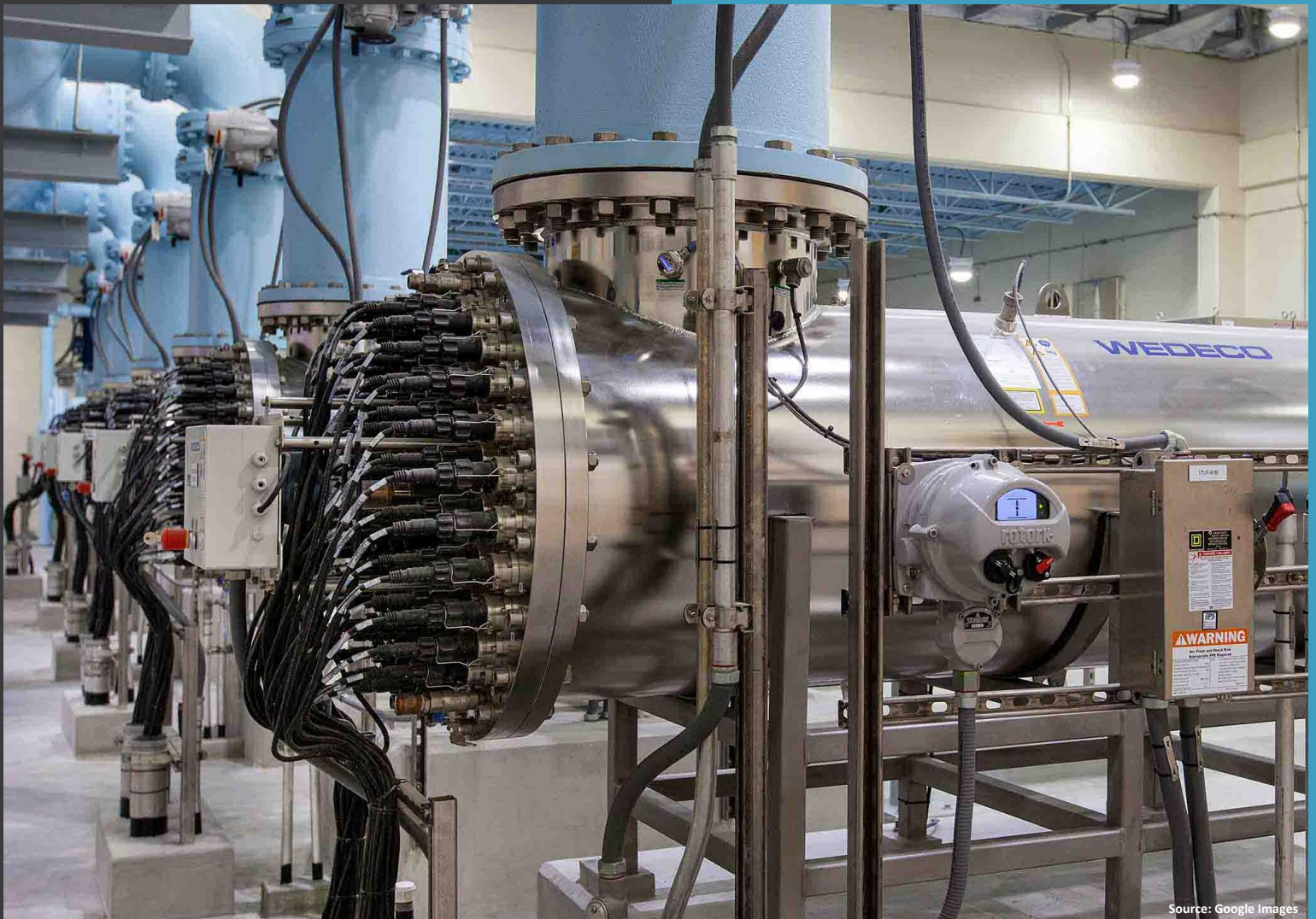
# EXHIBIT 2



# Technical Proposal

## Regional Plant Ultraviolet Disinfection System Upgrade Feasibility Study

### PROPOSAL



Source: Google Images

MAY 2, 2023

Hoch Consulting





# Executive Summary

## Executive Summary

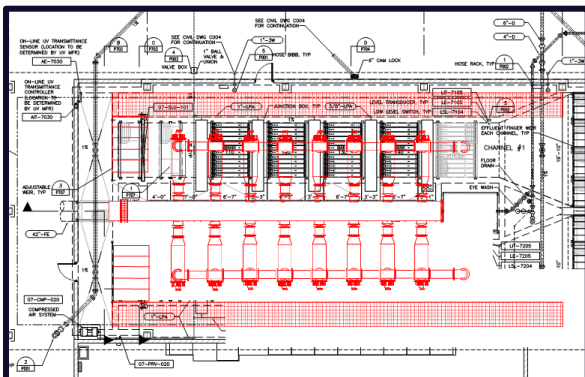
Hoch Consulting is a civil engineering firm focused on providing our clients with high-quality, cost-effective, and practical engineering and funding solutions. Each member of our proposed **team** is local to Southern California and has recent and relevant experience in water treatment feasibility studies, including the evaluation of ultraviolet disinfection processes. Over the past eleven years, Hoch Consulting has managed and executed feasibility studies for disinfection (including UV) for several clients in Southern California. Our experience as former utility managers and consulting engineers helps us to efficiently and effectively analyze issues holistically to make optimal recommendations for our clients. Hoch staff's experience as former utility owners provides us with unique insight into optimizing operations and maintenance costs, including but not limited to the following considerations:

- ✓ Flexibility in operations (including number of trains online and permitting language)
- ✓ Optimized operations costs (predominantly electricity)
- ✓ Optimized maintenance costs (e.g. lamp replacement and lamp cleanliness – which impacts UVT)

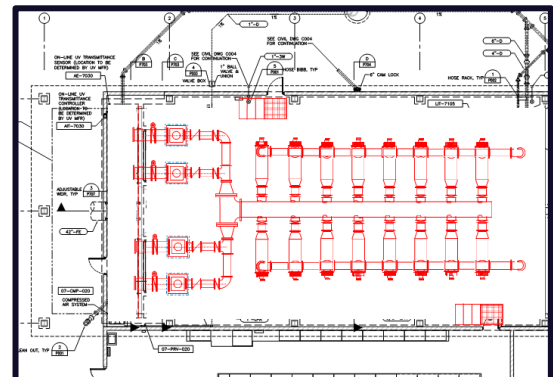
Our PIC, Ms. Dale, will ensure that Hoch is executing the project per the Authority's expectations and that adequate resources from Hoch are dedicated to the project. Our PM, Mr. Gress, will lead communications with the Authority and third parties, lead the technical analysis of the evaluation, and lead the development of the feasibility study report. Our dedicated QA/QC and technical advisor, Mr. Hoch, will provide technical and/or quality assurance and quality control over the entire effort, and provide reporting on budgets and schedules. We have included a trusted roster of subconsultants including Kelsey Structural and Gerry Green, Inc. for structural and electrical support.

Our Team's approach is to provide the VVWRA's management, engineering, operations and maintenance staff with important information, including costs, O&M ease and constructability of the Wedeco LBX reactors for both **gravity and pumping feed installation scenarios**. Installation of Wedeco LBX 1500 UV Reactors will provide redundancy of treatment equipment at Westside, Happy Valley, and Hesperia. Retrofits of existing treatment facilities can be complex, as plant permit compliance and treatment performance must be maintained while removing existing equipment and replacing it with new equipment. The long-term success of this retrofit project will depend on the careful planning laid out in the **Feasibility Report**. Several key considerations were identified by Hoch through listening to VVWRA describing their operational priorities including (1) layout development, (2) hydraulic feasibility, (3) cost implication, (4) permit compliance, and (5) implementation strategy.

Given the additional head requirements, Hoch has already begun developing a hydraulic profile identified a layout for a gravity and pumped solution to installing the new Wedeco reactors. **We are ready to hit the ground running efficiently for VVWRA!**



*Conceptual Gravity Feed Layout*



*Conceptual Pumped Feed Layout*



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## Identification of Proposer

**Hoch Consulting** is a full-service civil engineering firm based in San Diego and focused on providing our clients with high-quality, cost-effective, and practical engineering, management, and funding solutions. Founded in 2012, our guiding principles are to provide technical expertise, creativity, accountability, integrity, and efficiency in everything we do.

We are a State certified small business enterprise (SBE) and offer a wide range of technical and support services to our clients in the stormwater, transportation, water, wastewater, and recycled water sectors.

We provide **turnkey project services** including funding support, **planning**, regulatory compliance, asset management, condition assessment, design, engineering, construction management and inspection, and municipal support/staff augmentation services. We are accustomed to working in close collaboration with our clients to efficiently and effectively meet project goals and objectives.

*With our experience as former utility managers and consulting engineers, Hoch has gained a reputation of providing detailed analysis and accurate recommendations that optimize the economics of wastewater treatment.*

Our senior team of **working managers** includes licensed engineers, former municipal executives, and project managers with over 150 years combined of experience as public agency employees, contractors, and consultants.

The team we propose for the **UV Disinfection System Upgrade Feasibility Project** is a talented group of individuals with proven expertise in evaluating the feasibility of and executing disinfection projects for wastewater facilities in Southern California.

**Our difference.** Founded by former public utility managers, we have a deep understanding of our clients' needs and take an owner's perspective with every assignment. We have earned our reputation as a valuable teaming partner.

Our senior team includes four licensed professional engineers with experience as project managers, design engineers, and construction managers with over 20 years as municipal agency employees. This breadth and depth of experience informs our decisions and allows us to analyze and discuss project issues from a holistic perspective. Using this approach, we strive to deliver projects in conformance with Agency goals, reduce construction cost increases to below industry average, and provide quality control that meets or exceeds the requisite standard of care. We have earned a reputation for providing high-quality, cost-effective, and practical engineering, design, and management solutions.

**Our approach.** We always focus on our clients and their stakeholders. By listening to and understanding their needs, we develop creative solutions that earn us the role of **trusted partner and advisor**.

### Legal Name & Company Address:

Hoch Consulting, APC  
804 Pier View Way, Suite 100  
Oceanside, CA 92054

Legal Status: S-Corporation (California)

Years in Business: 11

Number Employees: 15

Certified: SBE | SLBE

California Business License #: 3553946

### Proposal Contact & Authorized Signer:

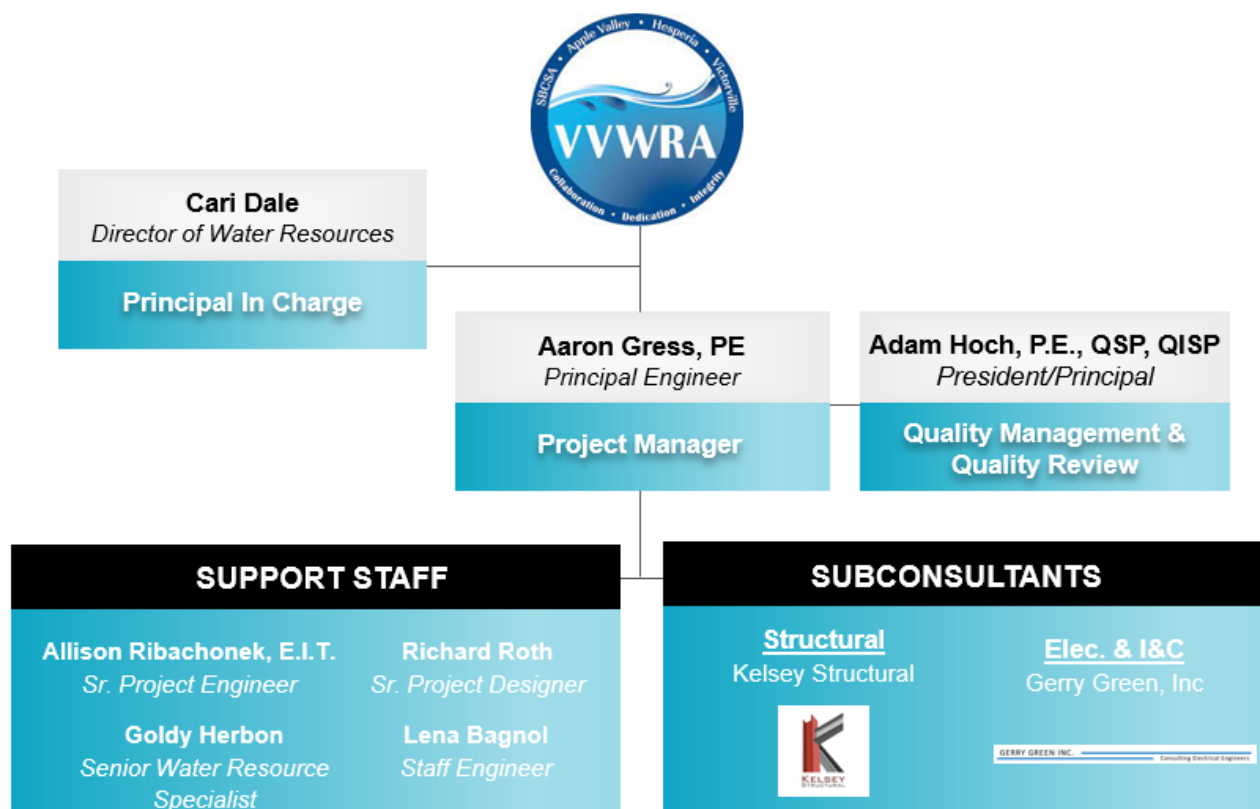
Adam Hoch, P.E., QSD, QISP  
President | Principal Engineer  
Address: 804 Pier View Way, Suite 100  
Oceanside, CA 92054  
Phone: 858-431-9767  
e-mail: [ahoch@hochconsulting.com](mailto:ahoch@hochconsulting.com)



# Staffing Resources

## Meet the Team

Hoch's local team consists of experienced individuals committed to the successful completion of this important project. Our core team members, as outlined in the **organizational chart below**, are experts in their respective fields, with extensive experience working on similar projects. They will work diligently to deliver the best long-term solution for your system while offering local and dedicated presence to make sure the project stays on schedule in the most cost-effect manner. Our team will provide the best available talent at optimal value.



## Key Staffing Resources

Each member of our proposed team is local to Southern California and has recent and relevant experience in water treatment feasibility studies, including the evaluation of ultraviolet disinfection processes. Our PIC, Ms. Dale, will ensure that Hoch is executing the project per the Authority's expectations and that adequate resources from Hoch are dedicated to the project. Our PM, Mr. Gress, will lead communications with the Authority and third parties, lead the technical analysis of the evaluation, and lead the development of the feasibility study report. Our dedicated QA/QC and technical advisor, Mr. Hoch, will provide technical and/or quality assurance and quality control over the entire effort, and provide reporting on budgets and schedules. Our proposed support staff will assist with analyses, exhibits, calculations, and optional tasks.



# Staffing Resources

## Firm Staffing and Key Personnel



### **Cari Dale, – Principal in Charge (PIC)**

Ms. Dale has over 29 years in the public sector, leading the management of potable water, wastewater, and water reclamation utilities and programs for a variety of agencies in Southern California. She has been successful in bringing internal teams together to plan for and resolve pressing water resource and quality issues. The Pure Water Oceanside project, commissioned in 2021 as San Diego County's first potable reuse project, is an example of her leadership and expertise in pushing forward innovative solutions to these problems. Prior to joining Hoch, she served as the City of

Oceanside's Water Utilities Director where she identified and pursued strategies, studies, programs, and funding to further a diversified water supply portfolio in support of the City Council's goal of 50% local supplies by 2030. Ms. Dale has experience negotiating terms of NPDES permits, which is anticipated to be helpful in developing flexibility in VVWRA's permit for minimum UV dosing.



### **Aaron Gress, PE – Project Manager | Water Treatment**

Mr. Gress is a civil/environmental engineer with over a decade of experience in a variety of civil engineering projects including planning, analysis, design, and construction phase services for municipal and commercial water treatment projects. He has managed several water treatment projects and has designed groundwater treatment systems, including a wellhead treatment facility for uranium and other treatment

processes for the removal of arsenic, iron, and manganese. Mr. Gress has also participated in groundwater supply development program studies, water quality and treatment needs analysis and a wastewater expansion evaluation. Mr. Gress will be leading efforts to evaluate treatment objectives and supporting Mr. Hoch with recommended project alternative development.

*"Aaron Gress provided complex technical solutions in managing the only second pass agricultural drainage treatment facility in the United States. His contributions ranged from complex calculations to directing multi-step optimization efforts. He was always willing to be the facilities' hands on leader to direct project success. I would consider Aaron a great asset to any team looking for a dedicated individual who seeks creative and practical solutions to water treatment challenges."*

*Miguel Arias-Paic*

*United States Bureau of Reclamation, Technical Practice Lead*



### **Adam Hoch, PE – Principal | Quality Review & Quality Management**

Mr. Hoch is a registered Civil Engineer in the State of California with over 19 years of experience in storm water, potable water, wastewater, and water reclamation. Over the past decade, he has served as design engineer, engineering inspector, construction manager, and project manager for projects including treatment facilities, pump stations and distribution systems. Mr. Hoch's experience includes five years in the public sector and eleven years as an engineering consultant to multiple cities, water districts, and wastewater districts in Southern California. Mr. Hoch's public works experience provides

valuable insight into treatment plant operations and maintenance, and regulatory concerns.



# Staffing Resources

## Support Staff



### Allison Ribachonek, EIT– Sr. Project Engineer

Allison is a NASSCO-certified inspector whose professional experiences are driven by her passion for water resources, disaster recovery, and building more resilient communities. She brings over 9 years of experience in hydrologic and hydraulic (H&H) modeling, capital improvement project planning and design, asset management, conditions assessment, funding support, document controls, construction site management, and project management on capital improvement projects for agencies throughout San Diego County. She has worked with many commercial software applications, including ArcGIS,

AutoCAD, HydroCAD, EPA/PC SWMM, and Microstation.



### Richard Roth – Design Lead

Mr. Roth has over 32 years of experience in the areas of civil engineering design and land surveying. As a project design lead and client account manager for agencies throughout San Diego County, he has been responsible for managing the technical aspects and leading civil design teams preparing of plans, specifications and cost estimates. Mr. Roth is well-versed in all releases of Autodesk AutoCAD Civil 3D, BENTLEY Microstation and Projectwise software, which enables him to implement the latest computer technology for a variety of engineering projects. Throughout his career, Mr. Roth has assembled a

diverse project portfolio completing technical designs of water, wastewater, stormwater, infrastructure including pipelines, pumping stations, reservoirs, and treatment plants.



### Goldy Herbon – Sr. Water Resources Specialist | Funding Support

Ms. Herbon has over 10 years of progressive local water resources planning experience in the public and private sector. Her duties have encompassed all levels of the planning processes including securing local/state/federal grant funding, authoring planning documents, developing and implementing monitoring plans, and executing multi-party agreements. She possesses integrated water resource planning skills- an interdisciplinary approach to developing long-term water supply reliability, improving water quality, and

protecting natural resources. Prior to joining Hoch Consulting, Ms. Herbon worked as a senior water resource specialist at various agencies, focusing on water supply planning, regulatory and policy advocacy and climate adaptation and mitigation. Ms. Herbon will support optional grant efforts and provide support as needed on the study.



### Lena Bagnol – Staff Engineer

Lena is an Environmental Engineer whose experience in the water industry has made her passionate about bringing more sustainable solutions to the water and wastewater industry. Previous work with NOAA (National Oceanic and Atmospheric Association) on assessing water quality has provided valuable knowledge on the Southern Californian water industry.

As an Undergraduate working at SDSU's Water Innovation and Reuse Lab, she helped further research on water quality in the Tijuana Estuary and its effects on San Diego beaches. Her goal is to provide accessibility to water resources to more communities and continue to make a difference working with the world's most precious resource. She has experience working with Bluebeam, ArcGIS, Microsoft Office, and AutoCAD.

## Additional Staffing Support

- ✓ Dan Poulton, P.E. – Director of Construction Services
- ✓ Nicholas Josten, P.E. – Sr. Project Engineer
- ✓ Krysten Burr – Director of Funding Services | Funding Lead
- ✓ Skylar Stephens – Water Resources Specialist | Funding Support

*Please see Appendix for Resumes beyond what is provided in this section*



# Staffing Resources

## Subconsultants

GERRY GREEN INC.

Consulting Electrical Engineers

### Gerry Green, Inc: Electrical and Instrumentation and Controls

Gerry Green, Inc. (formerly Moraes/Pham & Associates) provides electrical, instrumentation, and control systems design services with a focus on water and wastewater projects throughout Southern California. With the impending retirement of Joe Moraes in 2021, Moraes/Pham & Associates (MPA) is transitioning business operations to Gerry Green Inc., which will continue offering local service and the same successful team, now led by owner Gerry Green. As Joe Moraes transitions away from business ownership, he will still be an active member of the team. Together, Joe and Gerry provide 30 years of experience in the industry and are familiar with current technology industry equipment such as Service Switchboards, Standby Generators, Transfer Switches, Motor Control Centers, Variable Frequency Drives, Soft Starters, Programmable Logic Controllers, SCADA, Telemetry, and Control System instrumentation.



#### Gerry Green – Electrical & Instrumentation Lead | Licensed\*

Gerry specializes in the design of industrial power systems including electrical and controls systems for water and wastewater facilities. Recent experience is with wells, treatment plants, and septage receiving stations. He has performed electrical and control system design, electrical power system studies, and observed construction progress for several water/wastewater projects in Southern California and is working with Hoch on several other local projects.



### Kelsey Structural: Structural Engineering

Kelsey Structural specializes in the structural design of water/wastewater structural engineering design services including new and existing structures, seismic analysis and retrofit design, structural investigation, condition assessment and evaluation studies of existing facilities, concrete and steel repair, planning studies, technical reports, life cycle analysis, cost estimating and construction support services. Kelsey Structural has worked closely with VVWRA in the past as their structural as-needed consultant and has completed several recent local projects.



#### Guy Kelsey – Structural Lead | PE, SE

Mr. Kelsey has over 14 years of structural engineering experience encompassing both new and retrofit projects for various infrastructure, military, commercial, water and wastewater facilities. Mr. Kelsey has performed extensive structural design, seismic analysis, structural evaluation and condition assessments for existing buildings, water and wastewater treatment facilities, reservoirs and conveyance structures throughout California. He has a passion for creative engineering design while providing efficient, cost-effective solutions

for his clients.





# Fiscal Stability

## Fiscal Stability

### Corporate Stability Evidence

Incorporated herein is a copy of Hoch's latest Dun & Bradstreet Commercial Credit Rating Report and letter from the Bank of Southern California. We request an exception to providing an audited financial report, as this is not a regular business practice of Hoch to date; however, we can provide unaudited reports and other financial data to verify our fiscal stability if acceptable.

**INSIGHTS** | ALERTS | HELP

Update your information with **D&B** Manager | Report as of: 12/09/2022

**Hoch Consulting, APC** | Alerts: | Affiliate offer: Manage your business with ClientBook from 1-800Acco

Address: 804 Pier View Way Ste 100, Oceanside, CA, 92054, United States

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**SCORES AND RATINGS**

<b>PAYDEX<sup>SM</sup> Score</b> <b>80</b> LOW RISK	<b>Delinquency Predictor Percentile</b> <b>96</b> LOW RISK	<b>Financial Stress Percentile</b> <b>69</b> LOW-MODERATE RISK	<b>Supplier Evaluation Risk Rating</b> <b>3</b> LOW RISK
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**LEGAL EVENTS**

Events	Open Count	Last Filled
Bankruptcies	0	-
Judgments	0	-
Liens	0	-
Suits	0	-
UCC	0	-

**TRADE PAYMENTS**

Highest Past Due: **US\$ 0**

Highest Now Owing: <b>US\$ 0</b>	Total Trade Experiences: <b>12</b>
Largest High Credit: <b>US\$ 5,000</b>	Average High Credit: <b>US\$ 1,900</b>

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**COMPANY PROFILE**

<b>DUNS</b> 05-198-3868	<b>Mailing Address</b> United States	<b>Annual Sales</b> US\$ 1,303,720
<b>Business Form</b> Corporation	<b>Telephone</b> (619) 630-9633	<b>Employees</b> 12 (12 here)
<b>Date Incorporated</b> March 4, 2013	<b>Website</b> www.hochconsultingsd.com	<b>Age (Year Started)</b> 10 (2012)
<b>State of Incorporation</b> CA	<b>Named Principal</b> Adam Hoch, President	<b>Line of Business</b> Business consultant by D
<b>Ownership</b> Not publicly traded		

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**FINANCIAL OVERVIEW**

Source:

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**INQUIRIES**

12 Month Summary

Total number of Inquiries: <b>2</b>	Unique Customers: <b>0</b>
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Trade References will be added subject to Dun & Bradstreet verification and acceptance. Dun & Bradstreet cannot guarantee that trade references will be accepted or that accepted trade references will impact your business credit file. Please see https://www.dandb.com/glossary/trade-references/ for eligibility, process and other information regarding Trade References.

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Hi there, thanks for stopping by Dun & Bradstreet! Can I point you in the right direction?



December 6, 2022

RE: Hoch Consulting APC

To Whom It May Concern;

Hoch Consulting APC has been a client of Bank of Southern California since April of 2020. Bank of Southern California is currently in the process of offering Hoch Consulting commercial credit. Hoch Consulting has been prescreened and preapproved for their credit request and I do not anticipate any issues arising as we are close to completion of our underwriting.

Hoch Consulting APC has been a pleasure to work with during our two-and-a-half-year relationship and we hold them in the highest regard at the bank. Feel free to reach out to me directly with any questions.

Cordially,

A handwritten signature in blue ink, appearing to read 'Scott E. Yates'.

Scott E. Yates

SVP, Regional Manager

[syates@banksocal.com](mailto:syates@banksocal.com)

(858) 847-4747



# Experience & Technical Competence

## Experience

Over the past eleven years, Hoch Consulting has managed and executed feasibility studies for disinfection (including UV) for several clients in Southern California. Our experience as former utility managers and consulting engineers helps us to efficiently and effectively analyze issues holistically to make optimal recommendations for our clients. Hoch staff’s experience as former utility owners provides us with unique insight into optimizing operations and maintenance costs, including but not limited to the following considerations:

- ✓ Flexibility in operations (including number of trains online and permitting language)
- ✓ Optimized operations costs (predominantly electricity)
- ✓ Optimized maintenance costs (e.g. lamp replacement and lamp cleanliness – which impacts UVT)

Mr. Gress is Hoch’s water treatment principal and has served as the technical lead in numerous feasibility studies similar to VVWRA’s needs. Ms. Dale, the proposed principal-in-charge, has helped negotiate NPDES permits that help provide optimal flexibility for operations. Mr. Hoch has served as the operations and maintenance lead on numerous feasibility studies, helping to quantify lifecycle costs and provide flexibility for owners.

While we are seeking our first contract with the Authority, members of our team have familiarity with the District and District staff, including Kelsey Structural, who is currently performing work for the District, and Ms. Dale who has interfaced with District staff numerous times over her career.

## Technical Competence

Internally, Hoch uses Microsoft Teams and the Office 365 programs to execute projects and will add relevant authority staff to a shared access folder for necessary transfer of documents and access to project files. We propose to track schedule in Microsoft Project. We anticipate Excel to suffice for fiscal controls and analysis and will provide reporting in Microsoft Word printed to PDF for final versions. Additionally, we have a deep bench of internal staff and staff within our larger proposed team that are capable of executing this contract.

## Project Specific Experience

Hoch has never had any of the conditions related to failure to perform, enter into a contract, litigation, etc., listed the RFP. The following section provides a description of three (3) most relevant service contracts held by Hoch within the last five years that exemplify our team’s familiarity with the kinds of services the Authority is seeking.



### CITY OF OCEANSIDE, CA

REFERENCE: Lindsay Leahy, PE  
 PROJECT: Pure Water Oceanside  
 P: 760.435.5913  
 E: lleahy@oceansideca.org



### CITY OF OCEANSIDE, CA

REFERENCE: Lindsay Leahy, PE  
 PROJECT: Recycled Water Design Build  
 P: 760.435.5913  
 E: lleahy@oceansideca.org



### SAN ELIJO JOINT POWERS AUTHORITY

REFERENCE: Chris Trees, Director of Operations  
 PROJECT: Advanced Water Purification Facility  
 P: 760.623.4212  
 E: treesc@sejpa.org



### CITY OF LAKEWOOD, CA\*

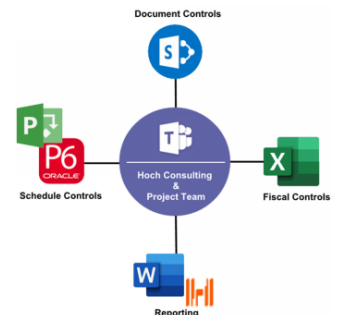
REFERENCE: Derwin Dy, Assistant Water Resources Director  
 PROJECT: Well 13A Arsenic WTP  
 P: 562.866.9771  
 E: DDy@lakewoodcity.org



### VALLECITOS WATER DISTRICT, CA\*

REFERENCE: Rob Kaessner, Project Manager  
 PROJECT: Sodium Hypochlorite Conversion Project  
 P: 760.744.0460  
 E: rkaessner@vwd.org

\* Indicate Projects Mr. Gress Worked on with Other Firm(s)





# Experience & Technical Competence



## PROJECT PROGRESS

- Phase 1 Construction completed January 2022.
- First IPR Project online in San Diego County
- Over \$50 Million procured in grants and rebates
- \$69 Million procured in low interest loans

## Pure Water Oceanside

### PROJECT DESCRIPTION

Pure Water Oceanside is an indirect potable reuse (IPR) groundwater augmentation project. The initial construction phase constructed a 4.5 million gallon per day (MGD) advanced water purification facility (AWPF) that is expandable up to 6.0 MGD in a subsequent phase, conveyance piping, backwash piping, injection wells, monitoring wells, an upper recycled water pump station, blending facilities for both the upper and lower recycled water service areas, and Nitrification Denitrification upgrades in plant 2 at the San Luis Rey Water Reclamation Facility (SLRWRF). The Project included a direct coupled UF/RO train, Hydranautics ESPA 2 membranes, and a predictive algorithm for the UVAOP system. The City began injecting water into the mission groundwater basin in December, 2021.

### PROJECT ROLE

Hoch Consulting provided program management, project management, public outreach and funding support for the Project. These services included planning, contract management, budget tracking, schedule tracking, permitting, coordination, quality assurance, quality control, value engineering, contract development, technical report writing, legal coordination, easement acquisition, public outreach, staff report preparation, project presentations, grant, rebate, and loan application preparation, regulatory coordination and facilitation and oversight of all other program elements. Hoch oversaw feasibility of the UV Disinfection System.



## PROJECT INFORMATION



**Client:** City of Oceanside  
**Contact:** Lindsay Leahy, P.E.  
**Tel Number:** 760-435-5913  
**Email:** lleahy@oceansideca.org  
**Year:** 2016 – Present  
**Contract Amount:** \$1,500,000  
**Key Staff:**

- Adam Hoch, P.E. - Program Manager
- Kyrsten Burr - Funding Support
- Sarah Davis – Public Outreach
- Allison Ribachonek – Staff Support
- Cari Dale – Water Utilities Director

### PROJECT HIGHLIGHTS

- Developed and managed program budget. Phase I of the program was on schedule and under budget.
- Provided QA/QC of the Engineer's design to ensure that City standards and expectations were met.
- Oversaw permitting through the City of Oceanside, including a conditional use permit, building permit, and grading permit.
- Managed the project's budget and schedule to ensure completion in conformance with SB606.
- Procured up to \$48 Million (combined with Pure Water Oceanside) in local resource program (LRP) funding through the Metropolitan Water District.
- Procured a \$70 Million (combined with Recycled Water) loan at 1.2% interest rate through the EPA WIFIA loan program.
- Procured a \$3.05 Million grant through the IRWM Program.





# Experience & Technical Competence



## RECYCLED WATER TREATMENT PLANT DESIGN BUILD PROJECT

### PROJECT DESCRIPTION

The Recycled Water Treatment Plant Design Build Project demolished an existing 0.7 mgd recycled water plant and constructed a new 3.0 MGD water reclamation facility and 2.0 MG prestressed concrete tank at the San Luis Rey Water Reclamation Facility (SLRWRF). Construction included deep soil cement mixing, new filter feed pumps, new concrete rapid mix and flocculation tanks, a 3.0 MGD cloth filter, a 3.0 MGD chlorine contact tank, a 2.0 MGD prestressed concrete tank, recycled water tank fill pumps, a new recycled water pump station including pumps and a surge tank, a concrete masonry unit (CMU) electrical building, emergency backup generation, demolition of existing facility, and all requisite process instrumentation (flow, level, and pressure instruments and transmitters) and controls (SCADA work). Work also included off-site pipeline work to tie the City's Land Outfall to the Fallbrook Land Outfall and to convert existing outfall piping to recycled water piping.

### PROJECT ROLE

Hoch Consulting provided Design Support, Project Management (PM), Construction Management (CM), and Funding Support for the Project. Hoch oversaw feasibility of the Title 22 treatment processes, which included evaluation of a UV disinfection system. Ultimately chlorine disinfection was selected as the optimal treatment train.

## PROJECT INFORMATION

**Client:** City of Oceanside  
**Contact:** Lindsay Leahy, P.E.  
**Tel Number:** 760-435-5913  
**Email:** lleahy@oceansideca.org  
**Year:** 2016 – 2020  
**Contract Amount:** \$807,020



### Key Staff:

- Adam Hoch, P.E. - Project Manager
- Dale Winterquist – Construction Manager
- Kyrsten Burr - Funding Support

### PROJECT HIGHLIGHTS

- Engineer of Record on the 30% Design Documents used to solicit design build firms.
- Provided QA/QC of the Design Builder's design to ensure that City standards and expectations were met.
- Managed changing field conditions that impacted the project's budget and schedule.
- Procured up to \$48 M (combined with Pure Water Oceanside) in local resource program (LRP) funding through the Metropolitan Water District.
- Identified significant defects in construction and enforced corrective actions.



# Experience & Technical Competence



## Advanced Water Purification Facility (AWPF) Project

### PROJECT DESCRIPTION

The San Elijo Joint Powers Authority (SEJPA) owns and operates the San Elijo Water Reclamation Facility (SEWRF) in Cardiff by the Sea, CA. In 2011, SEJPA began construction of a \$4.2 million 1.0 MGD microfiltration (MF)/Reverse Osmosis (RO) Advanced Water Treatment (AWT) Facility to improve the quality and quantity of SEJPA reclaimed water. Construction included foundations, prefabricated metal buildings, RO skids, MF skids, process piping, electrical underground, electrical gear, instrumentation and controls, painting, architectural concrete and several buried pressure pipelines, including various sizes of ductile iron piping, PVC, and copper piping.

Hoch Consulting CM duties included submittal review and response, progress meeting attendance, coordination with other agencies, daily construction oversight, preparation of daily inspection reports, and technical assistance with change orders.

### PROJECT ROLE

Hoch Consulting provided Construction Management (CM) and Construction Inspection, Materials Inspection, Coordination, Reporting, and Project Closeout Duties the Project. Hoch oversaw the feasibility evaluation for disinfection systems, which included UV disinfection. Ultimately, the Authority opted to maintain its existing chlorine disinfection system.

### PROJECT INFORMATION



**Client:** San Elijo Joint Powers Authority  
**Contact:** Chris Trees  
**Tel Number:** 760-623-4212  
**Email:** treesc@sejpa.org  
**Year:** 2011 – 2013  
**Contract Amount:** \$96,500



### Key Staff:

- Adam Hoch, P.E. – Project Manager, Construction Manager, & Inspector

### PROJECT HIGHLIGHTS

- Procured a Coastal Development Permit
- Maintained project budget and schedule.
- Identified several major deviations from contract specifications – including the delivery of unapproved materials, placement of asphalt in an unapproved manner, installation of incorrect underground electrical conduit, conflicts between the plumbing and grade beams, and improper coating of process piping– and corrected at no additional cost.





# Proposed Method to Accomplish the Work

## Proposed Method to Accomplish the Work



The existing UV facility layout includes parallel gravity feed channels. The current layout challenges maintenance activities and the current permit includes prescriptive measures rather than performance measures.

*The Hoch Team will rely on strong local leadership, transparent communication, our past project experience, and our owner’s mentality to guide this project to success.*

The Victor Valley Wastewater Reclamation Authority (VWVRA) is embarking on a critical project at their Westside Water Reclamation Plant (WWRP) to replace their existing UV equipment and determine the feasibility of installing a new low-pressure high-output (LPHO) closed vessel UV system. Hoch will continue working with Xylem’s engineering team to develop a robust strategy for construction and installation of the selected equipment.

Our Teams approach is to provide the VWWRAs management, engineering, operation and maintenance staff with important information, including costs, O&M ease and constructability of the Wedeco LBX reactors for both **gravity and pumping feed installation scenarios**. Installation of Wedeco LBX 1500 UV Reactors will provide redundancy of treatment equipment at Westside, Happy Valley, and Hesperia.

Retrofits of existing treatment facilities can be complex, as plant permit compliance and treatment performance must be maintained while removing existing equipment and replacing it with new equipment. The long-term success of this retrofit project will depend on the careful planning laid out in the **Feasibility Report**. Several key considerations were identified by Hoch through listening to VWVRA describing their operational priorities including:



Flexibility in Operations and Ease of Maintenance is Critical to Project Success

## KEY CONSIDERATIONS



Layout Development



Hydraulic Feasibility



Cost Implication



Permit Compliance



Implementation Strategy



# Proposed Method to Accomplish the Work

## Simple and Effective Planning will Allow VVWRA to easily Install, Maintain, and Operate the New UV Equipment

The UV disinfection equipment needs to be installed in the existing UV building. The existing UV equipment consists of two open channel style Wedeco TAK 55 reactors. The existing UV building is approximately 110'x67' with each UV basin being approximately 75'x15'. The basin(s) will need to be retrofitted to accommodate the new equipment. The installation will allow VVWRA to continue meeting Title 22 disinfection requirements while reducing overall energy consumption. Structural evaluations and feasibility analysis will be developed for each proposed alternative layout. The existing electrical and controls systems will also be evaluated to determine if any existing equipment can be reused.

- Layout Development**                      Developing an operationally efficient solution that accommodates the VVWRA's needs. Hoch will work with the VVWRA to develop equipment layouts for each alternative.
- Hydraulic Feasibility**                      Understanding the existing plant hydraulics will be critical to providing recommendations for identified alternatives.
- Cost Implication**                      Developing accurate rough order of magnitude (ROM) costs will allow VVWRA decision makers to proceed with a thorough feasibility evaluation of the preferred alternative.
- Permit Compliance**                      Understanding permit requirements and limitations will help VVWRA avoid re-opening the existing permit.
- Implementation Strategy**                      The goal of the Feasibility Report is to provide a platform for VVWRA to develop a robust implementation strategy for the next phases of the project.

### Design Criteria

The UV technology under consideration is a low-pressure high-output closed vessel system suitable for wastewater applications. Currently the Wedeco LBX is the only closed vessel reactor offered by Xylem that meets an **NWRI 2012 MS2 dose of 100 mJ/cm<sup>2</sup>** at peak flow required to meet effluent standards. Key design parameters have already been identified by Xylem's engineering team. Hoch will review the recommendations to confirm regulatory compliance and design optimization.

Description	Units	Value
Design Dose	mJ/cm <sup>2</sup>	100
Cryptosporidium Inactivation	log	3 (3.5)
Minimum Flow Rate	mgd	TBD
Average Design Flow Rate	mgd	11
Maximum Design Flow Rate	mgd	14
Design UVT	percent	55
Total Suspended Solids	mg/L	10
No. Reactors	No.	14
No. Redundant Reactors	No.	2

### Effluent Standards:

- ✓ Total Coliforms (7 day geometric mean) 2.2 Total Coliforms/100 mL
- ✓ Total Coliforms (max sample) 23 Total Coliforms/100 mL

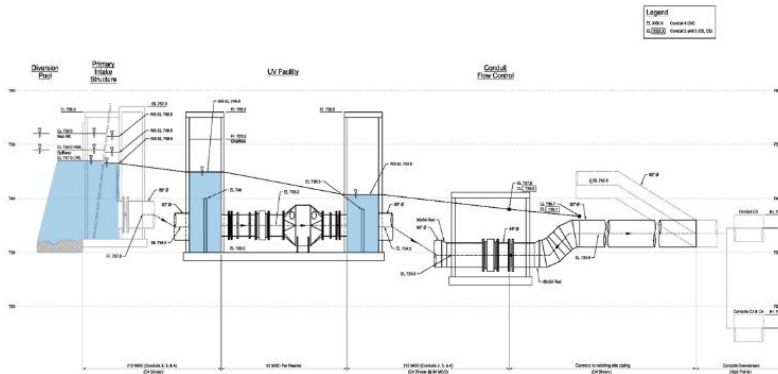




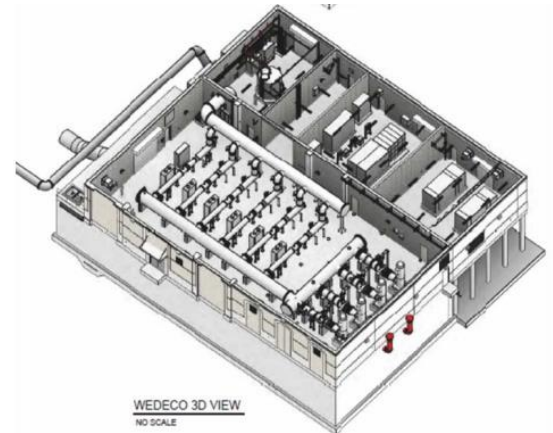
# Proposed Method to Accomplish the Work

## Hydraulics

Development of a hydraulic profile is critical to understanding the required hydraulic conditions and if retrofits to the existing UV basin can be implemented to accommodate them. Otherwise, the system will require an integrated pumping station to provide additional head to the system. Hoch has already begun this process and identified that additional head is required to accommodate the new equipment. The finished floor elevation of the existing UV channel is ~2594'. The maximum water surface elevation in the channel at 19.4 mgd is 2598.39' resulting in 4.39' of available head to maintain the existing hydraulic grade line. The minimum discharge height of the Wedeco reactor, including pipe fittings, and supports, is ~8' above the finished floor. Additional head can be gained through structural modifications to the existing UV building or through pumps. The below figures provide preliminary information reflecting each option.



Hydraulic Profile with Gravity Feed



UV System with Integrated Pumping Station

While the Wedeco reactor was explicitly delineated by the Authority as the equipment of choice (and Hoch understands that this would provide consistency of equipment across the Authority’s treatment facilities), other manufacturers may have equipment with more advantageous hydraulic conditions in addition to potentially lower operational costs and ease of maintenance costs. The Wedeco proposal provided included 14 duty reactors and 1 standby reactor with 900 total installed lamps. Our preliminary outreach to one of the alternate vendors suggests alternate designs that would potentially significantly reduce the number of reactors and total lamps while offering flexibility in performance and more ideal hydraulics. Accordingly, Hoch has provided an optional task to look at one additional UV vendor (e.g. Trojan, Evoqua, or Aquionics) for consideration by the Authority.

## Grant Writing (Optional)

Hoch is also proposing an optional grant writing task on this contract. We have procured over \$200 Million in low-interest loans, rebates, and grants for our clients in Southern California over the last 3 years and believe this project, which aims to reduce energy consumption, optimize maintenance, and maintain water quality in a surface water of the United States has good potential for obtaining grant funding.

The infographic displays Hoch's 3-Year Track Record with the following statistics:
 

- \$57M awarded in secured funding for our clients in grants and rebates
- \$147M awarded in low interest loans
- 90%+ Procurement Rate

 Logos for SANDAG, WIFIA, CalRecycle, and the Bureau of Reclamation are shown at the bottom. The text 'Hoch's 3-Year Track Record' is prominently displayed at the bottom of the graphic.





# Proposed Method to Accomplish the Work

To accomplish the work, Hoch proposes the following Scope of work:

## Scope of Work

### Task 1 – Project Management

Provide overall leadership and team strategic guidance aligned with the VVWRAs objectives. Coordinate, monitor, and control the project resources to meet the technical, communication, and contractual obligations required for developing and implementing the project scope.

**1.1 Invoice Status Reports:** Hoch will prepare monthly invoices, including expenditures by task, hours worked by project personnel, and other direct expenses with the associated backup documentation. Monthly status reports will accompany each invoice and include comparisons of monthly expenditures and cumulative charges to budget by Task, including cost-to-complete, earned value, cash flow, and certified firm participation.

**1.2 Management, Coordination and Meetings:** Hoch’s Project Manager (PM) will manage and coordinate the technical and scope issues of the overall project. Progress meetings will be conducted as appropriate. Hoch will also coordinate with the Authority to communicate the status of the project.

- ✓ **Kick-Off Meeting** – We will host an initial meeting to discuss the application schedule, identify team member roles and responsibilities, and review data requests. Most critically, we will clarify the project’s scope of work, budget, schedule. We will also engage in a strategic discussion regarding how to effectively address and align with the funding program’s scoring criteria and vet a technical narrative that best responds to the funding opportunity’s evaluation criteria.
- ✓ **Schedule Development** – Hoch will develop a detailed schedule with key milestones and check-ins (driven by the submittal deadline) that builds in time for the Authority to review, provide input, and issue final approvals and signatures prior to submittal.

**Task Deliverables:** Hoch will deliver to the VVWRA monthly invoice and status report covering:

- Work on the project performed during the previous month.
- Meetings attended.
- Problems encountered and actions taken for their resolution.
- Potential impacts to submittal dates, budget shortfalls or optional services.
- Budget analysis.
- Issues requiring project team action.

**Task Assumptions:**

- Kick-off meeting will be held in person.
- Regular meetings will be virtual.
- Project is assumed to be 6 months to a year, therefore it is assumed there will be six to twelve progress payments/status reports.

### Task 2 – Data Collection and Review

Hoch will develop project specific application checklists, request data from Authority staff and provide proactive and early identification of critical documents that may be time sensitive, including board resolutions, letters of support, and other required documentation.

As additional data gaps are identified, site visits can be conducted to collect required information for proposed UV systems facility integration. Hoch will prepare and maintain a list of supplemental data needed for the project, submit the list to the Authority, and coordinate the data collection and evaluation.

**Task Assumptions:** VVWRAs Staff will provide the following:

- Necessary information on the facilities and respond to additional requests for information.
- Site access for site visits, with an operator familiar with facility as required.

### Task 3 – Hydraulic Profile Development

Hoch will use the information gathered in Task 2 to understand the hydraulic profile of the existing UV facilities and develop hydraulic profiles for the two proposed operating scenarios. Development of the hydraulic profile will allow the Hoch design team to provide better recommendations for either retrofitting the existing basin to accommodate a gravity feed system or pumping requirements for implementation of a dedicated pumping station.

**Task Deliverables:**

- Hydraulic Profile for installation of Wedeco LBX reactors with gravity feed
- Hydraulic Profile for installation of Wedeco LBX reactors with pumping feed

**Task Assumptions:**

- VVWRA will provide all available flow, level, and other data necessary to develop the hydraulic profiles.

### Task 4 – Feasibility Report

**4.1 Alternative Layout Development:** Hoch will develop a feasibility assessment for two alternative layouts using the Wedeco LBX UV reactors. Preliminary layouts for each alternatives include:

- Alternative 1: Wedeco LBX 1500 w/ Gravity Feed (**Figure 1**)
- Alternative 2: Wedeco LBX 1500 w/ Pumping Feed (**Figure 2**)

Hoch will work with the VVWRA to develop the layouts for each alternative and host a virtual workshop to finalize the layouts that will be developed in the Feasibility Report.

**4.2 Feasibility Report:** Hoch will prepare a Feasibility Report to evaluate the O&M ease, constructability, and life cycle costs for both alternatives. The Report will evaluate the existing mechanical, process, structural, electrical, and instrumentation & controls improvements conditions and provide recommendations on feasibility of the proposed and identified changes for installing the Wedeco LBX reactors. Hoch’s subconsultants Kelsey Structural and Gerry Green, Inc. will evaluate the structural and electrical and I&C feasibility.

The Feasibility Report may include, but not be limited to the following sections:

- Introduction
- Existing System
- Alternative Selection Overview
- Hydraulic Considerations Summary
- Design Criteria for Recommended Alternative, and O&M Considerations
- UV System Layout and Design Considerations
- Structural Improvements
- Electrical/Controls Improvements
- Permitting and Regulations
- Cost Analysis
- Recommendations and Implementation

**4.3 Cost Estimate:** Hoch will develop a Class 5 cost estimate for planning level OPCC including appropriate factors and contingencies to provide the VVWRA an understanding of the full project implementation costs for each alternative. The cost estimate will be included in the feasibility report.

**Task Deliverables:**

- Cost Estimate
- Draft Feasibility Report: Hoch will submit a draft feasibility report to VVWRA for comments.
- Final Feasibility Report: Hoch will incorporate one round of comments from the draft report and submit a Final Feasibility Report.

**Task Assumptions:**

- One 2-hour workshop to review proposed layouts will be held virtually and attended by Hoch’s project manager and principal engineer.
- The VVWRA will review and comment on the Feasibility Report

**4.4 (Optional Task):**

- If requested, Hoch can review additional alternatives including but not limited to:
  - Additional alternative gravity of pumping feed layouts
  - New UV building
  - Alternative Closed System Equipment (Trojan, Evoqua, Aquionics)

### Task 5 – Permitting Support (Optional)

Hoch will review the existing permit and coordinate with the State regulatory authority to confirm the proposed improvements will not result in any permit modifications or additional permit requirements. The Hoch water resource team will coordinate and facilitate up to two 2-hour meetings with the State regulatory authority to review the proposed facility improvements and document any preliminary recommendations or requirements defined by the permitting authority.

**Task Assumptions:**

- Two 2-hour meetings with VVWRA staff and regulatory authority.
- Findings will be documented in meeting notes.

### Task 6 – Grant Support (Optional)

Overall energy savings and potential increases in water reuse may qualify the project for grant funding support. Hoch’s diverse team has grant writing specialists that have successfully secured funding for similar types of projects. Additional support tasks include:

**Task 6.1: Grant Identification (Optional):** The pursuit of grants has become essential for many forward-thinking agencies, like the Authority, which are looking to maximize return on investment. Grants and loans are often a critical component in funding important projects, and fortunately there are numerous funding programs available. The challenge for most is understanding where the real opportunities lie, accessing those opportunities in a timely fashion with a good project or program in hand, and strategically developing applications that align with the priorities and criteria set forth by the funding agency. Hoch Consulting also specializes in supporting local agencies in the identification and acquisition of grant funding. As part of this optional task, Hoch will identify and obtain the best possible funding options, evaluate potential opportunities, and position the Authority to engage quickly in the preparation of applications as funding opportunities are announced. Deliverables will include a Funding Needs Analysis and Strategy Report for the Authority, inclusive of the UV project as well as other projects in the 5-year Capital Improvement Plan.

**Task 6.2: Grant Writing (Optional):** Hoch will prepare and submit a superior application that is responsive to the evaluation criteria requirements set forth by the funding agency. Once a client receives a funding award, the Hoch team is well-equipped to assist in efforts leading to the execution of the funding agreement and then administering the award. As each funding opportunity is unique, Hoch will provide a cost proposal for grant writing once a funding opportunity has been identified.

**Task 6.3: Grant Administration (Optional):** Hoch will assist with grant administration by coordinating, filing, and submitting grant applications.

### Schedule

Hoch will develop a detailed schedule with key milestones and check-ins (driven by the submittal deadline) that builds in time for the Authority to review, provide input, and issue final approvals and signatures prior to submittal. This schedule is constantly monitored to ensure progress is made accordingly, with corrective measures taken and communicated quickly, should delays occur. A preliminary schedule is included in the Appendix.

### Appendix

## Misc. Mechanical Considerations

The main mechanical components associated with the UV reactors include a UVT analyzer, valves, pipes, flow meters, sump pumps, and other miscellaneous mechanical components.

- ✓ UV Transmittance Analyzer
- ✓ Pipe and Fittings
- ✓ Valves and Actuators
- ✓ Flow Meters
- ✓ Mis. Mechanical Components Including: Air Relief, Drain Valves, Drain Lines, Sample Taps, etc...

## Controls and Operations Strategies

The UV system can be controlled locally from a local UV reactor control panel, or remotely through SCADA. The equipment will have an automatic cleaning process. Each UV reactor must be monitored to determine whether it is operating within validated conditions. The equation listed in the permit will be used in the automatic UV disinfection control system for calculating UV Dose:

$$S = e^{-0.5876} \times e^{0.0456 \times UVT} \times P^{0.9574}$$

$$RED_{calc} = 10^{1.8871} \times A_{254}^{-1.4460} \times [S/S_0]^{0.9821} \times [1/Q]^{0.7970} \times B$$

Figure 1 - Proposed Gravity Feed Layout

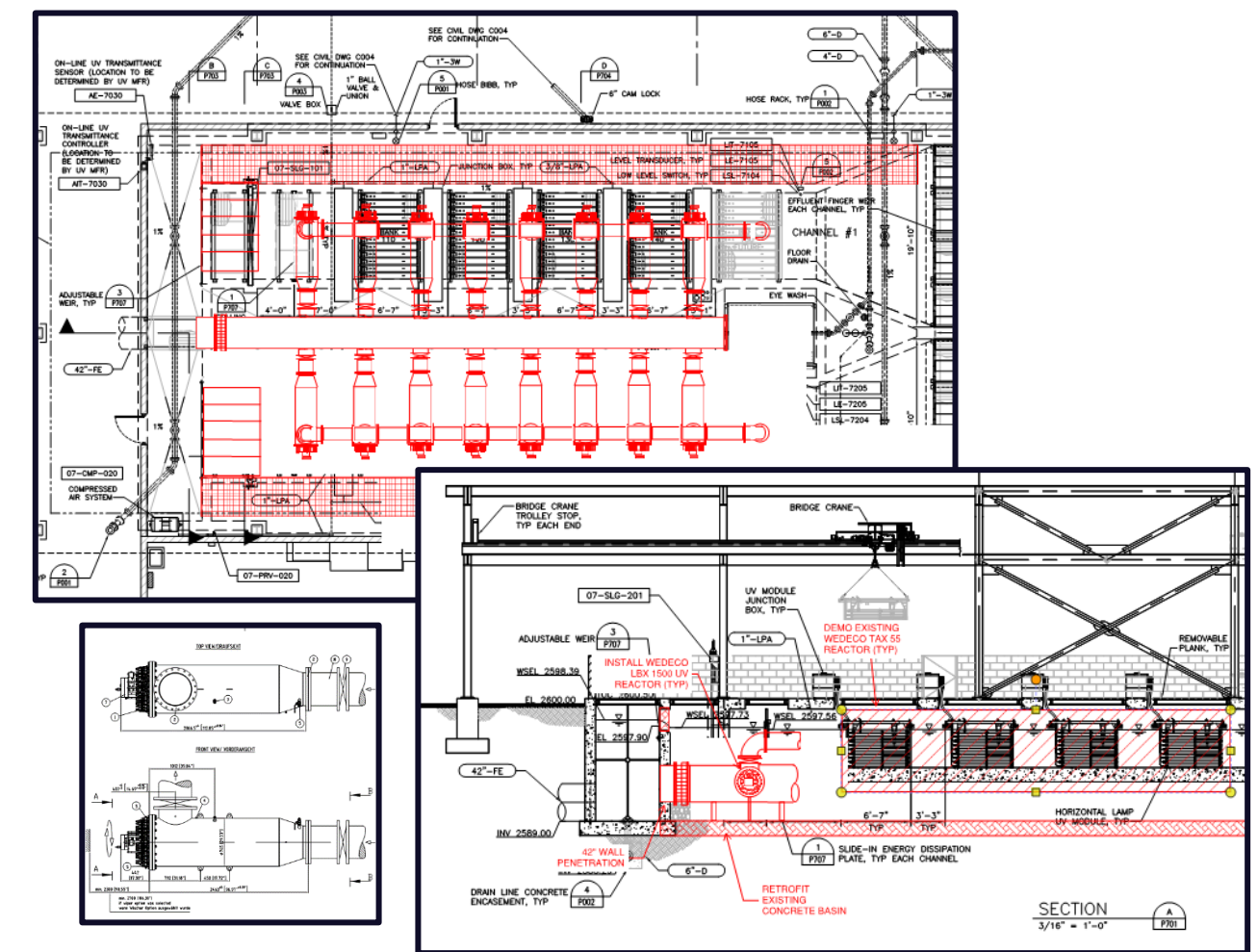
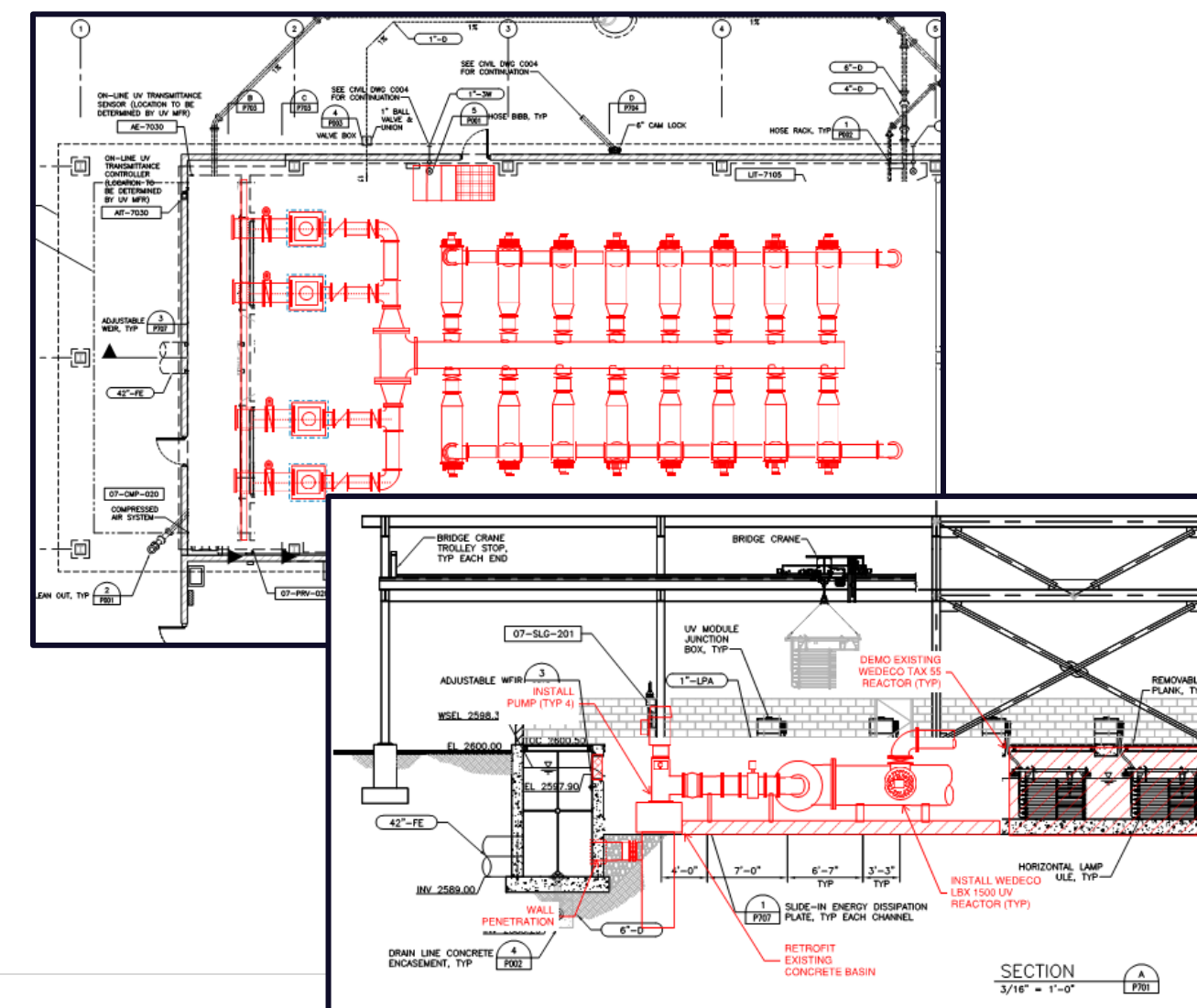


Figure 2 – Proposed Layout w/ Pumping Station





## Fee Proposal

Hoch Consulting is pleased to submit our hourly rates to the Victor Valley Wastewater Reclamation Authority for the **UV Feasibility Project**. In alignment with the proposed scope of work in the approach section above, Hoch Consulting proposes the following lump-sum, not-to-exceed budget to perform the identified tasks.

### *Budget Summary*

Payment will be made at the Billing rates for personnel working directly on the project, which will be made at the Consultant's Hourly Rates, plus Direct Expenses incurred. Hoch Consulting's rate schedule for this contract provides all-inclusive hourly billing rates, which include overhead, profit, and expenses. Reimbursable expenses, such as mileage and reproduction, will not exceed a 10% mark up.

All work will be performed on a lump-sum "not-to-exceed" basis for the agreed amount and no additional compensation will be received beyond the total amount negotiated for the scope of work unless changes are approved in advance by a written change order issued and signed by VVWRA and Hoch Consulting. The initial estimated maximum total fee to be invoiced under this Agreement is \$56,010 which shall not be exceeded without written authorization from VVWRA. A breakdown of the costs by tasks is attached (See Table Below). Optional tasks for additional alternatives analyses, permitting support, and grant identification are proposed for consideration by the Authority for an additional \$20,530.



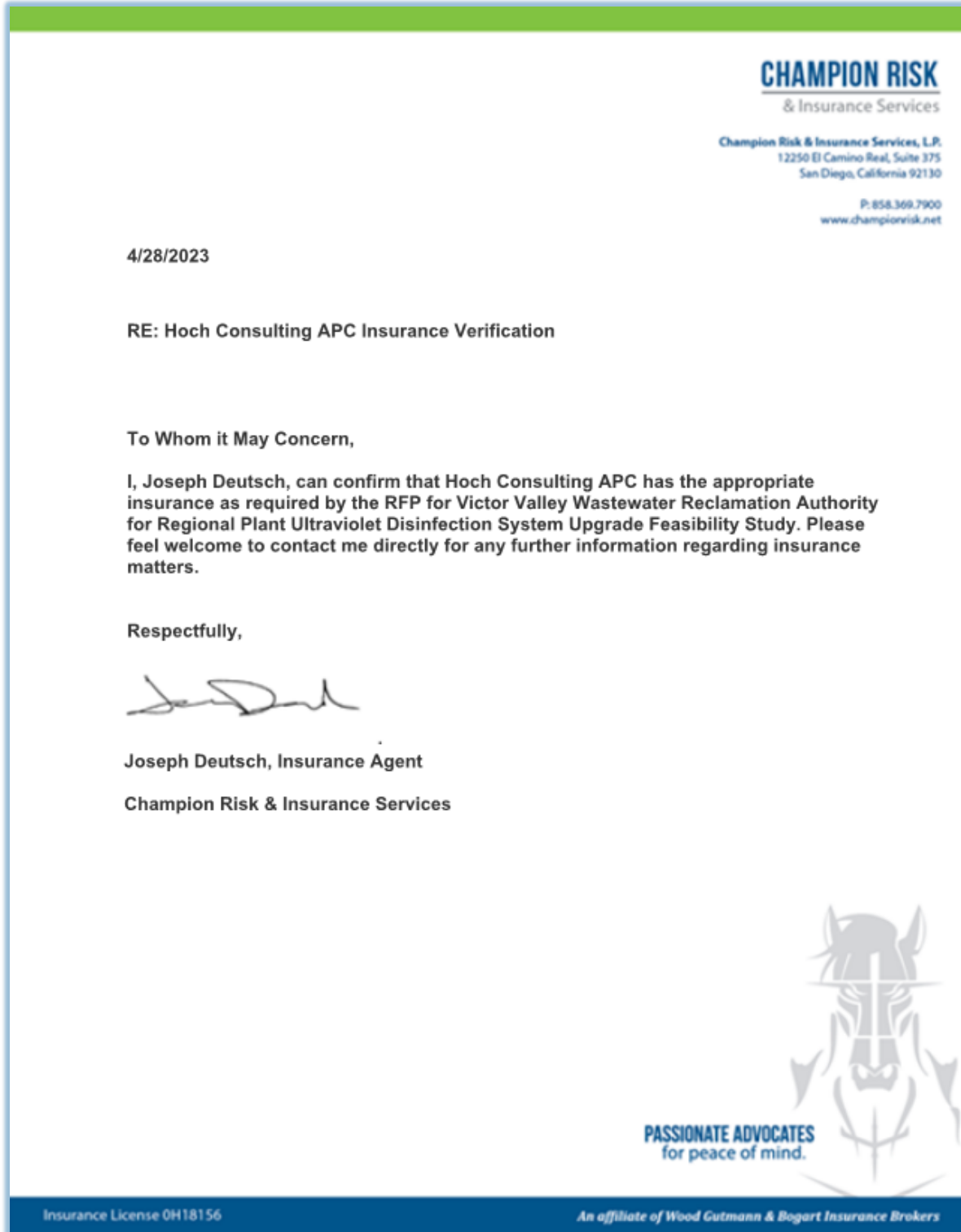


Victor Valley Wastewater Reclamation Authority - UV Feasibility Project											Hoch Consulting	
Classification	Labor						Total Hoch	Subconsultants		ODCs Expenses	Total Fees Total	
	Principal In-Charge	Project Manager	Principal Engineer	Senior Project Engineer	Staff Designer/Drafter	Water Resources Specialist		Kelsey Structural	Gerry Green, Inc (Elec and I&C)			
<b>Labor Rate</b>	\$240.00	\$240.00	\$235.00	\$205.00	\$140.00	\$190.00						
<b>Task 1: Project Management</b>	1	6	4	0	0	0	\$ 2,620.00	\$ 2,000.00	\$ -	\$ 500.00	\$5,120.00	
1.1 Invoice Status Reports	1	2					\$ 720.00				\$720.00	
1.2 Management Coordination and Meetings		4	4				\$ 1,900.00	\$ 2,000.00		\$ 500.00	\$4,400.00	
<b>Task 2: Data Collection &amp; Review</b>		4	2	4			\$ 2,250.00	\$ 920.00			\$3,170.00	
<b>Task 3: Hydraulic Profile</b>		16	4	8			\$ 6,420.00				\$6,420.00	
<b>Task 4: Feasibility Report</b>	5	54	10	10	12		\$ 20,240.00	\$ 8,240.00	\$ 12,320.00	\$ 500.00	\$41,300.00	
4.1 - Layout Development	2	8	4		8		\$ 4,460.00			\$ 500.00	\$4,960.00	
4.2 - Feasibility Report	2	30	4	8	4		\$ 10,820.00	\$ 8,240.00	\$ 12,320.00		\$31,380.00	
4.3 - Cost Estimate	1	16	2	2			\$ 4,960.00				\$4,960.00	
<b>Total Base Proposal</b>	<b>6</b>	<b>80</b>	<b>20</b>	<b>22</b>	<b>12</b>	<b>0</b>	<b>\$ 31,530.00</b>	<b>\$ 11,160.00</b>	<b>\$ 12,320.00</b>	<b>\$ 1,000.00</b>	<b>\$56,010.00</b>	
<b>Task 4.4 - Alternatives (Optional)</b>	1	15	2	4	2		\$ 5,410.00				\$5,410.00	
<b>Task 5: Permitting Support (Optional)</b>	4	4	24		20		\$ 10,360.00				\$10,360.00	
<b>Task 6: Grant Support (Optional)</b>	4	0	0	0	0	20	\$ 4,760.00				\$4,760.00	
6.1 - Grant Identification	4					20					\$4,760.00	
6.2 - Grant Writing*											*	
6.3 - Grant Administration*											*	
<b>Total Optional Tasks</b>	<b>15</b>	<b>99</b>	<b>46</b>	<b>26</b>	<b>34</b>	<b>20</b>	<b>\$ 20,530.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$20,530.00</b>	
* Grant Writing and Grant Administration fees, if desired, can be negotiated depending on the specific grant opportunities.											<b>Total Base Proposal + Optional Tasks</b>	<b>\$76,540.00</b>



## Insurance

Hoch Consulting carries insurance coverage consistent with the requirements in the RFP. Below is a letter certifying that Hoch meets the requirements in the RFP. Official certificates of insurance will be provided to the Authority prior to contract execution and upon notice of contract award.





## Litigation

Hoch Consulting does not have any litigation history for any claims filed by the firm or against the firm related to the provision of services in the last five (5) years.



## Other Information

### Demonstration of staffing record, completion on time and within budget

Hoch staff are experienced in providing engineering planning services to local governments and take great pride in our long standing and trusted working relationship with our clients. Our company culture and capabilities make working as an extension of the Authority's staff seamless and convenient. Hoch Consulting proposes a team that is local to Southern California and possesses a wealth of technical experience. Members of our team, led by Aaron Gress, are hard-working and committed, each with track records of successful work that were completed on time and within budget.

Hoch demonstrates a strong record of staffing tasks efficiently, completing projects on time and within the allocated budget through a tried-and-true approach to Line-of-Communication and Team Integration. We propose the primary line of communication be between Mr. Gress, as the main point of contact from Hoch Consulting, and the Authority's contract /project manager. As specific funding support efforts are initiated it may be most effective for Ms. Burr to coordinate directly with a designated authority staff person who is focused on the effort. Ms. Burr will be responsible for managing her team's internal work efforts and will oversee the coordination of meetings, review processes, and document exchanges with the authority. Project timelines and schedules will be developed by the Hoch team at the start of each task order and approved by the Authority. When deemed most efficient, direct communication and coordination between the Hoch team support staff and Authority staff will occur. As the Principal PM, Gress will actively track schedule, staff time and budget to ensure all tasks are performed on time and on budget.

### Community Involvement

Hoch's company's vision is, "to provide value to our clients, our community, and our employees," and we take this statement to heart. Hoch has adopted an official giveback policy encompassing all full-time and part-time employees, to participate in a paid volunteer day or activity each year. Hoch employees keep a record of upcoming volunteer opportunities and typically agree on participating in the same giveback day activity. Employees who cannot or choose not to participate in the group giveback day activity may utilize this time to participate in another volunteer opportunity.



Past activities have included blood donations, charity drives in partnership with Water for People, participating in Habitat for Humanity construction activities and civic cleanups to remove polluting litter and debris from the community, in partnership with I love a Clean San Diego. We typically involve ourselves in the communities that we work for; if provided the opportunity to contract with the Victor Valley Wastewater Reclamation Authority, Hoch intends to offer Victor Valley-based volunteer opportunities to our staff. If desired, we can coordinate our community involvement with the Victor Valley staff liaison for the contract.



### Description of any previous involvement with the District

Cari Dale, our Director of Water Resources, is a colleague of General Manager Darron Poulsen, having both worked together at the City of Ontario Public Works Agency. Hoch Consulting has not had any previous contracting efforts with the Victor Valley Wastewater Reclamation Authority but is excited for the opportunity to work with the Authority on this important project.

Kelsey Structural, Hoch Consulting's subconsultant for structural engineering, has worked closely with VVWRA in the past as their structural as-needed consultant and has completed several recent local projects.





## Certification

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### Certification of Proposal

Hoch Consulting acknowledges the addenda posted on Planet Bids. We take no exceptions to the RFP or Authority's standard contract. In Submitting our proposal, we agree to furnish services to the Authority in accordance with the Request for Proposal (RFP), and to be bound by the terms and conditions of the RFP.

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Adam Hoch, President/Principal Engineer



## Appendix A. Additional Resumes

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**Cari Dale**

**Director of Water Resources**



**Education:**

Master's in Public Administration, Water Resources Management emphasis, *California State University, San Bernardino*

B.A., Biology, *Macalester College*

**Years of Experience:**

29 Years – Public Agency

**Recognition**

Recycled Water Advocate of the Year, WaterReuse CA, 2022

Pathogen Study, White House Water Summit, 2016

**Organizations:**

Women in Water

California Water Environment Association

WaterReuse

California Association of Sanitation Agencies

Ms. Dale is a skilled utility executive, having spent over 29 years in the public sector, leading the management of potable water, wastewater and water reclamation programs for a variety of agencies in Southern California. In these roles, she routinely guided relevant technical studies, programs and funding initiatives to develop reliable water supplies and ensure program implementation. For over a decade, she served as the City of Oceanside's Water Utilities Director where she oversaw annual operating and capital budgets in excess of \$200 million. Her political acumen has allowed for the agencies that she has represented, to move forward with high-profile utility projects including San Diego County's first Potable Reuse Project, Pure Water Oceanside, recycled water system expansions as well as groundwater supply development. Ms. Dale is versed in water use planning estimates, water purchase agreements and the development of Master Plans, Conservation Master Plans, Urban Water Management Plans, and other critical water supply studies.

**RELEVANT PROJECT EXPERIENCE:**

**Planning, Studies, and Analysis**

*Feasibility, Pilot and Technical Studies*

**San Luis Rey Valley Groundwater Recovery Project, Rainbow Municipal Water District, 2022 - current**

Key author of the Feasibility Study to assess the technical, economic, environmental, regulatory and overall feasibility of a groundwater recovery project as a source of locally controlled water supply. The report is being written to conform to the Bureau of Reclamation requirements for feasibility studies, positioning the District to be eligible for federal funding.

**Pure Water Oceanside, City of Oceanside, 2010-2022**

Identified and pursued strategies, technical studies, programs and funding to further local water supply development in support of City Council's goal of 50% local supplies by 2030. Pure Water Oceanside was put into operation at the end of 2021 and will provide Oceanside with up to 20% of its water supply needs.

**Ocean Desalination Pilot Study, City of Oceanside, 2012**

Oversaw the project management, pilot and feasibility studies for the future implementation of Ocean Desalination from nearshore extraction wells.

**Brine Pilot Studies/Brine Minimization and Well Expansion, City of Oceanside, 2017**

Initiated two separate pilot studies to explore the use of a 3<sup>rd</sup> Stage Reverse Osmosis Unit at the Mission Basin Groundwater Purification Facility. Upon completion of these studies, Ms. Dale led the effort to author a Feasibility Study for the Bureau of Reclamation, which was adopted by Congress, to allow the project to be eligible for Federal Funding under the WIIN Desalination Program.

**Pathogen Removal Study, City of Oceanside 2016**

Guided completion of a Pathogen Removal Study at the San Luis Rey Water Reclamation Facility, which was recognized at the White House Water Summit during the Obama Administration and included in the Executive Office of the President, "Commitments to Action on Building a Sustainable Water Future". The Study now serves as a model for the permitting of Indirect Potable Reuse projects within the State of California.



## Aaron Gress, P.E. Principal Engineer



### Education:

B.S., Natural Resources and Environmental Sciences, University of Illinois – Urbana-Champaign

M.S., Civil Engineering, University of Illinois – Urbana-Champaign

### Professional Registrations & Certifications:

Professional Engineer (Civil) California, # C86657

Professional Engineer (Civil) Oregon, # 93850PE

Professional Engineer (Civil) Washington, # 22021860

### Years of Experience:

10 Years – Private

### Organizations:

American Water Works Association

Mr. Gress is a civil/environmental engineer with 10 years of experience in a variety of civil engineering projects including planning, analysis, design, and construction phase services for municipal and commercial water treatment projects. He has managed several water treatment projects and has designed groundwater treatment systems, including a wellhead treatment facility for uranium and other treatment processes for the removal of arsenic, iron, and manganese. Mr. Gress has also participated in groundwater supply development program studies, water quality and treatment needs analysis, and a wastewater expansion evaluation.

### RELEVANT PROJECT EXPERIENCE:

## Design & Engineering *Treatment*

**Lopez WTP Primary Disinfection Alternative Analysis, San Luis Obispo County, California.** Project manager and process lead for evaluation of alternative disinfection technologies at a 6 mgd surface water treatment plant. The Lopez Water Treatment Plant (LWTP) lies outside of Arroyo Grande, California. The LWTP has used chlorine dioxide (ClO<sub>2</sub>) as a primary disinfectant targeting 0.5 log inactivation credit for Giardia lamblia, control of manganese, and reduction of disinfection by products. Because of concerns surrounding safety and ease of use for both training and operation, the County is evaluating alternatives to replace ClO<sub>2</sub> with an alternative technology.

**North and South Water Treatment Plant Design, City of Harrisburg, Harrisburg, Oregon.** Project manager and process lead for design and construction of two iron and manganese removal facilities. Project included installation of vertical pressure vessels, chemical feed systems, corrosion control feed systems, and degassing systems at two locations. Developed plans and specifications, coordinated with structural, electrical, mechanical, and civil subcontractors to deliver project.

**Crooked River WTP Value Engineering, City of Prineville, Prineville, Oregon.** Served as the process engineer providing value engineering services for a newly constructed groundwater treatment plant. Assisted the construction team with implementing value engineering design for reducing costs for mechanical, chemical, and other process equipment.

**85 MGD WTP Expansion, Joint Water Commission, Forest Grove, Oregon.** Process engineer responsible for developing and implementing a tracer study for the Joint Water Commissions expanded water treatment plant (55 MGD to 85 mgd). Complicated clearwell system which required updating existing CT calculations for compliance. Work included updated CT calculations, analyzing hydraulic performance of clearwell, and planning for and implementing a tracer study. A step dose method was preformed using chlorine and the tracer study was approved by the Oregon Health Authority.

**San Luis Demonstration Treatment Plant, Firebaugh, California.** Plant Manager for the United States Bureau of Reclamations San Luis Demonstration Treatment Plant (SLDTP). The SLDTP provides Selenium removal from the Panoche drainage district and includes biological and membrane treatment process including ultrafiltration and reverse osmosis. The SLDTP treats ~200 gpm of drainage water and may potentially be implemented at a full-scale design.



## Adam Hoch, P.E., QSD, QISP President/Principal Engineer



### Education:

B.S., Civil Engineering,  
*Lehigh University*,  
2003

### Professional Registrations:

Professional Engineer  
(Civil) California,  
# C77635

Qualified SWPPP  
Developer (QSD),  
#C77635

Qualified Industrial  
SWPPP Practitioner  
(QISP), #C77635

**Years of Experience:**  
5 Years – Public Works  
10 Years – Private

### Organizations:

American Society of  
Civil Engineers

American Public  
Works Association

California Water  
Environment  
Association

WaterReuse

California Stormwater  
Quality Association

Mr. Hoch is a registered Civil Engineer in the State of California with experience in storm water, potable water, wastewater, and water reclamation. Over the past decade, he has served as design engineer, engineering inspector, construction manager, and project manager for projects including treatment facilities, pump stations, and distribution systems. Mr. Hoch's experience includes five years in the public sector and six years as an engineering consultant to multiple Cities, water districts, and wastewater districts in Southern California. Mr. Hoch's Public Works experience provides valuable insight into treatment plant operations and maintenance, regulatory concerns, and administrative procedures.

### RELEVANT PROJECT EXPERIENCE:

#### **Indirect Potable Reuse (IPR) Project, City of Oceanside, 2016 - Present**

Program Manager of an \$80 million program to plan, design, and construction advanced water purification facilities (AWPF) at the SLRWRF, which will provide 3.0 MGD of advanced treated water for injection into the Mission Groundwater Basin and 1.5 MGD of advanced treated water for blending with recycled water. Work includes conveyance and backwash facilities and injection and monitoring wells in the Mission Groundwater Basin. During this project, Mr. Hoch has overseen and reviewed critical elements including groundwater evaluations and studies of the Mission Groundwater Basin, borings, geophysical surveying, regulatory discussions, production of engineering reports and reports of waste discharge, permitting through the City (including but not limited to Conditional Use Permitting (CUP), building permitting, and grading permits), coordination with SDG&E, budgeting, and report writing. Mr. Hoch has also been instrumental in guiding advanced planning efforts for the future water reuse program including sizing the AWPF for 6.0 mgd, sizing the conveyance piping for 6.0 mgd, recommending well site locations, and providing insight on funding sources and support.

#### **North City Pure Water Project, City of San Diego, CA, 2017-2018**

Hoch Consulting performed a constructability review for the North City Pure Water Phase 1, Indirect Potable Reuse Project for the City of San Diego. Work included site evaluations and a review of the plans and specifications to assess the overall design of a pump station, dechlorination facility, pipeline, and subaqueous pipeline. Provided technical review services and project coordination services.

#### **Advanced Water Treatment Project, San Elijo Joint Powers Authority, 2009 - 2014**

Staff support, construction manager, and field inspector for \$4.2 million microfiltration/reverse osmosis advanced purification facility at the San Elijo Water Reclamation Facility (SEWRF). Provided review of conceptual, preliminary, and final design, managed environmental permitting, provided discretionary permitting, managed construction, and provided field inspection services for a facility designed to reduce total dissolved solids (TDS) in the SEJPA's reclaimed water.

#### **Recycled Water Treatment Plant Design Build Project, City of Oceanside, 2016 - 2020**

Project Manager for design/build construction of a \$15 million 3.0 MGD recycled water treatment plant at the San Luis Rey Water Reclamation Facility (SLRWRF). The proposed upgrades constructed new cloth filtration, chlorine disinfection, tertiary storage, and recycled water pumping systems downstream of a 17.6 MGD facility.

## GERRY GREEN, PE

### *Electrical & Instrumentation Lead*

Gerry specializes in the design of industrial power systems including electrical and controls systems for water and wastewater facilities. Recent experience is with wells, treatment plants, and septage receiving stations. He has performed electrical and control system design, electrical power system studies, and observed construction progress for several water/wastewater projects in Southern California



### SELECT PROJECT EXPERIENCE

**WELL 13 TREATMENT PLANT DESIGN SERVICES, CITY OF LAKEWOOD, CA;** *Electrical Engineer.*

**CAYUCOS SUSTAINABLE WATER PROJECT, CAYUCOS SANITARY WATER DISTRICT, CA;** *Electrical Engineer.* Electrical Engineer performing the electrical and instrumentation and control system designs for a new Recycled Water Plant with multiple process areas. Water treatment systems included various chemical treatment systems for well sourced potable water service and recycled water process.

**NORTH CITY WATER RECLAMATION FACILITY ANTI-SCALANT SYSTEM, CITY OF SAN DIEGO, CA;** *Electrical Engineer.* Electrical Engineer performing the electrical and instrumentation and control system designs for chemical system improvements at a recycled water process facility

**NORTH CITY WATER RECLAMATION FACILITY CHEMICAL FILL SYSTEM, CITY OF SAN DIEGO, CA;** *Electrical Engineer.* Electrical Engineer performing the electrical and instrumentation and control system designs for chemical tank fill system improvements at a recycled water process facility.

**NORTH CITY WATER RECLAMATION FACILITY AWPf PILOT PLANT, CITY OF SAN DIEGO, CA;** *Electrical Engineer.* Electrical Engineer performing the electrical and instrumentation and control system designs for an Advanced Water Purification Facility Pilot Plant at a recycled water process facility. System additions included pumps, tanks, and supporting components for sulfuric acid, hydrogen peroxide, ammonium hydroxide, sodium hypochlorite, and citric acid. Water purification process included chemical treatment, RO, and filtration.

### YEARS OF EXPERIENCE

30

### EDUCATION

- BS, Electrical Engineering, San Diego University

### REGISTRATION

- Electrical Engineer - CA

## GUY KELSEY, PE, SE

### Structural Lead

Guy brings 13 years of experience in structural engineering, designing both new and retrofit projects for various types of structures including water/wastewater, commercial, infrastructure and military facilities. He specializes in the design of water/wastewater treatment, storage and conveyance facilities with an emphasis placed on providing cost-effective solutions for durable, long-lasting structures to help ensure safe and reliable operations. Guy has a thorough understanding of the structures at the Meadowlark Water Reclamation Facility and has been a part of several recent projects with VWD including the seismic assessments of the existing Chemical Building in both 2016 and 2019.



### SELECT PROJECT EXPERIENCE

#### SEISMIC WALKTHROUGH AT MEADOWLARK WATER RECLAMATION FACILITY CHEMICAL BUILDING, VALLECITOS WATER DISTRICT, CARLSBAD, CA, *Project*

*Manager/Structural Engineer of Record.* Mr. Kelsey performed the structural site visits of an existing chlorine storage building for Vallecitos Water District (VWD) in both 2016 and 2019 as part of the California Accidental Release Prevention (CalARP) regulations, in order to observe the condition of the existing chlorine building, equipment supports and anchorage with respect to resisting seismic forces. Based on the site visit findings and in order to satisfy the CalARP regulations, Kelsey Structural performed a seismic retrofit upgrade to the chlorine tank storage racks and recommended further investigation and retrofit design for possible seismic deficiencies of the CMU building.

#### NORTH CITY CONVEYANCE SYSTEM, CITY OF SAN DIEGO, SAN DIEGO, CA, *Project*

*Manager/Structural Engineer of Record.* Mr. Kelsey provided the structural design for the City of San Diego NCCS project which included a new pipeline bridge and dechlorination facility. The Dechlorination Facility included a partially buried CMU building housing (2) 9' diameter x 12' tall FRP tanks. The structure was designed for differential soil loads due to uneven backfill which required increased wall reinforcing and thickened foundations to resist the lateral forces. FRP tank anchorage, foundation design and minimum freeboard recommendations were included as part of the structural design package.

#### LOS PIÑOS 2A PUMP STATION IMPROVEMENTS, ELSINORE VALLEY MUNICIPAL WATER DISTRICT, LAKE ELSINORE, CA, *Project Manager/Structural Engineer of*

*Record.* Mr. Kelsey provided the structural design for a replacement pump station for Elsinore Valley Municipal Water District. Design consisted of a new slab-on-grade foundation with steel canopy structure and pump/piping supports for relocated piping and electrical equipment. The pump station is located on a large slope and tightly constrained site which required coordination with multiple disciplines to determine the most efficient slab and canopy configurations to minimize construction costs and allow for safe operation, access and maintenance of the pump station.

#### OLIVENHAIN HYPOCHLORITE TANK PAD PROJECT, OLIVENHAIN MUNICIPAL WATER DISTRICT, ESCONDIDO, CA, *Structural Engineer of Record.*

Mr. Kelsey provided the structural design of an FRP hypochlorite tank foundation for the Olivenhain Municipal Water District David C. McCollom Water Treatment Plant. The project included adding a new 6" equipment pad over an existing 15" thick reinforced concrete slab to support a new 10' diameter x 16' tall tank. FRP tank anchorage design and minimum freeboard recommendations were included as part of the structural calculations. Repair recommendations for the existing concrete slab surface were also provided due to corrosion from chemical exposure and included crack and spall repairs as well as protective coating recommendations.

### YEARS OF EXPERIENCE

13

### EDUCATION

MS, Structural Engineering and BS, Structural Engineering, University of California, San Diego

### REGISTRATION

- Professional Engineer - CA
- Structural Engineer - CA

### ADDITIONAL PROJECT EXPERIENCE

- **Neighborhood No. 1 Sewer Pump Station Replacement, Olivenhain Municipal Water District, San Diego, CA**
- **Weese Filtration Plant Interconnect, Rainbow Municipal Water District, Oceanside, CA**





## Appendix B. Schedule

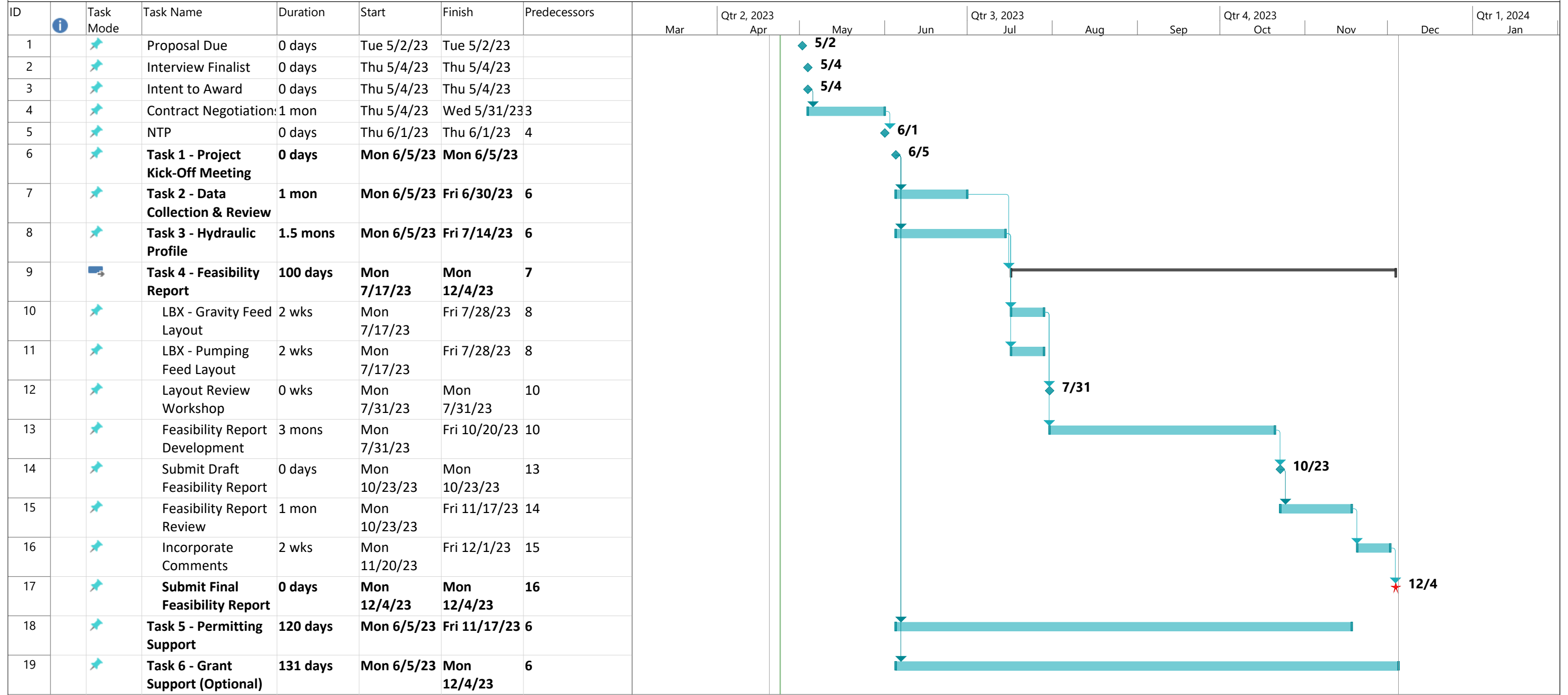
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# Victor Valley Wastewater Reclamation Authority

## UV Feasibility Project

Updated: May 2, 2023



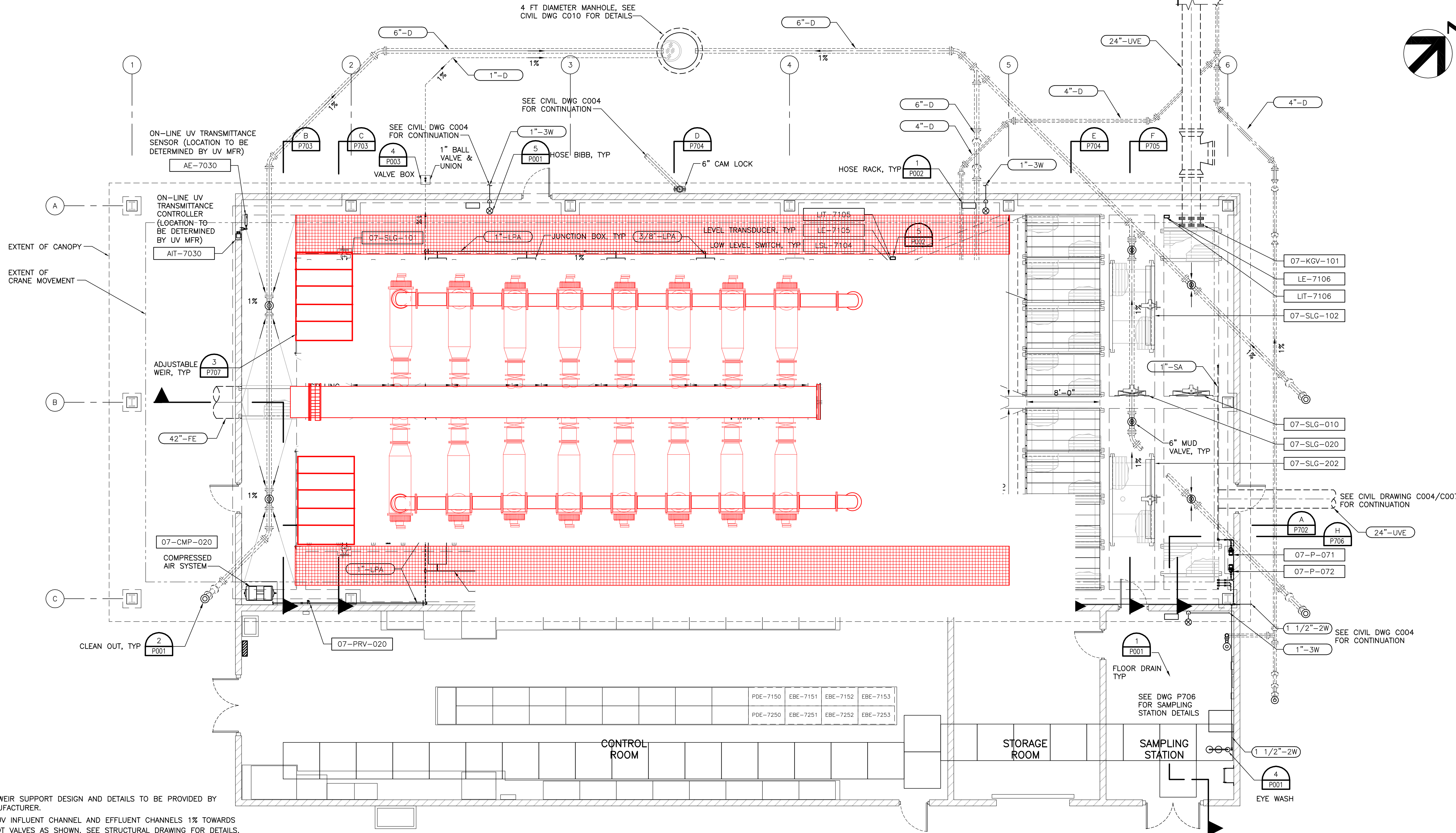
Project: VWRA - UF Feasibility Date: Mon 4/24/23	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			



## Appendix C. Preliminary Layouts (Full Size)

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Alternative 1 - LBX 1500 w/ Gravity Feed

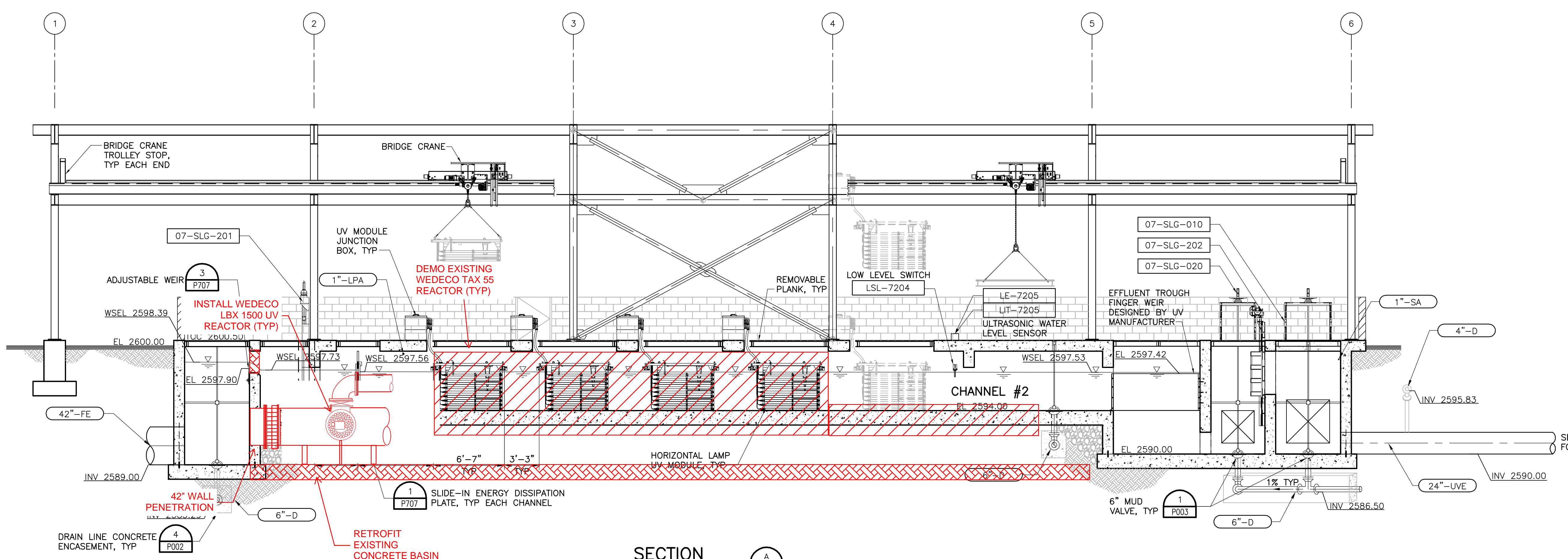


- NOTE:
- 1) FINGER WEIR SUPPORT DESIGN AND DETAILS TO BE PROVIDED BY UV MANUFACTURER.
  - 2) SLOPE UV INFLUENT CHANNEL AND EFFLUENT CHANNELS 1% TOWARDS THE FOOT VALVES AS SHOWN. SEE STRUCTURAL DRAWING FOR DETAILS.
  - 3) SLOPE WATER DRAIN LINE AND COMPRESSED AIR LINE 1% AS SHOWN.

PLAN  
3/16" = 1'-0"

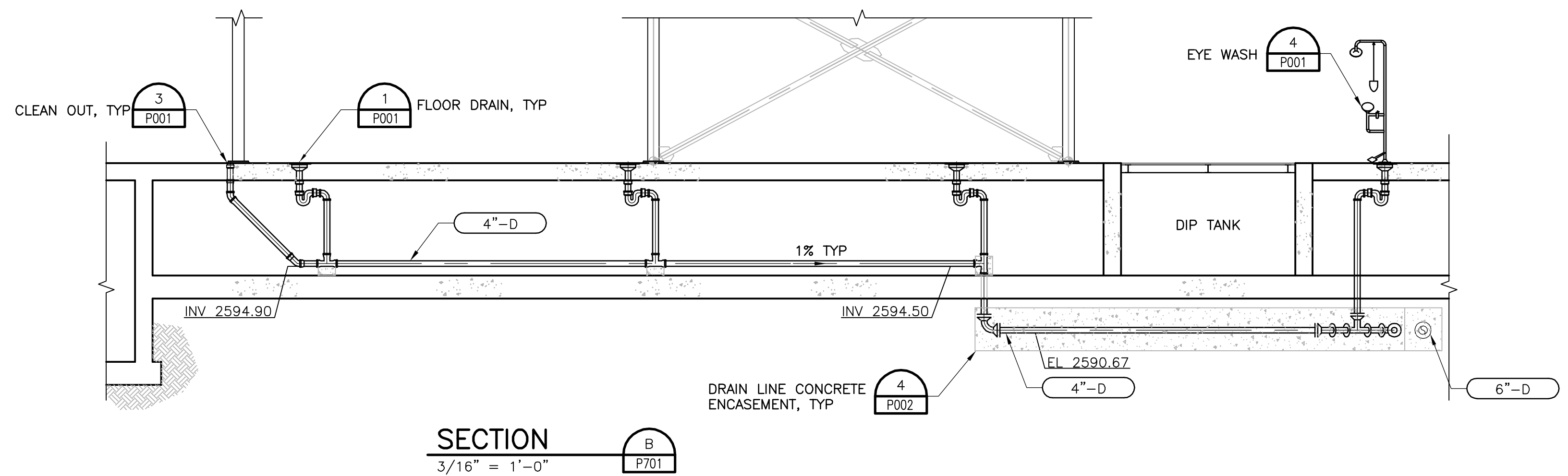
<p>HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, Ca. 92602-1377</p>	DESIGNED K. PANDA	SUBMITTED  ENGINEER RCE NO. DATE REV. DATE BY DESCRIPTION APPROVED DATE		Victor Valley Wastewater Reclamation Authority Westside Water Reclamation Plant Phase III A Regulatory Upgrades Volume 3	VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.	DRAWING <b>P701</b> SHEET 78 OF 140
	DRAWN S. LIN / N. KAKADE					
	REVIEWED G. GARCIA					
	JOB NUMBER 76291					





**SECTION A**  
3/16" = 1'-0"

- NOTE:
- 1) FINGER WEIR SUPPORT DESIGN AND DETAILS TO BE PROVIDED BY UV MANUFACTURE.
  - 2) WSEL AS SHOWN IS BASED ON A FLOWRATE OF 14.00 MGD, REFER TO HYDRAULIC PROFILE II ON DRAWING G009 FOR DETAILS OF WSEL AT VARIOUS FLOWRATE.

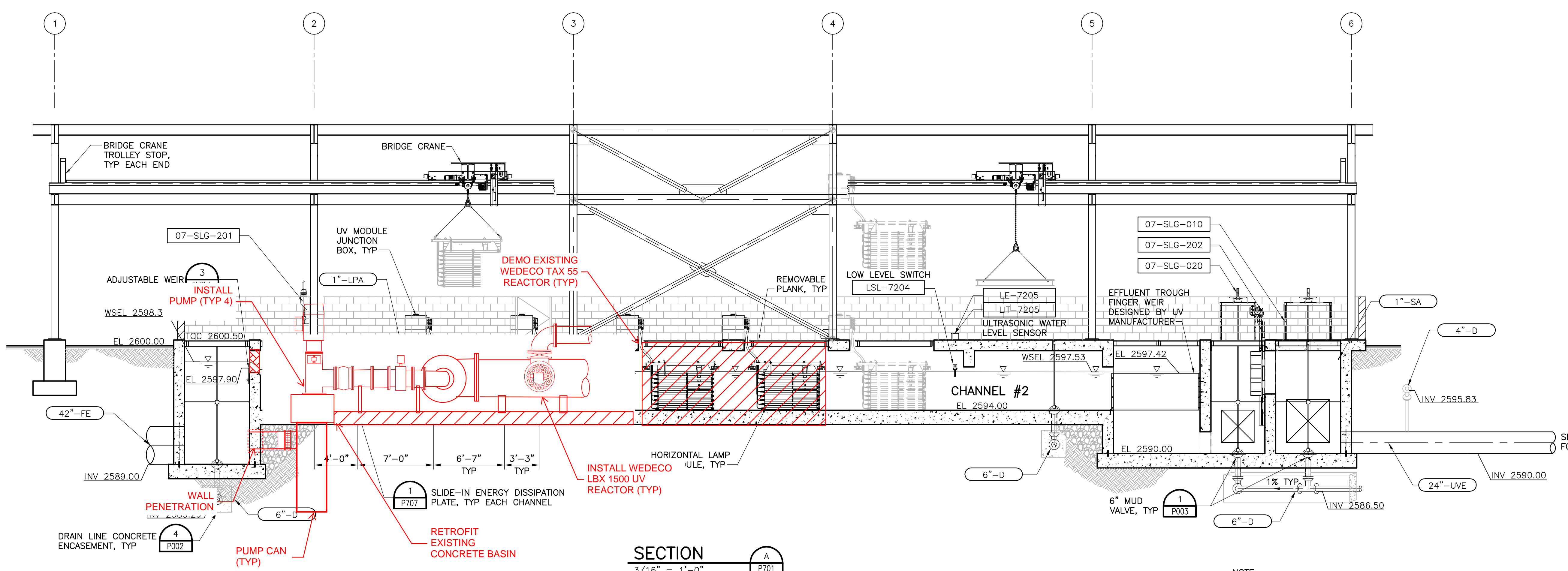


**SECTION B**  
3/16" = 1'-0"

<b>HDR</b> HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, Ca. 92602-1377	DESIGNED K. PANDA	SUBMITTED					 <b>Victor Valley Wastewater Reclamation Authority</b> <b>Westside Water Reclamation Plant</b> <b>Phase III A Regulatory Upgrades</b> <b>Volume 3</b>	<b>VERIFY SCALE</b> BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.	<b>UV DISINFECTION SECTIONS I</b>	DRAWING <b>P702</b>
	DRAWN S. LIN / N. KAKADE							SHEET <b>79 OF 140</b>		
	REVIEWED G. GARCIA	ENGINEER	RCE NO.	DATE	REV.	DATE	DESCRIPTION	APPROVED	DATE	
	JOB NUMBER 76291									

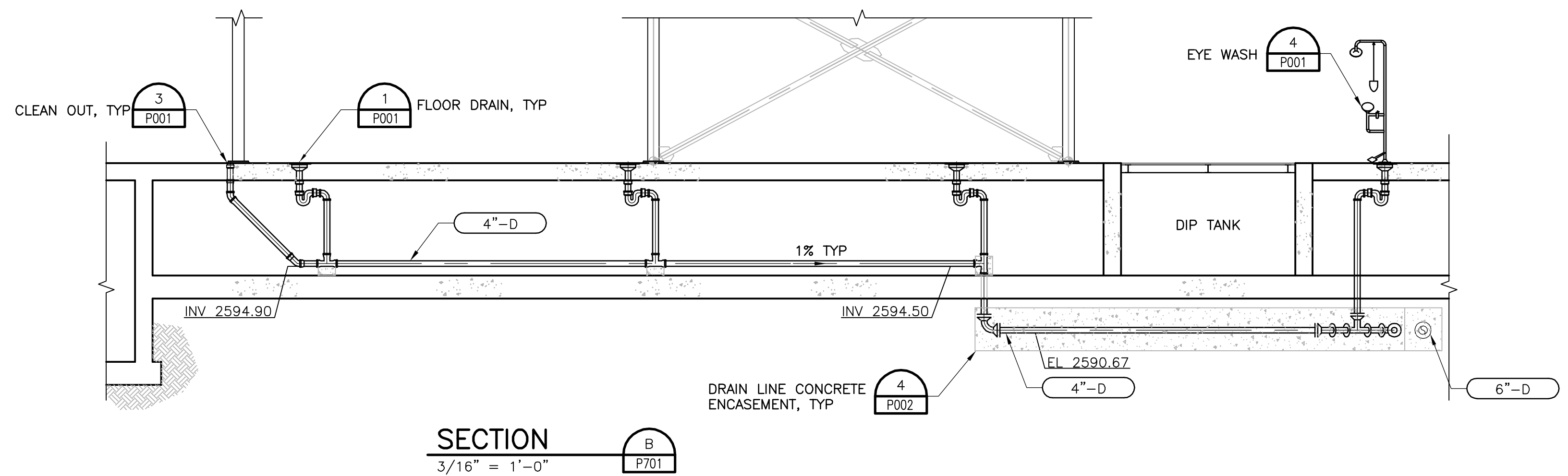






**SECTION A**  
3/16" = 1'-0"

NOTE:  
 1) FINGER WEIR SUPPORT DESIGN AND DETAILS TO BE PROVIDED BY UV MANUFACTURE.  
 2) WSEL AS SHOWN IS BASED ON A FLOWRATE OF 14.00 MGD, REFER TO HYDRAULIC PROFILE II ON DRAWING G009 FOR DETAILS OF WSEL AT VARIOUS FLOWRATE.



**SECTION B**  
3/16" = 1'-0"

<b>HDR</b> <small>HDR Engineering, Inc. 3230 El Camino Real Suite 200 Irvine, Ca. 92602-1377</small>	DESIGNED K. PANDA	SUBMITTED					 <b>Victor Valley Wastewater Reclamation Authority</b> Westside Water Reclamation Plant Phase III A Regulatory Upgrades Volume 3	<b>VERIFY SCALE</b> BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.	<b>UV DISINFECTION SECTIONS I</b>	DRAWING	
	DRAWN S. LIN / N. KAKADE									<b>P702</b>	
	REVIEWED G. GARCIA									SHEET	
	JOB NUMBER 76291	ENGINEER	RCE NO.	DATE	REV.	DATE	BY	DESCRIPTION	APPROVED	DATE	79 OF 140



**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY  
Board of Commissioners Staff Report**

**TO:** VVWRA Board of Commissioners  
**FROM:** Darron Poulsen, General Manager  
**SUBMITTED BY:** Latif Laari, Environmental Compliance Manager  
**DATE:** August 17<sup>th</sup>, 2023

**RECOMMENDATION TO PURCHASE COMPOSITE WATER-RESISTANT MANHOLE COVERS AND FRAMES FROM TITUS® WASTEWATER SOLUTIONS, INC FOR THE AMOUNT OF \$132,087.58**

**SUBJECT:**

---

<input checked="" type="checkbox"/>	<b>For Action</b>	<input checked="" type="checkbox"/>	<b>Fiscal Impact : \$132,087.58</b>
<input type="checkbox"/>	<b>Information Only</b>	<input checked="" type="checkbox"/>	<b>Account Code: 01-02-545-9015-9999</b>
		<input checked="" type="checkbox"/>	<b>Funds Budgeted/ Approved: Yes</b>

---

**STAFF RECOMMENDATION**

It is recommended that the Board of Commissioners authorize the General Manager to approve the purchase of composite water-resistant manhole covers on a sole source basis 75 water-resistant manhole covers, frames and related tools from TITUS® WASTEWATER SOLUTIONS, INC for the amount of \$132,087.58.

**PREVIOUS ACTION(S)**

None

**BACKGROUND INFORMATION**

On May 9<sup>th</sup>, 2022, a 254,370-gallon spill occurred at the Hesperia Interceptor manholes 12 13, 14, and 15, subsequently the Lahontan Regional Water Quality Control Board issued VVWRA a Notice of Violation on September 8, 2022 (Exhibit 1). Vandalism was the root cause of the spill and in our continued effort to prevent any vandalism within the VVWRA sewer network staff identified 75 priority manholes located immediately adjacent to the Mojave River that if vandalized could lead to a higher risk of a severe category I spill into the river.

The existing manhole lids and frames are cast iron and will be replaced and secured using the new composite water-resistant manhole covers and frames from TITUS® WASTEWATER SOLUTIONS, INC

TITUS® Wastewater Solutions, Inc. (TITUS®) provides Proprietary TITUS® TwistLIFT® Security locking system exclusively for the use with unique East Jordan Composite Access Covers and frames. In the past VVWRA has purchased on a sole s source basis (Exhibit 2) and

replaced more than a hundred covers and frames using this system, it has proven safe, secure and reliable.

It is recommended that the Board of Commissioners authorize the General Manager to approve the purchase of composite water-resistant manhole covers on a sole source basis 75 water-resistant manhole covers, frames and related tools from TITUS® WASTEWATER SOLUTIONS, INC for the amount of \$132,087.58. (Exhibit 3)

### **ATTACHMENTS**

**Exhibit 1:** Waterboard Notice of Violation dated September 8, 2022

**Exhibit 2:** Sole Source letter from TITUS® WASTEWATER SOLUTIONS, INC

**Exhibit 3:** Estimate #14326 from TITUS® WASTEWATER SOLUTIONS, INC



# EXHIBIT 1



## Lahontan Regional Water Quality Control Board

September 8, 2022

**CERTIFIED MAIL NO. 7021 1970 0001 8926 7583**

Darron Poulsen  
 Victor Valley Wastewater Collection System  
 20111 Shay Road  
 Victorville, CA 92394  
[dpoulsen@vwwra.com](mailto:dpoulsen@vwwra.com)

### **Notice of Violation of State Water Resources Control Board Order No. 2006-0003-DWQ, Section C.1 & Section C.2, Victor Valley Wastewater Collection System, Cal-OES #22-2649, WDID No. SSO11169**

The purpose of this Notice is to inform the Victor Valley Wastewater Collection System that the Lahontan Regional Water Quality Control Board (Water Board) is alleging a violation of Board Order No. 2006-003-DWQ, Sections C.1 and C.2, that on May 9, 2022, a 254,370-gallon spill occurred at the Hesperia Inceptor manholes 12, 13, 14, and 15. Water Board staff discovered the alleged violation, as discussed below, when we were notified by Victor Valley Wastewater Collection System staff. Water Board staff also conducted a site visit on May 10, 2022, to observe clean-up efforts.

#### **VIOLATIONS**

**YOU ARE HEREBY NOTIFIED** that the Discharger violated Board Order 2006-0003-DWQ and the Water Quality Control Plan for the Lahontan Region (Basin Plan) for the following violation:

- Board Order No. 2006-0003-DWQ, Section C.1: “Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.”
- Board Order No. 2006-0003-DWQ, Section C.2: “Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.”

A blockage in the sewer line caused a back-up and approximately 254,370 gallons of sewage water overflowed at a high rate into an unnamed wash that is a tributary to the Mojave River. It was determined by Victor Valley Wastewater Collection System that the spill occurred due to vandalism after objects such as a tire, tent, and rocks were removed from the manholes. This is an indication that the manholes are not secured enough to prevent vandalism.

PETER C. PUMPHREY, CHAIR | MICHAEL R. PLAZIAK, PG, EXECUTIVE OFFICER

**REQUIRED RESPONSE/ACTIONS**

Victor Valley Wastewater Collection System is required to take the following actions in response to the alleged violations.

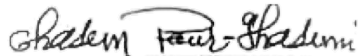
Please submit a revised Sewer System Management Plan and time schedule by **October 8, 2022**, that addresses measures you will take to secure manholes and prevent vandalism.

Alternatively, if Victor Valley Wastewater Collection System believes that it has received this Notice in error, or that any of the information provided in this Notice is incorrect or incomplete, submit a written response explaining Victor Valley Wastewater Collection System's position(s) as soon as possible.

**ADDITIONAL ENFORCEMENT**

The Water Board takes the above-referenced violation very seriously. Victor Valley Wastewater Collection System's response to this Notice will be taken into consideration when contemplating, if and what, additional enforcement is necessary.

Please contact John Yu, Water Resource Control Engineer, at (760) 241-7409 ([John.Yu@waterboards.ca.gov](mailto:John.Yu@waterboards.ca.gov)) or me at (760) 241-2434 ([Ghasem.Pour-Ghasemi@waterboards.ca.gov](mailto:Ghasem.Pour-Ghasemi@waterboards.ca.gov)) to answer any questions Victor Valley Wastewater Collection System may have regarding this Notice. Electronic document submittal is required. Please send Victor Valley Wastewater Collection System's response to [Lahontan@waterboards.ca.gov](mailto:Lahontan@waterboards.ca.gov), and include "Victor Valley Wastewater Collection System" and the WDID No. in the subject line.



Ghasem Pour-Ghasemi,  
Senior Water Resource Control Engineer  
Lahontan Regional Water Quality Control Board

cc: Latif Laari, Business Applications Manager/Victor Valley Wastewater Reclamation Authority ([Llaari@vwwra.com](mailto:Llaari@vwwra.com))  
Ben Letton, Assistant Executive Officer/Lahontan Regional Water Quality Control Board ([Ben.Letton@waterboards.ca.gov](mailto:Ben.Letton@waterboards.ca.gov))  
Elizabeth Beryt, Office of Chief Counsel/State Water Resources Control Board ([Elizabeth.Beryt@waterboards.ca.gov](mailto:Elizabeth.Beryt@waterboards.ca.gov))  
Robert Tucker, Enforcement Coordinator/Lahontan Regional Water Quality Control Board ([Robert.Tucker@waterboards.ca.gov](mailto:Robert.Tucker@waterboards.ca.gov))

# EXHIBIT 2



Latif Laari  
 Victor Valley Wastewater Reclamation Authority  
 20111 Shay Road  
 Victorville, CA 92394

7/27/23

TITUS® Wastewater Solutions, Inc. (TITUS®) provides our Proprietary TITUS® TwistLIFT® Security locking system exclusively for the use with EJ Composite Access Covers and frames currently.

The TITUS® TwistLIFT® Security Locking System offers a high degree of security, and reliability however it is designed to be only a deterrent to theft, and vandalism, and provide for a safe and efficient method for removing light weight composite covers. TITUS®, and our affiliate EJ Inc. make no implied or direct warranties as to being vandal Proof.

The TITUS® TwistLIFT® Security lock system must only be installed by trained qualified personnel approved by TITUS®. This training has been provided to the staff at EJ Inc at their factory in Muskegon, Michigan. The TITUS® TwistLIFT® Security lock system is produced only by TITUS®.

The bolt shall be machined from titanium stainless steel.

TITUS® must approve all machine work done to accommodate the TITUS® TwistLIFT® composite locking system. Proper hole placement, and dimensions, as well as the stop design and location are critical to the proper operation of the lock system.

For security reasons, TITUS® Wastewater Solutions, Inc., limits the sale and availability of the lock operation key to only qualified agency personnel

Lewis Titus

Vice President of Operations

TITUS® Wastewater Solutions, Inc.



Titus Wastewater Solutions Inc | 5301 CY Avenue | Casper WY |  
 82604 (877) 582-9899 | [www.tituswws.com](http://www.tituswws.com)

# EXHIBIT 3





TITUS® Wastewater Solutions, Inc.  
 5301 Cy Ave.  
 Casper WY 82604 (New Remit To Address)  
 Phone: 877-582-9899  
 Website: www.tituswws.com

Date	Estimate #
7/19/2023	14326

Name / Address
Victor Valley Wastewater Reclamation Auth Accounts Payable 20111 Shay Road Victorville, CA 92394

Terms	Rep	FOB	Project
2% 10 Days or Net ...	LT	MI	

Qty	Item	Description	Rate	Total
30	TL-NPR22-002285-38747	EJ 26" Black Composite Water Resistant Manhole Cover and Frame with Gasket "VVWRA" Center Insert and SANITARY SEWER Top insert Heavy Duty Traffic Rated U.S. Load Specification Exceeds• AASHTO M306-10 H-20 & H-25 traffic requirements of 50,000 lbs., with 89,925 lb. ultimate load bearing EU and International Load Specification Exceeds: EN 124 D400- 89,925 Lbs. (2) TITUS® TwistLIFT® Security Lock Systems bolt shall be machined From Titanium Stainless Steel 24" Clear Opening Made In USA 68 lbs. Approximately Please Allow 8 to 12 Week Lead Time Custom Order Non-Returnable-Non Refundable Deposit may be required	1,036.90	31,107.00T
				0.00

<b>Subtotal</b>
<b>Sales Tax (8.75%)</b>
<b>Total</b>

TITUS® Wastewater Solutions, Inc.  
 5301 Cy Ave.  
 Casper WY 82604 (New Remit To Address)  
 Phone: 877-582-9899  
 Website: www.tituswws.com

Date	Estimate #
7/19/2023	14326

Name / Address
Victor Valley Wastewater Reclamation Auth Accounts Payable 20111 Shay Road Victorville, CA 92394

Terms	Rep	FOB	Project
2% 10 Days or Net ...	LT	MI	

Qty	Item	Description	Rate	Total
25	TL-COM320VVWRA	EJ 32" Black Composite Water-Resistant Manhole Cover and Frame with Gasket " VVWRA" Center Insert SANITARY SEWER Top Insert Heavy Duty Traffic Rated U.S. Load Specification Exceeds• AASHTO M306-10 H-20 & H-25 traffic requirements of 50,000 lbs. (2) TITUS® TwistLIFT® Security Lock Systems bolt shall be machined From Titanium Stainless Steel 30" Clear Opening With Pick Bar Slot Made In US 130 lbs. Approximately Please Allow 6 to 12 Week Lead Time	1,542.90	38,572.50T
20	TL-COM380152A01	EJ 38" Black Composite Water Resistant Manhole Cover and Frame with Gasket " VVWRA" Center Insert SANITARY SEWER Top Insert Heavy Duty Traffic Rated U.S. Load Specification Exceeds• AASHTO M306-10 H-20 & H-25 traffic requirements of 50,000 lbs. (2) TITUS® TwistLIFT® Security Lock Systems bolt shall be machined From Titanium Stainless Steel 36" Clear Opening Made In US 130 lbs. Approximately Please Allow 6 to 12 Week Lead Time	2,440.50	48,810.00T

<b>Subtotal</b>
<b>Sales Tax (8.75%)</b>
<b>Total</b>



TITUS® Wastewater Solutions, Inc.  
 5301 Cy Ave.  
 Casper WY 82604 (New Remit To Address)  
 Phone: 877-582-9899  
 Website: www.tituswvs.com

Date	Estimate #
7/19/2023	14326

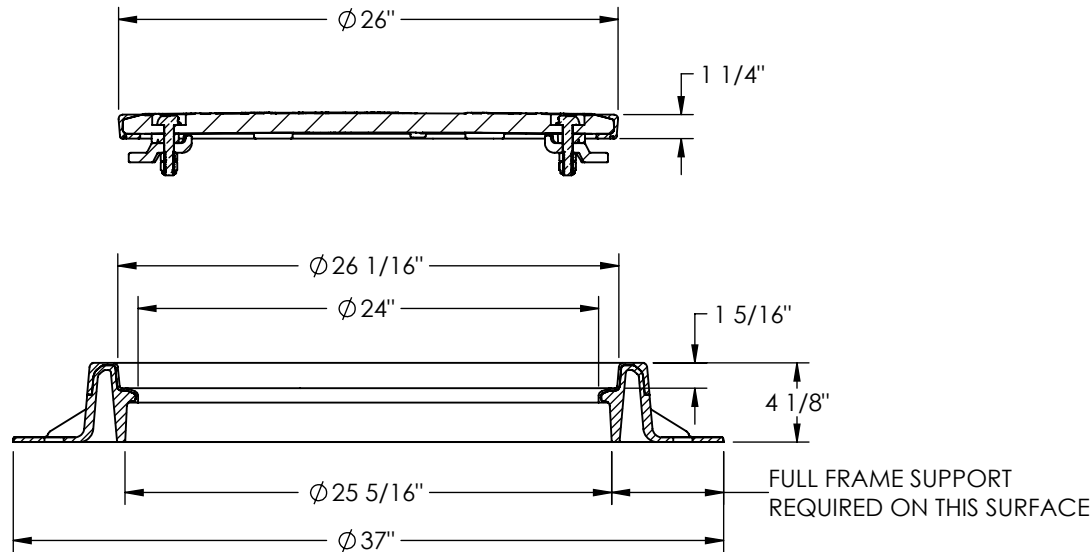
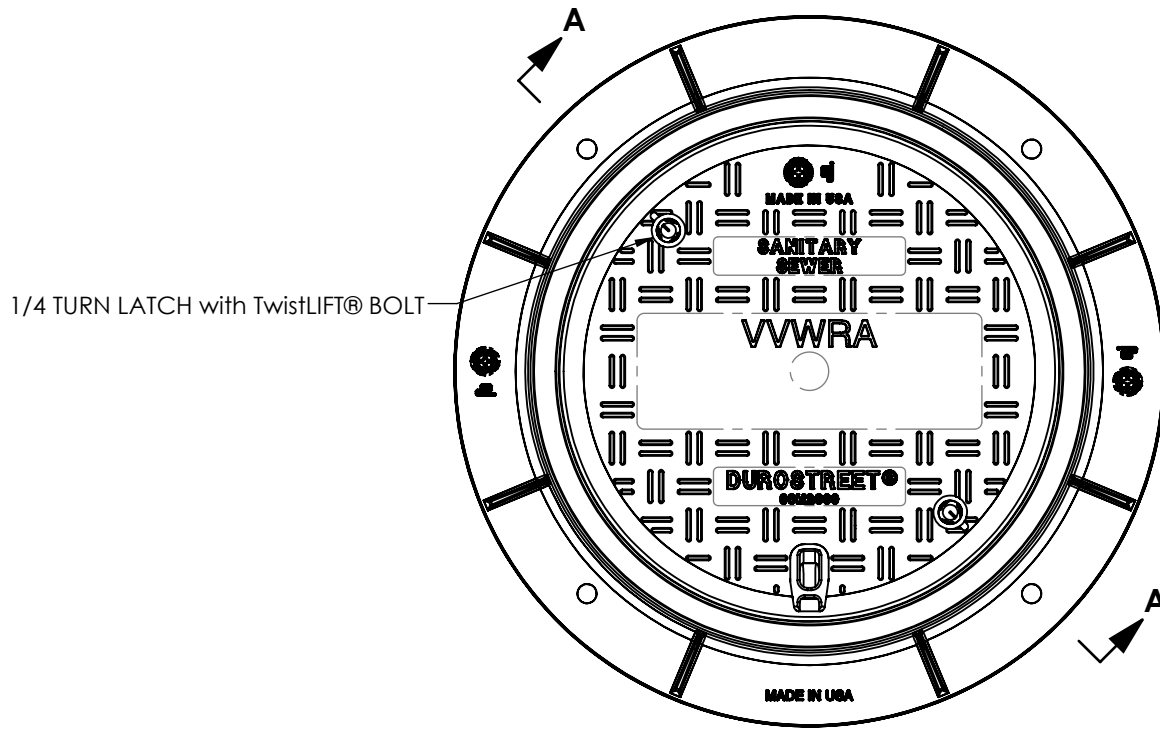
Name / Address
Victor Valley Wastewater Reclamation Auth Accounts Payable 20111 Shay Road Victorville, CA 92394

		Terms	Rep	FOB	Project	
		2% 10 Days or Net ...	LT	MI		
Qty	Item	Description			Rate	Total
10	COT-30	Composite Cover TwistLIFT® Opening Tool With Lock Socket 30" Long Powdered Coated Black			70.00	700.00T
1	Freight Expense	To Be Determined for Standard Rate Business to Business **Additional Charges will Accrue** For Residential or Construction Site Delivery, Limited Access, Lift Gate service or Call Prior to Delivery is Required.  **Actual Freight To Be Determined At Time of Shipment.			2,469.00	2,469.00
	Discount	Discount				

Estimate Valid 30 Days  
 PRICES SUBJECT TO CHANGE WITHOUT NOTICE  
 1. 50% Deposit due upon onset of Purchase Order remaining due prior to delivery  
 2. Custom Orders Are Non-Returnable Non-Refundable  
 3. Customer Responsible for all Installation  
 4. Lead times are approximate not guarantees for shipment dates  
 5. Credit Cards accepted for a 3.50% processing fee  
 6. Freight is additional  
 Buyer shall be solely responsible for determining the materials and quantities required for a project

<b>Subtotal</b>	\$121,658.50
<b>Sales Tax (8.75%)</b>	\$10,429.08
<b>Total</b>	\$132,087.58

# 2600 DUROSTREET® Composite Assembly



SECTION A-A 6-12

## Preliminary

### Product Number

NPR22-002285-38747

### Design Features

- Load Rating  
H25 (50,000 lb)
- Estimated Weight  
70 lb
- Country of Origin: USA

### Performance Specification

- Proofload per AASHTO M306-10
- Max. Operating Temp: 160 °F

### Lock Options

TwistLIFT®

\*TwistLIFT® is a Registered Trademark of Titus Industrial Group

### Major Components

COM260210  
NPR22-002285-38746

### Drawing Revision

05/23/2022 Designer: AJD  
Revised By:

### Disclaimer

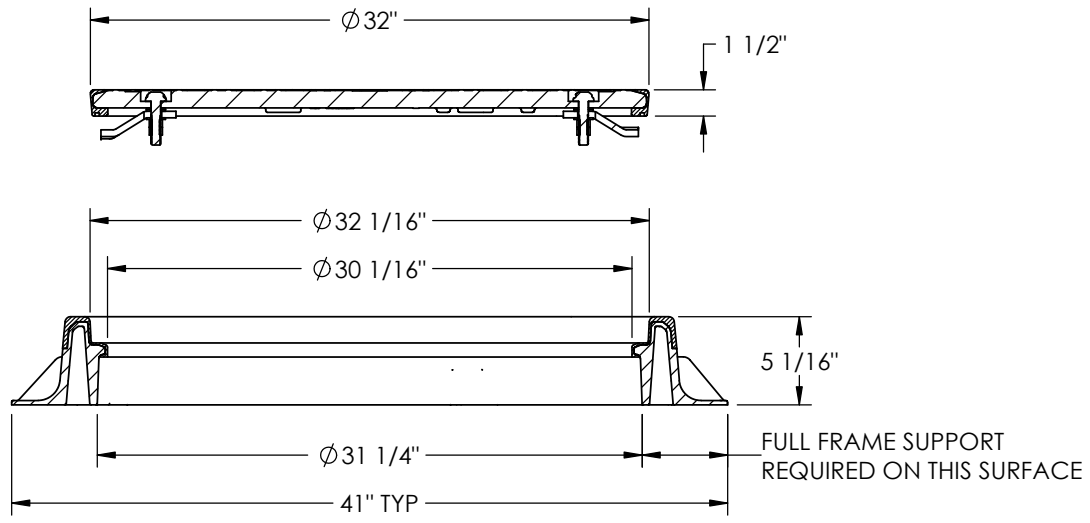
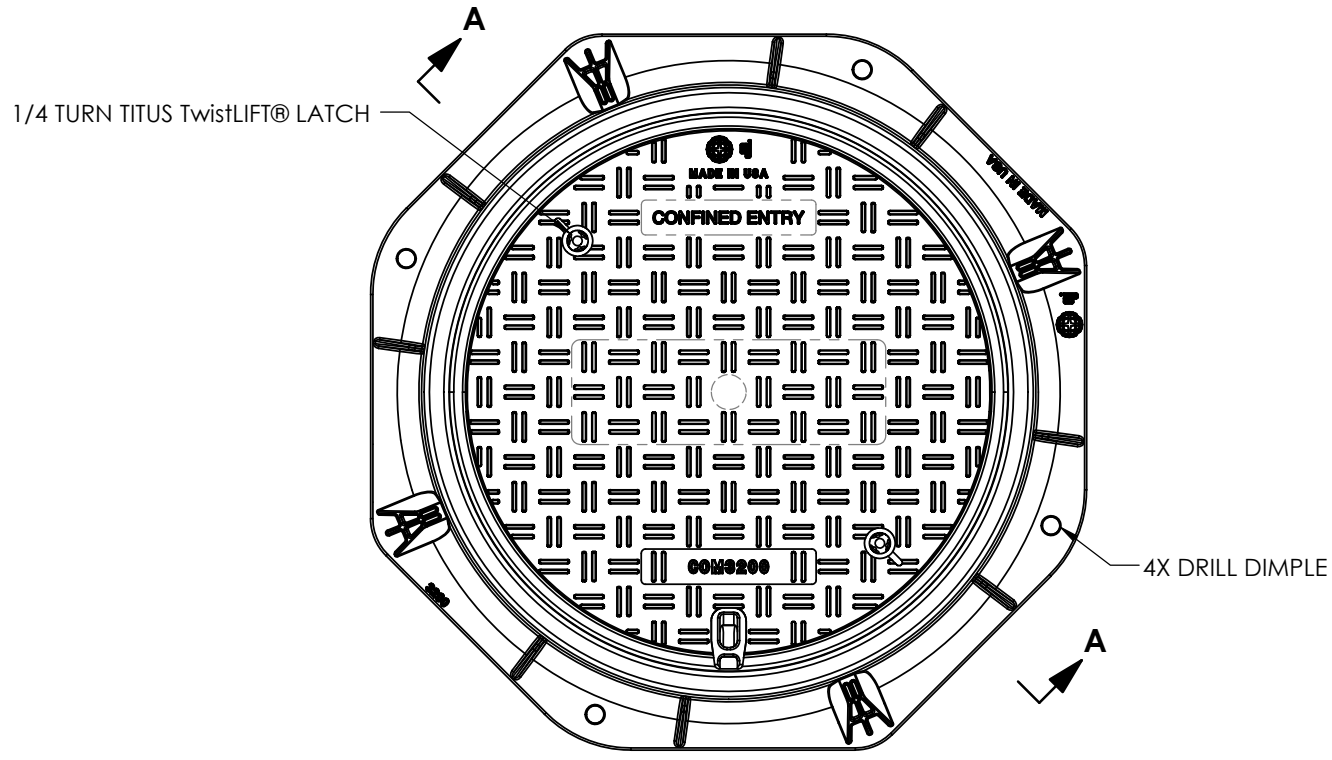
Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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### Contact

800 626 4653  
ejco.com

# 3200 Composite Assembly



SECTION A-A

6-13

**Product Number**

COM320088A01

**Design Features**

- Load Rating  
H25 (50,000 lb)
- Estimated Weight  
109 lb
- Country of Origin: USA

**Performance Specification**

- Proofload per AASHTO M306-10
- Max. Operating Temp: 160 °F

**Major Components**

- COM320010
- COM320088

\*TwistLIFT® is a Registered Trademark of Titus Industrial Group

**Drawing Revision**

- 02/20/2019 Designer: EGS-1
- 02/21/2019 Revised By: EGS-1

**Disclaimer**

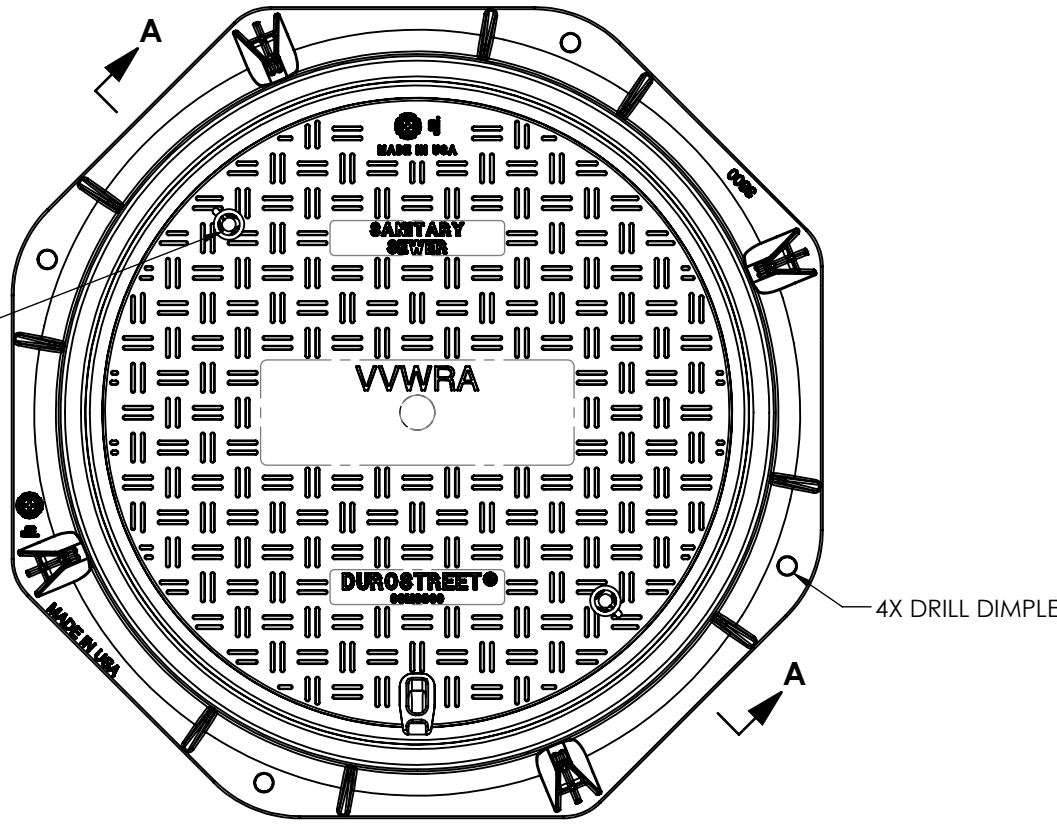
Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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**Contact**

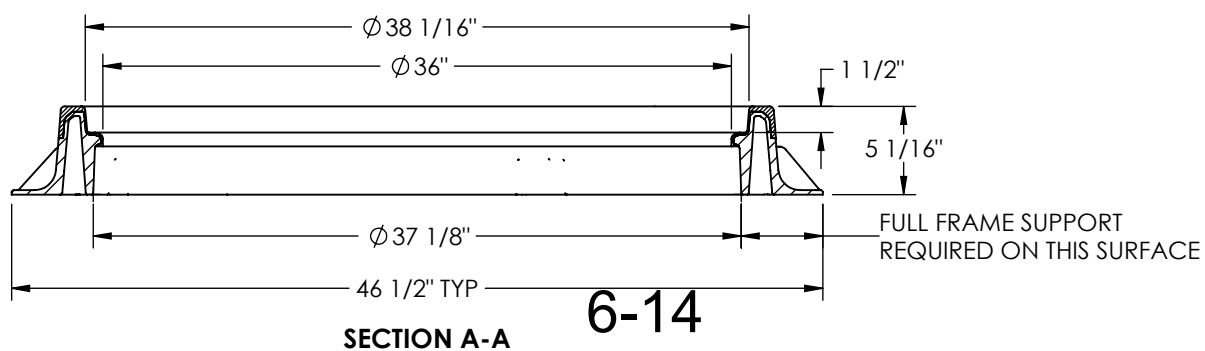
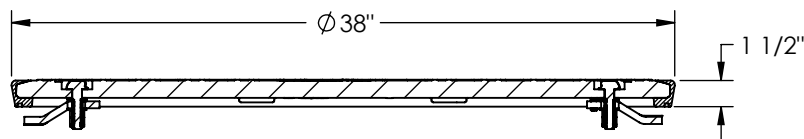
800 626 4653  
ejco.com

# 3800 DUROSTREET® Composite Assembly



1/4 TURN TITUS TwistLIFT® LATCH

4X DRILL DIMPLE



SECTION A-A

6-14

**Product Number**

COM380152A01

**Design Features**

- Load Rating  
H25 (50,000 lb)
- Estimated Weight  
132 lb
- Country of Origin: USA

**Performance Specification**

- Proofload per AASHTO M306-10
- Max. Operating Temp: 160 °F

**Lock Option**

TwistLIFT®

\*TwistLIFT® is a Registered Trademark of Titus Industrial Group

**Major Components**

- COM380129
- COM380152

**Drawing Revision**

10/05/2015 Designer: MAH  
03/22/2021 Revised By: AJD

**Disclaimer**

Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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**Contact**

800 626 4653  
ejco.com



## **TITUS® TwistLIFT® Lock Composite Cover Lock Specification**

### **1.0 Required Function**

The composite cover locking mechanism shall be designed to secure a manhole cover in order to protect against unauthorized access to the manhole, restrict movement of the cover therefore reducing wear, noise reduction and provide an attachment for a lifting tool to remove the cover.

### **2.0 Manufacturer**

The locking mechanism shall be a TITUS® TwistLIFT® manufactured by TITUS® Wastewater Solutions, Inc. 5301 CY Ave. Casper, WY 82604 (877-582-9899 or 1-541-948-4458).

### **3.0 Overall Design Criteria**

TITUS® TwistLIFT® composite access cover lock is designed as a security bolt requiring a special tool to operate the quarter turn bolt, and lift the cover from the frame. It functions with the standard cam lock quarter turn paddle.

### **4.0 Specific Design Criteria**

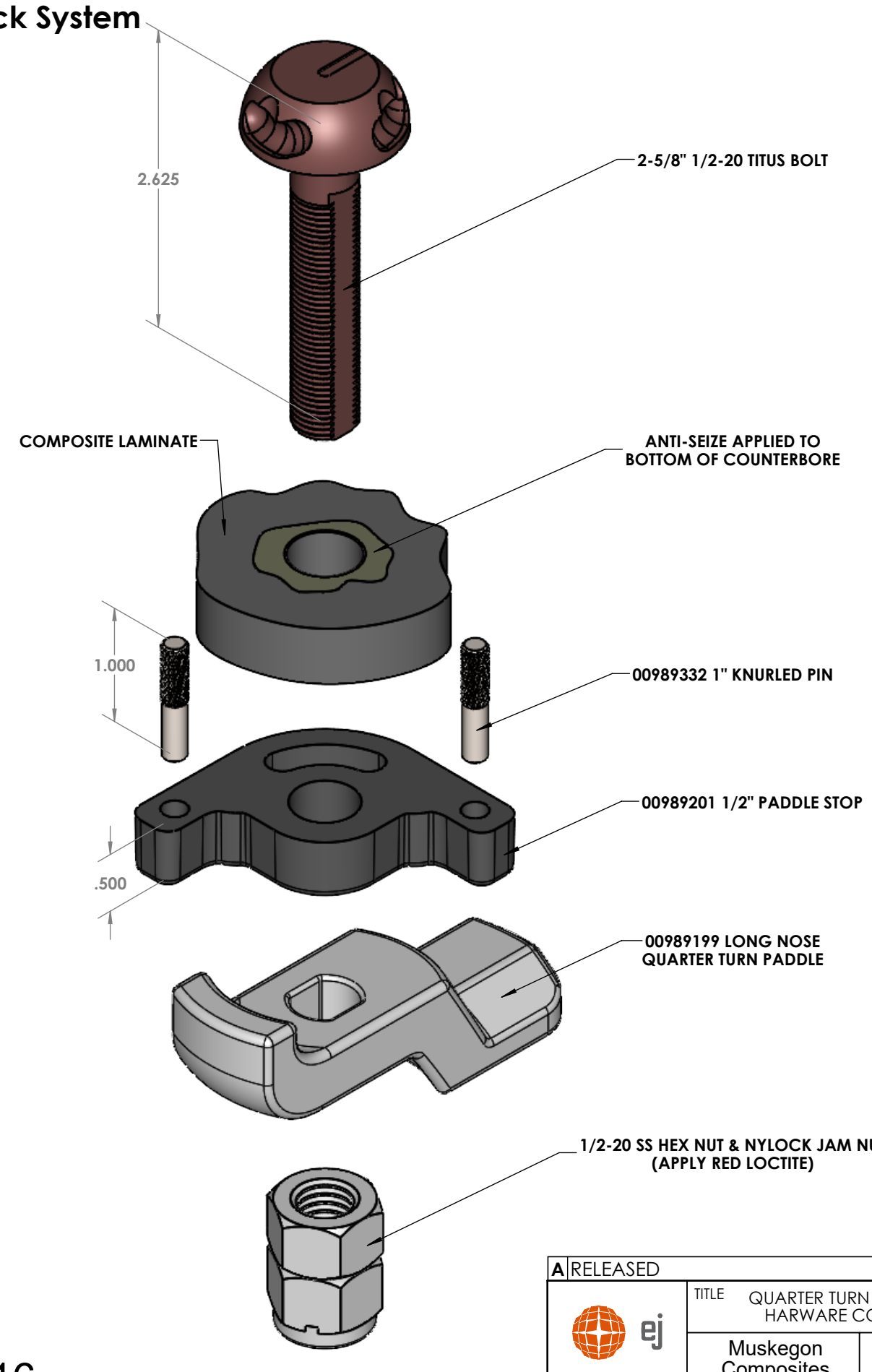
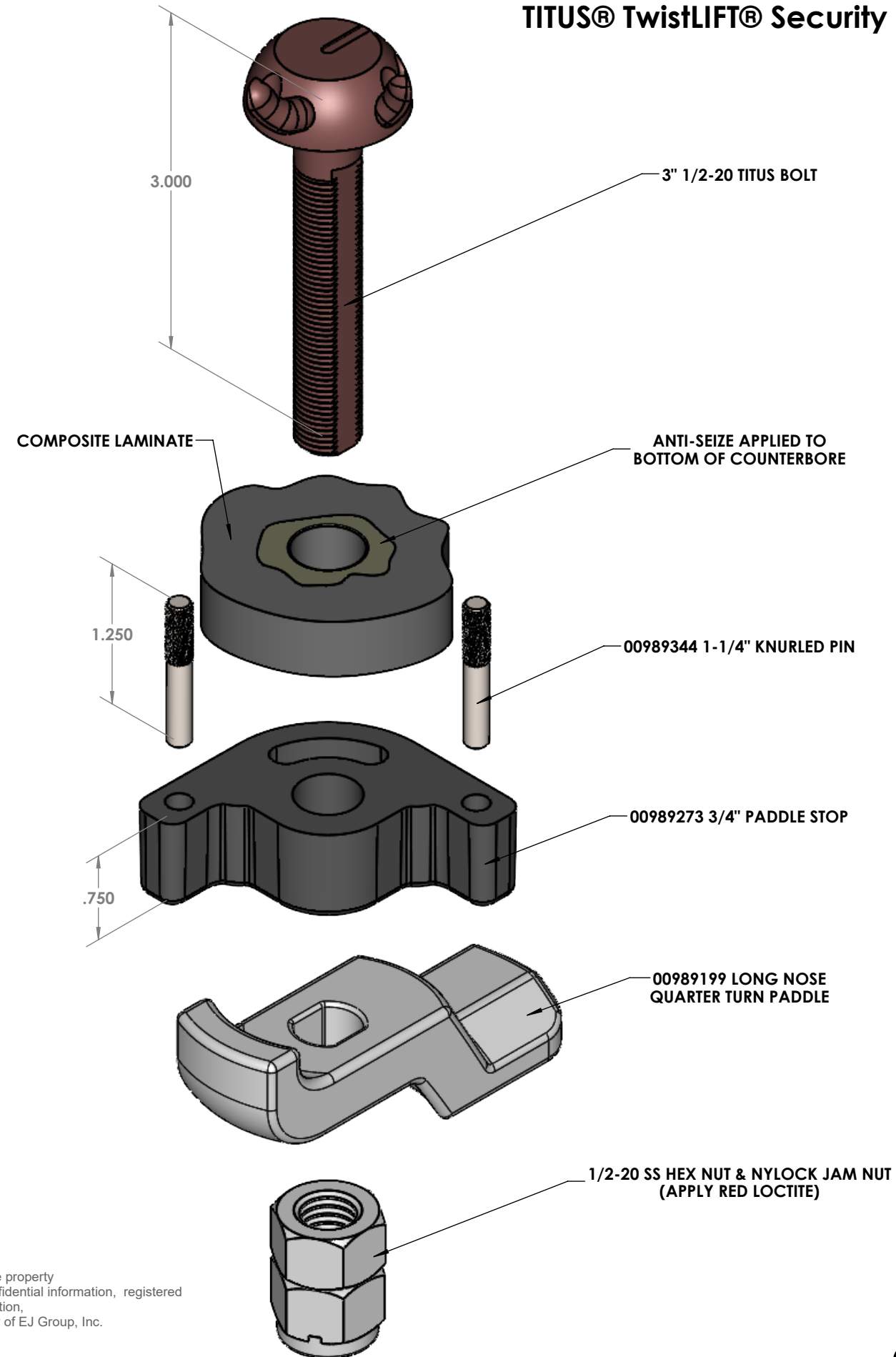
- a. The bolt shall be machined from 17-4PH H900 hardened stainless steel.
- b. The bolt features a domed head with 3 equally space 'J' slots running horizontally around the bolt head. A flat is machined on the top to extend the life of the debris plugs.
- c. Standard bolt sizes are 14 MM coarse thread with a flat machined on two sides to engage paddle.
- d. The paddle is an investment cast paddle 304 stainless steel and also available standard cam lock design.
- e. The bolt and paddle will be assembled using two Stainless Steel 14 MM nut's, the bottom nut is a standard nut that will be torqued to 35 ft. lbs. to give the desired tension on the bolt. A second Nylock™ lock nut is used as a jam nut, and torqued to 90 ft. lbs. Stainless Steel washers are used to provide consistent turning resistance.
- f. A 3/16 Stainless Steel set screw, set in a threaded hole in the cover provides for a stop at ¼ turn of operation.
- g. The bolt will be operated by means of a specially made opening key consisting of a special socket attached to a 'T' handle used to both turn the bolt, and lift out the cover.
- h. Replacement opening keys are only available through TITUS® Wastewater Solutions, Inc.
- i. The bolt head is protected by a weather resistant plastic debris cap. The cap is included with each lock.

*Specifications are subject to change without notice. Please contact TITUS® Wastewater Solutions, Inc. regarding any questions or requirements at 1-877-582-9899 or 1-541-948-4458.*


### COM3200 & COM3800 VERSION

### COM2400 & COM2600 VERSION

## TITUS® TwistLIFT® Security Lock System



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A RELEASED		AJD	01/04/2022
	TITLE		SCALE
	QUARTER TURN LONG NOSE TITUS HARWARE CONFIGURATIONS		1:1
Muskegon Composites		DRAWING NUMBER	

# TITUS® TwistLIFT® Security Lock Opening Tool



**Product Number: COT30**

**Design Features:**

- 316L Stainless Steel Machined Socket
- Complete Welded Construction
- Powder coated Finish

**Disclaimer:** Weights (4 lbs) dimensions (Inches/mm), are provided for your guidance.

We reserve the right to modify specifications without prior notice.

**Confidential:** This drawing is the property of TITUS® Wastewater Solutions, Inc.

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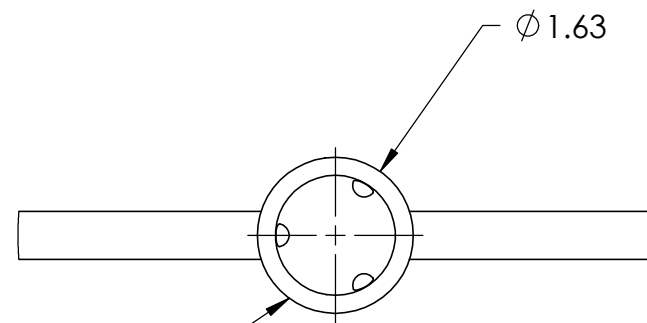
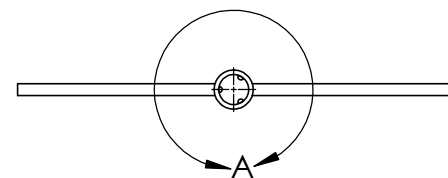
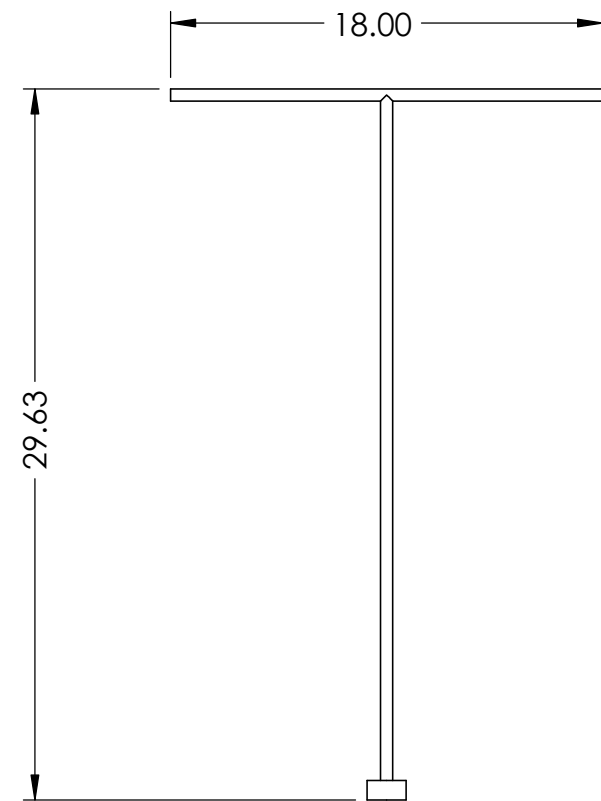
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**Contact:**

**Office: 877-582-9899**

**Info@tituswws.com**

**www.tituswws.com**



**This Socket Fits**  
**Titus® TwistLIFT® Security Bolt**  
**Titus® TwistLIFT® Security Lock Handle**



<b>TOLERANCES</b> <small>UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES EXCEPT WHERE NOTED TOLERANCES ARE:</small> DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/16" ANGULAR: MACH ± 1 BEND ± 1 ONE PLACE DECIMAL ± .10 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005		5301 CY Ave. Casper, WY 82604 (541) 389-1975	
APPROVAL: _____ DATE: _____ DESIGNER: ELC	TITLE: _____ SIZE: B DWG.: Titus® TwistLIFT® Handle SCALE: 1:8 DO NOT SCALE SHEET: 1 OF 1	APPROVED: _____ DATE: _____	REV.: _____
<small>THIRD ANGLE PROJECTION</small> 			
<small>PROPRIETARY AND CONFIDENTIAL. THIS DOCUMENT CONTAINS CONFIDENTIAL OR PROPRIETARY INFORMATION WHICH IS THE PROPERTY OF TITUS. USE OF THIS DOCUMENT IS LIMITED TO AUTHORIZED CUSTOMERS, VENDORS, OR OTHER AGENTS OF OR FABRICATION LTD. UNAUTHORIZED USE OF THIS DOCUMENT SHALL BE PROSECUTED TO THE FULLEST EXTENT OF THE LAW</small>			



## TITUS® TwistLIFT® Security Lock Operation TwistLIFT® Locks Feature 1/4 Turn Operation

### TO OPEN

1. Remove plastic debris caps with a knife or screw driver.
2. To unlock and remove cover place tool on bolt head and turn till the tool drops down on the bolt head.
3. Rotate COUNTER CLOCKWISE to lock tool to bolt head.
4. With a moderate amount of torque turn the bolt 1/4 turn till stop is encountered. **STOP! Do not force, or damage may be done to bolt.**
5. Maintain a small amount of torque to the handle to keep it engaged in the bolt and lift up.

**CAUTION! NEVER PULL SIDWAYS ON TOOL  
TWIST AND LIFT TO REMOVE  
NEVER FORCE TOOL WHEN LOCK IS UP AGAINST THE STOP**

6. Two (2) bolt 2400 series and 2600 series only require the operation of one (1) lock. Four (4) bolt units require the operation of at least three (3) bolts.
7. Two (2) bolt 3200 series and 3800 series require the operation of two (2) bolts. This series/size should be lifted by two people, one on each side. Lift and walk forward.
8. Four (4) bolt units will require the operation of at least three (3) bolts.
9. Any series of EJ composites can be opened with the use of a 'J' hook after operating all bolts to the open position.

### PLEASE NOTE

**TITUS® TwistLIFT® Security bolts are now available in a new HIGH STRENGTH version. If you have damaged bolts, contact your dealer for replacements. The new bolt features double the tensile strength of the original 316 Stainless bolts. To determine what type bolt you have, use a magnet. The older bolts are non-magnetic, new bolts are magnetic, and may also (but not always) be a bronze color.**

Headquarters | 5301 CY Ave. | Casper WY | 82604  
(877) 582-9899 | [info@tituswws.com](mailto:info@tituswws.com) | [www.tituswws.com](http://www.tituswws.com)





## TITUS® TwistLIFT® Security Lock Operation TwistLIFT® Locks Feature ¼ Turn Operation

### COVER REPLACEMENT

1. Place tool on bolt, rotate slightly to lock on to bolt head. (Use two tools simultaneously on 3200 and 3600 series or use 'J' hook)
2. Lift cover and place over frame. Keeping cover at a slight angle, insert cover into frame, allowing the locked paddle to slide under frame. Set down cover.
3. Make sure cover is flush with the frame. If it is not flush, lift and reinsert making sure the locked paddle slides UNDER the frame.
4. Rotate the tool **Clockwise ¼ turn** till stop is engaged. **STOP! Do not force, or damage may result to the lock system.**
5. Wiggle the tool while lifting and tool should unlock from the bolt head.
6. On four (4) bolt models, place tool on remaining bolts and rotate clockwise ¼ turn to the locked position.
7. Replace plastic caps and step on them to seat them into place. Caps should be flush, if not use a mallet to seat them flush.

### ADJUSTING LOCKS

Locks may loosen after some use. The lock should require a moderate amount of force to rotate. If adjustment is needed due to a loose lock use the following method.

Tools required: 7/8" or 22 mm open end wrench. 7/8" or 22 mm socket and torque wrench. ½ in drive is best.

1. Remove cover and place upside down on a bench or tailgate.
2. Hold the bottom adjustment nut with the open-end wrench, do not let it turn.
3. Using the socket turn the top JAM nut counterclockwise about ½ turn.
4. Remove the open-end wrench.
5. Align the flats of the top JAM nut so the socket can slide down over the bottom adjusting nut. Apply Loctite 263 to the JAM nut
6. Torque to 30 ft. lbs. of torque.
7. Hold bottom adjustment nut with open end wrench, and torque JAM nut to 90 to 100 ft. lbs. of torque. Do not allow bottom adjustment nut to turn while torquing top nut.
8. **If you cannot get the bolt to tighten it may be damaged. Contact your dealer.**
9. **New hardened high strength bolts are now available for upgrading your locks. Contact your dealer.**

Headquarters | 5301 CY Ave. | Casper WY | 82604  
(877) 582-9899 | info@tituswws.com | [www.tituswws.com](http://www.tituswws.com)





# Composite Frames and Covers Suggested Specification

## General

This specification is applicable for composite frames and covers. All products shall be manufactured in the United States of America. All manufacturers shall be approved suppliers and be able to demonstrate that there is an acceptable quality control program at the producing facility prior to supplying products.

## Material

Composite products shall be manufactured from fiber reinforced polymer (FRP). It shall consist of a FRP matrix consisting of between 45% to 70% fiber reinforcement by weight. Fiber reinforcement shall consist of fiberglass, carbon, aramid, basalt and/or natural fibers. The polymer matrix shall be thermoset consisting of a polyester, vinylester, epoxy, polyurethane, and/or hybrid chemical composition. The resin matrix must be thermoset.

## Manufacture

Composite frames and covers shall be of uniform quality, with a dimensional tolerance of 1/16 of an inch. The finished product will feature a strength to weight ratio of 750:1. There shall be no possibility of corrosion welding between the cover and the frame, preventing damage to the infrastructure when opening. Gasket system shall be integrated to reduce traffic shock and abatement of noise and malodors. Static Coefficient of Friction shall be 0.6 or greater, as described in ASTM C1028 Standard, in both wet and dry applications.

## Fatigue Performance

Composite products shall be tested against a fatigue performance consisting of 2 million cycles at 16,000 lbs. There shall be no visible damage, and must meet allowable permanent set for the applicable class. This test must be performed in a manner approximating the field installation as accurately as possible. After the product has gone through the cycle test, it must then pass the proof load requirements of AASHTO M 306 or H-20, depending on product application.

## Proof Load Testing

Traffic service castings shall have a first article proof load test conducted and the results of that proof load shall be made available to the purchaser upon request. The proof load shall be conducted in accordance with the method and procedure that is outlined in AASHTO M 306. The product shall be tested on a suitable and calibrated load testing machine and the composite frame and cover shall hold a 50,000 pound proof load for one minute without experiencing any cracks or detrimental permanent deformation.

## Inspection

Inspections shall be in accordance with AASHTO M 306. Results of these tests shall be furnished to the purchaser upon request. The production date and product numbers, as cast on the product, shall be the basis of traceability and recording of the tests.

## Marking

Each product shall be identifiable and show, at a minimum, the following: name of the manufacturer, country of manufacture (such as "Made in USA"), material designation, and individual part number. Product shall include all lettering as shown on the specification drawings.

## Sampling

Random checks of the products may be conducted by the purchaser. These random checks shall be conducted in accordance with specification drawings.





**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY  
Board of Commissioners Staff Report**

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**For Action**                       **Fiscal Impact:            \$ 474,092.27**  
 **Information Only**             **Account Code: 09-02-535-9000-R155**

**TO:**    VVWRA Board of Commissioners  
**FROM:**                                        Darron Poulsen, General Manager  
**SUBMITTED BY:**                        Brad Adams, Plant Superintendent  
**DATE:**                                        8/17/2023  
**SUBJECT:**                                 Recommendation to award a contract to Christensen Brothers Engineering to pave and repair the Regional Plant roads.  
    **Funds Budgeted/ Approved**

---

**STAFF RECOMMENDATION**

It is recommended that the Board of Commissioners approve the General Manager to award a contract, pending legal review, to repair the Regional Plant paved roads to Christensen Brothers Engineering for \$451,516.45 plus a 5% contingency, to cover unforeseen costs, totaling \$474,092.27.

**PREVIOUS ACTION(S)**

None

**BACKGROUND INFORMATION**

Over the last two years the VVWRA operations have experienced a number of improvements at the Regional Treatment plant. New piping was installed as part of the RNG project and most recently with the ammonia side stream treatment project. These new pipelines were installed within the existing roads at the Regional Plant. Some of these existing roads have not been repaired or replaced since the plant was constructed over 40 years ago. Due to the age of the existing asphalt and the numerous trench cuts that were made to install the new piping, the roads are now in significant disrepair and are becoming unsafe. For these reasons Staff created a scope of work to make only the necessary repairs to make the roads operable again.

On June 20, 2023, VVWRA contacted numerous paving contractors and solicited bids through a request for proposal posted on our bidding software, Planet Bids. The request for bids provided a specific scope of work for the repair of paved roads inside of the Regional Facility at 20111 Shay Rd. Victorville, CA 92394. The scope of work for the project required the contractor to furnish all labor, equipment, materials, and supervision to perform the following tasks: (Exhibit 1)

- Supply all required material, parts, and pieces per design.
- 2” grind and overlay existing road that is in decent shape. (32,612 SF)
- Remove and replace 4” existing road that is in poor shape. (38,678 SF)
- Grade and pave 4” HMA and 6” CBM (3,433 SF)

- Crack fill and seal coat (28,861 SF)
- Pour and place A Curb (185 LF)

All received bids have been reviewed for accuracy and compliance with the RFP and Addendums. All bid requirements were evaluated and found to be complete.

Bids received were as follows:

- Christensen Brothers General Engineering - \$451,514.45
- Sully-Miller Contracting Company - \$611,700.45

Christensen Brothers is a local contractor with an excellent reputation and the ability to perform the work of this contract. The final bid submitted by Christensen Brothers is attached (Exhibit 1).

It is staff's recommendation that the Board of Commissioners approve the General Manager to award a contract, pending legal review, to repair the Regional Plant paved roads to Christensen Brothers Engineering for \$451,516.45 plus a 5% contingency, to cover unforeseen costs, totaling \$474,092.27.

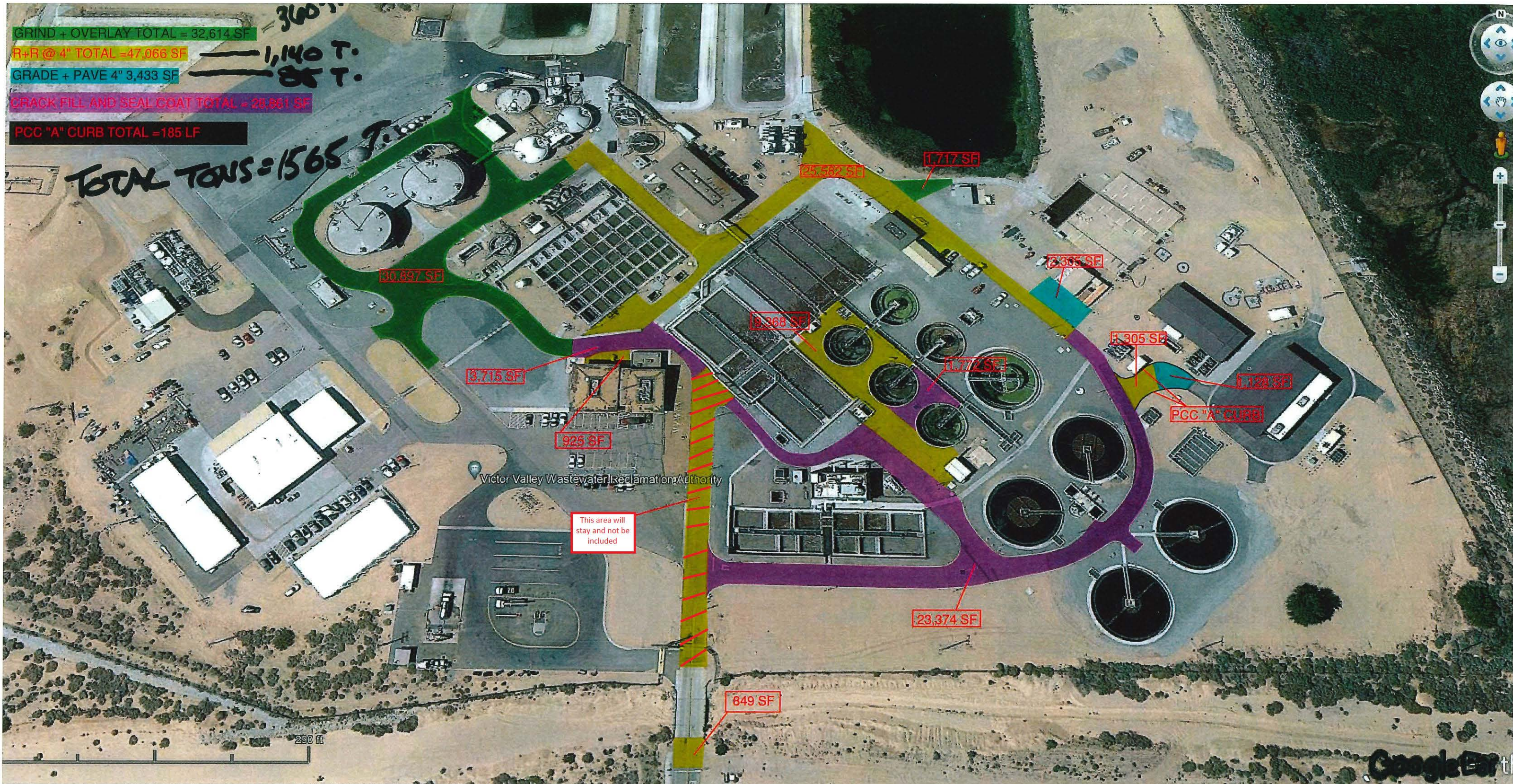
## **ATTACHMENTS**

**Exhibit 1- Map Highlighting Roads That Will Be Repaired**

**Exhibit 2- Christensen Brothers Bid**

# EXHIBIT 1







# EXHIBIT 2



**Christensen Brothers 7**  
**General Engineering Inc.**

21834 Bear Valley Road - Apple Valley - CA - 92308

Phone: (760)240-5236 - Fax: (760)961-2307 - Lic. No. 893188

---

7/31/23

Christensen Brothers General Engineering, Inc., presents this proposal to the:  
Victor Valley Wastewater Reclamation Authority

Thank you for the opportunity to provide the following Proposal for:

ROAD PAVING SERVICES- Regional Plant Paving Project



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7.....Bidder Experience

8.....Proposed Methods

9.....Fee Proposal

10.....Insurance and Litigation Statement

11.....Proof of Insurance Certificate

**Identification of Proposer**

Name Of Firm: Christensen Brothers General Engineering, Inc.

Type Of Firm: Corporation

Business Address: 21834 Bear Valley Rd Apple Valley CA 92308

Mailing Address: 21834 Bear Valley Rd Apple Valley CA 92308

Business Phone: ( 760 ) 240-52636 Fax: ( 760 ) 961-2307

Federal Identification No: 20-3969067

Emergency Contact Person: Caleb Christensen

Emergency Phone: ( 760 ) 240-5236

Email Address: caleb@christensenbrothers.net

Number of years as a Contractor in construction work of this type? 18

**Names and Titles of All Members of the Firm:**

Name: Caleb Christensen Title: CEO President

Name: Seth Christensen Title: Vice President

Name: Leona Christensen Title: Corporate Secretary/ Treasurer

Name: \_\_\_\_\_ Title: \_\_\_\_\_

If requested by the Client, the bidder shall furnish a notarized financial statement, financial data, references, and other information, sufficiently comprehensive to permit an appraisal of his/her current financial condition.

Person from your firm who inspected the job site of the proposed Work:

Name: Seth Christensen Date Inspected: 7/11/23

# Caleb Christensen

Apple Valley, CA / (760)953-0498 cell  
[caleb@christensenbrothers.net](mailto:caleb@christensenbrothers.net)

More than 26 years of experience in Heavy and Civil Engineering projects with expertise in Pipeline and Paving. Proven track record with over 15 years of successful completion of major public works projects related to public water systems, storm drainage and sewer improvements, including pavement and surface restoration.

### Areas of Expertise

- Water main replacement
- Sewer main replacement
- Lift stations
- Storm drainage systems
- Paving restoration
- Grind and Cap
- Booster Pump systems
- Reclaimed water systems
- Drainage basins
- Reservoir storage tanks
- Storm water retention systems

**2005- Present**                      **Christensen Brothers General Engineering, Inc.**  
**President/ CEO**

- Founded business with modest capital investment and grew it to over \$20M+ annually
- Oversaw All aspects of growth and development strategies and implementation
- Expanded services to include Paving to add value with enhanced scheduling and quality control
- Grew Field Operations to over 10 Field Crews with dozens of pieces of equipment
- Developed 24 hr. emergency response capability to better serve our clients
- Developed dozens of long term mutually beneficial relationships with Municipal entities including: Golden State Water Co., Town of Apple Valley, City of Hesperia, City of Victorville, City of Riverside, City of Norco and Jurupa Community Services District.
- Instituted Safety Training Programs for the protection of employees and Clients

### Project Experience

<b>2019</b>	<b>Apple Valley Desert Water Reuse</b>	<b>\$3M+</b>
	<ul style="list-style-type: none"> <li>• 6595' of 6"-8" Reclaimed water Line, 780' of Potable water Line</li> <li>• 2 Bolted Steel Reclaimed Water Tanks, Over 500K gallon Total Capacity</li> <li>• Multiple Booster Stations, Extensive Fine Grading, Paving and Chain Link Fencing</li> </ul>	
<b>2018</b>	<b>Lancaster Ave K Transmission Phase IV Watermain</b>	<b>\$2.5M</b>
	<ul style="list-style-type: none"> <li>• 65,340 sqft. of Cold Mill and AC paving</li> <li>• 5,331' of 24" CML&amp;C Watermain and all applicable appurtenances</li> </ul>	
<b>2017</b>	<b>Moreno Valley Sewer Improvements</b>	<b>\$1.8M</b>
	<ul style="list-style-type: none"> <li>• 2,800 Lf of 8"-12" VCP Sewer Main and all applicable appurtenances</li> </ul>	
<b>2016</b>	<b>Temple City Pentland St Watermain</b>	<b>\$1.3M</b>
	<ul style="list-style-type: none"> <li>• 8,683' of 6"-8" PVC DR-18 and all applicable appurtenances</li> </ul>	

# Seth Christensen

Apple Valley, CA / (760)953-9076 cell  
[seth@christensenbrothers.net](mailto:seth@christensenbrothers.net)

More than 26 years of experience in Heavy and Civil Engineering projects with expertise in Pipeline and Paving. Proven track record with over 15 years of successful completion of major public works projects related to public water systems, storm drainage and sewer improvements, including pavement and surface restoration.

### Areas of Expertise

- Water main replacement
- Sewer main replacement
- Lift stations
- Storm drainage systems
- Paving restoration
- Grind and Cap
- Booster Pump systems
- Reclaimed water systems
- Drainage basins
- Reservoir storage tanks
- Storm water retention systems

**2005- Present**                      **Christensen Brothers General Engineering, Inc.**  
**Vice President**

- Co-founded business with modest capital investment and grew it to over \$20M+ annually
- Oversaw All aspects of growth and development strategies and implementation
- Created in house Paving operation to add value with enhanced scheduling and quality control
- Oversee daily Field Operations with over 10 Field Crews and dozens of pieces of equipment
- Developed 24 hr. emergency response capability to better serve our clients
- Maintain dozens of long term mutually beneficial relationships with Municipal entities including: Golden State Water Co., Town of Apple Valley, City of Hesperia, City of Victorville, City of Riverside, City of Norco and Jurupa Community Services District.
- Instituted Safety Training Programs for the protection of employees and Clients

### Project Experience

<b>2019</b>	<b>Apple Valley Desert Water Reuse</b>	<b>\$3M+</b>
	<ul style="list-style-type: none"> <li>• 6595' of 6"-8" Reclaimed water Line, 780' of Potable water Line</li> <li>• 2 Bolted Steel Reclaimed Water Tanks, Over 500K gallon Total Capacity</li> <li>• Multiple Booster Stations, Extensive Fine Grading, Paving and Chain Link Fencing</li> </ul>	
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<b>2016</b>	<b>Temple City Pentland St Watermain</b>	<b>\$1.3M</b>
	<ul style="list-style-type: none"> <li>• 8,683' of 6"-8" PVC DR-18 and all applicable appurtenances</li> </ul>	

# Zach Hisey

Apple Valley, CA / (909)682-8534 cell  
[Zach@christensenbrothers.net](mailto:Zach@christensenbrothers.net)

Over 10 years of experience managing Civil Engineering projects throughout Southern California

### Areas of Expertise

- Scheduling
- Cost Budgeting
- Materials procurement
- Sub-contractor Coordination
- Contract Administration
- Submittal Generation
- Communication and Documentation
- Change Order Preparation

**2019-Present**                      **Christensen Brothers General Engineering, Inc.**  
**Project Manager**

- Coordinate with field superintendents to schedule manpower and equipment
- Track productions to ensure budgets and schedules are met
- Attend meetings with clients to discuss ongoing project details
- Provide Foreman with Project Binders containing all project related documents
- Negotiate credits and charges for scope changes
- Communicate with Foreman on any scope or design changes
- Scheduling and contract administration for Subcontractors
- Primary point of contact for Project Owners

**2014-2019**                                      **Bogh Engineering, Inc.**  
**Project Manager**

- Maintain budgets and costs for ongoing projects between Company and Sub-contractors
- Work with upper management to ensure on time completion of projects within budget
- Coordinate scheduling with Sub-contractors
- Communicate goals weekly with Field crews of up to 100+ employees

### Project Experience

- |             |   |               |
|-------------|---|---------------|
| <b>2019</b> | <b>Hutchinson St Water Main Replacement PH I &amp; II</b>       | <b>\$3.1M</b> |
| •           | 7,600 Lf of 4"-12" C900 PVC and all applicable appurtenances    |               |
| •           | 808 Lf of 8" Ductile Iron Pipe and all applicable appurtenances |               |
| •           | 96,000 Sqft of A/C Paving                                       |               |
| <b>2019</b> | <b>Main St Watermain Replacement</b>                            | <b>\$630K</b> |
| •           | 1,330 Lf of 8"-12" C900 PVC and all applicable appurtenances    |               |
| •           | 92,880 Sqft of Grind and Cap A/C                                |               |
| <b>2019</b> | <b>Waalew Happy Trails Tank Reservoir</b>                       | <b>\$1M</b>   |
| •           | 800 Lf of 24" RCP and all applicable appurtenances              |               |
| •           | 1,100 Lf of 8" C900 PVC and all applicable appurtenances        |               |

**EXPERIENCE OF BIDDER**

(3) similar projects that have been completed directly for a municipal agency or private company. Each project listed identifies the project name, construction cost, dates completed and name, addresses, and telephone numbers of persons in charge of the projects and of public agency or firm for which the project was constructed.

**Three Projects of This Type Recently Completed:**

Project Name: Avenue E Street and Sidewalk Improvements, Bryant to 5th Street, Phase I, Project No. 10788

Contract Amount: \$2,647,408.60 Date Completed: 12-20-20

Owner's Name: City of Yucaipa

Address: 34272 Yucaipa Blvd, Yucaipa, CA 92399

Contact Person: Landon Kern Telephone No: (909) 797-2489

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Project Name: First Year Paving Project Phase 2 Improvements

Contract Amount: \$2,433,105.23 Date Completed: 7-18-21

Owner's Name: City of Needles

Address: 817 Third St, Needles CA 92363

Contact Person: Tammy Ellmore Telephone No: 760-326-5740

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Project Name: Apple Valley South Safe Routes to School Project

Contract Amount: \$3,255,160.25 Date Completed: 12/27/20

Owner's Name: Town of Apple Valley

Address: 14955 Dale Evans Pkwy, Apple Valley CA 92307

Telephone No: Rich Berger Telephone No: 760-240-7000

---

## Proposed Method to Accomplish the Work

Christensen Brothers General Engineering, Inc., proposes to complete the work as described in the RFP using Standard industry methods, Including but not limited to the following:

Cold plan Grinding and Paving Screed Machine and Roller Compactor

We will also use an assortment of small equipment and Trucks



See Attached Pricing



# Christensen Brothers 7

**General Engineering Inc.**

P.O. Box 1286, Apple Valley, CA 92307

Phone: (909) 747-7163 FAX: (760) 961-2307  
 Lic. No. 893188 From: Seth Christensen Date: 8/2/2023

To:  
 Estimating  
 PO Box 997  
 Apple Valley CA

Quote No : 2550  
 Fax No :  
 Phone :

We propose to furnish you labor and material in strict accordance with the plans and specifications as follows:

**VVWRA Regional Plant Paving  
 Victorville**

Sch Item No. No.	Description	Quantity	U/M	Unit Price	Total Price
01 1	Mobalization/Demobalization	1	LS	\$49,000.00	\$49,000.00
01 2	2" Grind + Overlay Existing Road (Green)	32,612	SF	\$3.30	\$107,619.60
01 3	Remove And Replace 4" Existing + Overlay Yellow Zone	38,678	SF	\$6.00	\$232,068.00
01 4	Grade And Pave 4" HMA + 6" CMB (Blue Zone)	3,433	SF	\$9.00	\$30,897.00
01 5	Crack Fill And Seal Coat (Purple Zone)	28,861	SF	\$0.85	\$24,531.85
01 6	PCC A Curb	185	LF	\$40.00	\$7,400.00
<b>Total for:</b>		<b>01</b>	<b>VVWRA Plant Paving Items</b>		<b>\$451,516.45</b>
<b>Total Proposal Price:</b>					<b>\$451,516.45</b>

## Insurance, Litigation,

Christensen Brothers General Engineering has no litigation to report

Please see attached proof of insurance certificate



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
4/11/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement.

PRODUCER License # OM63276
Hardy Insurance Services, Inc.
2911 Bonita Avenue Suite A
La Verne, CA 91750
CONTACT NAME: Christine Crilley, CISR
PHONE (A/C, No, Ext): (909) 593-7776 7919
FAX (A/C, No): (909) 593-5477
E-MAIL ADDRESS: ccrilley@hardyirm.com
INSURER(S) AFFORDING COVERAGE
INSURER A: Bridgeway Insurance 12489
INSURER B: Everest National Insurance Company 10120
INSURER C: Indian Harbor Insurance Company 36940
INSURER D: State Compensation Insurance Fund of California 35076
INSURER E: Westchester Surplus Lines Insurance Company 10172
INSURER F: Scottsdale Insurance Company 41297

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADDL INSD, SUBR WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Rows include Commercial General Liability, Automobile Liability, Umbrella Liab, Workers Compensation, Pollution Liability, and Commercial Excess Li.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Proof of Insurance.

CERTIFICATE HOLDER CANCELLATION

Proof of Insurance
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
AUTHORIZED REPRESENTATIVE
[Signature]



**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY  
Board of Commissioners Staff Report**

**TO:** VVWRA Board of Commissioners  
**FROM:** Darron Poulsen, General Manager  
**SUBMITTED BY:** Latif Laari, Environmental Compliance Manager  
**DATE:** August 17<sup>th</sup>, 2023

**SUBJECT:** **RECOMMENDATION TO PURCHASE ARCSERVE TOTAL  
BACKUP SOLUTION VIA THEIR DISTRIBUTOR  
BLUEALLY INC. FOR THE AMOUNT OF \$136,850.26**

---

<input checked="" type="checkbox"/>	<b>For Action</b>	<input checked="" type="checkbox"/>	<b>Fiscal Impact : \$136,850.26</b>
<input type="checkbox"/>	<b>Information Only</b>	<input checked="" type="checkbox"/>	<b>Account Code: 09-02-545-9000-9999</b>
		<input checked="" type="checkbox"/>	<b>Funds Budgeted/ Approved: Yes</b>

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**STAFF RECOMMENDATION**

It is recommended that the Board of Commissioners authorize the General Manager to approve the purchase of ArcServe total backup solution and related services via their distributor BlueAlly Inc for \$136,850.26. (Exhibit 1)

**PREVIOUS ACTION(S)**

None

**BACKGROUND INFORMATION**

In recent years, VVWRA has completed several Information Technology (IT) projects, including the upgrade to the backbone of the network infrastructure, new antivirus/endpoint software by Sophos for all devices, implementation of Microsoft Office 365, installation of new cameras and upgrade of campus-wide wireless network. Currently IT staff are using a basic data backup solution provided by Barracuda Networks, this solution no longer meets specific requirements of the disaster recovery plan (DRP) and the business continuity plan (BCP) identified during IT audits.

The total backup solution by Arcserve was chosen for the following reasons:

- Arcserve is a trusted brand with a long history of providing reliable data protection solutions.
- Arcserve's total backup solutions offer a wide range of features, including backup, disaster recovery, replication, and cloud backup.
- Arcserve's solutions are easy to use and manage.
- Arcserve's solutions are scalable to meet the needs of government agencies of all sizes.

Specific benefits of the Arcserve's total backup solutions include:

- **Backup:** Arcserve's backup solutions can protect VVWRA's data from a wide variety of threats, including ransomware, malware, and hardware failure. According to the Cybersecurity and Infrastructure Security Agency (CISA), in 2020 the Per-Incident Cost and Loss Estimates of a ransomware or Cybersecurity incident is between \$56,000 to \$394,000.
- **Disaster recovery:** Arcserve's disaster recovery solutions can help VVWRA IT staff restore data quickly, easily and meet several regulatory requirements in the event of a disaster.
- **Replication:** Arcserve's replication solutions can help staff keep VVWRA data in sync between multiple locations, which can help protect data from disasters and outages.
- **Cloud backup:** Arcserve's cloud backup solutions can help staff store VVWRA data offsite, which can provide an additional layer of protection against data loss.
- **Secure Backup:** Arcserve backup solutions will integrate with Sophos (Endpoint Protection) and The Arcserve® 9000 Appliance Series is the first and only means to neutralize ransomware attacks, deliver effective disaster recovery (DR) and restore data, an all-in-one data protection strategy that can be deployed in just few minutes.

Staff conducted extensive research and chose Arcserve total backup solution including two separate Arcserve Appliances 9000 Series Secured by Sophos (Exhibit 2) as the IT solution must be compatible with current VVWRA IT infrastructure. Per VVWRA's procurement policy (VII Bidding Exemptions (8)), the purchase of this specific IT solution is exempt from bidding requirement to assure compatibility with existing IT infrastructure.

It is recommended that the Board of Commissioners authorize the General Manager to approve the purchase ArcServe total backup solution and related services via their distributor BlueAlly Inc for the amount of \$136,850.26.

## ATTACHMENTS

**Exhibit 1:** ArcServe estimate #404423 from BlueAlly Inc.

**Exhibit 2:** ArcServe Appliances 9000 Series Secured by Sophos Datasheet



# EXHIBIT 1



# QUOTE

9979 Muirlands Blvd, Irvine CA 92618  
 www.blueally.com | insidesales@blueally.com  
 Tel: 949.870.3500 | FAX: 949.266.9332

Quote #: **404423**

Date: 03/06/2023

### Billing Address

**Victor Valley Wastewater RA**  
 20111 Shay Road  
 Attn: Accounts Payable  
 Victorville CA 92394  
 USA

### Shipping Address

**Victor Valley Wastewater RA**  
 Attn: Daniel Enriquez  
 20111 Shay Road  
 Victorville CA 92394  
 USA

Customer ID: **63797**

Salesperson: **Jason Gilmore**

Shipping Method:

QTY	ITEM	DESCRIPTION	MSRP	SALE PRICE	TOTAL
1	MAPR9096MAWBDRG 36C	ARC APPL 9096DR PERP 3YR GOLD MNT NEW	36,957.36	\$ 20,326.55	\$20,326.55
1	NAPR9096FLWBD7N0 0C	ARCSERVE APPLIANCE 9096DR PERP PRODUCT ONLY	76,994.50	\$ 42,346.98	\$42,346.98
1	MAPR9096MAWBDRG 36C	ARC APPL 9096DR PERP 3YR GOLD MNT NEW	36,957.36	\$ 20,326.55	\$20,326.55
1	NAPR9096FLWBD7N0 0C	ARCSERVE APPLIANCE 9096DR PERP PRODUCT ONLY	76,994.50	\$ 42,346.98	\$42,346.98
1	NAPSR001PSNAS1N0 0C	4HR ARC PROF SVCS SVCS	895.00	\$ 492.25	\$492.25

**Quotation Subtotal** \$ 125,839.31

**Total Tax** \$ 11,010.95

**Quotation Total** **\$ 136,850.26**

**Quotation Valid Until: 04/06/23**

**RETURN POLICY:** All Returns must meet all applicable criteria listed in our Return Policy found at <https://www.BlueAlly.com/returns>.  
 For approval please contact the sales representative listed on this invoice.

\* All Claims for shortage, damaged or shipping errors must be made within 3 days of receipt.

\* All sales have a 30 day return period unless noted otherwise.

\* No cash refunds.

\* Non-defective items returned subject to 15% restocking fee.

\* Warranties void if labels removed or tampered with.

\* Returns must include all original packaging and include all accessories & documentation.

\* All software and license downloads are not returnable. All sales are final when software has been registered, activated or used.

To securely submit payment for this quote via credit card, please

<https://BlueAlly.com/SecurePayment/SecurePayment/404423/63797>

# EXHIBIT 2

# Arcserve Appliances 9000 Series Secured by Sophos

**First and last line of defense against cyber-attacks,  
IT disasters and data loss.**

The Arcserve® 9000 Appliance Series is the first and only means to neutralize ransomware attacks, deliver effective disaster recovery (DR) and restore data - an all-in-one data protection strategy that can be deployed in just 15 minutes flat.



Powered by award-winning Arcserve Unified Data Protection (UDP) and Sophos Intercept X cybersecurity, Arcserve Appliances uniquely combine deep learning endpoint protection with onsite and offsite business continuity capabilities for a multilayered approach that delivers complete IT resiliency.

Architected with cloud-native capabilities, Arcserve Appliances integrate your on- and off-site disaster recovery with built in cloud DR and backup to the Arcserve® Cloud, as well as to private and public clouds, including Amazon® AWS, Microsoft Azure®, Nutanix® Objects, Eucalyptus® and Rackspace®.



*"I booted up, plugged in, and set [Arcserve UDP Appliances] up for our environment. They were up-and-running and we had successful backups on the first day."*

*- Brandon Grubbs, Director of Information Technology, Randall County, Texas, United States*

## Appliances At-a-Glance

- Up to **20 CPU** cores and **1,536GB RAM** to spin up dozens of VMs in case of failures
- Up to **504TB** effective capacity of a single appliance with up to **6PB** of backups managed via a single user interface
- Up to **20:1** deduplication ratio and extreme, flash-accelerated deduplication performance with enterprise-grade SAS HDDs and SSDs
- Easy-to-install **Expansion Kits** to increase capacity and meet your data growth demands
- **12Gbps RAID** cards with 2GB NV cache and redundant hot-swap power supplies for high-performance and reliability
- **Sophos Intercept X Advanced for Server** included to defend backups from ransomware, malware and hacker attacks
- **On-site support** in as little as **4 hours** for peace of mind

## Key Features

### Ransomware Prevention Made Simple

- Implement quick disaster recovery for physical servers and cloud Windows / Linux instances.
- Protect VMware, Hyper-V, RHEV, KVM, Nutanix AHV, Citrix and Xen VMs with agentless and agent-based backup.
- Back up and recover Microsoft Office 365, UNIX, FreeBSD, AIX, HP-UX, Solaris, Oracle Database, SAP HANA and more, protecting your entire IT infrastructure from ransomware.
- Spin up dozens of VMs on the appliance with up to 20 cores on Intel Xeon CPUs, up to 1,536GB DDR4 RAM, and optional SSD flash expansion kits.

### Secure Your Backups from Any Threat

- Keep your data and system backups safe with Sophos Intercept X Advanced for Server, preloaded and shipped on Arcserve Appliances.
- Stay protected against any threat, including unknown malware, with a deep learning neural network combined with signature-based protection from common threats.
- Prevent major hacking techniques, including credential harvesting, lateral movement and privilege escalation with exploit prevention.
- Stop ransomware attacks on backup data with CryptoGuard and master boot record attacks with WipeGuard.

### Scale Without Limitations

- Enable safe business and IT growth with 11 configuration options that range from 12TB to 504TB of effective capacity per appliance.
- Keep up with data growth by expanding original capacity by up to four times with in-field, in-appliance Expansion Kits.
- Seamlessly scale up and out to the cloud with fully integrated hybrid cloud services.
- Reduce backup storage requirements up to 95% with built-in SSD drives and hyper-efficient global deduplication.

### Eliminate Ransomware-induced IT Disruptions

- Quickly install the only “set it and forget it,” multi-layered anti-ransomware solution, proven to be deployable in under 15 minutes.
- Protect hundreds of systems with scalable, policy-based disaster recovery and backup management.
- Reclaim up to 50% more time to spend on strategic IT initiatives.
- Keep business and IT stakeholders informed with SLA reporting that includes recovery time objective (RTO) and recovery time actual (RTA) comparisons.

### Gain Peace of Mind

- Remove the “do it yourself” complexity of orchestrating a cohesive data protection and cyber security strategy with one solution, from one vendor for backup, disaster recovery, high availability, security, hardware and cloud services.
- Recover data and Windows/Linux systems across hardware, cloud and hypervisors.
- Experience unparalleled ease of deployment and usability with a simple, wizard-driven setup.



## Protect from Major Disasters

- Benefit from cloud economies of scale by storing backups and rapidly spinning up systems off-site in the Arcserve Cloud or private and public clouds, including Amazon® AWS, Microsoft Azure®, Eucalyptus® and Rackspace®.
- Reduce the need for dedicated bandwidth with built-in, WAN-optimized backup replication.
- Send copies of your sensitive data and systems off-site with proven tape drive and tape library integration.

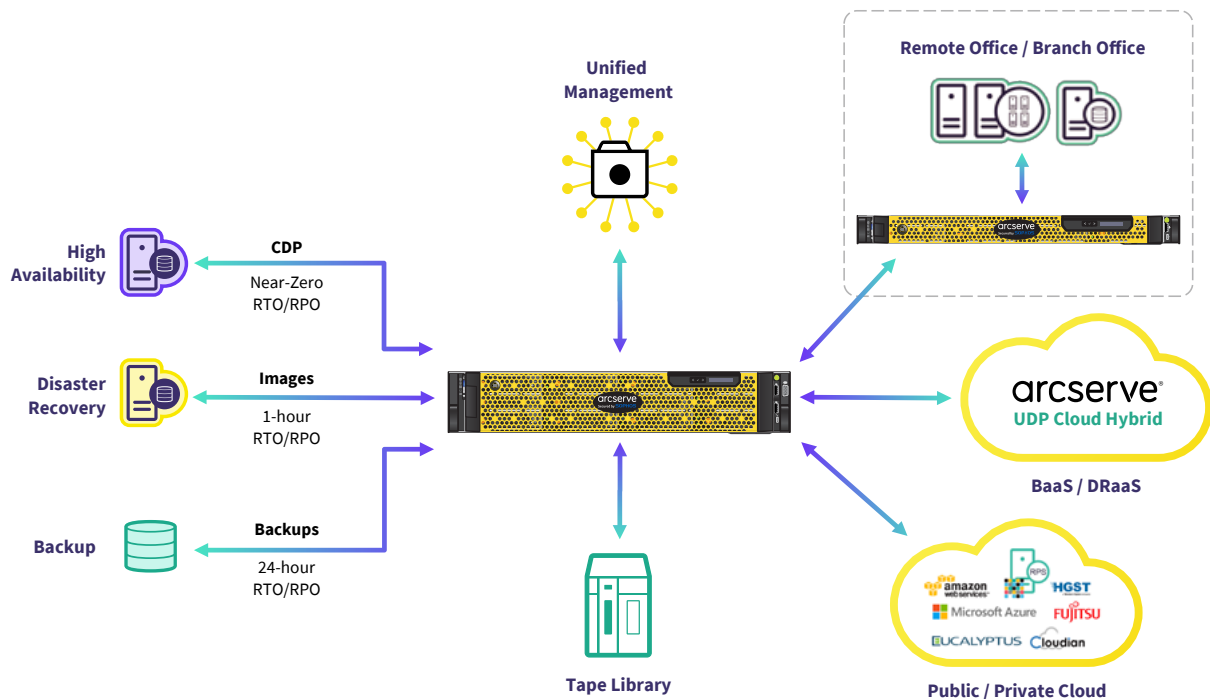


*“Thanks to Arcserve’s deduplication capabilities, our existing storage estate can accommodate backups for the next few years, so we didn’t need to invest in any additional hardware.”*

*- Mr. Taha Bhajjee, System Analyst, Admirals Trading LLC, United Arab Emirates*

## Flexible Deployment

Businesses of all sizes leverage Arcserve Appliances to streamline a wide variety of deployment scenarios:



- Single-site disaster recovery and backup** for physical or virtual systems, including x86 and non-x86
- Primary site backup** with a copy to Arcserve Cloud for off-site disaster recovery
- Cross-site protection** between two sites
- Central appliance** site with multiple branch offices
- Hybrid deployment** with a combination of on-premises local, remote and cloud systems

## Performance

Arcserve Appliances streamline your environment with a wide variety of deployment scenarios, including single-site, primary site, cross-site, central appliance site, and a hybrid combination of on-premises local, remote, and cloud systems. Each appliance is a self-contained, “set and forget” disaster recovery and backup solution architected with cloud-native capabilities, global source-based deduplication, multi-site replication, tape integration and automated data restore capabilities.

Its performance is unmatched, with models 9012, 9024 and 9048 delivering up to 20 TB/hour throughput based on global source-side deduplication with a 98% deduplication ratio. Arcserve Appliance models 9072DR, 9096DR, 9144DR, 9192DR, 9240DR, 9288DR, 9360DR and 9504DR deliver up to 76 TB/hour throughput based on global source-side deduplication with a 98% deduplication ratio.





	9012	9024	9048	9072DR	9096DR	9144DR	9192DR	9240DR	9288DR	9360DR	9504DR	
Effective Capacity (TB) <sup>1</sup>	12	24	48	72	96	144	192	240	288	360	504	
Maximum Effective Capacity with expansion kit (TB) <sup>1</sup>	N/A	N/A	N/A	288						384	408	N/A
Maximum Effective Managed Capacity <sup>2</sup>	72	144	288	3456						4896	6048	
Form Factor	1U			2U								
Base RAM	48GB (6x8)			192GB (12x16)							384GB (12x32)	
Optional RAM Expansion Kits	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Max RAM	512GB			1,536GB								
SSD	1x 480GB			2x 1.9TB (RAID1)								
CPU	Intel® Xeon® Silver 4108			Dual Intel® Xeon® Silver 4114 2.2G								
RAID Controller	PERC H730P Low Profile, 2GB NV Cache			PERC H730P Minicard, 2GB NV Cache								
RAID Configuration	RAID5			RAID6								
Drive Bays	3xHDD, 1xSSD			16xHDD, 2xSSD								
SAS 12G HDD	3x2TB	3x4TB	3x8TB	5x8TB	6x8TB	8x8TB	10x8TB	12x8TB	10x12TB	12x12TB	16x12TB	
Usable Capacity	4TB	8TB	16TB	24TB	32TB	48TB	64TB	80TB	96TB	120TB	168TB	
Optional SSD Flash and HDD Expansion Kits				✓	✓	✓	✓	✓	✓	✓		
DIMM Slots	10 <sup>3</sup>			24								
10GB Base-T LAN Ports	2 on-board (Broadcom 57416 LOM)			4 included (Intel X550 RNDK)								
SAS 12GBps HBA External Controller	Optional			Included								
Intel X550 Dual Port 10G Base-T Adapter				Optional								
Intel X710 Dual Port 10G SFP+ FC Adapter				Optional								
Broadcom 57414 Dual Port 25GB SFP28 FC Adapter				Optional								
QLogic 2692 Dual Port 16Gb Fibre Channel HBA				Optional								
Remote Hardware Management	iDRAC 9 Enterprise license included											
Power Supplies	Dual, Hot-Plug, Redundant Power Supply (1+1), 550 W			Dual, Hot-Plug, Redundant Power Supply (1+1), 750 W								
Heat Dissipation	2,559 BTU/hr			2,891 BTU/hr								
Weight	53lbs (24kg)			75lbs (34kg)								
In-rack Dimensions <sup>4</sup>	25.9" x 17.1" x 1.7" (65.7 cm x 43.4 cm x 4.3cm)			26.7" x 17.1" x 3.4" (67.9 cm x 43.4 cm x 8.7cm)								
Outer Dimensions <sup>5</sup>	28.7" x 19.0" x 1.7" (72.9 cm x 48.2 cm x 4.3cm)			29.6" x 19.0" x 3.4" (75.1 cm x 48.2 cm x 8.7cm)								
Packaging Dimensions	36" x 23" x 10" (92cm x 59cm x 25cm)			38" x 26" x 12" (97cm x 66cm x 30cm)								

<sup>1</sup> Effective capacity takes global source deduplication into account and is equal 3x the usable capacity. Actual backup capacity may vary, depending on data types, backup type and schedule, as well as other factors.  
<sup>2</sup> Maximum Effective Managed Capacity of backups managed from a single management console connected to up to six identical stacked appliance models 9012-9048, and up to twelve identical stacked appliance models 9072DR-9504DR, with largest available expansion kits  
<sup>3</sup> Appliance models 9012, 9024 and 9048 have 16 DIMM slots on the dual-socket motherboard, however as these models have only one CPU installed, maximum 10 DIMM slots can be populated.  
<sup>4</sup> In-rack dimensions exclude bezel, front panel and power supply handles.  
<sup>5</sup> Outer dimensions include bezel, front panel and power supply handles.

## About Arcserve

Arcserve provides exceptional solutions to protect the priceless digital assets of organizations in need of full scale, comprehensive data protection. Established in 1983, Arcserve is the world’s most experienced provider of business continuity solutions that safeguard multi-generational IT infrastructures with applications and systems in any location, on premises and in the cloud. Organizations in over 150 countries around the world rely on Arcserve’s highly efficient, integrated technologies and expertise to eliminate the risk of data loss and extended downtime while reducing the cost and complexity of backing up and restoring data by up to 50 percent. Arcserve is headquartered in Minneapolis, Minnesota with locations around the world.

Explore more at [arcserve.com](http://arcserve.com)

