

**BOARD MEETING AGENDA  
SPECIAL MEETING OF THE BOARD OF DIRECTORS OF  
CITRUS HEIGHTS WATER DISTRICT (CHWD)  
MARCH 17, 2021 beginning at 6:00 PM**

**DISTRICT ADMINISTRATIVE OFFICE  
6230 SYLVAN ROAD, CITRUS HEIGHTS, CA**

**PHONE CALL IN: (253)215-8782**

**PHONE MEETING ID: 984 2340 5666**

**COMPUTER AUDIO/LIVE MEETING PRESENTATIONS:** <https://zoom.us/j/98423405666>

In compliance with the Americans with Disabilities Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting, please contact the General Manager at (916) 725-6873. Requests must be made as early as possible, and at least one full business day before the start of the meeting. Pursuant to Executive Order N-29-20, the meeting will be held at the listed physical location and electronically through the above phone number.

Directors and members of the public may attend the meeting in person at the District headquarters or remotely through the phone number and link above. In compliance with the Sacramento County Health Order issued May 26, 2020, which states “Persons should wear face coverings when in public places,” members of the public shall wear a face covering unless they are exempt per the order.

**CALL TO ORDER:**

Upon request, agenda items may be moved to accommodate those in attendance wishing to address that item. Please inform the General Manager.

**ROLL CALL OF DIRECTORS**

**PLEDGE OF ALLEGIANCE**

**PUBLIC COMMENT**

**CLOSED SESSION:**

CL-1. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION  
Initiation of Litigation pursuant to Government Code, section 54956.9(d)(4):  
(one case)

**FUTURE CHWD BOARD OF DIRECTORS MEETING DATES:**

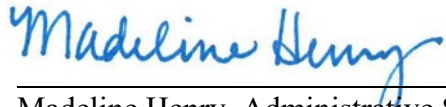
March 17, 2021	6:30 PM	Regular Meeting
April 21, 2021	6:30 PM	Regular Meeting
May 19, 2021	6:30 PM	Regular Meeting
June 16, 2021	6:30 PM	Regular Meeting
August 18, 2021	6:30 PM	Regular Meeting

September 15, 2021	6:30 PM	Regular Meeting
October 20, 2021	6:30 PM	Regular Meeting
November 17, 2021	6:30 PM	Regular Meeting
December 15, 2021	6:30 PM	Regular Meeting

**ADJOURNMENT:**

**CERTIFICATION:**

I do hereby declare and certify that this agenda for this Special Meeting of the Board of Directors of the Citrus Heights Water District was posted in a location accessible to the public at the District Administrative Office Building, 6230 Sylvan Road, Citrus Heights, CA 95610 at least 24 hours prior to the special meeting in accordance with Government Code Section 54954.2.



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Madeline Henry, Administrative Services Manager/  
Chief Board Clerk

Dated: March 11, 2021

**BOARD MEETING AGENDA  
REGULAR MEETING OF THE BOARD OF DIRECTORS OF  
CITRUS HEIGHTS WATER DISTRICT (CHWD)  
MARCH 17, 2021 beginning at 6:30 PM**



**DISTRICT ADMINISTRATIVE OFFICE  
6230 SYLVAN ROAD, CITRUS HEIGHTS, CA**

**PHONE CALL IN: (253) 215-8782  
PHONE MEETING ID: 984 2340 5666**

**COMPUTER AUDIO/LIVE MEETING PRESENTATIONS:** <https://zoom.us/j/98423405666>

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**CALL TO ORDER:**

Upon request, agenda items may be moved to accommodate those in attendance wishing to address that item. Please inform the General Manager.

**ROLL CALL OF DIRECTORS:**

**PLEDGE OF ALLEGIANCE:**

**VISITORS:**

**PUBLIC COMMENT:**

The Public shall have the opportunity to directly address the Board on any item of interest to the public before or during the Board’s consideration of that item pursuant to Government Code Section 54954.3. Public comment on items of interest within the jurisdiction of the Board is welcome. The Presiding Officer will limit comments to three (3) minutes per speaker.

(A) Action Item

(D) Discussion Item

(I) Information Item

**CONSENT CALENDAR: (I/A)**

All items under the Consent Calendar are considered to be routine and will be approved by one motion. There will be no separate discussion of these items unless a member of the Board, Audience, or Staff request a specific item be removed for separate discussion/action before the motion to approve the Consent Calendar.

CC-1a. Minutes of the Special Meeting – February 8, 2021 (A)

CC-1b. Minutes of the Regular Meeting – February 17, 2021 (A)

- CC-1c. Minutes of the Special Meeting – February 17, 2021 (A)  
Recommendation: Approve the minutes of the February 8, 2021 Special Meeting and the February 17, 2021 Regular and Special Meetings.
- CC-2. Revenue Analysis Report for February 2021 (I)
- CC-3. Assessor/Collector’s Roll Adjustment for February 2021 (I)
- CC-4. Treasurer’s Report for February 2021 (I)
- CC-5. Treasurer’s Report of Fund Balances for February 2021 (I)
- CC-6. Operating Budget Analysis for February 2021 (I)
- CC-7. Capital Projects Summary February 2021 (I)
- CC-8. Warrants for February 2021 (I)
- CC-9. Purchase Card Distributions for February 2021 (I)
- CC-10. Employee Recognitions (I)
- CC-11. Long-Range Agenda (I)
- CC-12. Engineering Department Report (I)
- CC-13. Operations Department Report (I)
- CC-14. 2021 Water Supply – Purchased and Produced (I)
- CC-15. Water Supply Reliability (I)
- CC-16. Water Efficiency and Safety Program Update (I)
- CC-17. Discussion and Possible Action to Amend Policy 4101.A1: Salary Schedule (A)  
Recommendation:  
 Amend District Policy No. 4101.A1 Salary Schedule as presented.
- CC-18. Review and Possible Action to Approve Investment of District Funds Policy (A)  
Recommendation:  
 Review District Policy 6300, Investment of District Funds, and re-adopt as required by Section 6300.90 of the District’s investment policy.

**PRESENTATIONS:**

None.

**PUBLIC HEARINGS:**

None.

**STUDY SESSION:**

- S-1. Overview of District-Wide Easement Project (I/D)

**BUSINESS:**

- B-1. Discussion and Possible Action Regarding Water Distribution System Projects (A)  
Recommendations:
1. Receive and file the Luhdorff & Scalmanini report titled “Evaluation of Palm and Sunrise Wells, Treatment and Storage Options.”
  2. Approve the modified Property Acquisition Matrix to accommodate potential tank storage.
  3. Provide direction concerning next steps for future Distribution system facilities.

**MANAGEMENT SERVICES REPORTS (I):**

None.

**CONSULTANTS' AND LEGAL COUNSEL'S REPORTS (I):**

None.

**DIRECTOR'S AND REPRESENTATIVE'S REPORTS (I):**

- D-1. Regional Water Authority (Wheaton).
- D-2. Sacramento Groundwater Authority (Sheehan).
- D-3. San Juan Water District (All).
- D-4. Association of California Water Agencies (Wheaton).
- D-5. ACWA Joint Powers Insurance Authority (Wheaton/Henry).
- D-6. City of Citrus Heights (Pieri).
- D-7. Chamber of Commerce Update (Talwar/Henry).
- D-8. RWA Legislative and Regulatory Affairs Update (Talwar/Henry).
- D-9. Customer Advisory Committee (Riehle/Henry).
- D-10. Other Reports.

**CLOSED SESSION:**

None.

**FUTURE CHWD BOARD OF DIRECTORS MEETING DATES:**

April 21, 2021	6:30 PM	Regular Meeting
May 19, 2021	6:30 PM	Regular Meeting
June 16, 2021	6:30 PM	Regular Meeting
August 18, 2021	6:30 PM	Regular Meeting
September 15, 2021	6:30 PM	Regular Meeting
October 20, 2021	6:30 PM	Regular Meeting
November 17, 2021	6:30 PM	Regular Meeting
December 15, 2021	6:30 PM	Regular Meeting

**ADJOURNMENT:**

**CERTIFICATION:**

I do hereby declare and certify that this agenda for this Regular Meeting of the Board of Directors of the Citrus Heights Water District was posted in a location accessible to the public at the District Administrative Office Building, 6230 Sylvan Road, Citrus Heights, CA 95610 at least 72 hours prior to the special meeting in accordance with Government Code Section 54954.2.



\_\_\_\_\_  
Madeline Henry, Administrative Services Manager/  
Chief Board Clerk

Dated: March 11, 2021

CITRUS HEIGHTS WATER DISTRICT  
BOARD OF DIRECTORS SPECIAL MEETING MINUTES  
February 8, 2021

The Special Meeting of the Board of Directors was called to order at 6:01 p.m. by President Wheaton and roll was called. Present were:

David C. Wheaton, President  
Caryl F. Sheehan, Vice President  
Raymond A. Riehle, Director

**Staff:**

Steve Anderson, General Counsel  
Tim Cutler, Water Distribution Supervisor  
Madeline Henry, Administrative Services Manager/ Chief Board Clerk  
Brian Hensley, Water Resources Supervisor  
Rex Meurer, Water Efficiency Supervisor  
David Rucker, Principal Information Technology Analyst  
Hilary Straus, General Manager  
Susan Talwar, Director of Finance and Administrative Services

**PLEDGE OF ALLEGIANCE:**

President Wheaton led the Pledge of Allegiance.

**PUBLIC COMMENT:**

None.

President Wheaton adjourned the meeting to closed session at 6:04 p.m.

President Wheaton reopened the open session at 7:03 p.m.

**CLOSED SESSION:**

CL-1. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION  
Initiation of Litigation pursuant to Government Code, section 54956.9(d)(4):  
(one case)

No Reportable Action.

**STUDY SESSIONS:**

S-1. Projected Staffing Requirements Report

**ADJOURNMENT:**

There being no other business to come before the Board, the meeting was adjourned at 8:13 p.m.

APPROVED:

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MADELINE A. HENRY  
Deputy Secretary  
Citrus Heights Water District

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DAVID C. WHEATON, President  
Board of Directors  
Citrus Heights Water District

CITRUS HEIGHTS WATER DISTRICT  
BOARD OF DIRECTORS SPECIAL MEETING MINUTES  
February 17, 2021

The Special Meeting of the Board of Directors was called to order at 6:03 p.m. by President Wheaton and roll was called. Present were:

David C. Wheaton, President  
Caryl F. Sheehan, Vice President  
Raymond A. Riehle, Director

**Staff:**

Steve Anderson, General Counsel  
Madeline Henry, Administrative Services Manager/ Chief Board Clerk  
Brian Hensley, Water Resources Supervisor  
Brittney Moore, Management Analyst/ Deputy Board Clerk  
David Rucker, Principal Information Technology Analyst  
Hilary Straus, General Manager  
Susan Talwar, Director of Finance and Administrative Services

**PLEDGE OF ALLEGIANCE:**

President Wheaton led the Pledge of Allegiance.

**PUBLIC COMMENT:**

None.

President Wheaton adjourned the meeting to closed session at 6:04 p.m.

**CLOSED SESSION:**

CL-1. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION  
Initiation of Litigation pursuant to Government Code, section 54956.9(d)(4):  
(one case)

No Reportable Action.

**ADJOURNMENT:**

There being no other business to come before the Board, the meeting was adjourned at 6:52 p.m.

**APPROVED:**

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MADELINE A. HENRY  
Deputy Secretary  
Citrus Heights Water District

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DAVID C. WHEATON, President  
Board of Directors  
Citrus Heights Water District



CITRUS HEIGHTS WATER DISTRICT  
BOARD OF DIRECTORS REGULAR MEETING MINUTES  
February 17, 2021

The Regular Meeting of the Board of Directors was called to order at 6:54 p.m. by President Wheaton and roll was called. Present were:

David C. Wheaton, President  
Caryl F. Sheehan, Vice President  
Raymond A. Riehle, Director

Staff:

Steve Anderson, General Counsel  
Madeline Henry, Administrative Services Manager/ Chief Board Clerk  
Brittney Moore, Management Analyst  
Missy Pieri, Director of Engineering/ District Engineer  
David Rucker, Principal Information Technology Analyst  
Rebecca Scott, Senior Management Analyst  
Hilary Straus, General Manager  
Susan Talwar, Director of Finance and Administrative Services  
  
Karen Blakely, RGS

**PUBLIC COMMENT:**

None.

**CONSENT CALENDAR:**

President Wheaton asked for consideration and/or approval of the Consent Calendar.

- CC-1a. Minutes of the Special Meeting – January 19, 2021 (A)
- CC-1b. Minutes of the Regular Meeting – January 20, 2021 (A)
- CC-1c. Minutes of the Special Meeting – January 20, 2021 (A)  
Recommendation: Approve the minutes of the January 19, 2021 Special Meeting and the January 20, 2021 Regular and Special Meetings.
- CC-2. Revenue Analysis Report for January 2021 (I)
- CC-3. Assessor/Collector's Roll Adjustment for January 2021 (I)
- CC-4. Treasurer's Report for January 2021 (I)
- CC-5. Treasurer's Report of Fund Balances for January 2021 (I)
- CC-6. Operating Budget Analysis for January 2021 (I)
- CC-7. Capital Projects Summary January 2021 (I)
- CC-8. Warrants for January 2021 (I)
- CC-9. Purchase Card Distributions for January 2021 (I)

- CC-10. Employee Recognitions (I)
- CC-11. Long-Range Agenda (I)
- CC-12. Engineering Department Report (I)
- CC-13. Operations Department Report (I)
- CC-14. 2021 Water Supply – Purchased and Produced (I)
- CC-15. Water Supply Reliability (I)
- CC-16. Water Efficiency and Safety Program Update (I)

**ACTION:**

Director Riehle moved and Vice President Sheehan seconded a motion to approve the consent calendar.

The motion carried 3-0 with all Directors voting yes.

**PRESENTATIONS:**

None.

**PUBLIC HEARINGS:**

None.

**STUDY SESSIONS:**

None.

**BUSINESS:**

None.

**MANAGEMENT SERVICES REPORTS (I):**

- MS-1. Customer Advisory Committee Update
- MS-2. Staffing Resources Planning Update

**CONSULTANTS' AND LEGAL COUNSEL'S REPORTS (I):**

None.

**DIRECTOR'S AND REPRESENTATIVE'S REPORTS (I):**

- D-1. Regional Water Authority (Wheaton).
- D-2. Sacramento Groundwater Authority (Sheehan).
- D-3. San Juan Water District (All).
- D-4. Association of California Water Agencies (Wheaton).
- D-5. ACWA Joint Powers Insurance Authority (Wheaton/Henry).
- D-6. City of Citrus Heights (Pieri).

- D-7. Chamber of Commerce Update (Talwar/Henry).
- D-8. RWA Legislative and Regulatory Affairs Update (Talwar/Henry).
- D-9. Customer Advisory Committee (Riehle/Henry).
- D-10. Other Reports.

**CLOSED SESSION:**

None.

**ADJOURNMENT:**

There being no other business to come before the Board, the meeting was adjourned at 7:42 p.m.

**APPROVED:**

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MADELINE A. HENRY  
Deputy Secretary  
Citrus Heights Water District

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DAVID C. WHEATON, President  
Board of Directors  
Citrus Heights Water District

**CITRUS HEIGHTS WATER DISTRICT  
 FEBRUARY 2021  
 REVENUE ANALYSIS**

**Outstanding Receivables**

<b>Aged Trial Balance</b>					
Total	Current	31-90	91-150	>150	Unapplied Current
994,722	831,733	113,889	61,361	90,583	102,843

<b>General Ledger Balance</b>	<b>Total</b>
Outstanding A/R	1,079,967.26
Outstanding Liens	-
Outstanding Grants	946
A/R Other	(25,348)
Less Unapplied Payments	(104,428)
<b>Total</b>	<b>\$ 951,138</b>

**CITRUS HEIGHTS WATER DISTRICT  
ASSESSOR/COLLECTOR'S ROLL ADJUSTMENTS FOR  
February 28, 2021**

CC-03

*There were no adjustments made for February 2021.*

Reason For Cancellation	Charge Type	Amount
		<u>\$ -</u>

**TREASURER'S REPORT TO THE BOARD OF DIRECTORS  
FEBRUARY 2021**


<b>Bank of the West</b>			
<b>Beginning Balance</b>			\$12,067,057
<b>RECEIPTS:</b>		1,034,782	
<b>DISBURSEMENTS:</b>			
Checks Issued / ACH Payments	802,960		
Payroll	355,909		
Returned Checks	645		
		1,159,515	(124,733)
<b>Bank of the West</b>			
<b>Balance per Bank 02/28/2021</b>			11,942,324
Outstanding Checks			(76,903)
Deposit in Transit			101,684
<b>Balance Per Books 02/28/2021</b>			<b>\$11,967,106</b>


<b>RECONCILEMENT:</b>			
Bank of the West			\$11,967,106
Local Agency Investment Fund			6,499,049
COP Reserve Account			0
Money Mkt Activity Account			543,971
<b>TOTAL BALANCE</b>			<b>\$19,010,125</b>

<b>CASH &amp; INVESTMENT SUMMARY:</b>			
Bank of the West (General Account)			11,967,106
Local Agency Investment Fund			6,499,049
COP 2010 Reserve Account			0
Money Mkt Activity Account			543,971
<b>Total</b>			<b>\$19,010,125</b>

INSTITUTION	MATURITY DATE	INT RATE	DEPOSIT AMOUNT	DATE OF LAST TRANSACTION
Local Agency Investment Fund	Daily	0.63%	10,259.60	1/15/2021

I certify that this report accurately reflects all pooled investments and is in compliance with applicable State of California Government Codes and is in conformity with Investment of District Funds Policy 6300. As Treasurer of the Citrus Heights Water District, I hereby certify that sufficient investment liquidity and anticipated revenue are available to meet the next six months' estimated expenditures.


  
\_\_\_\_\_  
**SUSAN K. TALWAR**  
Treasurer

  
\_\_\_\_\_  
**HILARY M. STRAUS**  
Secretary

Signed: 03/11/2020

**TREASURER'S REPORT OF FUND BALANCES**  
**February 28, 2021**

Fund Name	Beginning Balance 01/01/2021	Year to Date Transfers In / Collections	Year to Date Transfers Out	Current Month Transfers In / Collections	Current Month Transfers Out	Ending Balance 02/28/2021	2021 Target Balance per Policy
<b>Operating Fund</b>	\$ 5,562,075	\$ 1,495,937	\$ (991,899)	\$ 1,037,995	\$ (2,944,371)	\$ 4,159,737	\$ 2,334,017
<b>Operating Reserve</b>	\$ 3,592,065	\$ -	\$ -	\$ -	\$ -	\$ 3,592,065	N/A
<b>Rate Stabilization Fund</b>	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
<b>Capital Improvement Reserve</b>	\$ 2,796,860	\$ -	\$ -	\$ -	\$ -	\$ 2,796,860	\$ 2,681,248
<b>Restricted for Debt Service</b>	\$ 536,963	\$ -	\$ -	\$ -	\$ -	\$ 536,963	N/A
<b>Water Supply Reserve</b>	\$ 1,623,173	\$ -	\$ -	\$ 1,000,000	\$ -	\$ 2,623,173	N/A
<b>Water Efficiency Reserve</b>	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ 200,000
<b>Water Meter Replacement Reserve</b>	\$ 1,525,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 1,725,000	N/A
<b>Fleet Equipment Reserve</b>	\$ 334,253	\$ -	\$ -	\$ -	\$ -	\$ 334,253	\$ 318,559
<b>Employment-Related Benefits Reserve</b>	\$ 405,319	\$ -	\$ -	\$ 581,643	\$ -	\$ 986,962	\$ 986,962
	<u>\$ 17,575,708</u>	<u>1,495,937</u>	<u>\$ (991,899)</u>	<u>\$ 2,819,638</u>	<u>\$ (2,944,371)</u>	<u>\$ 17,955,013</u>	<u>\$ 7,520,786</u>

  
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**SUSAN K. TALWAR, Treasurer**

**TREASURER'S REPORT OF FUND BALANCES**  
**February 28, 2021**

**Fund Transfers Summary:**

The Operating Fund Transferred:	\$ 1,037,995	from funds collected in February 2021 per Treasurer's Report
	\$ (1,162,728)	disbursements made in February 2021 per Treasurer's Report
	\$ (1,000,000)	to the Water Supply Reserve (2020 budgeted transfer)
	\$ (200,000)	to the Water Meter Replacement Reserve (2020 budgeted transfer)
	<u>\$ (581,643)</u>	to the Employee-Related Benefits Reserve to meet 2021 target
	\$ (1,906,376)	



Citrus Heights Water District  
Budget Performance Report  
As of 2/28/2021

	February Actual	Year-to-Date Actual	Year-to-Date Budget	YTD Variance		Annual Budget
				Amount	Percent	
<b>Revenues</b>						
Metered Service Charges	\$886,375.96	\$1,537,855.52	\$1,597,682.00	(\$59,826.48)	-3.74%	\$9,586,090.00
Metered Water Deliveries	304,368.52	503,727.95	437,467.00	66,260.95	15.15%	5,234,960.00
Non-Metered Service Charges	12,627.93	15,725.27	23,334.00	(7,608.73)	-32.61%	140,000.00
Penalties	426.00	1,065.00	12,535.00	(11,470.00)	-91.50%	150,000.00
Interest	3,273.93	6,382.29	7,590.00	(1,207.71)	-15.91%	45,535.00
Backflow Fees	6,033.40	8,709.40	19,334.00	(10,624.60)	-54.95%	116,000.00
Water Service Install & S&R	18,102.22	31,028.49	4,550.00	26,478.49	581.94%	27,300.00
Miscellaneous *	2,436.19	3,075.63	24,500.00	(21,424.37)	-87.45%	147,000.00
Cost Reimbursements	9,123.23	9,123.23		9,123.23	100.00%	0.00
Income - Wheeling Water		9,189.78	450.00	8,739.78	1942.17%	2,700.00
Income - Connection Fees	10,756.00	10,756.00		10,756.00	100.00%	0.00
<b>Total Revenue</b>	<b>1,253,523.38</b>	<b>2,136,638.56</b>	<b>2,127,442.00</b>	<b>9,196.56</b>	<b>0.43%</b>	<b>15,449,585.00</b>
<b>&amp; other Miscellaneous Revenue Sources</b>						
<b>Operating Expenses</b>						
<b>Cost of Water</b>						
Purchased Water	713,106.91	542,775.51	530,977.40	11,798.11	2.22%	3,185,864.40
Ground Water	56,067.13	92,996.27	158,667.46	(65,671.19)	-41.39%	952,004.76
	<b>769,174.04</b>	<b>635,771.78</b>	<b>689,644.86</b>	<b>(53,873.08)</b>	<b>-7.81%</b>	<b>4,137,869.16</b>
<b>Labor &amp; Benefits</b>						
Labor Regular	253,861.79	410,044.23	559,924.22	(149,879.99)	-26.77%	3,359,545.32
Labor Non-Regular	2,762.20	2,762.20		2,762.20	0.00%	
Labor Taxes	16,505.64	33,804.47	44,536.76	(10,732.29)	-24.10%	267,220.56
Labor Workers Comp	16887.29		15,250.00	(15,250.00)	-100.00%	91,500.00
Labor External	3,189.19	7,195.70	21,013.34	(13,817.64)	-65.76%	126,080.04
Benefits Med/Den/Vis	39,781.31	114,264.98	85,733.62	28,531.36	33.28%	514,401.72
Benefits LTD/Life/EAP	2,767.98	9,794.96	8,819.02	975.94	11.07%	52,914.12
Benefits CalPers	11,836.62		55,103.20	(55,103.20)	-100.00%	330,619.20
Benefits Other	13,897.51	21,629.56	21,521.74	107.82	0.50%	129,130.44
Benefit Retiree Expenses	4,140.50	7,551.00	9,473.74	(1,922.74)	-20.30%	56,842.44
Benefit Unemployment			1,543.46	(1,543.46)	-100.00%	9,260.76
Benefit GASB 68		193,525.00	68,175.00	125,350.00	183.87%	409,050.00
<b>Capitalized Labor &amp; Benefit Contra</b>	<b>(43,951.17)</b>	<b>(63,340.79)</b>	<b>(83,333.34)</b>	<b>19,992.55</b>	<b>-23.99%</b>	<b>(500,000.04)</b>
	<b>321,678.86</b>	<b>737,231.31</b>	<b>807,760.76</b>	<b>(70,529.45)</b>	<b>-8.73%</b>	<b>4,846,564.56</b>
<b>General &amp; Administrative</b>						
Fees & Charges	12,826.89	14,493.56	34,837.50	(20,343.94)	-58.40%	209,025.00
Regulatory Compliance/Permits	1,857.00	29,224.61	19,995.84	9,228.77	46.15%	119,975.04
District Events & Recognition	1,119.60	1,375.54	16,120.52	(14,744.98)	-91.47%	96,723.12
Maintenance/Licensing	275.00	102,797.63	24,133.50	78,664.13	325.95%	144,801.00
Equipment Maintenance	4,753.14	6,966.30	18,895.82	(11,929.52)	-63.13%	113,374.92
Professional Development	1,058.37	3,103.37	22,364.84	(19,261.47)	-86.12%	134,189.04
Department Admin			4,450.02	(4,450.02)	-100.00%	26,700.12
Dues & Subscriptions	2,625.87	109,507.96	34,653.84	74,854.12	216.01%	207,923.04

Citrus Heights Water District  
Budget Performance Report  
As of 2/28/2021

	February	Year-to-Date	Year-to-Date	YTD Variance		Annual
	Actual	Actual	Budget	Amount	Percent	Budget
Fuel & Oil	4,076.26	4,615.71	10,540.00	(5,924.29)	-56.21%	63,240.00
General Supplies	8,180.26	9,125.77	11,533.32	(2,407.55)	-20.87%	69,199.92
Insurance - Auto/Prop/Liab		69,918.06	17,000.00	52,918.06	311.28%	102,000.00
Leasing/Equipment Rental	1,266.60	2,494.90	6,650.00	(4,155.10)	-62.48%	39,900.00
Parts & Materials	13,282.98	16,259.93	9,166.66	7,093.27	77.38%	54,999.96
Postage/Shipping/Freight	4,988.73	9,766.10	28,750.00	(18,983.90)	-66.03%	172,500.00
Rebates & Incentives	825.00	1,575.00	5,666.66	(4,091.66)	-72.21%	33,999.96
Telecom/Network	3,604.65	4,399.30	11,356.66	(6,957.36)	-61.26%	68,139.96
Tools & Equipment	969.84	1,877.29	14,933.34	(13,056.05)	-87.43%	89,600.04
Utilities	583.91	924.11		924.11	0.00%	
Write-Off Bad Debt Exp			833.34	(833.34)	-100.00%	5,000.04
Capitalized G&A Contra	(21,125.56)	(61,488.61)		(61,488.61)	0.00%	
Capitalized Equipment Contra	(29,559.99)	(40,347.04)		(40,347.04)	0.00%	
	<u>11,608.55</u>	<u>286,589.49</u>	<u>291,881.86</u>	<u>(5,292.37)</u>	<u>-1.81%</u>	<u>1,751,291.16</u>
Professional & Contract Services						
Support Services	160,633.25	75,246.84	295,577.52	(220,330.68)	-74.54%	1,773,465.12
Legal Services	22,096.98	22,096.98	68,749.98	(46,653.00)	-67.86%	412,499.88
Printing Services			5,950.02	(5,950.02)	-100.00%	35,700.12
	<u>182,730.23</u>	<u>97,343.82</u>	<u>370,277.52</u>	<u>(272,933.70)</u>	<u>-73.71%</u>	<u>2,221,665.12</u>
Reserves & Debt Services						
Interest Expense	39,543.75	6,590.62	12,455.57	(5,864.95)	-47.09%	74,733.37
Net Increase(Decrease) in Value of Investments		14,738.10		14,738.10	0.00%	
	<u>39,543.75</u>	<u>21,328.72</u>	<u>12,455.57</u>	<u>8,873.15</u>	<u>71.24%</u>	<u>74,733.37</u>
Total Operating Expenses	<u>1,324,735.43</u>	<u>1,778,265.12</u>	<u>2,172,020.57</u>	<u>(393,755.45)</u>	<u>-18.13%</u>	<u>13,032,123.37</u>
Net Income / (Expense)	<u>(71,212.05)</u>	<u>358,373.44</u>	<u>(44,578.57)</u>	<u>402,952.01</u>	<u>903.91%</u>	<u>2,417,461.63</u>

Citrus Heights Water District  
 Capital Projects Summary  
 Fiscal Period End as of 2/2021

CC-7

Project Number	Project Name	BUDGET		AMOUNTS PAID			Remaining Budget
		Project Forecast Budget	Expenditures to 12/2020	Month to Date	Year to Date	Project to Date	
C16-134	Auburn Blvd-Rusch Park Placer	\$167,000	\$1,438	\$734	\$734	\$2,172	(\$734)
C19-108	6230 Sylvan East Wall	\$245,000	\$7,653	\$118	\$206	\$7,859	(\$206)
C20-040B	CH Electric Greenwy Bike Trail	\$0	\$411	\$0	\$0	\$411	\$0
C20-108	Corp Yard PreArchitecture Stdy	\$100,000	\$1,676	\$0	\$0	\$1,676	\$0
C20-109	Corp Yard Plans Specs Estimate	\$400,000	\$0	\$0	\$0	\$0	\$0
<b>Construction in Progress</b>		<b>\$912,000</b>	<b>\$11,177</b>	<b>\$852</b>	<b>\$940</b>	<b>\$12,118</b>	<b>(\$940)</b>
C20-010	Water Main Replacements	\$70,000	\$3,455	\$0	\$0	\$3,455	\$0
C20-011	Water Valve Replacements	\$70,000	\$40,727	\$3,176	\$5,175	\$45,902	(\$5,175)
C20-012	Water Service Connections	\$850,000	\$733,734	\$1,611	\$8,183	\$741,916	(\$8,183)
C20-013	Water Meter Replacements	\$70,000	\$23,262	\$0	\$0	\$23,262	\$0
C20-014	Fire Hydrants	\$160,000	\$69,837	\$0	\$0	\$69,837	\$0
C21-010	Water Main Replacements	\$72,100	\$0	\$0	\$0	\$0	\$0
C21-011	Water Valve Replacements	\$103,000	\$0	\$0	\$0	\$0	\$0
C21-012	Water Service Connections	\$875,500	\$0	\$63,073	\$66,420	\$66,420	(\$66,420)
C21-013	Water Meter Replacements	\$500,000	\$0	\$16,017	\$71,208	\$71,208	(\$71,208)
C21-014	Fire Hydrants	\$164,800	\$0	\$0	\$0	\$0	\$0
<b>Annual Infrastructure</b>		<b>\$2,935,400</b>	<b>\$871,014</b>	<b>\$83,878</b>	<b>\$150,985</b>	<b>\$1,022,000</b>	<b>(\$150,985)</b>
C15-104B	Document Management System	\$244,639	\$5,361	\$0	\$0	\$5,361	\$0
C19-003	Fleet/Field Operations Equip	\$295,000	\$268,668	\$0	(\$25,657)	\$243,011	\$25,657
C20-003	Fleet/Field Operations Equip	\$380,000	\$484,920	\$0	\$0	\$484,920	\$0
C20-004	Technology Hardware/Software	\$0	\$98,618	\$0	\$0	\$98,618	\$0
C21-003	Fleet/Field Operations Equip	\$260,000	\$0	\$0	\$0	\$0	\$0
C21-004	Technology Hardware/Software	\$56,650	\$0	\$0	\$0	\$0	\$0
<b>Fleet and Equipment</b>		<b>\$1,236,289</b>	<b>\$857,566</b>	<b>\$0</b>	<b>(\$25,657)</b>	<b>\$831,910</b>	<b>\$25,657</b>
C15-109	Blossom Hill Way 6" & 10" Inte	\$27,777	\$0	\$0	\$0	\$0	\$0
C15-110	Crestmont Ave 6" Intertie	\$24,979	\$91	\$0	\$0	\$91	\$0
C17-102	Michigan Dr - Sunrise to West	\$397,897	\$277,327	\$0	\$0	\$277,327	\$0
C18-103	Cologne Way 6in Main Replace	\$267,069	\$261,711	\$0	\$0	\$261,711	\$0
C19-101	Robie Way 8" Main Replacement	\$341,382	\$256,784	\$10,160	\$10,879	\$267,663	(\$10,879)
C19-104	Admiral MainRepl 8"	\$291,439	\$228,552	\$10,398	\$10,398	\$238,950	(\$10,398)
C19-105	Whyte MainRepl 8" Langley	\$742,655	\$680,994	\$28,274	\$29,122	\$710,115	(\$29,122)
C19-106	Wells Ave Main 8"	\$219,003	\$30,302	\$673	\$811	\$31,114	(\$811)
C19-107	Rowan MainRep 8/6" Grady	\$119,095	\$91,997	\$0	\$0	\$91,997	\$0

Citrus Heights Water District  
 Capital Projects Summary  
 Fiscal Period End as of 2/2021

CC-7

Project Number	Project Name	BUDGET		AMOUNTS PAID			Remaining Budget
		Project Forecast Budget	Expenditures to 12/2020	Month to Date	Year to Date	Project to Date	
C20-101	Fair Oaks Blvd	\$475,137	\$10,210	\$7,106	\$7,106	\$17,315	(\$7,106)
C20-102	Langley Ave & Chance Dr	\$504,057	\$46,739	\$3,049	\$3,460	\$50,199	(\$3,460)
C20-103	Marsala Ct	\$53,683	\$22,081	\$0	\$0	\$22,081	\$0
C20-104	Skycrest School	\$104,022	\$5,536	\$1,500	\$1,808	\$7,344	(\$1,808)
C20-105	Walnut Drive	\$105,247	\$3,732	\$4,523	\$4,728	\$8,460	(\$4,728)
C20-106	Wisconsin Drive	\$301,990	\$42,391	\$1,909	\$2,141	\$44,532	(\$2,141)
C21-101	Antelope & Rusch Park	\$187,741	\$0	\$0	\$0	\$0	\$0
C21-102	Old Auburn Road	\$91,459	\$0	\$0	\$0	\$0	\$0
C21-103	Pratt Ave	\$39,043	\$0	\$0	\$0	\$0	\$0
C21-104	Mesa Verde HS	\$118,779	\$0	\$0	\$462	\$462	(\$462)
C21-105	Madison Ave & Dewey Dr	\$28,138	\$0	\$0	\$0	\$0	\$0
<b>Water Mains</b>		<b>\$4,440,592</b>	<b>\$1,958,447</b>	<b>\$67,592</b>	<b>\$70,916</b>	<b>\$2,029,363</b>	<b>(\$70,916)</b>
C19-040C	Mariposa Ave SR2S Phase IV	\$0	\$508	\$59	\$217	\$725	(\$217)
C20-005	Facilities Improvements	\$280,000	\$238,767	\$0	\$0	\$238,767	\$0
C20-005A	Admin Bldg Remodel	\$0	\$41	\$0	\$0	\$41	\$0
C20-040	Other City Partnerships	\$90,000	\$5,000	\$0	\$0	\$5,000	\$0
C20-041	Other Misc Infrastructure	\$50,000	\$0	\$0	\$0	\$0	\$0
C20-042	Other Property Acquisition	\$0	\$172,539	\$0	\$0	\$172,539	\$0
C21-005	Facilities Improvements	\$60,000	\$0	\$0	\$0	\$0	\$0
C21-040	Other City Partnerships	\$112,551	\$0	\$0	\$0	\$0	\$0
C21-041	Other Misc Infrastructure	\$112,551	\$0	\$0	\$0	\$0	\$0
<b>Miscellaneous Projects</b>		<b>\$705,102</b>	<b>\$416,856</b>	<b>\$59</b>	<b>\$217</b>	<b>\$417,073</b>	<b>(\$217)</b>
C17-104	Groundwater Well Property Acq	\$640,000	\$370,943	\$0	\$1,475	\$372,418	(\$1,475)
C17-104A	Well #7 Patton	\$250,000	\$45,712	\$100,460	\$100,752	\$146,463	(\$100,752)
C17-104B	Well #8 Highland	\$0	\$37,483	\$198,461	\$198,626	\$236,109	(\$198,626)
C20-020	Groundwater Well Improvements	\$150,000	\$36,581	\$0	\$0	\$36,581	\$0
C20-107	Well Design & Construction	\$1,105,500	\$0	\$0	\$0	\$0	\$0
C21-020	Groundwater Well Improvements	\$154,500	\$0	\$0	\$0	\$0	\$0
<b>Wells</b>		<b>\$2,300,000</b>	<b>\$490,719</b>	<b>\$298,921</b>	<b>\$300,853</b>	<b>\$791,572</b>	<b>(\$300,853)</b>
<b>Grand Totals:</b>		<b>\$12,529,383</b>	<b>\$4,605,780</b>	<b>\$451,301</b>	<b>\$498,254</b>	<b>\$5,104,034</b>	<b>(\$498,254)</b>

## FEBRUARY 2021 WARRANTS

<u>CHECK</u>	<u>PAYEE</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
70944	Richard E/Diana R Del Secco	Customer Refund	\$188.60
70945	Simmons Family Trust	Customer Refund	\$122.68
70946	Stephen W/Lisa Rickey	Customer Refund	\$95.64
70947	Matava Properties LLC	Customer Refund	\$172.28
70948	Jacob W/Lindsey R Kearns	Customer Refund	\$18.96
70949	James/Kayla Williams	Customer Refund	\$7.46
70950	ACWA/JPIA	Workers Comp Insurance	\$16,887.29
70951	AFLAC	Employee Paid Insurance	\$290.48
70952	Bart/Riebes Auto Parts	Repair-Trucks	\$79.55
70953	Best Best & Krieger	Legal & Audit	\$10,491.74
70954	BSK Associates	Water Analysis	\$880.00
70955	Burketts	Office Expense	\$57.85
70956	California Landscape Associates Inc	Contract Services-Other	\$230.00
70957	Robin Cope	Health Insurance	\$457.00
70958	Cybex	Equipment Rental-Office	\$172.71
70959	Ferguson Enterprises Inc #1423	Material	\$153.01
70960	Harris Industrial Gases	Supplies-Field	\$40.00
70961	Joseph Hash	Toilet Rebate Program	\$150.00
70962	Steve Hullibarger	Toilet Rebate Program	\$150.00
70963	Integrity Administrators Inc	Health Insurance	\$255.99
70964	J Comm Inc	Contract Services-Other	\$5,000.00
70965	Cheryl Buckwalter- Landscape Liaisons	Contract Services-Miscellaneous	\$475.00
70966	Mitch's Certified Classes	Continued Education	\$700.00
70967	Orangevale Chamber of Commerce	Dues & Subscriptions	\$230.00
70968	Timothy Parks	Toilet Rebate Program	\$150.00
70969	Placer Title Company	Customer Refund	\$125.00
70970	Post Modern Marketing	Contract Services-Other	\$250.00
70971	Prime Auto Repair	Repair-Trucks	\$889.95
70972	Republic Services #922	Utilities	\$273.79
70973	Response Structural Engineers, Inc	Contract Services-Financial	\$900.00
70974	Regional Government Services	Contract Services-Other	\$3,671.68
70975	River City Staffing Group	External Labor	\$635.25
70976	Sagent	Contract Services- Social Media, Website, Strategy	\$14,778.67
70977	Simon and Company Inc	Contract Services-Other	\$1,000.00
70978	SMUD	Utilities	\$16,513.53
70979	Sonitrol	Equipment Rental-Office	\$189.00
70980	Sterling Administration	Contract Services-Miscellaneous	\$550.00
70981	TIAA Commercial Finance Inc	Equipment Rental-Office	\$571.09
70982	Uni Waste LLC	Contract Services-Other	\$503.07
70983	Walker's Office Supplies	Office Expense	\$442.68
70984	Axiom Technologies LLC	Contract Services-Other	\$3,962.00
70985	Sagent	Contract Services- Social Media, Website, Strategy	\$5,701.79
70986	Sagent	Contract Services- Website Water Efficiency, Media Relations, Centennial	\$7,656.22
70987	James D Hall Revocable Trust	Customer Refund	\$165.69
70988	Richard/Diane McSherry	Customer Refund	\$47.07
70989	Joel E/Jennifer Wright	Customer Refund	\$20.18
70990	Elsie M Holmes	Customer Refund	\$130.95
70991	Sharon J Cody	Customer Refund	\$143.93
70992	Ronald/Dawn M Pyle	Customer Refund	\$285.19
70993	Clinton M Alexander	Customer Refund	\$58.02
70994	Tracy Stowell	Customer Refund	\$240.21
70995	Mykhaylo Yefanov	Customer Refund	\$149.35
70996	Edward Crocker	Customer Refund	\$54.43
70997	ACWA	Continued Education	\$725.00

## FEBRUARY 2021 WARRANTS

<u>CHECK</u>	<u>PAYEE</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
70998	Afman Supply	Small Tools	\$499.45
70999	AnswerNet	Telephone-Answering Service	\$347.35
71000	AT&T Payment Center	Telephone-Local/Long Distance	\$60.00
71001	Bart/Riebes Auto Parts	Repair-Trucks	\$174.78
71002	Blue Jay Trucking Inc	Contract Services-Other	\$1,870.00
71003	Capio	Continued Education	\$20.00
71004	Consolidated	Telephone-Local/Long Distance	\$1,850.86
71005	Corelogic Information Solutions Inc	Dues & Subscriptions	\$212.18
71006	Dr. Well Water Well Services Inc	Wells Maintenance	\$750.00
71007	Flowline Contractors, Inc	Contract Services-Engineering	\$48,164.28
71008	Future Ford	Repair-Trucks	\$2,127.12
71009	Grainger	Small Tools	\$356.13
71010	Harris & Associates	Contract Services-Engineering	\$2,760.00
71011	Hunt & Sons Inc	Gas & Oil	\$539.45
71012	IAP2 USA	Dues & Subscriptions	\$390.00
71013	Integrity Administrators Inc	Health Insurance	\$5,000.00
71014	Placer County Clerk	Election Expense	\$50.00
71015	River City Staffing Group	External Labor	\$476.44
71016	Sagent	Contract Services-Social Media, Website	\$4,005.13
71017	SureWest Directories	Telephone-Local/Long Distance	\$49.00
71018	SWRCB	Dues & Subscriptions	\$51,268.22
71019	Tee Janitorial & Maintenance	Janitorial	\$2,989.00
71020	A. Teichert & Son, Inc.	Road Base	\$1,483.10
71021	Walker's Office Supplies	Office Expense	\$28.31
71022	Wex Bank	Gas & Oil	\$3,088.09
71023	Wizix Technology Group Inc	Equipment Rental-Office	\$162.87
71024	Zanjero	Contract Services-Conservation	\$10,400.00
71025	Sagent	Contract Services- Website, Print Communications, Centennial	\$14,042.50
71026	Sagent	Contract Services- Print Media, Website, Water Efficiency, Media Relation	\$13,099.99
71033	Sam C/Donna R Lantz	Customer Refund	\$124.60
71034	Arbour Trust	Customer Refund	\$43.74
71035	Jeffrey J Newbold	Customer Refund	\$103.28
71036	Dolores I Jolson 2006 Trust	Customer Refund	\$123.92
71037	Loan M Pham	Customer Refund	\$13.94
71038	Jennifer/John Randall	Customer Refund	\$202.62
71039	Courtney Rozell	Customer Refund	\$24.62
71040	Anne Lovejoy Trust	Customer Refund	\$144.05
71041	Afman Supply	Small Tools	\$85.50
71042	Alexander's Contract Services	Contract Services-Meter Reads	\$6,851.52
71043	Batteries Plus Bulbs	Supplies	\$74.89
71044	Bender Rosenthal Incorporated	Contract Services-Other	\$1,494.43
71045	Bryce Consulting, Inc	Legal & Audit	\$595.00
71046	Capio	Continued Education	\$275.00
71047	Cappo	Dues & Subscriptions	\$130.00
71048	Citrus Heights Chamber of Commerce	Continued Education	\$695.00
71049	Lowe's	Supplies-Field	\$582.42
71050	MMANC	Dues & Subscriptions	\$75.00
71051	Moonlight BPO LLC	Contract Services-Bill Print	\$4,278.60
71052	Pacific Gas & Electric	Utilities	\$194.70
71053	Quick Quack Car Wash	Maintenance Agreement-Equipment	\$298.30
71054	River City Staffing Group	External Labor	\$288.75
71055	Sacramento Suburban Water District	Contract Services-Other	\$4,968.24
71056	Sagent	Contract Services-Social Media, Print Media, Website	\$15,650.89
71057	Sierra Safety	Small Tools	\$200.81

## FEBRUARY 2021 WARRANTS

<u>CHECK</u>	<u>PAYEE</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
71058	WaterWise Consulting, Inc	Contract Services-Conservation	\$1,125.00
71059	Warren Consulting Engineers Inc	Contract Services-Engineering	\$8,025.00
71060	Sagent	Contract Services- Website, Water Efficiency, Media Brand Audit, Centenr	\$12,758.73
71061	Mark/Linda Antonelli	Customer Refund	\$53.46
71062	Michael Ryan	Customer Refund	\$21.85
71063	Eleonora Prizhbilov	Customer Refund	\$162.81
71064	Joe Massolo & Sons Trucking Co Inc	Customer Refund	\$626.72
71065	Eric F/Whitney K Poole	Customer Refund	\$126.80
71066	Lance Clifton Chiropractic	Customer Refund	\$259.80
71067	James S/Tara J Harlan	Customer Refund	\$88.90
71068	Shirley/Michael Disbrow	Customer Refund	\$240.00
71069	Ruth/Ryan S Carter	Customer Refund	\$268.08
71070	William Alfred Connelly Estate	Customer Refund	\$9.47
71071	Elizabeth C Giorgi	Customer Refund	\$83.69
71072	Jason Slieter	Customer Refund	\$300.11
71073	Edward V Zhidovienko	Customer Refund	\$24.82
71074	ACWA	Continued Education	\$225.00
71075	Afman Supply	Small Tools	\$15.87
71076	AREA Restroom Solutions	Equipment Rental-Field	\$142.41
71077	AUL Health Benefit Trust	Health Insurance	\$3,432.06
71078	Bart/Riebes Auto Parts	Repair-Trucks	\$146.27
71079	California Surveying & Drafting Supply	Small Tools	\$10.00
71080	Les Carter	Toilet Rebate Program	\$75.00
71081	Sacramento County Utilities	Utilities	\$80.98
71082	Fast Action Pest Control	Contract Services-Miscellaneous	\$115.00
71083	GEI Consultants	Contract Services-Wells	\$858.00
71084	Government Finance Officers Association	Dues & Subscriptions	\$345.00
71085	Global Machinery West	Repair-Trucks	\$711.88
71086	Ferguson Enterprises Inc #1423	Material	\$1,521.43
71087	Luhdorff & Scalmanini	Contract Services-Wells	\$1,535.00
71088	Moonlight BPO LLC	Contract Services-Bill Print/Mail	\$2,192.74
71089	Pace Supply Corp	Material	\$3,659.50
71090	Prime Auto Repair	Repair-Trucks	\$1,136.88
71091	Red Wing Shoe Store	Small Tools	\$498.02
71092	Rental Guys	Equipment Rental-Field	\$77.02
71093	Pauline Risberg	Toilet Rebate Program	\$75.00
71094	SMAQMD	Permit Fees	\$2,476.00
71095	David Sacco	Toilet Rebate Program	\$150.00
71096	Les Schwab Tires	Repair-Trucks	\$456.21
71097	Cathy Stratton	Toilet Rebate Program	\$150.00
71098	Victoria Strawn	Toilet Rebate Program	\$150.00
71099	Traffic Management Inc.	Field Miscellaneous	\$2,703.99
71100	WaterWise Consulting, Inc	Contract Services-Conservation	\$2,100.00
<b>Total</b>			<u>\$351,088.55</u>

**FEBRUARY 2021 WARRANTS**

<u>CHECK</u>	<u>PAYEE</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
ACH	1168-2021-1 IC	Bank Fee	\$5,190.10
ACH	BOW JANUARY 2021	Bank Fee	\$957.62
ACH	CA CHOICE MAR 2021	Health Insurance	\$41,214.13
ACH	CHASE JANUARY 2021	Bank Fee	\$3,422.72
ACH	JP MORGAN JANUARY 2021	See February Agenda Item CC-8	\$4,168.11
ACH	PLACER TITLE	Deposit Funds-Highland Ave	\$198,336.00
ACH	PERS 1/7/21 PAYDAY	PERS	\$22,547.05
ACH	PRINCIPAL MARCH 2021	Health Insurance	\$7,908.50
ACH	SJWD BONDS	COP Debt Service	\$134,535.23
<b>Total</b>			<hr/> <hr/> \$418,279.46
<b>Grand Total</b>			<hr/> <hr/> <hr/> \$769,368.01



**JP Morgan Purchase Card Distributions  
Feb-21**

<b>Name</b>	<b>General Supplies</b>	<b>District Events &amp; Recognition</b>	<b>Professional Development</b>	<b>CIP</b>	<b>Maintenance / Licensing</b>	<b>Equipment Maintenance</b>	<b>Dues &amp; Subscription</b>	<b>Tools &amp; Equipment</b>	<b>Reimbursed Expense</b>	<b>Total Bill</b>
Shockley	\$ 713.21	\$ 1,455.76	\$ 484.00	\$ 108.27				\$ 84.19	\$ 70.47	\$ 2,915.90
Henry		\$ 47.91								\$ 47.91
Talwar		\$ 59.38			\$ 275.00		\$ 3.99			\$ 338.37
Straus				\$ 15.00						\$ 15.00
Spiers	\$ 90.75					\$ 2,892.57				\$ 2,983.32
Rucker					\$ 4,703.47		\$ 97.50			\$ 4,800.97
<b>Total Bill</b>	<b>\$ 803.96</b>	<b>\$ 1,563.05</b>	<b>\$ 484.00</b>	<b>\$ 123.27</b>	<b>\$ 4,978.47</b>	<b>\$ 2,892.57</b>	<b>\$ 101.49</b>	<b>\$ 84.19</b>	<b>\$ 70.47</b>	<b>\$ 11,101.47</b>

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

SUBJECT : EMPLOYEE RECOGNITION  
 STATUS : Information Item  
 REPORT DATE : March 1, 2021  
 PREPARED BY : Brittney Moore, Management Analyst

The following District employees were recognized for perfect attendance during January 2021, and outstanding customer service and quality of work during the month of February 2021.

### Administrative Services

<u>Name</u>	<u>Attendance</u>	<u>Customer Service</u>	<u>Work Quality</u>
Madeline Henry		Organizing staff appreciation treats.	Assisted with coordinating District's EAP enrollment.
Dana Mellado	Yes	Worked with communications staff to begin regularly providing data regarding the number of users utilizing the District's online system.	
Brittney Moore		Organizing staff appreciation treats.	Attended February Board Meeting.  Coordinated trainings with staff and Board.  Assisted with coordinating District's EAP enrollment.
Alberto Preciado	Yes		
David Rucker			Assisted with Board Meeting Audio/Visual

<u>Name</u>	<u>Attendance</u>	<u>Customer Service</u>	<u>Work Quality</u>
Kayleigh Shepard		Assisted team lead with billing for construction meters.	Coordinated meeting with Engineering to clarify procedures for parcel splits, sub-meters, and requests for a second meter.
Beth Shockley	Yes	Organizing staff appreciation treats.	Assisted with District audit, pulling and scanning documentation for auditors.
Desiree Smith	Yes	Assisted team member with helping a customer to troubleshoot problems he was having with accessing our payment processor. Desiree was able to identify the issue and help the customer to utilize our online payment system.	

**Engineering Department**

<u>Name</u>	<u>Attendance</u>	<u>Customer Service</u>	<u>Work Quality</u>
Tamar Dawson		Met with Admin staff and educated them on parcels, parcel splits, sub meters and when a customer can request a 2 <sup>nd</sup> meter.	
Timothy Katkanov	Yes	Assisted Water Resources in updating the GIS components of the District's hydraulic model.	
Neil Tamagni			Refined and prepared an exemplary 2020 Annual Asset Development Report.

**Operations Department**

<u>Name</u>	<u>Attendance</u>	<u>Customer Service</u>	<u>Work Quality</u>
Christopher Bell		Customer on Oak Grove Ave. called and thanked crew for a great job removing water service from backyard. "Crew was very courteous and professional."	
Tim Cutler			Re-staked the Meyer Lemon Tree at the Sylvan Ranch Community Garden which suffered damage from a recent windstorm.  Created a water service template in CityWorks that will streamline Engineering's Work Order process.  Presented at the February special board meeting.
Kelly Drake	Yes		
James Ferro		Customer on Oak Grove Ave. called and thanked crew for a great job removing water service from backyard. "Crew was very courteous and professional."	
Jarrett Flink	Yes	Customer on Oak Grove Ave. called and thanked crew for a great job removing water service from backyard. "Crew was very courteous and professional."	Responded to a 4:00am emergency water main break on Old Auburn Rd.  Re-staked the Meyer Lemon Tree at the Sylvan Ranch Community Garden which suffered damage from a recent windstorm.
Brian Hensley	Yes		Presented at the February special board meeting.

<u>Name</u>	<u>Attendance</u>	<u>Customer Service</u>	<u>Work Quality</u>
Rick Jimenez	Yes		
Ricky Kelley	Yes		
Mike Mariedth	Yes		
Rex Meurer			Presented at the February special board meeting.
Chris Nichols	Yes		Fixed Gate #3 at the Corporation Yard when the laser eye stopped working.  Responded to a 4:00am emergency water main break on Old Auburn Rd.
Jace Nunes	Yes	Customer on Oak Grove Ave. called and thanked crew for a great job removing water service from backyard. "Crew was very courteous and professional."	Responded to a 4:00am emergency water main break on Old Auburn Rd.
Ryon Ridner			Responded to an emergency service leak at on Conover Dr.
John Spinella			Responded to an emergency water main break at on Old Auburn Rd.

**CITRUS HEIGHTS WATER DISTRICT  
DISTRICT STAFF REPORT TO BOARD OF DIRECTORS  
MARCH 17, 2021 MEETING**

SUBJECT : LONG RANGE AGENDA  
 STATUS : Consent/Information Item  
 REPORT DATE : March 10, 2021  
 PREPARED BY : Madeline A. Henry, Administrative Services Manager

**OBJECTIVE:**  
 Listed below is the current Long Range Agenda.

Legend	
S	Study Session
CC	Consent Calendar
P	Presentation
B	Business
PH	Public Hearing
CL	Closed Session

CITRUS HEIGHTS WATER DISTRICT LONG RANGE AGENDA					
MEETING DATE	MEETING TYPE	ITEM DESCRIPTION	ASSIGNED	AGENDA TYPE	AGENDA ITEM
April 21, 2021					
April 21, 2021		2021 Strategic Plan Update	Henry	CC	I/D
April 21, 2021		Groundwater Study Report	Scott/Hensley	CC	A
April 21, 2021		Update to Customer Advisory Committee Resolution	Henry	CC	A
April 21, 2021		Capital Improvement Program (CIP) Update	Pieri	P	I/D
April 21, 2021		Aquifer Storage and Recovery (ASR) Study Update	Scott/Hensley	S	I/D
May 19, 2021					
May 19, 2021		Poster Contest Presentation	Meurer/Scott	P	I/D
May 19, 2021		Review of the Draft Urban Water Management Plan (UWMP)	Scott/Meurer	SS	I/D
May 19, 2021		Comprehensive Annual Financial Report (CAFR)	Preciado/Talwar	B	A
May 19, 2021		Award of Contract for Langley Avenue and Chance Way Water Main Project	Pieri	CC	A
June 16, 2021					
June 16, 2021		Agreement for Audit Services	Preciado/Talwar	CC	A
June 16, 2021		Agreement with Response Structural Engineers	Pieri	CC	A
June 16, 2021		Water Meter Replacement Study	Scott	B	A
June 16, 2021		Award of Contract for Fair Oaks Boulevard Water Main Replacement Project	Pieri	B	A
June 16, 2021		Adoption of the Urban Water Management Plan (UWMP)	Scott/Meurer	B	A
June 16, 2021		Finance Corporation, Confirm & Appoint Officers of the Finance Corp., Status of Finance Corp.	Preciado/Talwar	B	A
July- Cancelled- Summer Recess					
August 18, 2021					
August 18, 2021		RWA/SGA Update	Straus/Scott	P	I/D
August 18, 2021		Approval of 2022 Strategic Plan	Henry/Talwar	CC	A
September 15, 2021					
September 15, 2021		Boring and Potholing Agreement	Pieri	CC	A
October 20, 2021					
October 20, 2021		Misc. Charges and Fees- Proposed	Talwar	B	A
October 20, 2021		2022 Budget- Proposed	Talwar	B	A
November 17, 2021					
November 17, 2021		On-Call Concrete Agreement	Scott	B	A
November 17, 2021		2022 Budget Adoption	Talwar	B	A
December 15, 2021					
December 15, 2021		District Officers	Henry	B	A
December 15, 2021		Selection of President and Vice President	Henry	B	A
December 15, 2021		Representatives and Alternatives	Henry	B	A

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

SUBJECT : ENGINEERING DEPARTMENT REPORT  
 STATUS : Information Item  
 REPORT DATE : March 03, 2021  
 PREPARED BY : Missy Pieri, Director of Engineering/District Engineer

Significant assignments and activities for the Engineering Department are summarized below. I will be available at the meeting to answer questions and/or provide additional details.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>PROJECT 2030 Water Main Replacement Project</b>	Engineering	Director of Engineering and Project Manager	Yes, First Quarter of 2021 (Final Completion Update)	Yes	Masterplan for replacement of water mains.	Top Alternative Implementation Plan developed and discussed at CAC Workshop #8 on 09/10/19.  Draft report submitted to CHWD on 01/06/20.  Board Presentation expected in mid-late 2021.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>CAPITAL IMPROVEMENT PROJECT</b> Corporation Yard / Facilities Master Plan Buildout	Engineering	Director of Engineering and Project Manager	Yes, 07/17/19 (Award of Contract)	Yes	Masterplan for office space requirements through 2045.	Staff to present findings to Board.
<b>CAPITAL IMPROVEMENT PROJECT</b> 6230 Sylvan Rd Perimeter Wall	Engineering	Director of Engineering and Assistant Engineer	Yes, TBD	No	Wall along the east side of District property.  2020 design.	CHWD received recorded easement document on 11/04/20.  Kick-off meeting occurred on 01/11/21.  Site survey performed on 02/09/21.



Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>CAPITAL IMPROVEMENT PROJECT Whyte Ave &amp; Langley Ave Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Senior Construction Inspector</p>	<p>Yes, 06/17/20 (Award of Contract)</p>	<p>Yes</p>	<p>2020 design, 2020 construction.</p>	<p>Received recorded easements on 01/20/21 except for one.</p> <p>Remaining one easement received from Placer County recorders on 03/02/21.</p> <p>100% Complete. Closing out project.</p> <p>Received recorded Notice of Completion and sent to Contractor on 02/25/21.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>CAPITAL IMPROVEMENT PROJECT</b>  <b>Robie Way - Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Senior Construction Inspector</p>	<p>Yes, 08/19/20 (Award of Contract)</p>	<p>Yes</p>	<p>2020 design, 2020 construction.</p>	<p>District submitted 8 easements to Placer County Recorder's office on 02/04/21.</p> <p>1 additional easement submitted to Placer County Recorder's office on 03/04/21.</p> <p>100% Complete. Closing out project.</p> <p>Received recorded Notice of Completion and sent to Contractor on 02/25/21.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>CAPITAL IMPROVEMENT PROJECT - Admiral Ave - Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Senior Construction Inspector</p>	<p>Yes, 08/19/20 (Award of Contract)</p>	<p>Yes</p>	<p>2020 design, 2020 construction.</p>	<p>District submitted 1 easement to Sacramento County Recorder's office on 02/04/21.</p> <p>100% Complete. Closing out project.</p> <p>Received recorded Notice of Completion and sent to Contractor on 02/25/21.</p>
<p><b>CAPITAL IMPROVEMENT PROJECT - Wells Ave - Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Senior Construction Inspector</p>	<p>Yes, 12/16/20 (Award of Contract)</p>	<p>Yes</p>	<p>2020 design, 2021 construction.</p>	<p>Easement acquisition complete. Waiting to record until construction complete.</p> <p>Award of Contract approved at the 12/16/20 Board Meeting.</p> <p>Construction started 03/01/21.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>CAPITAL IMPROVEMENT PROJECT - Wisconsin Dr - Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Senior Construction Inspector</p>	<p>Yes, 12/16/20 (Award of Contract)</p>	<p>Yes</p>	<p>2020 design, 2021 construction.</p>	<p>Easement acquisition complete. Waiting to record until construction complete.</p> <p>Award of Contract approved at the 12/16/20 Board Meeting.</p> <p>Construction started 03/01/21.</p>
<p><b>CAPITAL IMPROVEMENT PROJECT - Skycrest School Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Assistant Engineer</p>	<p>No</p>	<p>Yes</p>	<p>2020 design, 2021 construction.</p>	<p>District submitted 95% plans and easement to SJUSD on 01/25/21.</p> <p>Anticipate construction to be completed by Operations in summer 2021.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>CAPITAL IMPROVEMENT PROJECT - Walnut Drive Water Service Project</b></p>	<p>Engineering</p>	<p>Project Manager and Assistant Engineer</p>	<p>No</p>	<p>Yes</p>	<p>2021 design, 2021 construction.</p>	<p>Right-of-Way agent obtaining 5 easements.</p> <p>District preparing final plans.</p> <p>Anticipate construction to be completed by Operations in Spring 2021.</p>
<p><b>CAPITAL IMPROVEMENT PROJECT - Chance &amp; Langley Water Main</b></p>	<p>Engineering</p>	<p>Project Manager and Assistant Engineer</p>	<p>Yes</p>	<p>Yes</p>	<p>2021 design, 2021 construction.</p>	<p>Right-of-Way agent obtaining 4 easements.</p> <p>Roads are private.</p> <p>District submitted final plans to Division of Drinking Water for review.</p> <p>Preparing CEQA Notice of Exemption.</p> <p>Anticipate out to bid in late March 2021.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>CAPITAL IMPROVEMENT PROJECT - Fair Oaks Blvd Water Main</b>	Engineering	Project Manager and Assistant Engineer	Yes	Yes	2021 design, 2021 construction.	District preparing 90% plans.  Potholing to occur in March.
<b>CAPITAL IMPROVEMENT PROJECT - Mesa Verde High School Water Main</b>	Engineering	Project Manager and Assistant Engineer	Yes	Yes	2021, 2022 construction	District preparing Task Order for Engineering Services.  Survey to be completed in March 2021.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT Mitchell Village - 7925 Arcadia Dr</b></p>	<p>Engineering</p>	<p>Director of Engineering and Senior Construction Inspector</p>	<p>Yes, 03/30/20, 04/15/20 (Deferment of Fees)</p>	<p>No</p>	<p>200-300 unit development by Watt Communities.</p>	<p>Recorded 2 easements at 8017 Greenback Lane received on 12/08/20.</p> <p>Waiting on 6434 Sunrise Boulevard easement until water main installed.</p> <p>Received recorded SMUD access easement on 01/08/21.</p> <p>Project re-started on 7/14/20. Water portion 90% Complete.</p> <p>Creek Crossing Agreement with KB Home signed. Construction began on 03/04/21.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT Mitchell Village Land Exchange - 7925 Arcadia Dr</b></p>	<p>Engineering</p>	<p>Director of Engineering and Senior Construction Inspector</p>	<p>Yes, 11/20/19 (Approval of Agreement)</p>	<p>No</p>	<p>Land Exchange of District's Well Site for development property.</p>	<p>Boundary line adjustment recorded on 08/31/20.</p> <p>Received recorded easement granted to SMUD on 01/11/21.</p> <p>Project 100% Complete. Final Acceptance occurred on 02/11/21.</p>
<p><b>PRIVATE DEVELOPMENT Lawrence Ave Wyatt Ranch</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>Yes, 01/20/21 (Deferment of Fees)</p>	<p>No</p>	<p>23 lot subdivision.</p>	<p>District signed plans on 12/04/19.</p> <p>Deferment Agreement signed on 02/11/21.</p> <p>Preconstruction meeting occurred on 02/22/21.</p>



Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT</b>  <b>12057 Fair Oaks Blvd</b>  <b>Fair Oaks Senior Apartments</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Seniors apartment complex with 42 one bedroom and 68 two bedroom units.</p>	<p>District sent Will Serve Letter on 12/04/18.</p> <p>Received first submittal from developer's engineer on 10/29/20.</p> <p>District provided additional comments on first submittal on 12/28/20.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>7581 Sycamore Dr</b>  <b>- Parcel Split 1 - 3</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Parcel being split into 3 for 3 home subdivision.</p>	<p>Plans signed on 09/19/18.</p> <p>Awaiting construction.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT</b>  <b>8043 Holly Dr</b>  <b>Parcel Split 1 - 3</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Parcel being split into 3 for 3 home subdivision.</p>	<p>District provided comments to the developer's engineer on 01/02/19.</p> <p>Developer's engineer submitted second submittal on 09/02/20.</p> <p>District provided comments on second submittal on 09/30/20.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>208 Langley Ave</b>  <b>Parcel Split 1 - 2</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Parcel being split into 2 lots. New single family home construction on one lot.</p>	<p>District sent correspondence to property owner on 04/20/20.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>5425 Sunrise Blvd</b>  <b>Sunrise Village</b>  <b>Phase 1</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Redevelopment of Sunrise Village.</p>	<p>Plans signed on 10/21/20.</p> <p>Plan revision submitted on 01/12/21 and District responded on 01/20/21.</p> <p>Awaiting start of construction.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT</b>  <b>8501, 8505 Auburn Blvd</b>  <b>Overall Site</b></p>	<p>Engineering</p>	<p>Senior Construction Inspector and Assistant Engineer</p>	<p>Yes, Quitclaim (06/17/20)</p>	<p>No</p>	<p>Commercial Development.</p>	<p>Final plans signed on 10/17/19.</p> <p>100% complete on water service to Studio Movie Grill. Contractor to complete improvements to two other parcels. Project stopped.</p> <p>Recorded easement received and sent to owner on 10/13/20.</p> <p>Quitclaim Resolution approved by the Board and recorded 07/27/20.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>7969 Madison Ave</b>  <b>Orchard Apts Storage Units</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Demo tennis courts to make storage unit with fire sprinkler system.</p>	<p>Payment received for Fees on 04/01/20.</p> <p>District signed plans on 11/23/20.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>PRIVATE DEVELOPMENT</b> <b>7435 Stock Ranch Rd</b> <b>USPI Surgical Center</b>	Engineering	Senior Construction Inspector and Assistant Engineer	No	No	Proposed multi-use outpatient surgical center.	Plan Check Fees paid on 03/24/20.  District signed plans on 08/18/20.  Preconstruction Meeting occurred on 12/09/20.
<b>PRIVATE DEVELOPMENT</b> <b>7424 Sunrise Blvd</b> <b>Sunrise Pointe</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	Proposed multi-unit housing complex for low-income and homeless.	Received first submittal on 12/03/20.  Received second submittal on 01/13/21.  District provided comments on 02/01/21.
<b>PRIVATE DEVELOPMENT</b> <b>8220 Sunrise Blvd</b> <b>Carefield Citrus Heights</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	Proposed memory care facility.	Received schematic plans on 05/08/19.  Will-Serve letter sent on 05/20/19.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>PRIVATE DEVELOPMENT Livoti Development</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	Six Parcel Subdivision.	Received second submittal on 05/20/19.  District provided comments to the engineer on 06/26/19.
<b>PRIVATE DEVELOPMENT 7056 Sunrise Blvd Starbucks</b>	Engineering	Senior Construction Inspector and Assistant Engineer	No	No	Commercial Development.	Plans signed on 05/13/20.  Construction 95% complete.  District provided punchlist on 02/01/21.
<b>PRIVATE DEVELOPMENT 7951 Antelope Rd American River Collegiate Academy</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	Commercial Development.	District provided comments on preliminary plans on 07/09/20.  Project Referral received 10/07/20. Will Serve Letter sent 10/13/20.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT</b>  <b>6128 San Juan Ave</b>  <b>Green Acres</b></p>	<p>Engineering</p>	<p>Senior Construction Inspector</p>	<p>No</p>	<p>No</p>	<p>Commercial Development.</p>	<p>Approved final plans on 01/06/21.</p> <p>Construction of water facilities began on 02/08/21. 40% complete.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>7800 Greenback Ln</b>  <b>Raising Cane's</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Commercial Development.</p>	<p>Will Serve Letter sent 08/27/20.</p> <p>District received first submittal on 12/14/20 and provided comments to developer's engineer on 01/12/21.</p> <p>District received second submittal on 01/19/21 and provided comments on 02/22/21.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>8030 Greenback Ln</b>  <b>Popeye's Louisiana Chicken</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Commercial Development.</p>	<p>Project Referral received on 12/10/20.</p> <p>Will Serve Letter sent 12/21/20.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>PRIVATE DEVELOPMENT</b>  <b>7301 Greenback Ln</b>  <b>Safeway Fire Improvements</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Interior Tenant Improvements and Fire Improvements.</p>	<p>District reviewed and signed final plans on 10/14/20.</p> <p>Awaiting payment of final fees and start of construction.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>8556 Pheasant Ridge Ln</b>  <b>Fire Improvements</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>No</p>	<p>Extension of water main, addition of fire hydrant, and fire sprinklers.</p>	<p>District has no additional comments on plans as of 02/16/21.</p> <p>Awaiting payment of final fees.</p>
<p><b>PRIVATE DEVELOPMENT</b>  <b>6031 Sunrise Vista Dr</b>  <b>Apartments &amp; Annexation</b></p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>Yes (Resolution adopted for Annexation - 12/16/20)</p>	<p>No</p>	<p>Annexation and proposed apartments</p>	<p>Annexation fees paid.</p> <p>Adoption of Resolution approving annexation occurred at the 12/16/20 Board Meeting.</p> <p>Awaiting plans from developer's engineer for review.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>PRIVATE DEVELOPMENT Huntington Square</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	New fire service and domestic water service for additional apartments	District received second submittal 01/18/21.  District provided comments on 01/28/21.
<b>PRIVATE DEVELOPMENT 9048 Caballero Water Service</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	Single Family Home - New Water Service	District received preliminary title report on 01/27/21 to verify public utility easement.  District coordinating placement of water service.



Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<p><b>CITY OF CITRUS HEIGHTS PROJECT</b>                      Bonita &amp; Old Auburn Rd Storm Drain Improvements</p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>Yes</p>	<p>Bonita Way &amp; Old Auburn Rd Storm Drain Project.</p>	<p>Plans signed on 05/06/20.</p> <p>Water relocation to be performed by Operations prior to storm drain improvements.</p> <p>Gas lines relocation by PG&amp;E completed in September.</p> <p>Anticipate bid and start of construction in early 2021.</p>
<p><b>CITY OF CITRUS HEIGHTS PROJECT</b>                      Chula Vista Dr Storm Drain Improvements</p>	<p>Engineering</p>	<p>Director of Engineering and Assistant Engineer</p>	<p>No</p>	<p>Yes</p>	<p>Chula Vista Dr Storm Drain Project.</p>	<p>Project is on hold at the City as of 09/24/20.</p>

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>CITY OF CITRUS HEIGHTS PROJECT</b> <b>Mariposa Ave - Safe Routes to School Phase IV</b>	Engineering	Director of Engineering and Assistant Engineer	No	Yes	Frontage improvements along east side of Mariposa Ave from Madison Ave to Skycrest School.	District prepared Cost Liability letter to the City of Citrus Heights on 06/27/19.  Received signed plans from City's engineer on 01/29/21.  Anticipated start of construction is May 2021.
<b>CITY OF CITRUS HEIGHTS PROJECT</b> <b>Auburn Blvd - Phase 2 Road Improvements</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	City of Citrus Heights Frontage Improvements and Utility relocation on Auburn Blvd from Rusch Park to north.	Utility information sent to City's engineer on 06/30/20.  Potholing started on 10/20/20.  District received plans for review on 02/05/21 and provided comments on 03/08/21.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>CITY OF CITRUS HEIGHTS PROJECT</b> <b>Electric Greenway Bike Trail</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	City of Citrus Heights Bike Trail.	District received Cost Liability letter from the City on 10/09/20.  District awaiting further information from City's consultant regarding Cost Liability Letter.
<b>CITY OF CITRUS HEIGHTS PROJECT</b> <b>Twin Oaks &amp; Sunrise Blvd Drainage Project</b>	Engineering	Director of Engineering and Assistant Engineer	No	No	Storm Drain Improvements at northwest corner of Twin Oaks & Sunrise	District provided water facilities map.  Waiting on plans from City's Engineer.
<b>District-wide Easement Project</b>	Engineering	Director of Engineering, Project Manager and Assistant Engineer	Yes, Presentation to Board to review Scope of Work of the Request for Proposal on 03/17/21.	Yes	Research and review District facility locations and easements for potential additions/revisions.	Staff working on Easement Request for Proposal.  Presentation to Board to review Scope of Work of the Request for Proposal at the March Board Meeting.

Items of Interest	Department	Project Team	To Board? If so, Date	Strategic Planning Item	Item Description	Update from Last Report/ Current Status
<b>Review CEQA process for Capital Improvement Projects (CIPs)</b>	Legal	Assistant General Counsel Joshua Nelson and Director of Engineering	TBD	Yes	Review existing CEQA process for CIPs. Update and revise as necessary.	Staff will conduct an initial scoping meeting in Q1 2021.

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

SUBJECT : OPERATIONS DEPARTMENT REPORT  
 STATUS : Information Item  
 REPORT DATE : March 3, 2021  
 PREPARED BY : Tim Cutler, Water Distribution Supervisor  
 Rebecca Scott, Principal Operations Specialist

Facilities Maintenance			CIP Projects		
	Completed WO's			Completed WO's	
	Feb.	Year to Date		Feb.	Year to Date
Backflow Maintenance	0	0	C21-010 Water Mainline	0	0
Blow Off Maintenance	2	41	C21-011 Water Valves	0	0
Hydrant Maintenance	90	235	C21-012 Water Services	30	35
Leak Investigation	0	1	C21-013 Water Meters	26	90
Mainline Repair/Maintenance	1	2	C21-014 Fire Hydrants	0	0
Meter Box Maintenance	1	5	C21-103 Pot Hole Main	0	0
Meter Register Replacement	21	34	<b>TOTAL</b>	<b>56</b>	<b>125</b>
Meter Repair/Test/Maintenance	0	5	<b>Water Quality</b>		
Pot Hole Work	0	0	<i>Water Analysis Report: Bacteriological testing has met all California Department of Public Health requirements. 72 samples were collected with no positive results.</i>		
Water Service Repair/Locate	2	2			
Valve, Mainline Maintenance	152	379			
Valve Box Maintenance	1	1			
<b>TOTAL</b>	<b>270</b>	<b>705</b>			

**CITRUS HEIGHTS WATER DISTRICT**  
**DISTRICT STAFF REPORT TO BOARD OF DIRECTORS**  
**MARCH 17, 2021 MEETING**

SUBJECT : 2021 WATER SUPPLY - PURCHASED & PRODUCED  
 STATUS : Information Item  
 REPORT DATE : March 3, 2021  
 PREPARED BY : Brian M. Hensley, Water Resources Supervisor

**OBJECTIVE:**

Monthly water supply report, including a comparison to the corresponding month in the prior 5 years. The 2013 data is included for reference as it is the baseline consumption year for water conservation mandates.

Month	2013	2016	2017	2018	2019	2020	2021				Year-to-Date Comparison to 2013	
	Total Water Monthly acre feet						Surface Water Purchased	Ground Water Produced	Total Water Monthly	Total Water Annual	acre feet	%
							acre feet					
Jan	602.52	539.60	506.81	531.38	520.86	519.03	491.47	84.07	575.54	575.54	-26.98	-4.5%
Feb	606.36	484.53	443.99	525.73	447.48	589.8	401.12	84.05	485.17	1,060.71	-148.17	-12.3%
Mar	819.55	517.56	546.60	540.78	516.87	654.31						
Apr	1,029.73	677.81	575.52	646.09	682.90	767.24						
May	1,603.43	979.49	1,138.72	1,072.27	977.41	1,168.99						
Jun	1,816.73	1,343.76	1,412.94	1,387.03	1,328.07	1,475.82						
Jul	2,059.21	1,544.57	1,650.76	1,737.13	1,582.40	1,682.83						
Aug	1,924.28	1,579.80	1,570.80	1,583.78	1,603.36	1,660.59						
Sep	1,509.82	1,257.91	1,441.76	1,330.19	1,297.12	1,381.14						
Oct	1,297.42	840.80	1,128.97	1,061.88	1,083.17	1,185.00						
Nov	911.55	561.82	631.55	807.7	839.06	779.34						
Dec	700.94	518.62	574.43	558.97	548.17	620.34						
<b>Total</b>	<b>14,881.54</b>	10,846.27	11,622.85	11,782.93	11,426.87	12,484.43	892.59	168.12	1,060.71	1,060.71		
% of Total							84.15%	15.85%				

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

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SUBJECT : WATER SUPPLY RELIABILITY  
STATUS : Information Item  
REPORT DATE : March 3, 2021  
PREPARED BY : Brian Hensley Water Resources Supervisor

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### **OBJECTIVE:**

Receive status report on surface water supplies available to the Citrus Heights Water District (District).

### **BACKGROUND AND ANALYSIS:**

As of March 1, 2021, storage in Folsom Lake (Lake) was at 346,483 acre-feet, 36 percent of the total capacity of 977,000 acre-feet. This represents an increase in storage of 56,406 acre-feet in the past month.

The District's total water use during the month of February 2021 (485.17 acre-feet) was 20 percent below that of February 2013 (606.36 acre-feet).

The District continues to assist with preserving surface water supplies in the Lake by operating its groundwater wells. The District's groundwater production wells: Bonita, Skycrest, Mitchell Farms and Sylvan, are operational and used on a rotational or as-needed basis. Other District groundwater production wells, Palm and Sunrise, are available for emergency use.

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# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

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SUBJECT : WATER EFFICIENCY & SAFETY PROGRAM UPDATE  
STATUS : Information Item  
REPORT DATE : March 3, 2021  
PREPARED BY : Rex W. Meurer, Water Efficiency Supervisor

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Water Efficiency, Safety and Meter Program updates are summarized below.

### **ACTIVITIES AND PROGRESS REPORT**

Water Efficiency, Safety and Meter Program activities during the month of February 2021 included:

- Seven High Efficiency Toilet (HET) rebates were processed for the month of February. This compares to six HET rebates processed for the month of February 2020. The five year monthly average (2016-2020) of February HET rebates is 9.
- A total of six High Efficiency Clothes Washer (HECW) rebates were issued during the fourth quarter of 2020. This compares to five HECW rebates issued for the fourth quarter of 2019. A total of 27 HECW rebates were issued for 2020. As of 12/31/2020, SMUD is no longer processing HECW rebates for the District. The District is now processing the rebates in-house. Zero rebates were issued during the month of February.
- There were six Smart irrigation controllers installed for customers in the month of February. A total of nine Smart irrigation controllers have been installed year to date.
- Three Pressure Reducing Valve (PRV) rebates have been issued year to date. Three PRV inspections are pending. Pending PRV inspections are in the process of being scheduled or the District is waiting for the customer to complete the installation of the PRV.
- 21 service calls were completed for the month of February. There were three reports of water waste received in February through CHWD's Water Efficiency web page. Staff continues reaching out to customers via telephone for water waste violations and leak notifications.
- Forklift Operator training is required every 3 years. In order to fulfill training requirements, staff members are required to complete the skills/driving portion of the training on an individual basis. As of February 28, eight staff members have completed the skills/driving portion of the training.
- Staff is working with to produce two demonstration videos on how to program a Smart irrigation controller. The videos focus on the Rachio and B-Hyve Smart controllers. Topics covered include, how to sync your controller to the internet, how to program the controller and setting up a watering schedule. The videos will be available through a link on our website and on YouTube later this month.
- CHWD's WaterSmart classes will continue to be given online as "virtual" classes for 2021. The



2021 WaterSmart class schedule is as follows:

- March 18: Smart Controller Basics
- April 8: Garden-Friendly Pest Management, Weed Control & Soil Management
- May 13: The Perfect Plants: What, Where and When
- June 17: Tree Care 101
- September 16: Sylvan Ranch Community Garden (1 Year Later)

All classes will be held at noon on Thursdays. Attendees can participate in a live Q & A session during each presentation. All virtual classes are being archived on CHWD’s website and on YouTube, where they can be viewed any time.

- CHWD has three garden plots at the Sylvan Ranch Community Garden featuring water efficient landscaping. The plots are being used as an education area for activities, such as workshops, demonstrations and presentations. CHWD is working with a customer based volunteer “Garden Corps.” These volunteers are now maintaining the plots by removing weeds and checking the irrigation system and controller timers. A WaterSmart class is planned to be held at the SRCG on September 16, 2021 at noon. The class will cover how to maintain your maturing garden and lessons learned at SRCG, one year later.
- The following table summarizes the Residential Gallons Per Capita Per Day (R-GPCD) values for CHWD to date for 2021:

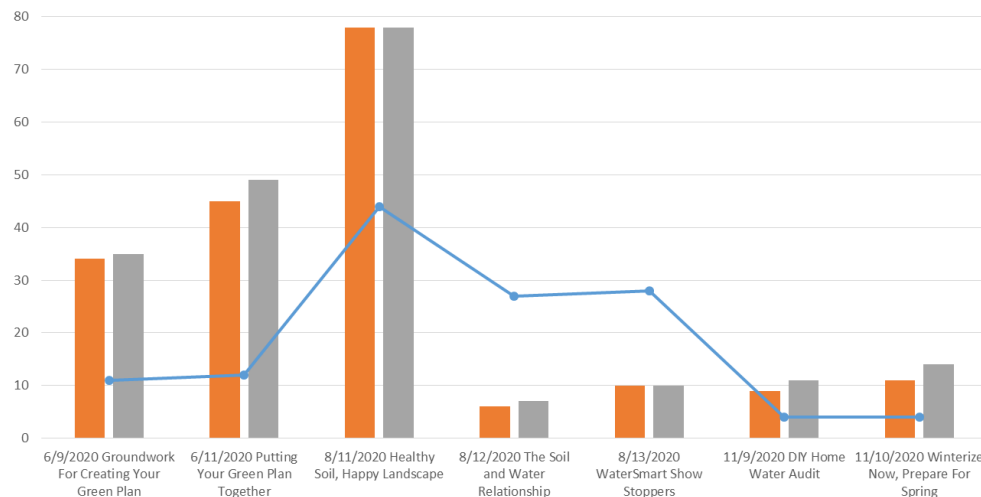
<b>Month</b>	<b>R-GPCD 2020</b>	<b>R-GPCD 2021</b>	<b>% CHANGE</b>
January	76	84	+10.5%
February	92	78	-15.2
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

- The following table summarizes the service requests and work orders of Water Efficiency staff for February 2021:

<b>WORK ORDERS</b>	<b>Feb. 2021</b>	<b>Feb. 2020</b>
CHANGE TOUCH-READ TO RADIO READ	0	1
CONVERT TO RADIO-READ METER	3	1
METER BOX MAINTENANCE	1	4
METER REPAIR	0	0
METER REPLACEMENT	0	1
METER TESTING	6	6
REGISTER REPLACEMENT	14	20
RADIO-READ REGISTER REPLACEMENT	0	0
INSTALL METER	12	1
<b>TOTAL</b>	<b>36</b>	<b>34</b>

<b>SERVICE REQUESTS</b>	<b>Feb. 2021</b>	<b>Feb. 2020</b>
CONSERVATION REQUEST	21	4
WATER EFFICIENCY REVIEWS	3	6
HIGH EFFICIENCY TOILET REBATES	7	2
CHECK FOR LEAK	0	1
UNABLE TO OBTAIN METER READ	27	40
TRIM SHRUBS	10	15
METER BURIED	20	23
METER MAINTENANCE	22	81
LOCKED GATE	7	4
RE-READ METER	9	20
READ METER	0	0
METER BOX MAINTENANCE	1	2
MOVE-IN/MOVE-OUT	21	18
CAR OVER METER	13	20
<b>TOTAL</b>	<b>161</b>	<b>236</b>

### WaterSmart Class Viewership



█ = Viewership, Jan. 2021  
█ = Viewership, Feb. 2021  
 Line = live attendees

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

SUBJECT : DISCUSSION AND POSSIBLE ACTION TO AMEND POLICY 4101.A1:  
SALARY SCHEDULE

STATUS : Action Item

REPORT DATE : March 1, 2021

PREPARED BY : Madeline Henry, Administrative Services Manager  
Susan Talwar, Director of Finance and Administrative Services

### **OBJECTIVE:**

Consider approval of the revised Policy 4101.A1 Salary Schedule to include the new classification career series, Communications and Public Engagement, and add the optional title of Principal Management Analyst as an alternate to the Administrative Services Manager/Chief Clerk of the Board position, for potential future use.

### **BACKGROUND AND ANALYSIS:**

#### *Background on the District's Communications & Public Engagement Program*

The Board's Strategic Plan Goals and Objectives 2018-2021 address a multitude of priorities for the District, including a number of initiatives centered around the District's communications and public engagement activities. As shown on Attachment 1 to this report, the workload around communication, outreach, and engagement has grown significantly in the last few years.

There are many federal, state, and local regulations that require public notice and input for what the District does as a water provider. However, communications and public engagement go beyond these minimum requirements because the District is committed to involving the community to achieve more effective and sustainable outcomes over the long-term. Taking a proactive approach to public engagement can also help customers and stakeholders gain a greater understanding of the District's priorities and programs.

Traditionally, water providers have met their mission as a silent service. In the past, much of the District's work received little attention from the communities it serves. That has changed with the prevalence of social media and increased visibility of local government agencies. The District needs to be proactive with messaging while also having the ability to pivot and respond quickly to public concerns that may stem from misinformation.

If the District is not communicating effectively, our customers and stakeholders may turn to less reliable sources of information. These sources, including social media and various other forms of media, including for-profit media, may provide information that is incorrect, incomplete, or out of context. Engaged with effectively, social and other forms of media can build support for and provide understanding of public interest issues like drinking water. If used to spread misinformation, it can have devastating impacts. Inadequate, inaccurate information can cause reputation damage, loss of support for a project, and have long term impacts.

The District's Strategic Plan includes communications initiatives that strengthen existing, and develop new, resources to improve communications and provide opportunities for engagement.

Audiences can be grouped in several ways, one of which is level of engagement. The most engaged customers and stakeholders are those who have a particular interest in the District's policies or programs. Many of our communication efforts are specifically focused on the most engaged groups as they have the highest interest in receiving communications from the District and have the most utility for that information. The District recognizes that the most engaged audience members tend to have highly specialized interests, such as water rates or specific capital projects. We know that it is also possible for disinterested or passive audience members to shift suddenly to interested or engaged when a District policy or program impacts them directly or if they receive misinformation from another source. Staff needs to keep this in mind when planning an initiative, program, or project.

The District's communications and public engagement program is an emerging program, and many of the District's other initiatives hinge on its success. Establishing professional and personal relationships that support trust, meaningful dialogue and collaboration takes time, but investing in the relationship-building will serve the District well into the future. Taking this into account, staff worked with Regional Government Services (RGS) to evaluate existing District resources, priorities and workload to identify how the program can be managed successfully

#### *Evaluation of & Recommendations for the Communications & Public Engagement Program*

RGS evaluated whether the work could be absorbed within an existing position and how other public agencies are handling similar public engagement activities within their organizations. In a review of nine public agencies (municipal utilities, water districts, and water wholesaler) with populations ranging from 42,000 to 91,000 and at least 13,500 service connections, RGS found that they each had a minimum of one dedicated communications staff member, with half of them having three such positions.

RGS also completed a workload assessment across the District, as well as a job analysis to determine the appropriate classification into which the communications job duties could be placed based on the similarity of work, difficulty of the work and the qualifications necessary to perform the core duties. Based on workload, and the specialized knowledge, skills and abilities required to successfully perform the representative duties of the job, the addition of a new classification career ladder/series, Communications and Public Engagement, is proposed.

Staff completed a review of salaries for similar positions with water utilities and public agencies in the Sacramento region, per Policy 4101. Internal salary relationships, another key factor in determining compensation, was also considered. The recommended salaries for the Communication and Public Engagement career series (*Communications and Public Engagement Series*) are shown in Attachment 2.

Staff recommends repurposing an existing and vacant Senior Management Analyst position to a position that will manage/coordinate CHWD's emerging Communications and Public Engagement program. It should be noted that additional contractor/consultant resources will continue to be needed to address specialized work requirements (e.g., video), peak workload, special projects, and more generally, to achieve the District's communications program objectives.

Recommendation for the Management Services Series

Further, since the time that the Salary Schedule was adopted on November 18, 2020; it has become clear that the title of one of the classifications in the **Management Services (MS) Series** should be updated to align the title with the District’s career series approach. It is recommended that an optional alternate title be added to the “Administrative Services Manager/Chief Board Clerk” classification to read “Administrative Services Manager/Principal Management Analyst/Chief Clerk of the Board.” This additional Principal Management Analyst title will provide greater flexibility to the District, and be available for future use as the organization continues to evolve.

These actions do not expand the District’s regular workforce beyond the organizational structure previously approved by the Board of Directors, therefore further Board action beyond approving the proposed Amended Salary Schedule is not necessary.

**RECOMMENDATION:**

Amend District Policy No. 4101.A1 Salary Schedule as presented to include a New Job Classification/Series Ladder Focused on Communications and Public Engagement and add the optional title of Principal Management Analyst as an alternate to the Administrative Services Manager/Chief Clerk of the Board position, for potential future use.

**ATTACHMENTS:**

- 1) RGS Analysis of Communication and Public Engagement related Board of Directors’ Strategic Initiatives
- 2) Policy 4101.A1. Compensation –Salary Schedule

**ACTION:**

Moved by Director \_\_\_\_\_, Seconded by Director \_\_\_\_\_, Carried \_\_\_\_\_

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# **ATTACHMENT 1**

**RGS Analysis of Communication and Public  
Engagement related Board of Directors'  
Strategic Initiative**

# RGS Evaluation of CHWD Identified Communications/PE Work Program

2018	2019	2020	2021
Social Media- Facebook	Social Media- Facebook	Develop Communications Plan	Develop Communications Plan
Social Media- Nextdoor	Social Media- Nextdoor	Social Media- Facebook	Social Media- Facebook
Newsletter- Print	Newsletter- Print	Social Media- Nextdoor	Social Media- Nextdoor
Website Updates	Videos- 1	Social Media- Twitter	Social Media- Twitter
Community Events	Website Updates	Newsletter- Print	Newsletter- Print
WaterSmart Classes	Community Events	Print Media- Bill Inserts	Newsletter- Digital
WaterSmart Programs	WaterSmart Classes	Videos-26	Print Media- Bill Inserts
Customer Advisory Committee	WaterSmart Programs	Website Updates	Videos
Water Efficiency Public Outreach	Customer Advisory Committee	Community Events	Website Updates
Website Redesign- Evaluation	Project 2030- CAC	WaterSmart Classes (Virtual)	Community Events
Prop 218 Notice	Project 2030- Market Research	WaterSmart Programs	WaterSmart Classes (Virtual)
	WaterSmart- 10% increase in attendance	Media Relations	WaterSmart Programs
	Attend Community Events	Customer Advisory Committee	Media Relations
	WE Reviews- 10% increase in participation	Project 2030- CAC	Customer Advisory Committee
	Website Redesign- RFP	Project 2030- Engagement Strategy	Project 2030- CAC
	Prop 218 Notice	WMRS- CAC	Project 2030- Engagement Strategy
		WMRS- Engagement Strategy	WaterSmart- 20% increase in attendance
		WaterSmart Communications Plan	WaterSmart- 1 class at garden
		WaterSmart- 10% increase in attendance	WE Rebates- 10% increase in participation
		WE Reviews- 10% increase in participation	WE Reviews- 10% increase in participation
		Community Garden & Volunteers	WMRS- CAC
		Communications Strategic Plan	WMRS- Engagement Strategy
		Complete Website Redesign	Centennial
		Centennial	Brand Audit
		Brand Audit	Market Research
		CVRA Outreach	Behind the Tap Campaign
			Voices of CHWD Campaign



Ongoing



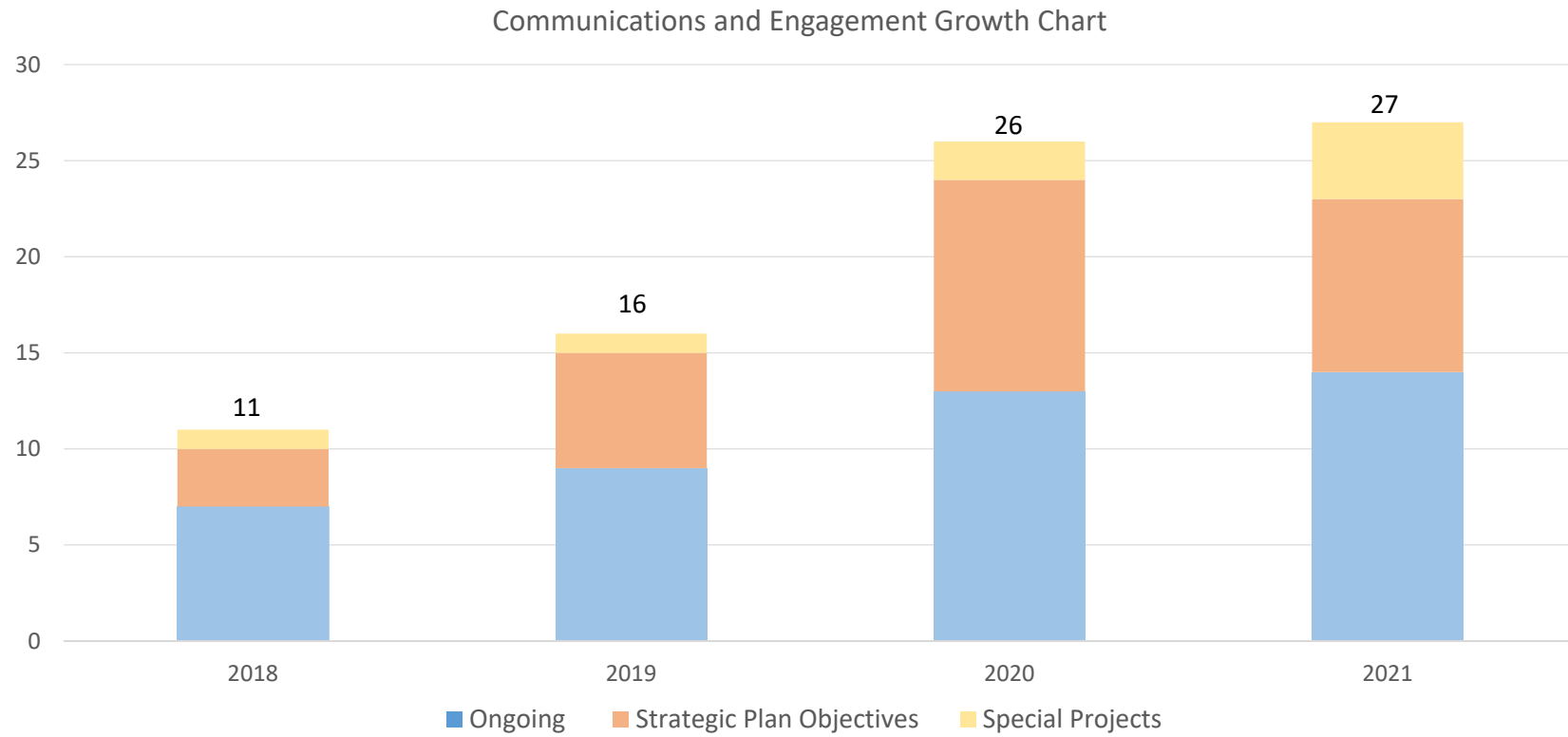
Strategic Plan Objectives



Special Projects



# Chart of CHWD Identified Communications/Engagement Work Program Growth





## **ATTACHMENT 2**

### **Policy 4101.A1. Compensation – Salary Schedule**

## Attachment 4101.A1 SALARY SCHEDULE PROPOSED- EFFECTIVE MARCH 17, 2021

HOURLY AND MONTHLY* SALARY RANGE				
JOB TITLE / JOB CLASS	2021 Base Hourly	2021 Base Monthly	2021 Maximum Hourly	2021 Maximum Monthly
<b><u>Organizational Leadership</u></b>				
General Manager (E)	83.52	14,477.59	112.76	19,545.69
Assistant General Manager (E)	69.94	12,123.79	94.43	16,367.88
<b><u>Accounting Series</u></b>				
Director of Finance/ Director of Finance and Administrative Services/ Director of Administrative Services (E)	63.59	11,021.28	85.85	14,880.06
Accounting Manager /Principal Accountant (E)	46.58	8,074.26	62.88	10,899.20
Senior Accountant (E)	39.86	6,908.80	53.81	9,325.55
Accountant	36.24	6,281.25	48.91	8,478.64
<b><u>Customer Service Series</u></b>				
Senior Customer Services Specialist	34.65	6,006.57	46.79	8,110.50
Customer Service Specialist	31.32	5,428.62	42.29	7,330.35
Customer Service Technician	25.89	4,486.34	34.95	6,058.07
<b><u>Engineering Technical Series</u></b>				
Project Manager (E)	53.90	9,342.45	72.76	12,612.58
Engineering Supervisor/Principal GIS Specialist (E)	41.98	7,276.35	56.67	9,822.98
Engineering/GIS Specialist	36.51	6,327.89	49.29	8,543.37
Engineering/GIS Technician	33.18	5,751.97	44.80	7,765.88
Engineering Aide	28.85	5,001.48	38.97	6,754.43
<b><u>Construction Inspection Series</u></b>				
Construction Inspection Supervisor/Principal Construction Inspector (E)	40.83	7,076.66	55.12	9,554.44
Senior Construction Inspector	35.50	6,153.45	47.93	8,306.96
Construction Inspector	32.28	5,594.57	43.58	7,553.52

**HOURLY AND MONTHLY\* SALARY RANGE**

<b>JOB TITLE / JOB CLASS</b>	<b>2021 Base Hourly</b>	<b>2021 Base Monthly</b>	<b>2021 Maximum Hourly</b>	<b>2021 Maximum Monthly</b>
<b><u>Engineering Series</u></b>				
Director of Engineering /District Engineer (E)	69.94	12,123.79	94.43	16,367.88
Principal Civil Engineer (E)	63.59	11,021.28	85.85	14,880.06
Senior Civil Engineer (E)	57.81	10,021.77	78.04	13,527.67
Associate Civil Engineer (E)	52.56	9,110.00	70.95	12,297.36
Assistant Civil Engineer	45.71	7,921.67	61.71	10,695.10
Assistant Engineer	36.51	6,327.03	49.35	8,554.93
<b><u>Information Technology (IT) Series</u></b>				
Information Technology Manager (E)	49.86	8,642.68	67.31	11,667.91
Principal Information Technology Analyst (E)	45.33	7,856.81	61.19	10,605.45
Senior Information Technology Analyst	41.20	7,141.51	55.63	9,642.19
Information Technology Analyst	37.46	6,492.98	50.70	8,787.65
Information Technology Technician	31.22	5,411.45	42.15	7,305.55
<b><u>Management Services (MS) Series</u></b>				
Administrative Services Manager/ Principal Management Analyst /Chief Board Clerk (E)	47.13	8,169.02	63.64	11,030.61
Senior Management Analyst (E)	40.98	7,103.57	55.34	9,592.61
Management Analyst	37.25	6,457.47	50.31	8,719.74
Management Technician	33.88	5,872.55	45.73	7,926.06
<b><u>Communications &amp; Public Engagement Series</u></b>				
Communications & Public Engagement Manager /Principal (E)	47.13	8,169.02	63.64	11,030.61
Senior Communications & Public Engagement Analyst (E)	40.98	7,103.57	55.34	9,592.61
Communications & Public Engagement Analyst	37.25	6,457.47	50.31	8,719.74
Communications & Public Engagement Technician	33.88	5,872.55	45.73	7,926.06

**HOURLY AND MONTHLY\* SALARY RANGE**

JOB TITLE / JOB CLASS	2021 Base Hourly	2021 Base Monthly	2021 Maximum Hourly	2021 Maximum Monthly
<b><u>Water Distribution Series</u></b>				
Director of Operations (E)	63.59	11,021.28	85.85	14,880.06
Water Distribution Supervisor (E)	48.23	8,360.37	65.11	11,286.41
Assistant Water Distribution Supervisor	41.23	7,147.23	55.66	9,647.91
Water Distribution Lead Worker/Operator	35.86	6,216.39	48.40	8,388.99
Water Distribution Operator II	32.59	5,649.88	44.00	7,627.92
Water Distribution Operator I	29.63	5,136.78	40.01	6,933.60
Water Distribution Worker	21.39	3,708.09	28.87	5,003.25
<b><u>Operations Specialist Series</u></b>				
Principal Operations Specialist	48.23	8,360.37	65.11	11,286.41
Senior Operations Specialist	43.84	7,599.30	59.18	10,258.29
Operations Specialist	37.65	6,525.41	50.81	8,808.62
Operations Technician	34.22	5,932.19	46.20	8,009.40
<b><u>Water Efficiency Series</u></b>				
Water Efficiency Supervisor (E)	37.77	6,548.29	50.99	8,839.15
Senior Water Efficiency Specialist	32.85	5,693.75	44.35	7,687.05
Water Efficiency Specialist	29.85	5,174.93	40.32	6,988.92
Water Efficiency Technician	27.15	4,705.69	36.64	6,351.82
<b><u>Water Resources Series</u></b>				
Water Resources Supervisor/Chief Operator (E)	48.23	8,360.37	65.11	11,286.41
Water Resources Specialist	34.27	5,941.72	46.28	8,020.85
Water Resources Technician	31.16	5,401.91	42.06	7,290.29
<b><u>Miscellaneous Series</u></b>				
Intern	12.39	2,147.79	24.77	4,293.68

(E) = Exempt

\*Monthly Salaries are average monthly compensation over a 12-month period based on the Hourly Salary Range.

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

SUBJECT : REVIEW AND POSSIBLE ACTION TO APPROVE INVESTMENT OF DISTRICT FUNDS POLICY

STATUS : Action Item

REPORT DATE : March 4, 2021

PREPARED BY : Alberto Preciado, Accounting Manager  
Susan K. Talwar, Director of Finance and Administrative Services  
Josh Nelson, Assistant General Counsel

### **OBJECTIVE:**

Review and re-adopt District Policy No. 6300, Investment of District Funds.

### **BACKGROUND AND ANALYSIS:**

Section 6300 of the District's investment policy specifies that the policy shall be reviewed, modified as necessary, and re-adopted or amended at least annually. The policy was last reviewed by the Board on February 19, 2020.

The Policy has been reviewed by District staff and by District Assistant General Counsel Josh Nelson. Assistant General Counsel Nelson's regular review covers the existing Policy and the current California Government Code Sections related to public agency investments. Accompanying this Board agenda report is a revised version of the policy with a few updates to reflect recent changes in the applicable Government Code provisions. These edits are summarized below:

- 6300.50(G): Changes the maximum percentage of funds in commercial paper (unsecured short-term debt issued by corporations) from 40% to 25%. Public agencies with less than \$100 million in investible funds may not invest more than 25% of their portfolio in commercial paper. CHWD has approximately \$19 million in investible funds, but does not currently invest in commercial paper. The District's focus in practice has been to primarily utilize the Local Agency Investment Fund (LAIF) for investing funds. This updated measure is intended to further safeguard public funds that are invested.
- 6300.50(J): Clarifies that no more than 10% of the District's invested funds may be invested in commercial paper and medium-term notes (debt issued by corporations, usually maturing in 5-10 years) of any single issuer. The CA state legislature wanted to clarify that agencies could not invest more than 10% of their portfolios with a single issuer in order to mitigate risk of loss. Previously, the statute could have been interpreted in such a way that a portfolio could invest more than 10% in a single issuer's investments, using different investment types.

### **RECOMMENDATION:**

Review District Policy No. 6300, Investment of District Funds, and adopt as amended to reflect changes in applicable law.

### **ATTACHMENTS:**

- 1) Proposed Policy 6300 – Investment of District Funds

### **ACTION:**

Moved by Director \_\_\_\_\_, Seconded by Director \_\_\_\_\_, Carried \_\_\_\_\_

6300.00

INVESTMENT OF DISTRICT FUNDS

6300.01 Purpose

This fiscal management policy is intended to provide a policy and guidelines for the District's Treasurer or designee for the prudent and suitable investment of funds and monies of the District without regard to source. The ultimate goal is to enhance the economic status of the District while protecting its funds.

The District's cash management system is designed to accurately monitor and forecast expenditures and revenues, thus enabling the District to invest operating and reserve funds to the fullest extent possible. The District shall attempt to obtain the highest yield, provided that all investments first meet the criteria established for safety and liquidity.

Funds not included in this Policy include deferred compensation funds.

6300.10 Definition and Provision of the Government Code

The Board of Directors and Officers authorized to make investment decisions on behalf of the District investing public funds pursuant to California Government Code sections 53600 et seq. and 53630 et seq. are trustees and therefore fiduciaries subject to the prudent investor standard. As an investment standard, any investment shall be made as if it is one which a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency.

6300.20 Authority

The investment policies and practices of the District are based upon compliance with federal, state and local law and prudent money management. Investments will be in compliance with governing provisions of law (California Government Code sections 53600 et seq. and 53630 et seq. as amended) and this Policy. This Policy shall take precedence when more restrictive than the California Government Code.

6300.21 The Board of Directors delegates for a one-year period the day-to-day management of the District's investments to the Treasurer, subject to the conditions of this Policy. The Treasurer shall be responsible for all transactions undertaken and shall establish a system of documentation and reporting pursuant to Section 6300.70 of this Policy.

6300.30 Ethics and Conflicts of Interest

Directors and Officers involved in the investment process shall refrain from personal business activity that could conflict with the proper execution of the investment program, or which could impair their ability to make impartial investment decisions.

6300.35      Prudence

Investments shall be made in the context of the “Prudent Investor” rule, which states that:

Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived.

The General Manager, District Treasurer and their designees involved in the investment process, acting in accordance with this Investment of District Funds Policy and exercising due diligence, shall not be held personally responsible for a specific security’s credit risk or market price changes, provided that these deviations are reported immediately and that appropriate action is taken to control adverse developments.

6300.40      Objectives

6300.41 Safety of Principal - Safety of principal is the primary objective of the District. Each investment transaction shall seek to preserve the principal of the portfolio, whether from institutional default, broker-dealer default or erosion of market value of securities. The District shall seek to preserve principal by mitigating the following two types of risk:

A.    Credit Risk - Credit risk, defined as the risk of loss due to failure of an issuer of a security, shall be mitigated by investing in only very safe institutions and by diversifying the investment of District funds so that the failure of any one issuer would not unduly harm the District’s cash flow.

B.    Market Risk - The risk of market value fluctuations due to overall changes in the general level of interest rates shall be mitigated by limiting the weighted average maturity of the District’s invested funds to three (3) years. It is explicitly recognized herein, however, that in a diversified portfolio, occasional measured losses are inevitable, and must be considered within the context of the overall investment return.

6300.42 Liquidity - Liquidity is the second most important objective. Investments shall be made whose maturity dates are compatible with cash flow requirements and which can be easily and rapidly converted into cash without substantial loss of value.

6300.43 Return on Investment - Investments shall be undertaken to produce an acceptable rate of return after first considering safety of principal, liquidity, and without undue risk.

6300.50      Authorized Investments

District investments are governed by the California Government Code sections 53600 et seq. and 53630 et seq. Within the context of these sections the following investments are authorized:

A.      Local Agency Investment Fund - The District may invest in the Local Agency Investment Fund (LAIF) established by the California State Treasurer and created by Government Code sections 16429.1 through 16429.4 for the benefit of local agencies up to the maximum permitted by the LAIF's Local Investment Advisory Board.

B.      Securities of the U.S. Government and its Agencies - United States Treasury Bills, Notes, Bonds, or Certificates of Indebtedness, or those for which the faith and credit of the United States are pledged for payment of principal and interest. There is no limitation as to the percentage of the District funds which can be invested in this category as they are all safe and liquid. Purchases may not have a term remaining to maturity in excess of five (5) years. (Gov. Code, §§ 53601(b) and 53635(a).)

C.      State of California Obligations - Registered State Warrants or Treasury Notes or Bonds of this State or any of the other 49 United States, as defined in Government Code sections 53601(c), 53601(d) and 53651 and pursuant to Government Code section 53635.2.

D.      Local Agency Obligations - Obligations issued by any local agency, as defined by the Government Code, within the State. Obligations may be bonds, notes, warrants, or other evidences of indebtedness, as defined in Government Code sections 53601(e) and 53651 and pursuant to Government Code section 53635.2.

E.      U.S. Agencies - Federal agency or United States government-sponsored enterprise obligations, participations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises. (Gov. Code, §§ 53601(f), 53651).

F.      Bankers' Acceptances – Bankers' acceptances otherwise known as bills of exchange or time drafts that are drawn on and accepted by a commercial bank. Purchases of bankers' acceptances shall not exceed 180 days' maturity or 40 percent of the District's money that may be invested pursuant to Government Code section 53601(g). However, no more than 30 percent of the District's money may be invested in the bankers' acceptances of any one commercial bank pursuant to Government Code section 53601(g). (Gov. Code, §§ 53601(g), 53651)

G.      Prime Commercial Paper - Commercial paper of "prime" quality of the highest ranking or of the highest letter and number rating as provided for by a nationally recognized statistical rating organization. The entity that issues the



commercial paper shall meet all of the following conditions in either paragraph (1) or (2):

- (1) The entity meets the following criteria:
  - (a) Is organized and operating in the United States as a general corporation.
  - (b) Has total assets in excess of five hundred million dollars (\$500,000,000).
  - (c) Has debt other than commercial paper, if any, that is rated "A" or higher by a nationally recognized statistical rating organization.
- (2) The entity meets the following criteria:
  - (a) Is organized within the United States as a special purpose corporation, trust, or limited liability company.
  - (b) Has program-wide credit enhancements including, but not limited to, overcollateralization, letters of credit, or surety bond.
  - (c) Has commercial paper that is rated "A-1" or higher, or the equivalent, by a nationally recognized statistical-rating organization.

Eligible commercial paper shall have a maximum maturity of 270 days or less. In addition:

- (a) No more than ~~40~~25 percent of the District's money may be invested in eligible commercial paper; and,
- (b) No more than 10 percent of the District's money that may be invested pursuant to this section may be invested in the outstanding commercial paper of any single issuer. (Gov. Code, § 53601(h), 53635.)

H. Investment of Surplus Funds in Deposits - Notwithstanding Government Code section 53601 or any other provision of the Government Code, the District, at its discretion, may invest a portion of its surplus funds in deposits at a commercial bank, savings bank, savings and loan association, or credit union that uses a private sector entity that assists in the placement of certificates of deposit. The following conditions shall apply:

- (1) The District shall choose a nationally or State-chartered commercial bank, savings bank, savings and loan association, or credit union in this State to invest the funds, which shall be known as the "selected" depository institution.
- (2) The selected depository institution may use a private sector entity to help place District deposits with one or more commercial banks, savings banks, savings and loan associations, or credit unions that are located in the

United States, and are within the network used by the private sector entity for this purpose.

(3) Any private sector entity used by a selected depository institution to help place District deposits shall maintain policies and procedures requiring both of the following:

(a) The full amount of each deposit placed pursuant to paragraph (2) above and the interest that may accrue on each such deposit shall at all times be insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.

(b) Every depository institution where funds are placed shall be capitalized at a level that is sufficient, and be otherwise eligible, to receive such deposits pursuant to regulations of the Federal Deposit Insurance Corporation or the National Credit Union Administration, as applicable.

(4) The selected depository institution shall serve as a custodian for each such deposit.

(5) On the same date that the District's funds are placed pursuant to paragraph (2) above by the private sector entity, the selected depository institution shall receive an amount of insured deposits from other financial institutions that, in total, are equal to, or greater than, the full amount of the principal initially deposited through the selected depository institution pursuant to paragraph (2) above.

(6) Notwithstanding Government Code section 53601.8 subdivisions (a) to (g), inclusive, a credit union shall not act as a selected depository institution under Government Code sections 53601.8 or 53635.8 unless both of the following conditions are satisfied:

(a) The credit union offers federal depository insurance through the National Credit Union Administration.

(b) The credit union is in possession of written guidance or other written communication from the National Credit Union Administration authorizing participation of federally insured credit unions in one or more certificate of deposit placement services and affirming that the monies held by those credit unions while participating in a deposit placement service will at all times be insured by the federal government.

(7) Purchases of certificates of deposit pursuant to Government Code sections 53601.8 and 53635.8 shall not, in total, exceed thirty (30) percent of the District's funds that may be invested for this purpose.

(8) Excluding purchases of certificates of deposit pursuant to Government Code sections 53601.8, no more than ten (10) percent of the District's funds that may be invested for this purpose may be submitted, pursuant to paragraph (2) above, to any one private sector entity that assists in the placement of deposits with one or more commercial banks, savings banks, savings and loan associations, or credit unions that are located in the United States, for the District's account. (Gov. Code, §§ 53601.8, 53635.8.)

I. Certificates of Deposits and Time Deposits - The District may invest in nonnegotiable time deposits collateralized in accordance with the Uniform Commercial Code, in those banks and State and federal associations which meet the requirements for investment in negotiable certificates of deposit (NCD). When conditions so warrant, the first \$100,000 of collateral security for such deposits can be waived if the financial institution is insured pursuant to federal and State law.

J. Medium-Term Corporate Notes - Medium-term notes, defined as all corporate and depository institution debt securities with a maximum remaining maturity of five (5) years or less issued by corporations organized and operating within the United States or by depository institutions licensed by the United States or any state and operating within the United States. Notes eligible for investment shall be rated "A" or better by a nationally recognized statistical rating organization. No more than 30 percent of the District's invested funds may be invested in medium-term notes, and no more than 10 percent of the District's invested funds may be invested in the commercial paper and medium-term notes of any single issuer. (Gov. Code, §§ 53601(k) and 53635.2)

K. Mutual Funds/Money Market Mutual Funds - To be eligible for investment pursuant to this subsection (K), these funds shall meet the following conditions in either paragraph (1) or (2) below:

(1) Shares of beneficial interest issued by diversified management companies (otherwise known as mutual funds) that invest in the securities and obligations as authorized by subdivisions (a) to (k), inclusive, or (m) to (q) inclusive, of Government Code section 53601 and that comply with the investment restrictions of Government Code sections 53600 et seq. and 53630 et seq. However, notwithstanding these restrictions, a counterparty to a reverse repurchase agreement or securities lending agreement is not required to be a primary dealer of the Federal Reserve Bank of New York if the company's board of directors finds that the counterparty presents a minimal risk of default, and the value of the securities underlying a repurchase agreement or securities lending agreement may be 100 percent of the sales price if the securities are marked to market daily. To be eligible

for investment pursuant to this paragraph (1), the companies must have either:

(a) Retained an investment adviser registered with the Securities and Exchange Commission with not less than five (5) years' experience investing in securities and obligations and authorized by subdivisions (a) to (k), inclusive, (m) or (q) inclusive of Government Code Section 53601 and with assets under management in excess of five hundred million dollars (\$500,000,000); or,

(b) Attained the highest ranking or the highest letter and numerical rating provided by not less than two (2) nationally recognized statistical rating organizations. (Gov. Code, § 53601(1)(1) & (3).)

(2) Shares of beneficial interest issued by diversified management companies that are money market funds registered with the Securities and Exchange Commission under the Investment Company Act of 1940 (15 U.S.C. Section 80a-1 et seq.). To be eligible for investment pursuant to this paragraph (2), the companies must either have:

(a) Retained an investment adviser registered with the Securities Exchange Commission with not less than five (5) years' experience managing money market mutual funds with assets under management in excess of five hundred million dollars (\$500,000,000); or

(b) Attained the highest ranking or the highest letter and numerical rating provided by not less than two (2) nationally recognized statistical rating organizations. (Gov. Code, § 53601(1)(2) & (4).)

(3) The purchase price of shares of mutual funds and money market mutual funds purchased pursuant to this Section K of this Policy shall not include any commission that the companies may charge and shall not exceed 20 percent of the District's funds that may be invested pursuant to Government Code Section 53601. Further, no more than 10 percent of the District's funds may be invested in shares of beneficial interest of any one mutual fund pursuant to paragraph (1) above. (Gov. Code, § 53601(1)(5).)

L. Mortgage Pass-through Securities - Any mortgage pass-through security, collateralized mortgage obligation, mortgage-backed or other pay-through bond, equipment lease-backed certificate, consumer receivable pass-through certificate, or consumer receivable-backed bond of a maximum remaining maturity of five (5) years or less. Securities eligible for investment under this Section L of this Policy

shall be rated in a rating category of “AA” or its equivalent or better by a nationally recognized statistical rating organization. Purchase of securities authorized by this Section L may not exceed 20 percent of the District’s surplus monies that may be invested pursuant to Government Code section 53601. (Gov. Code, §§ 53601(o), 53635.2.)

M. Joint Powers Authority - Shares of beneficial interest issued by a joint powers authority organized pursuant to Government Code section 6509.7 that invests in the securities and obligations authorized in subdivisions (a) to (r), inclusive, of Government Code section 53601. Each share shall represent an equal proportional interest in the underlying pool of securities owned by the joint powers authority. To be eligible under this Section M of this Policy, the joint powers authority issuing the shares shall have retained an investment adviser that meets all of the following criteria:

1. The adviser is registered or exempt from registration with the Securities and Exchange Commission;
2. The adviser has not less than five years of experience investing in the securities and obligations authorized in subdivisions (a) to (q), inclusive, of Government Code section 53601; and,
3. The adviser has assets under management in excess of five hundred million dollars (\$500,000,000) (Gov. Code, § 53601(p).)

N. Passbook Deposits - Savings account(s) shall be maintained for amounts under \$250,000 as a source of funds for immediate use if required for selective commercial accounts. Savings account deposits may exceed the specified amount for periods not to exceed 45 days in anticipation of payment of monthly accounts payable.

O. Supranationals - United States dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank. The maximum remaining maturity for these obligations must be five (5) years or less, and they must be eligible for purchase and sale within the United States. In addition, these investments must be rated “AA” or better by at least two (2) nationally recognized statistical ratings organizations and shall not exceed 30 percent of the District’s monies that may be invested pursuant to Government Code section 53601. (Gov. Code, § 53601(q).)

#### 6300.51 Non-Compliance with Authorized Investments

Investments which were obtained prior to adoption of this Policy which are currently not in compliance with said policy may be held until maturity pursuant to Government Code

section 53601.6(b). Reporting of said non-compliant investments shall be made per Section 6300.70 of this Policy.

6300.55      Designation of Depositories

The Board of Directors shall, by Resolution, and in accordance with Government Code sections 53600 et seq. and 53630 et seq., designate depositories for District funds. A State or federal credit union may not be designated as a depository for District funds if a member of the Board of Directors or any person with investment decision-making authority for the District serves on the Board of Directors, any committee appointed by the Board of Directors, or the credit committee or supervisory committee of the State or federal credit union.

As far as possible, all money belonging to, or in the custody of the District, including money paid to the Treasurer or other official to pay the principal, interest, or penalties of bonds, shall be deposited for safekeeping in State or national banks, savings associations, federal associations, credit unions, or federally insured industrial loan companies in this State, selected by the Treasurer or other official having legal custody of the money; or may be invested in the investments set forth in Government Code section 53601. To be eligible to receive District money, a bank, savings association, federal association, or federally insured industrial loan company shall have received an overall rating of not less than "satisfactory" in its most recent evaluation by the appropriate federal financial supervisory agency of its record of meeting the credit needs of California's communities, including low- and moderate-income neighborhoods, pursuant to Section 2906 of Title 12 of the United States Code. Government Code sections 53601.5 and 53601.6 shall apply to all investments that are acquired pursuant to this Government Code section 53635.2. (Gov. Code, § 53635.2).

6300.60      Safekeeping of Securities

To protect against potential losses caused by collapse of individual securities dealers, all securities may be delivered against payment and shall be kept in safekeeping pursuant to Government Code section 53608. Depositories having custody of the District's funds, securities, and other investment instruments shall be directed to forward copies of verification of such deposits in accordance with policies consistent with generally accepted reporting procedures of depositories. In no case shall funds be wired or transmitted in any manner to brokers.

6300.70      Reporting Requirements

Under provisions of Government Code sections 53646 and 53607, the Treasurer shall render a monthly report to the District's Board of Directors and General Manager. The report shall include the type of investment, issuer, date of maturity, par value and the dollar amount invested in all securities, investments and monies held by the District, and shall additionally include a description of any of the District's funds, investments or programs, that are under the management of contracted parties, including lending programs. With respect to all securities held by the District, and under management of any outside party

that is not also a local agency of the State of California Local Agency Investment Fund, the report shall also include a current market value as of the date of the report, and shall include the source of this same valuation.

In the report, a subsidiary ledger of investments may be used in accordance with generally accepted accounting practices.

The Treasurer shall report whatever additional information or data may be required by the District's Board of Directors.

For District investments that have been placed in the Local Agency Investment Fund, created by Government Code section 16429.1, in National Credit Union Share Insurance Fund-insured accounts in a credit union, in accounts insured or guaranteed pursuant to Financial Code section 14858, or in Federal Deposit Insurance Corporation-insured accounts in a bank or savings and loan association, in a county investment pool, or any combination of these, the Treasurer may supply to the District's Board of Directors and General Manager the most recent statement(s) received by the District from these institutions in lieu of the aforementioned information regarding the type of investment, issuer, date of maturity, par value and the dollar amount invested in all securities, investments and monies held by the District.

The monthly Treasurer's report shall state compliance of the portfolio with this Investment of District Funds Policy, or manner in which the portfolio is non-compliant. The report shall include a statement denoting the ability of the District to meet its expenditure requirement for the next six months or an explanation as to why sufficient monies will not or may not be available.

6300.90      Investment Policy Review

This policy governing Investment of District Funds shall be reviewed, modified as necessary and re-adopted or amended at a public meeting of the Board of Directors annually or more frequently if necessary.

# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

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SUBJECT : OVERVIEW OF DISTRICT-WIDE EASEMENT PROJECT  
STATUS : Information and Discussion  
REPORT DATE : March 01, 2021  
PREPARED BY : Tamar Dawson, Assistant Engineer  
Missy Pieri, Director of Engineering/District Engineer

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Engineering staff will provide an overview of the Strategic Planning item: District-wide Easement Project (Project), including a review of the Scope of Services included in the draft Request for Proposals for the Project.



# CITRUS HEIGHTS WATER DISTRICT

## DISTRICT STAFF REPORT TO BOARD OF DIRECTORS MARCH 17, 2021 MEETING

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SUBJECT : DISCUSSION AND POSSIBLE ACTION REGARDING WATER  
DISTRIBUTION SYSTEM PROJECTS

STATUS : Action Item

REPORT DATE : March 10, 2021

PREPARED BY : Brian Hensley, Water Resources Supervisor  
Rebecca Scott, Principal Operations Specialist

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### **Objective:**

Receive information on the current status and future feasibility of the Palm and Sunrise Well sites, and consider future tank storage and changes to the District's Property Acquisition Matrix.

### **Background and analysis:**

The Palm and Sunrise Wells, constructed in 1991, respectively, were rehabilitated in 2018 due to a significant reduction in the specific yield. Since that time, both wells have been offline due to concentrations of iron and manganese that have recently or are currently exceeding their respective Maximum Contaminant Levels (MCLs).

In June 2020, the Citrus Heights Water District (District) executed a Task Order with Luhdorff and Scalmanini Consulting Engineers (LSCE) to evaluate options for returning the wells to service, including treatment options in terms of siting and cost. LSCE also evaluated the cost and footprint to add a 5-million-gallon storage tank and booster pump station at the Sunrise site in the future. LSCE prepared a Technical Memorandum (attached) that summarizes their findings and recommendations.

### **Options to Reduce Iron and Manganese**

From a public health perspective, iron and manganese are classified as secondary MCLs, which are not considered toxic elements. However, in drinking water, they affect aesthetics and are known to cause color, taste, and odor concerns, in addition to maintenance issues in the well and distribution system. According to the LSCE technical memo, options to reduce iron and manganese concentrations from the Palm and Sunrise Wells include the following: modification of the existing well structures to limit the contribution of water from zones with undesirable water quality; abandonment of the existing wells and installation of replacement wells on-site that exclude zones of undesirable water quality; or on-site treatment.

#### **1. Well Modification**

Well modifications to reduce the contribution from zones with elevated concentrations of undesirable constituents generally include filling the bottom portion of a well with an impervious material such as cement or bentonite or installing patches to block screen intervals. The success of either option is dependent on identifying the origin of the poor-quality water to determine if that zone can be effectively isolated. Both the Palm and Sunrise Wells are of the gravel pack design,

meaning that if a screened interval in the well is blocked, water can still move vertically (up or down) in the annulus between the borehole wall and the well casing. Total isolation of a zone is not possible in either well. However, a reduction in contribution from a particular zone may be possible to the degree that the water produced is of better quality. Blocking off screened intervals will reduce well yield. Based on the flow profiling and zone-specific water quality sampling conducted in the Palm Well, excluding the contribution from the screened interval below 398 feet by the installation of a cement plug would likely reduce the total concentration of iron and manganese in the well discharge. However, excluding any contribution from the screen below 389 feet would also result in a loss of production of roughly 25%.

The Sunrise Well has a relatively low yield (800 GPM) as compared to other District wells and is constructed with two screened zones. Well profiling could be conducted to identify if manganese could be reduced by blocking a screened zone, but this would further reduce the yield of the well and lower the pumping water level (currently below the top of the upper zone) resulting in pump changes. The loss of yield associated with well modifications is not favorable for this low-yielding well and therefore well profiling and modification is not recommended for the Sunrise Well.

## **2. Well Replacement**

Well replacement can be an option to improve water quality only if the zones contributing poorer quality water can be identified and a well can be designed with the appropriate seals to prevent contribution from the problematic zone(s).

The Palm Well site presents challenges in regards to drilling a new well. Based on the initial assessment, the Division of Drinking Water's (DDW) fifty-foot wellhead control zone requirement would prevent the construction of a new well on the existing property. Additionally, overhead utilities bisect the property which would make construction activities difficult, if not impossible. It is recommended that the Palm Well be abandoned once it is no longer viable and a new well be constructed in a different location.

The geophysical log from the Sunrise Well borehole does indicate substantial (thick) clay layers separating aquifer zones that would allow for placement of annular seal(s) that would effectively isolate a target zone. In its current configuration, a new well cannot be constructed at the Sunrise Well site that will meet DDW control zone requirements. However, there is room to expand the well station into the recreational field. Expanding the well site to 100 by 100 feet would enable a new well to be constructed that will meet all DDW control zone and sanitary feature setback requirements; provide adequate separation from the existing well, and provide adequate room for well construction and ongoing operations and maintenance. Table 2 below provides an estimate to construct a new well at the Sunrise site. The cost estimate assumes the equipment at the existing Sunrise Well site can be re-used for a new well constructed adjacent to the existing well and operating at a similar capacity (up to 800 GPM and 125 horsepower). The existing electrical switchgear, PLC, soft-starter, pump station piping, and chemical feed would all be re-used in the current location. If those components cannot be re-used, then the pump station construction cost would roughly double.

**3. Treatment Options**

There are various treatment options to remove iron and manganese from groundwater; however, the most common and economical method is through an oxidation/filtration process. In this process, iron and manganese are removed using a filter system that is connected between the discharge piping of the well and the distribution system. Various treatment vendors provide “packaged” plants. LSCE contacted two reputable vendors that have similar treatment systems in operation locally: Loprest and ATEC. A detailed analysis of both systems is covered in the Technical Memorandum and not included in this staff report, as these options are not being recommended for either well due to the cost, life expectancy of each well, and current operational parameters.

**Table 1—Summary of Options to Return Palm Well to Service**

<b>Options</b>	<b>Pros</b>	<b>Cons</b>	<b>Cost</b>	<b>Recommended?</b>
<b>Well Modification</b>	Excluding the screen sections below 398 feet will reduce the levels of iron and manganese.	Eliminating contribution from screened intervals will further reduce the well yield.	<b>\$14,000</b>	<b>YES Completed</b>
<b>Well Replacement</b>		The site is not large enough to locate a new well that will meet DDW setback requirements.	\$2.4 million	No
<b>Treatment</b>	Meets water quality regulations. Allows the well to continuously operate at full capacity (1100 GPM) in normal operation.	High capital and O&M costs. Increased maintenance. Well has limited life-cycle.	\$1.4 million	No
<b>Utilize Well for Emergency Only</b>	Cheapest option.	Unreliable source, uncertain regulatory parameters for use of the well.	\$0	No

**Table 2—Summary of Options to Return Sunrise Well to Service**

<b>Options</b>	<b>Pros</b>	<b>Cons</b>	<b>Cost</b>	<b>Recommended?</b>
<b>Well Modification</b>	Could potentially reduce the levels of iron and manganese.	Eliminating contribution from either screen interval will further reduce the already low well yield and may not reduce the levels of iron and manganese below respective MCL's.	\$14,000	No
<b>Well Replacement</b>	Well could be constructed to exclude poor water quality zone.	Expansion of the well site would be required. Well yield may be limited.	\$2.4 million	Is possible, if more property can be acquired
<b>Treatment</b>	Meets water quality regulations and allows well to operate.	High capital and O&M costs. Increased Maintenance. Well has limited life-cycle.	\$1 million	No
<b>Utilize Well for Emergency Only</b>	Cheapest option.	Unreliable source, uncertain regulatory parameters for use of the well.	<b>\$0</b>	<b>Yes</b>

**Status:**

Based on the LSCE report and staff's analysis of all available options, a concrete plug was installed in the Palm Well to exclude the screen sections below 398 feet to reduce the levels of iron and manganese.

For Sunrise Well, no additional action is recommended at this time. The District will continue to use this well for emergencies only. If more property can be acquired in the future, potential well replacement is possible.

**WATER STORAGE OPTIONS**

Separate from the Palm and Sunrise Well analysis, the LSCE Report also evaluated the viability of water storage. There are two ways in which the District's groundwater wells can be used to fully meet water demands if surface water is unavailable. One option would be to expand the groundwater well capacity to meet the peak instantaneous flows, referred to as peak hour demand (PHD). This would require a substantial increase in the number of total groundwater wells (approximately 20).

Another option is to use the wells (approximately 10) to meet the maximum day demand of the system and use water storage with booster pumps providing the balance of water needed to meet PHD beyond the flow rate of what the wells can sustain.

LSCE provided the District with initial, high-level cost estimates for two storage tank options (welded steel and pre-stressed concrete) for a 5-million-gallon (MG) capacity storage tank, as well as the estimated required site footprint for that size tank so that the District can begin exploring possible storage tank sites. (Final tank sizing would be determined from a detailed water demand and supply analysis.)

### Types of Tanks

1. Welded Steel

These tanks are generally constructed of thick steel plates with an expected lifespan of 100 years. As stated by the steel plate fabricators association and AWWA, a steel tank has an indefinite life assuming proper maintenance is performed. Essentially, if the steel is protected from corrosion it will not deteriorate. To accomplish this, the tank must be re-coated every 20 years or more often in harsh environmental conditions such as excessive heat, cold, humidity, or corrosiveness. Welded steel tanks can be coated with a variety of colors and can be imprinted with logos or decorative murals.

2. Pre-Stressed Concrete

Pre-stressed concrete tanks have no horizontal wall joints as the walls are a continuous pour with concrete consolidation throughout the entire height of the wall. The exterior of the tank can have a wide range of architectural finishes to integrate any desired type of aesthetic, and burying concrete tanks can reduce the visual impact. Concrete tanks have a rated life span of 100 years but typically last longer. There is no coating required for the tank and virtually no maintenance other than occasional cleaning. One advantage of concrete storage tanks is that they provide a great deal of thermal insulation, preventing water stratification and discouraging algae growth. This enhances the water quality and reduces the maintenance cost associated with cleaning.

### Site Requirements and Total Cost

For a 5 MG concrete tank that is 160 feet in diameter and 35 feet tall, with half of the tank buried in the ground, the total recommended land purchase to expand the existing Sunrise Well site would be approximately 52,400 square feet (or 1.2 acres) for a concrete tank and booster station.

In comparison to similar projects by LSCE, the estimated costs related to the booster pump station and other site improvements could range from \$2 to \$3 million, so the table below uses \$2.5 million for these items. A summary of the total budgetary costs for both tank options including the booster station construction costs is also included in the table.

Item	Welded Steel Tank	Pre-Stressed Concrete Tank
<b>Tank Construction Cost</b>	\$4,361,500	\$5,500,000
<b>Booster Station and Site Construction Cost</b>	\$2,500,000	\$2,500,000
<b>Land Acquisition Cost (Tables 11 &amp; 12)</b>	\$250,000	\$250,000
<b>Engineering and other cost</b>	\$594,750	\$750,000

<b>Item</b>	<b>Welded Steel Tank</b>	<b>Pre-Stressed Concrete Tank</b>
<b>Total Capital Cost</b>	<b>\$7,706,250</b>	<b>\$9,000,000</b>
<b>Tank Maintenance Cost over 100 Years</b>	<b>\$3,680,000</b>	<b>\$240,000</b>
<b>Total Life Cycle Cost</b>	<b>\$11,386,250</b>	<b>\$9,240,000</b>

District staff has inquired with San Juan Unified School District about the possibility of expanding the footprint at Sunrise Well, and discussions are ongoing.

The District currently uses a Property Acquisition Matrix originally developed as a check-list for the purchase of land for well sites, including placement within District boundaries that would minimize contamination and low production yield. The Property Acquisition Matrix for the purchase of land for well sites has been modified (Attachment 2) to accommodate the possibility for water storage either as a standalone option or co-located with other District facilities.

At this time, the District does not have additional properties that could accommodate a storage tank. If the Board approves the modified Property Acquisition Matrix to include options for water storage, staff will look into potential land purchases suitable for tank storage.

If the Board wishes to take additional time to consider tank storage options, staff will bring this item back to the April board meeting for further consideration.

**Recommendation:**

1. Receive and file the Luedorff & Scalmanini report titled “Evaluation of Palm and Sunrise Wells, Treatment and Storage Options.”
2. Approve the modified Property Acquisition Matrix to accommodate potential tank storage.
3. Provide direction concerning next steps for future Distribution system facilities.

**Attachment:**

1. LSCE Report “Evaluation of Palm and Sunrise Wells, Treatment and Storage Options”
2. CHWD Property Acquisition Matrix (Storage)

# **ATTACHMENT 1**

**LSCE Report “Evaluation of Palm and Sunrise  
Wells, Treatment and Storage Options**



# Technical Memorandum

DATE: January 25, 2020

PROJECT: 20-2-074

TO: Brian Hensley, Project Manager, Citrus Heights Water District

FROM: Scott Lewis, P.G., Principal Geologist  
Justin Shobe, P.E., Supervising Engineer

SUBJECT: **EVALUATION OF PALM AND SUNRISE WELLS, TREATMENT AND STORAGE OPTIONS**

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## 1. BACKGROUND

### 1.1. Purpose

Luhdorff and Scalmanini Consulting Engineers (LSCE) have prepared this Technical Memorandum summarizing our findings and recommendations related to the Citrus Heights Water District's (District) Palm and Sunrise Wells and well stations. The Palm and Sunrise Wells are currently offline due to concentrations of iron and manganese that have recently or are currently exceeding their respective Maximum Containment Levels (MCL). Each well has also seen a significant reduction in the specific yield since construction.

The objective of the work conducted by LSCE was to evaluate options for returning the wells to service, evaluate treatment options for both wells in terms of siting and cost, and evaluate the cost and footprint to add a 5 million-gallon storage tank and booster pump station at the Sunrise site.

### 1.2. Well Locations

#### 1.2.1 Palm Well

The Palm Well is located at 7349 Palm Avenue, which is the northwest corner of the intersection of Palm and San Juan Avenues in Fair Oaks and adjacent to a residential neighborhood. The irregularly shaped parcel is approximately 80 feet wide and extends at least 500 feet along Palm Avenue; however, most of this area is encumbered by overhead power easements, drainage easements, and encroachment of neighboring parcel fence lines onto District property. The well and associated appurtenances are enclosed in a 30 by 43-foot fenced area at the intersection of Palm and San Juan Avenues. There is an area of about 27 by 161 feet next to the well site which appears to be the portion of District property most easily used by the District as it is not encumbered by the encroachments (see site drawings in **Exhibit C**).



### 1.2.2 Sunrise Well

The Sunrise Well is in the southeast corner of a school recreational field on Canelo Hills Drive between Dana Butte Way and San Cosme Drive in Citrus Heights. The site is in a residential area adjacent to a long-term care facility. The fenced well station is approximately 50 by 80 feet in size.

### 1.2.3 Hydrogeology

Both the Palm and Sunrise Wells are completed in the Pliocene Mehrtan Formation, which is composed of fluviially (deposited by water) lahar deposits (volcanic mud and debris). The aquifers of Mehrtan formation are the primary water-bearing units in the Sacramento region. The Mehrtan aquifer units are composed of coarse to fine black sands separated by high plastic clay layers. The water quality of the Mehrtan formation can vary with depth. Generally, the water quality of the Mehrtan is good with regards to drinking water standards but, high concentrations of iron, manganese, and arsenic are common. Changes in the quality of water produced from some Wells completed in the Mehrtan has been observed in recent years. Changes in Mehrtan water quality may be the result of extended drought periods, changes in pumping regimes, and declining water levels.

## **2. WELL EVALUATION**

### **2.1. Well Construction and Condition**

#### 2.1.1 Palm Well

The Palm Well was drilled in 1991 by Beylik Drilling using the reverse circulation method (see Figure 1 included in **Exhibit A**). The 28-inch diameter borehole was drilled to a depth of 460 feet below ground surface (bgs). The well was constructed of 16-inch diameter by ¼-inch and 5/16-inch wall mild steel casing. The zones targeted for completion were screened with 16-inch diameter by ¼-inch wall mild steel “Super Flo” well screen with 0.050-inch louvered openings. The annulus between the borehole and the well casing from a depth of 460-feet bgs to 240-feet bgs was filled with an 8 x 16 graded gravel envelope. The annulus from 240 feet bgs to ground surface was filled with 10-sack cement grout. A patch is installed in the Palm Well from 403-408 feet bgs.

A post-rehabilitation video survey was conducted in 2018. Based on the post-rehabilitation video survey, the well structure appears to be in good condition with no visible holes or damage in the well casing or screened intervals. During the post-rehabilitation pump test in 2018, 0.05 cubic centimeters (cc’s) of material (rust and sand) was collected in the Rossum sand tester in 45 minutes, after which time production of any material stopped. Based on the video and sand production, the well structure appears to be in good condition.

#### 2.1.2 Sunrise Well

The Sunrise Well was drilled in 1991 by Beylik Drilling using the reverse circulation method (see Figure 2 included in **Exhibit A**). The 28-inch diameter borehole was drilled to a depth of 528 feet below ground surface (bgs). The well was constructed of 16-inch diameter by ¼-inch wall mild steel casing. The zones

targeted for completion were screened with 16-inch diameter by ¼-inch wall mild steel “Standard Flo” well screen with 0.050-inch louvered openings. The annulus between the borehole and the well casing from a depth of 528-feet bgs to 180 feet bgs was filled with an 8 x 16 graded gravel envelope. The annulus from 180 feet bgs to ground surface was filled with 10-sack cement grout.

Various repairs and rehabilitation have occurred to the well over its life, but most recently a post-rehabilitation video survey was conducted in 2018. Based on this survey, the well structure appears to be in good condition with no visible holes or damage to the well casing or screen intervals. During the post-rehabilitation pump test in 2018, 0.03 cubic cc’s of material (rust and a trace of sand) was collected in the Rossum sand tester in 5 minutes, after which time production of any material stopped. Based on the video and sand production, the well structure appears to be in good condition.

Construction details for each well are summarized in Table 1.

**Table 1: Summary of Well Construction Details**

Well Parameter	Palm Well	Sunrise Well
<b>Year of Construction/Age</b>	1991/29	1991/29
<b>Borehole Depth (ft)</b>	460	528
<b>Well Depth (ft)</b>	455	335
<b>Blank Casing</b>	16-inch Dia. X ¼ Wall Mild Steel (GS to 400 feet bgs) 16-inch Dia. X 5/16 Wall Mild Steel (400 feet bgs to 455 feet bgs)	16-inch Dia. X 1/4 Wall Mild Steel
<b>Screen Type</b>	Louvered, Super-Flow	Louvered, Standard-Flow
<b>Screen Intervals (ft bgs)</b>	258-278, 289-356, 378-398, 400-410, 432-450	204-264, 310-330
<b>Seal Depth (ft bgs)</b>	240	180
<b>Flow Rate (gpm)</b>	1,500 gpm (1991)	1,098 (1996)
<b>Specific Capacity (gpm/ft)</b>	107 gpm/ft (1991)	38.8 (1996)

## 2.2. Well Performance

### 2.2.1 Palm Well

At the time of construction, the Palm Well had a reported specific capacity of 107 gpm/ft at 1,500 gpm. The Palm Well has been rehabilitated and tested twice since construction. Original and post-rehabilitation well performance values are included in Table 2. After the chemical and mechanical rehabilitation conducted in 2018, the Palm Well had a specific capacity of 37 gpm/ft. Stated another way, the specific capacity of the Palm Well has declined 63%. Due to the failure of the pump installed in the Palm Well, a pre-rehab pump test was not performed.

**Table 2. Palm Well Historical Performance**

Year	Specific Capacity (gpm/ft)	Flowrate (gpm)	Percent of Original Specific Capacity
1991	107	1,500	--
2001	72	1,525	67
2018	37	1,418	35

### 2.2.2 Sunrise Well

At the time of construction, the Sunrise Well had a reported specific capacity of 45 gpm/ft at 1,000 gpm. The Sunrise Well has been rehabilitated and tested several times since construction. Original and post-rehabilitation well performance values are included in Table 3. After being chemically and mechanically rehabilitated in 2018, the Palm Well had a specific capacity of 26 gpm/ft, representing a 65% decrease from its original specific capacity.

**Table 3. Sunrise Well Historical Performance**

Year	Specific Capacity (gpm/ft)	Flowrate (gpm)	Percent of Original Specific Capacity
1991	45	1,000	--
1996	38	1,098	84
2001	37	1,074	82
2017	7	630	15
2018	26	736	57

## 2.3. Water Quality

The United States Environmental Protection Agency (EPA) has established National Primary Drinking Water Regulations (NPDWRs) that set mandatory water quality standards for drinking water contaminants. These are enforceable standards called "maximum contaminant levels" (MCLs) which are established to protect the public against consumption of drinking water contaminants that present a risk

to human health. An MCL is the maximum allowable amount of a contaminant in drinking water delivered to the consumer.

Additionally, the EPA has established National Secondary Drinking Water Regulations (NSDWRs) that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these "secondary maximum contaminant levels" (SMCLs). They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL. Iron and manganese fall under this category.

### 2.3.1 Sunrise Well

From water quality data available on the SWRCB Drinking Water Watch website, dating back to 2004 for iron and manganese, both parameters have been non-detect from 2004 through 2013. No samples are on record between 2013 and 2018. In 2018, following well rehab, Sunrise Well was found with iron and manganese concentrations multiple times greater than the MCL. Iron was 5.1 mg/L (MCL is 0.3 mg/L) and manganese was 1.4 mg/L (MCL is 0.05 mg/L). The District proceeded to flush the well and has collected samples over the past two years. Concentrations of both contaminants have declined since 2018. Iron has been stable for the last three sampling events since November 2019 at approximately 0.17 mg/L, which is below the MCL. Manganese dropped to a low of 0.14 mg/L in November 2019 but then increased over the next two sampling events to 0.24 mg/L in April 2020, which is about five times greater than the MCL. Figures 1 and 2, graphically illustrate the iron and manganese levels in the Sunrise Well.

Figure 1: Sunrise Well – Iron Concentrations

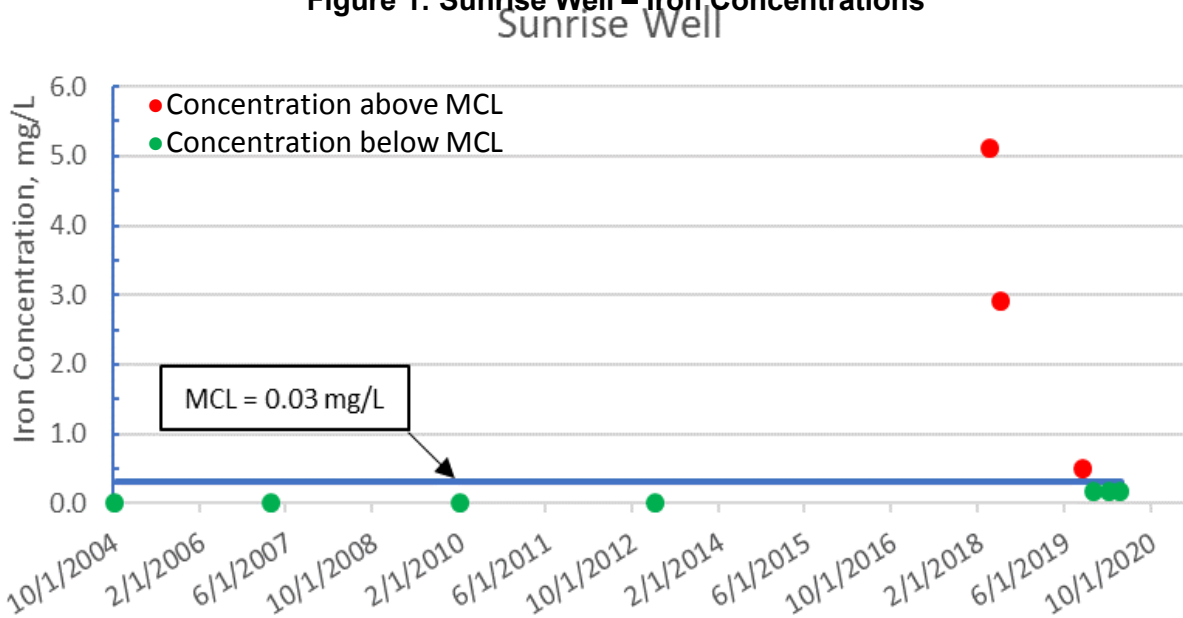
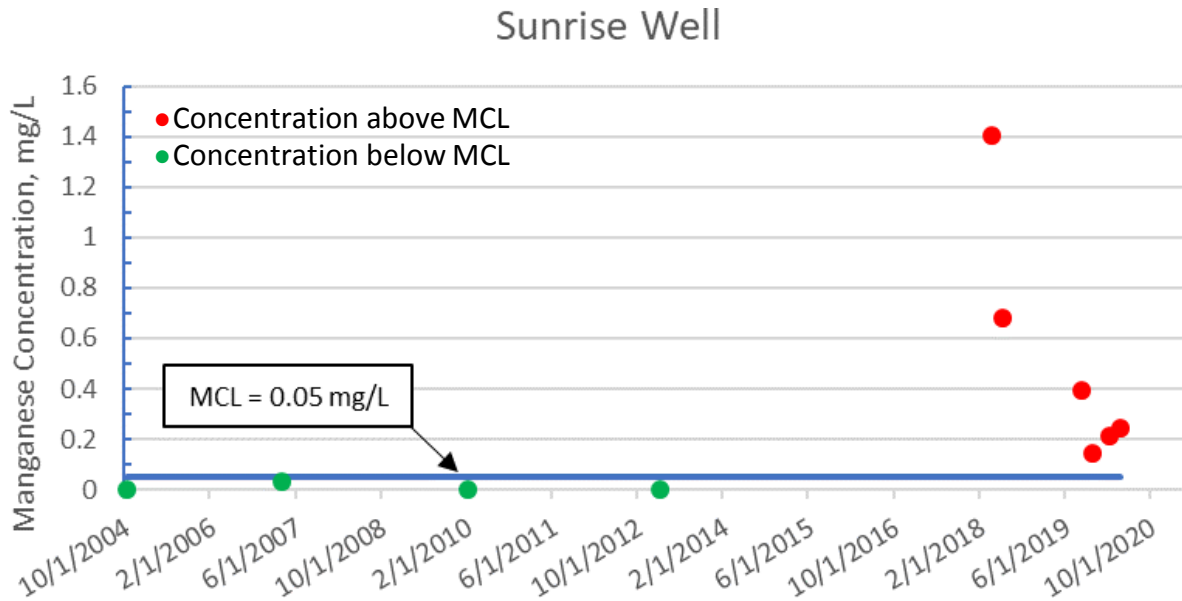


Figure 2: Sunrise Well – Manganese Concentrations



### 2.3.2 Palm Well

From water quality data available on the SWRCB Drinking Water Watch website, that dates back to 1989 for iron and manganese, these two parameters have been mostly non-detect up through 2013, with exception of detection of iron in 2007 of 0.6 mg/L and two detections for manganese in 2001 and 2007 of 0.18 and 0.17 mg/L, respectively. No samples are on record between 2013 and 2018. In 2018, following well rehab, Palm Well was found with iron and manganese concentrations multiple times greater than the MCL. Iron was 2.0 mg/L (MCL is 0.3 mg/L) and manganese was 0.57 mg/L (MCL is 0.05 mg/L). The District proceeded to flush the well and has collected samples over the past two years. Concentrations of both contaminants have declined since 2018. Iron has been stable for the last two sampling events since February 2020 at approximately 0.15 mg/L, which is below the MCL. Manganese steadily declined and most recently was 0.15 mg/L in April 2020, which is three times greater than the MCL. Figures 3 and 4, graphically illustrate the iron and manganese levels in the Palm Well.

Figure 3: Palm Well – Iron Concentrations

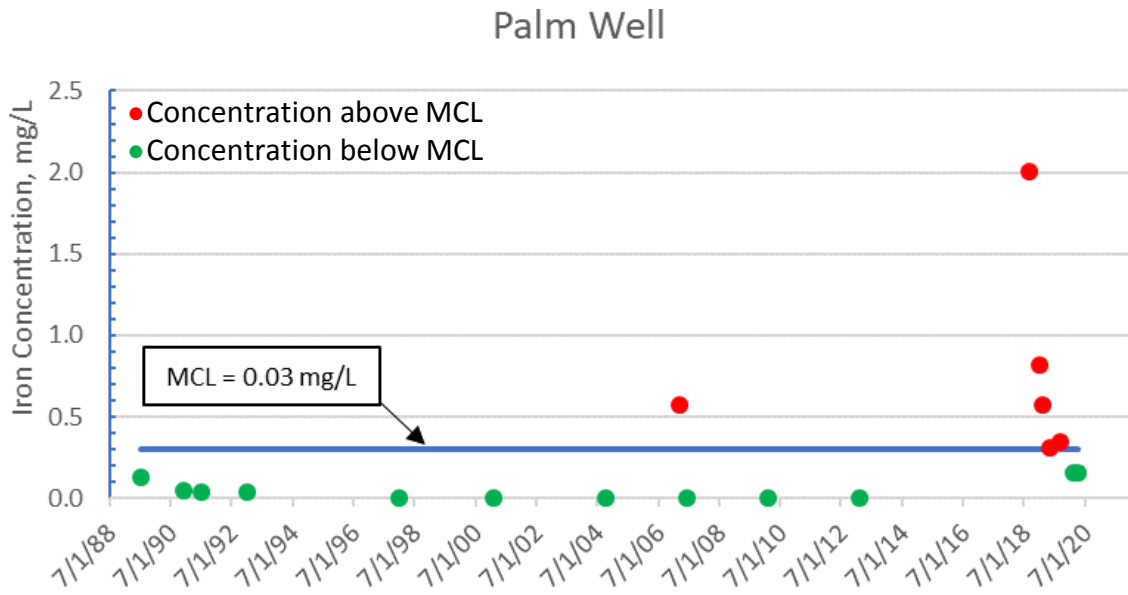
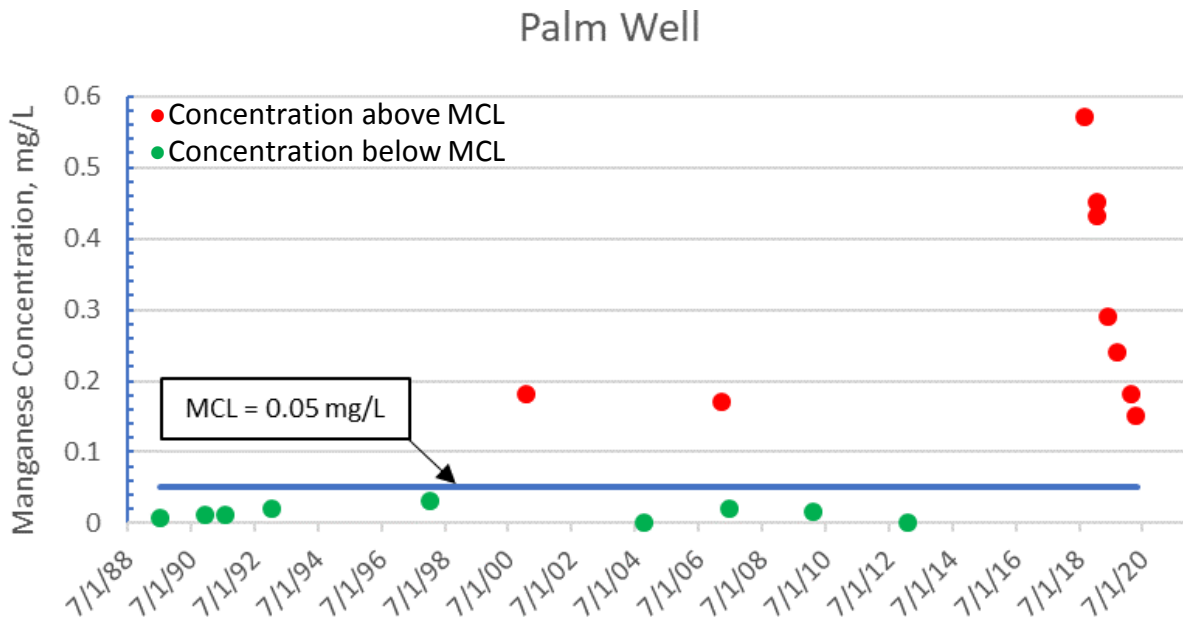


Figure 4: Palm Well – Manganese Concentrations



## 2.4. Palm Well Flow Profiling

A dynamic flow profile survey was conducted in the Palm Well on October 10, 2020, to measure the amount of water contributed (flow) from each screened interval or group of screens, and to characterize the water chemistry of the flow from each screen interval. The purpose of the survey was to determine if a specific screen interval or intervals had elevated levels of iron and manganese that could be blocked off to reduce the overall concentrations of the iron and manganese in the well yield and what the resulting reduction in yield would be. The screen zone intervals sampled, and corresponding concentrations of iron and manganese are presented in Table 4. Table 5 summarizes the flow contribution from screen intervals in the Palm Well.

**Table 4. Palm Well Zonal Iron and Manganese Concentrations**

Depth Interval	Iron (mg/l)	Manganese (mg/l)
258-278	0.13	0.083
289-356	0.086	0.081
378-410	0.25	0.11
432-450	0.32	0.11

The results of the zonal water quality analysis indicate that the quality of water above 378 feet is superior with regards to iron and manganese concentration than deeper zones.

**Table 5. Palm Well Contribution for Screen Intervals**

Perforated Zone Depth	Zonal Production (gpm)	% of Total Well Production (gpm)	Zonal Specific Capacity (gpm/ft)
258-278	23	2	1.1
289-356	520	46	7.8
378-398	290	25	14.5
400-410	37	3	3.7
432-450	271	24	15.1
<b>Total Discharge</b>	1,141	100	--

The result of the flow profiling indicates that the 289–356 foot screened interval is the most productive zone yielding 46% of the total well yield. The 378-398 and 432-450 zone each produce approximately 25% of the total well yield. 5% of the total well yield originates from the 258-278 and 400-410 foot screen intervals.

The Sunrise Well has a relatively low yield (800 gpm) as compared to other District wells and it is constructed with two screened zones. Well profiling could be conducted to identify if Mn could be reduced by blocking a screened section but this would further reduce the yield of the well and lower the pumping water level resulting in pump changes. The loss of yield associated with well modification is not favorable for this low-yielding well and therefore well profile was not recommended.

### 3. OPTIONS TO REDUCE MANGANESE AND IRON

From a public health perspective, iron and manganese are not considered toxic elements. However, in drinking water, they are known to cause offensive color, taste, and odor concerns, in addition to maintenance issues associated with precipitate build-up in the well and distribution system. The secondary MCLs are in place for control of aesthetics. Utilities can meet the secondary MCL standards on a running annual average. Options to reduce iron and manganese concentrations from the Palm and Sunrise Well sites include the following: modification of the existing well structures to limit the contribution of water from zones with undesirable water quality; abandonment of the existing Wells and installation of replacement Wells at the sites that exclude zones of undesirable water quality; or on-site treatment.

#### 3.1. Well Modification

Well modifications to reduce the contribution from zones with elevated concentrations of undesirable constituents generally include filling the bottom portion of a well with an impervious material (cement, bentonite) or installing patches to block screen intervals. The success of either option is dependent on identifying the origin of the poor-quality water and if that zone can be effectively isolated. Both the Palm and Sunrise Wells are of the gravel pack design meaning that if a screened interval in the well is blocked, water can still move vertically (up or down) in the annulus between the borehole wall and the well casing. Total isolation of a zone is not possible in either well. However, a reduction in contribution from a particular zone may be possible to the degree that the water produced from the well is of better quality. Blocking off screened intervals will reduce well yield.

Based on the flow profiling and zone-specific water quality sampling conducted in the Palm Well, excluding the contribution from the screened interval below 398 feet by placing a cement plug in the well would likely reduce the total concentration of iron and manganese in the well discharge. However, excluding any contribution from the screen below 389 feet would also result in a loss of production of roughly 25%. LSCE's estimated cost to install a cement plug in the Palm Well is \$14,000.

The Sunrise Well has a relatively low yield (800 gpm) as compared to other District wells and is constructed with two screened zones. Well profiling could be conducted to identify if manganese could be reduced by blocking a screened zone but this would further reduce the yield of the well and lower the pumping water level (currently at the top of the upper zone) resulting in pump changes. The loss of yield associated with well modifications is not favorable for this low-yielding well and therefore well profiling and modification was not recommended.

#### 3.2. Well Replacement

Well replacement can be an option to improve water quality only if the zones contributing poorer quality water can be identified and a well can be designed with the appropriate seals to prevent contribution from the problematic zone(s). The geophysical log from the Sunrise Well borehole does indicate substantial (thick) clay layers separating aquifer zones that would allow for placement of annular seal(s) that would effectively isolate a target zone.



The Palm Well site presents challenges in regards to siting a new well. Based on our initial assessment, a new well cannot be located on the available property that will meet the Division of Drinking Water's (DDW) fifty-foot wellhead control zone requirement. Additionally, overhead utilities bisect the property which would make well construction activities difficult if not impossible. It is recommended that the Palm Well be abandoned once it is no longer viable and construct a new well in a different location.

In its current configuration, a new well cannot be constructed at the Sunrise Well Station that will meet DDW control zone requirements. However, there is room to expand the well station into the recreational field. Expanding the well site to 100 by 100 feet would enable a new well to be constructed that will meet all DDW control zone and sanitary feature setback requirements, provide adequate separation from the existing well, and would provide adequate room for well construction and ongoing well operations and maintenance. Table 6 provides an estimate to construct a new well at Sunrise.

The cost estimate below assumes the equipment at the existing Sunrise Well site can be re-used for a new well constructed adjacent to the existing well and operating at a similar capacity as the existing well (up to 800 gpm and 125 horsepower). Pump station construction could include a new submersible pump, piping to connect to the existing station pipe, and site improvements on the expanded site area including paving, fencing, and drainage. The existing electrical switchgear, PLC, soft-starter, pump station piping, and chemical feed would all be re-used in the current location. If those components cannot be re-used, then the pump station construction cost would be approximately doubled to install those as new.

**Table 6: Estimated Well Replacement Cost – Sunrise Well**

Item	Budget	Components
<b>Investigation</b>	\$150,000	<ul style="list-style-type: none"> <li>• Test hole drilling and zone sampling</li> <li>• Water quality analysis</li> </ul>
<b>Well Abandonment</b>	\$25,000	<ul style="list-style-type: none"> <li>• Casing perforation, placement of seal</li> </ul>
<b>New Well Installation</b>	\$450,000	<ul style="list-style-type: none"> <li>• Well construction</li> <li>• Pump testing</li> <li>• Water quality analysis</li> </ul>
<b>Pump Station Construction and Upgrades</b>	\$600,000	<ul style="list-style-type: none"> <li>• New submersible pump (600 gpm, 125 HP)</li> <li>• Site improvements for 100 x 100 expansion area: earthwork, paving, perimeter fencing, drainage.</li> <li>• New 6" piping to connect back to existing Sunrise station pipe.</li> <li>• Re-use existing station pipe, controls, switchgear, panels, soft-start, PLC, and chemical feed system.</li> </ul>
<b>Property Acquisition</b>	\$250,000	<ul style="list-style-type: none"> <li>• Enlargement of station footprint</li> </ul>
<b>Sub-Total</b>	<b>\$1,475,000</b>	Total construction from above items
<b>Other Costs</b>	\$221,250	15% construction contingency
	\$150,000	Engineering, inspection, CEQA, surveying, permitting
	\$600,000	Optional cost if new controls are needed or desired
<b>Total</b>	<b>\$2,446,250</b>	Total Estimated Cost

### 3.3. Treatment Options

There are various treatment options to remove iron and manganese from groundwater; however, the most common and economical method is through an oxidation/filtration process. In this treatment process, iron and manganese are removed using a filter system that is connected between the discharge piping of the well and water distribution system. This option would involve adding a filter system and a backwash recovery tank on the well site along with other ancillary upgrades.

In the treatment process, iron and manganese are oxidized using sodium hypochlorite to precipitate the contaminants into solid particles that are then filtered out. The filter system contains special media that promotes the oxidation kinetics for manganese and iron. There are multiple media options specific to this oxidation/precipitation process for these contaminants. One type is a sand media that is coated with manganese dioxide (i.e. greensand), and another is a pure manganese dioxide ore that is crushed into filter particles (i.e. pyrolusite). The filter media speeds up the chemical reaction, which eliminates the need for reaction chambers or aeration basins commonly found in older manganese treatment systems.

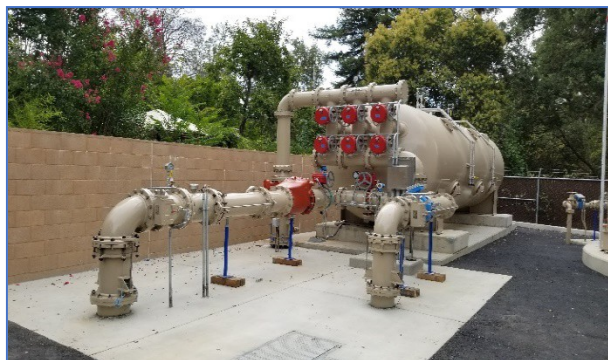
Filter backwash is an important design consideration for cost and footprint. As precipitated solids accumulate in the media, the differential pressure across the filter begins to increase requiring the filter to be backwashed. The maximum differential pressure across the filter is typically 10 psi. Backwash typically occurs every 24 to 48 hours of filter runtime, depending on the concentration of iron and manganese and the size of the filter. Clean water must be provided for backwash, but some filter configurations allow this water to come from the Well rather than the distribution system. The flow rate of backwash water is about twice the filter capacity; however, the backwash flow rate can be reduced by making a filter configuration of multiple smaller vessels.

Due to the volume and frequency of backwashes, it is usually not practical to discharge the waste into a sewer collection system and for this reason, most filter plants end up using a backwash storage tank to store the waste. Backwash storage can also be used to reclaim the wastewater in the treatment process, reducing the waste of the plant. The backwash tanks will accumulate sludge over time, and it is common practice to clean the tanks every year. If there is a sewer service onsite, then the cleaning process can be accomplished using a drain pump installed next to the tank that pumps the contents to the sewer. If there is no sewer service, then a wet-vac truck would extract the tank sludge (usually a volume of about 10-percent of the tank volume).

Various treatment vendors are available that can provide “packaged” plants that include filter vessels, media, internal filter piping, external face piping, valves, instrumentation, and a programmable logic controller (PLC) to automate the filter and backwash process. In preparing the budget estimates, LSCE contacted two reputable vendors that have similar treatment systems in operation locally: Loprest and ATEC.

An example of a 1,500 gpm Loprest filter is below (Figure 5) and an example of a 1,500 gpm ATEC filter is below (Figure 6). Both vendors have unique filter designs that use smaller cells or filters to reduce the backwash flow and allow the well to supply the backwash water. Loprest’s design accomplishes this by using a single horizontal pressure vessel that is separated internally with cells, i.e. multi-cell vessel. ATEC’s design uses smaller vertical vessels that are 32” to 48” in diameter and situated vertically on a skid. **Exhibit B** (attached) provides an example drawing of the Lorpest filter system and the ATEC filter system.

**Figure 5: Loprest Multi-Cell Filter**



**Figure 6: ATEC Filter System**



### 3.3.1 Treatment Cost

LSCE evaluated each of the existing site conditions to determine the feasibility of placing a filter and backwash system and other upgrades to retrofit each well site. The budget estimates (Table 8 and Table 9 below) include separate line items for the filter system with all related components and site improvements. There are also line items for possible costs that might be needed to upgrade to a variable frequency drive (VFD) and to upgrade the chemical system. A VFD would help maintain a constant flow during each stage of treatment. While mechanical flow control would be far cheaper, a VFD would provide better process control and efficiency and it may also be required depending on the hydraulic ranges of the well. Based on the raw water chemistry, the chemical treatment system must achieve a dosage of at least 2 mg/L plus an additional amount for a free chlorine concentration.

The design criteria used as a basis for the treatment systems are shown below (Table 7). **Exhibit C** (attached) provides the conceptual layout drawings for the addition of treatment on both sites and the concept of storage on the Sunrise Well site discussed in the next section.

**Table 7: Design Criteria for Treatment**

Parameter	Palm Well	Sunrise Well
<b>Design Flow Rate</b>	1300 gpm	600 gpm
<b>Operating Pressure</b>	100 psi	100 psi
<b>Vessel Design Working Pressure</b>	175 psi	175 psi
<b>Iron Raw Water Concentration</b>	0.5 mg/L	0.2 mg/L
<b>Manganese Raw Water Concentration</b>	0.2 mg/L	0.3 mg/L
<b>Theoretical Chlorine Dosage</b>	2 mg/L	2 mg/L

In addition to the capital cost estimates (Table 8 and 9), there will be additional operation and maintenance of adding a filter system. The filters are constructed from steel pressure vessels that have internal piping and media and are coated inside and out to protect the steel. The vessel itself would have a repair/refurbishment cycle on the order of 10 to 15 years that involves removing and replacing the

media and repairing any internal components or coating. The cost of this recurring refurbishment and filter media exchanges could cost approximately 10-25% of the initial cost of the filter vessels.

The complete filter system also includes exterior ancillary components that require routine inspection and maintenance such as a reclaim pump station with a small booster pump (5 to 10 horsepower), automated filter valves (pneumatic or electric motors), flowmeters, piping, and instrumentation. These components all require attention from operators to maintain and replace the wearable components (such as valves and instrumentation).

There is also labor time related to backwash cycles. Although backwash is an automated process, it will occur every couple of days and typically requires extra attention from the operators to ensure proper operation and management of the overall water supply. A filter system will also have a slight decrease in the overall plant efficiency of the well due to extra head losses of approximately 10 psi, which means that the current pumps will produce slightly less water than they currently produce for the same amount of electrical power.

**Table 8: Budgetary Capital Costs for Treatment at Palm Well**

Item	Budget	Components
<b>Filter Vessels</b>	\$340,000	<ul style="list-style-type: none"> <li>• ATEC system using pyrolusite media (Loprest system using Greensand would be more expensive and cost \$500,000)</li> <li>• Includes contractor markup and installation.</li> <li>• 12 vessels on a skid, each vessel is 48" diameter x 60" tall.</li> <li>• Filter piping and control valves included</li> <li>• Integrated PLC control panel included</li> <li>• Total Backwash Volume: 21,000 gallons</li> <li>• Footprint: 26' x 10'</li> </ul>
<b>Backwash Tank</b>	\$120,000	<ul style="list-style-type: none"> <li>• 45,000-gallon tank to hold 2 x backwash volumes</li> <li>• Economic construction: bolted steel, factory coated</li> <li>• 20-ft dia x 24 ft tall (custom dimensions for the site, more expensive)</li> <li>• Cost includes floating suction and typical tank appurtenances</li> <li>• Footprint: 28' x 28' minimum to provide 4' access around tank</li> </ul>
<b>Reclaim System</b>	\$30,000	<ul style="list-style-type: none"> <li>• 130 gpm, 15 HP, Reclaim Pump</li> <li>• Station piping, meter, flow control, instrumentation</li> <li>• Motor control center (soft starter)</li> </ul>
<b>SCADA Upgrades</b>	\$30,000	<ul style="list-style-type: none"> <li>• Budgetary cost for programming labor only</li> <li>• Filter system PLC will communicate with existing SCADA. Programming to update alarms and well controls.</li> </ul>
<b>Civil/Mechanical Construction</b>	\$200,000	<ul style="list-style-type: none"> <li>• Budgetary: site excavation, earthwork, concrete foundations, gravel paving, piping, startup.</li> </ul>
<b>Electrical Site Construction</b>	\$100,000	<ul style="list-style-type: none"> <li>• Budgetary: Instrumentation, conduits, wiring, lighting.</li> </ul>
<b>Sub-Total</b>	<b>\$820,000</b>	<b>Total construction from above items</b>
<b>Other Costs</b>	\$125,000	Upgrades to a 200 HP VFD, if required for adequate flow control
	\$25,000	Chemical system upgrade, if required for adequate chemical feed
	\$50,000	(Optional) sanitary service with SASD for backwash sludge disposal
	\$164,000	20% construction contingency
	\$250,000	Engineering, surveying, geotechnical, CEQA, inspection, permitting
<b>Total</b>	<b>\$1,434,000</b>	<b>Budgetary Cost Estimate</b>

**Table 9: Budgetary Capital Costs for Treatment at Sunrise Well**

Item	Budget	Components
<b>Filter Vessels</b>	\$180,000	<ul style="list-style-type: none"> <li>• ATEC system using pyrolusite media (Loprest system using Greensand would be more expensive and cost \$400,000)</li> <li>• Includes contractor markup and installation</li> <li>• 6 vessels on a skid, each vessel is 48" diameter x 60" tall</li> <li>• Filter piping and control valves included</li> <li>• Integrated PLC control panel included</li> <li>• Total Backwash Volume: 11,000 gallons</li> <li>• Footprint: 13' x 10'</li> </ul>
<b>Backwash Tank</b>	\$40,000	<ul style="list-style-type: none"> <li>• 22,000-gallon tank to hold 2 x backwash volumes</li> <li>• Economic construction: bolted steel, factory coated</li> <li>• 18-ft dia x 16 ft tall (standard dimensions to save cost)</li> <li>• Cost includes floating suction and typical tank appurtenances</li> <li>• Footprint: 26' x 26' minimum to provide 4' access around tank</li> </ul>
<b>Reclaim System</b>	\$20,000	<ul style="list-style-type: none"> <li>• 70 gpm, 10 HP, Reclaim Pump</li> <li>• Station piping, meter, instrumentation</li> <li>• Motor control center (soft starter)</li> </ul>
<b>SCADA Upgrades</b>	\$30,000	<ul style="list-style-type: none"> <li>• Budgetary cost for programming labor only.</li> <li>• Filter system PLC will communicate with existing SCADA. Programming to update alarms and well controls.</li> </ul>
<b>Civil/Mechanical Construction</b>	\$150,000	<ul style="list-style-type: none"> <li>• Budgetary: site excavation, earthwork, concrete foundations, gravel paving, piping, startup.</li> </ul>
<b>Electrical Site Construction</b>	\$80,000	<ul style="list-style-type: none"> <li>• Budgetary: Instrumentation, conduits, wiring, lighting.</li> </ul>
<b>Sub-Total</b>	<b>\$500,000</b>	<b>Total construction from above items</b>
<b>Other Costs</b>	\$80,000	Upgrades to a 125 HP VFD, if required for adequate flow control
	\$25,000	Chemical system upgrade, if required for adequate chemical feed
	\$50,000	(Optional) sanitary service with SASD for backwash sludge disposal
	\$103,000	20% construction contingency
	\$250,000	Engineering, surveying, geotechnical, CEQA, inspection, permitting
<b>Total</b>	<b>\$1,005,000</b>	<b>Budgetary Cost Estimate</b>

### 3.4. Summary of Options for Returning Wells to Service

Based on the above analysis, below are a summary of options for returning the Palm and Sunrise Wells to service given the current concentrations of iron and manganese. A summary is provided in Table 10 below.

**Well Modification** – Well modification involves partial well abandonment and/or installing patches to restrict production from poor-quality zones. Any modification would not guarantee improved water quality due to the design of both wells and the unique lithology at each site. A reduction in well yield and deeper pumping water levels should be expected with any well modification.

- **Palm Well:** Based on the geophysical survey performed in the Palm Well borehole at the time of construction, the targeted water-bearing formation at the Palm site is massive with relatively minor fine-grained (clay) intervals separating the coarse-grained intervals. The absence of thick fine-grained intervals within the targeted zone would make excluding intervals contributing to poor quality difficult. Based on the spinner survey and zonal water quality analysis performed in the Palm Well, a reduction in the overall concentration of iron and manganese may be possible with the placement of a plug in the bottom of the well to exclude the contribution from below 398 feet. Blocking of any screen interval will result in a reduction of well yield.
- **Sunrise Well:** Due to the separation of the two aquifer zones currently targeted for production at Sunrise Well, it could be a candidate for modification if the zone contributing poor quality water could be identified. However, blocking any zones will further reduce capacity in a well that is currently pumping below the top of the upper screened zone and is limited in its capacity relative to other District wells.

**Well Replacement** – The goal of a replacement well is to exclude the aquifer zones containing iron and manganese and still achieve suitable capacities.

- **Palm Well:** A new well cannot be located on the available property at the Palm site that will meet the DDW fifty-foot wellhead control zone requirements. Additionally, overhead utilities bisect the property which would make well construction activities difficult if not impossible.
- **Sunrise Well:** In its current configuration, a new well cannot be located on the Sunrise Well site that will meet all DDW siting requirements. However, open space does exist around the well station that, if it could be acquired, would allow installation of a new well that would meet all DDW siting requirements. A new well could be installed that would target only the aquifer zone with the preferable water quality. LSCE's estimated cost to investigate, design, construct, make site improvements, and integrate a new well into the distribution system at the Sunrise site is \$2,446,250. (Preferred option)

**Treatment** – A treatment system can be installed to remove iron and manganese allowing the existing wells to return to service at their rated capacity. In addition to the capital cost, there will be increased labor and materials to operate a filter system with refurbishment occurring on 10-15-year cycles.

- **Palm Well:** \$1.4 million capital cost. The un-used area of the District's property next to the existing well site is large enough to fit a treatment system (see Exhibit C).



- **Sunrise Well:** \$1.0 million capital cost. Additional land would need to be purchased from the school site to expand for a treatment system.

**Utilize Wells for Emergency Use Only** - Each of the options summarized above has drawbacks including uncertain outcomes and/or significant capital and operational costs. It is LSCE's understanding that the District has plans for future system improvements including new well facilities. Another option that should be considered is utilizing the Palm and Sunrise Wells only as emergency backup supply wells with no modifications or improvements, on-site replacement, or installation of treatment systems and direct funds that would be used for those purposes to develop new well facilities at other locations.

The District would need to explore the options to use this as a back-up well with the State Water Resources Control Board – Division of Drinking Water (DDW) for compliance with the Drinking Water Regulations (Title 22). Several options may be available within Title 22 which may include classifying the well as an Emergency Backup Source or using the source without a waiver. These options generally will limit the availability of operation for this well and increase the required monitoring and require public notifications whenever it is used.

**Table 10: Summary of Options to Return Wells to Service**

Options	Palm Well	Sunrise Well
<b>Well Modification</b>	<p><b>Pros:</b> Excluding the screen sections below 398 feet will reduce the levels of iron and manganese.</p> <p><b>Cons:</b> Placement of plug will reduce the yield of the well and may not reduce the levels of iron and manganese below respective MCL's.</p> <p><b>Cost:</b> \$14,000</p>	<p><b>Cons:</b> Eliminating contribution from either screen interval will further reduce the already low well yield and may not reduce the levels of iron and manganese below respective MCL's.</p>
<b>Well Replacement</b>	<p><b>Cons:</b> The site is not large enough to locate a new well that will meet DDW setback requirements.</p>	<p><b>Pros:</b> Well could be constructed to exclude poor water quality zone</p> <p><b>Cons:</b> Expansion of well site would be required. Well yield may be limited.</p> <p><b>Capital:</b> \$2,446,250</p>
<b>Treatment</b>	<p><b>Pros:</b> Meets water quality regulations. Allows the well to continuously operate at full capacity (1100 gpm) in normal operation.</p> <p><b>Cons:</b> Higher capital and O&amp;M costs.</p> <p><b>Capital:</b> \$1.434 million</p> <p><b>O&amp;M:</b> Increases from frequent backwash cycles, annual tank cleaning, additional valves/pumps.</p>	<p><b>Pros:</b> Meets water quality regulations. Allows the well to continuously operate at capacity in normal operation.</p> <p><b>Cons:</b> Higher capital and O&amp;M costs.</p> <p><b>Capital:</b> \$1.005 million</p> <p><b>O&amp;M:</b> Increases from frequent backwash cycles, annual tank cleaning, additional valves/pumps.</p>
<b>Utilize Wells for Emergency Only</b>	<p><b>Pros:</b> Lowest cost option.</p> <p><b>Cons:</b> Unreliable source, uncertain regulatory parameters for use of the well.</p> <p><b>Capital:</b> \$0</p> <p><b>O&amp;M:</b> Same as existing to maintain well operation.</p>	<p><b>Pros:</b> Lowest cost option.</p> <p><b>Cons:</b> Unreliable source, uncertain regulatory parameters for use of the well.</p> <p><b>Capital:</b> \$0</p> <p><b>O&amp;M:</b> Same as existing to maintain well operation.</p>

## 4. STORAGE OPTIONS FOR SUNRISE WELL

The purpose of this memo is to provide the District with initial, high-level cost estimates for two storage tank options (prestressed concrete and welded steel) for a 5 million gallon storage reservoir, as well as to estimate the required site footprint so that the District can begin exploring possible storage tank sites. While this memo is not intended to determine the size or basis for a storage tank, some background information that reflects the District's concept for a storage tank is presented below.

### 4.1. Concept of Storage and Booster Pumps

The District is aware that with its current groundwater supplies it would not be able to sustain the peak water demands in the summer if surface water were not available. For this reason, the District has been exploring storage as an option to be able to rely on groundwater in an extended drought. The District has indicated that a storage reservoir for this purpose would be approximately 5 million gallons (MG), but final sizing must be determined through a technical evaluation of water demands, supplies, and objectives for water supply reliability.

There are two ways in which the District's groundwater Wells can be used to fully meet water demands if surface water is unavailable. One option would be to expand the groundwater well capacity in which the wells would meet the peak instantaneous flows, referred to as peak hour demand (PHD). Our understanding is that this would require a substantial increase in the number of groundwater wells. Another option is to use the wells to meet the maximum day demand (MDD) of the system and use water storage with booster pumps providing the balance of water needed to meet PHD beyond the flow rate of what the wells can sustain.

Per discussion with the District, there are currently six groundwater wells that can provide approximately 11 million gallons per day (MGD), or about 8,000 gpm. The District indicated there is a goal to install four more wells, which will increase total production to approximately 15 MGD, or about 10,000 gpm. According to a Water Distribution System Hydraulic Model Update (June 16, 2017, West Yost Associates), the diurnal patterns in 2015 indicate an hourly peak demand of 1.25 MG per hour, equating to a PHD of approximately 21,000 gpm. With wells providing 10,000 gpm, this leaves a balance of 11,000 gpm to come from storage and booster pumps. Typically, PHD occurs over a period of 4 hours. For a storage and booster station to provide 11,000 gpm over 4 hours would require at least 2.6 MG of accessible water storage. There also needs to be a volume allowance for unusable storage and minimum storage levels to allow filling the tank with wells during low demand periods of the day. Based on this preliminary information, a 5 MG reservoir appears reasonable as a preliminary estimate. Final sizing would be determined from a detailed water demand and supply analysis.

In addition to the size of the tank, the capacity and quantity of booster pumps also affect the cost and footprint of a storage reservoir. Sizing of booster pumps is dependent on several factors, some of which include the range of operational capacity from low demand periods to peak hour; instantaneous fire demand; efficiency of the units throughout the operating range; the operational speeds of the units; the

normal and low flow delivery rate from groundwater; and the ability or inability of the District's groundwater supply wells to respond to meet the fire, peak hour, and emergency demands.

An ultimate booster pumping flow capacity of 11,000 gpm could be met by at least three large booster pumps, constructed as can-type vertical lineshaft pumps. Depending on the factors noted, there might be additional pumps to meet the minimum flows and VFDs to provide a smooth flow operation over the entire range with all pumps combined. For an initial preliminary basis, it is assumed there would be five (5) pumps, each capable of 2,500 gpm and a discharge pressure of 100 psi, which results in five motors that are each 200 horsepower (HP) and operated on a VFD.

## 4.2. Tank Construction Options

Two types of tank construction were considered for a 5 MG reservoir, which is welded steel tank and prestressed concrete tank. Below is a brief description of each type that considers the area required for construction, lead time, unique advantages, maintenance, useful life, and aesthetics.

### 4.2.1 Welded Steel

Welded steel tanks are constructed in accordance with the American Water Works Associations (AWWA) standards ANSI/AWWA D100. Construction of a welded steel tank involves welding of carbon steel plating, structural steel framing, and field application of lining and coating. The foundation is typically a concrete ringwall with either a welded steel bottom or an embedded concrete floor. Certified welders and x-ray technicians are involved in the welding process. The entire system is coated with paint inside and outside to prevent the steel from corroding. An example photo of a local installation is provided below (Figure 7).



**Figure 7: Welded Steel 5-MG Tank in Sacramento**

The success of a welded steel tank relies on the coating and cathodic protection to prevent corrosion of the steel. After the tank is welded together, the welded steel surface must be sandblasted, and all irregularities smoothed out in preparation for the field-applied epoxy coating. The epoxy coating must be applied under certain climate conditions, as excessive heat, cold, wind, or humidity will negatively affect the quality and durability of the epoxy-coating, resulting in premature failure of the coating system. Inspection is required to ensure proper application and to address any coating imperfections. As the entire tank is constructed in the field, the area required for construction and staging is typically larger than what is needed for the site itself.

Welded steel tanks are generally constructed of thick steel plates with an expected lifespan of 100 years. As stated by the steel plate fabricators association and AWWA, a steel tank has an indefinite life assuming proper maintenance is performed. Essentially, if the steel is protected from corrosion it will not deteriorate. To accomplish this the tank must be re-coated every 20 years or more often in harsh environmental conditions such as excessive heat, cold, humidity or corrosivity. Re-coating of the tank is a large undertaking as it involves draining the tank, removing the prior coating, sandblasting the surface, cleaning, and application of a new coating system. Welded steel tanks can be coated with a variety of colors and can be imprinted with logos or decorative murals.

**Cost Estimate:** The cost estimate below (Table 11) was prepared based on input from several welded steel tank contractors for a 5 MG reservoir with an inside diameter of 166 feet, and a maximum water surface elevation of 31 feet plus 2.5 feet of freeboard. The working area would be at least 200 x 200-foot area for staging and assembly. The life cycle cost is primarily a function of the coating and lining frequency, which is dependent on environmental conditions causing failure of the coating.

**Table 11: Welded Steel Tank Costs**

Item	Cost	Notes
<b>Construction Costs</b>		
Welded Steel Tank	\$2,700,000	\$0.54/gal, with appurtenances, plus markup
Coating and Lining	\$875,000	\$14/sq.ft. (interior), \$6/sq.ft. (exterior)
Concrete Ring Wall	\$240,000	120 Cubic Yards RC @ \$2,000/yard
Excavation and Compaction	\$150,000	5,000 Cubic Yards
<b>Sub-Total Construction</b>	<b>\$3,965,000</b>	<b>Total construction from above items</b>
Construction contingency	\$396,500	10% of sub-total
Land Acquisition	\$250,000	A minimum cost of \$250K is used
Engineering, surveying, geotechnical, CEQA, special inspection, permitting	\$594,750	Assumes 15% of Construction Cost
<b>Total Capital Cost</b>	<b>\$5,206,250</b>	
<b>Useful Life</b>	<b>100 Years</b>	Assumed
<b>Tank Maintenance Cost</b>	<b>\$860,000</b> <b>\$40,000</b>	Int. Lining Cost, done every 20 years (4 cycles) Ext. Coating Cost, done every 15 years (6 cycles)
<b>Total Life Cycle Cost</b>	<b>\$8,886,250</b>	Present cost, does not include an interest rate for inflation

#### 4.2.2 Concrete Tank

Pre-stressed concrete tanks are constructed in accordance with ANSI/AWWA D110 - Wire and Strand Wound, Circular, Prestressed Concrete Water Tank. There are four types (I, II, III, IV), but on the west coast concrete tanks are predominately Type I - Cast-in-Place Concrete with Vertical Prestressed Reinforcement. The main components of the tank (cement, aggregate, and steel reinforcement rebar) are readily available and can be supplied and installed by local companies. An example photo of an installation in Fresno is provided below that has a basic paint coating for the finish (Figure 8).



**Figure 8: Pre-Stressed Concrete 5-MG Tank, Basic Paint, Fresno County**

In the Type I tanks, there are no horizontal wall joints as the walls are a continuous pour with concrete consolidation throughout the entire height of the wall. Large thread rods are cast vertically inside the concrete wall, anchored at the top and bottom, which are tightened once the concrete cures providing vertical compression on the concrete. Following this step, a “pre-stressing machine” installs horizontal cables circumferentially around the tank and pulls the cables in tension to provide horizontal compression. Simultaneously the machine applies shotcrete on the outside making a smooth finish. The pre-stressing is what allows the wall to be relatively thin as compared to the height of the tank. The concrete wall is typically 12” thick for tanks up to 35 feet tall. A PVC water stop is integrated into the concrete floor and wall to prevent leakage. The roof thickness is typically 9” thick and can support a large operational live load.

There is only one concrete tank company, DN Tanks, that possesses the pre-stressing machine and the expertise to apply the pre-stressing on concrete tanks (for Type I tanks). DN Tanks are structural engineers and qualified installers of complete concrete tanks. While DN Tanks can perform the entire concrete tank installation, local contractors can also be used for the concrete placement of the floor and walls with DN Tanks providing only the pre-stressing procedure, which allows for competitive bidding to general contractors for a fully warranted system.

The exterior of the tank can have a wide range of architectural finishes to integrate any desired type of aesthetic. DN Tanks provided example architectural finishes along with their budget estimate (**Exhibit D**). These finishes are additional costs and typically conducted by an architect of the owner’s choosing. Burying concrete tanks can reduce the visual impacts and provide top surfaces with multi-recreation functions, such as picnic areas, tennis courts, etc. Cost increases as recreational loads or soil loads are placed on top of the tank.

The oldest Type 1 prestressed concrete tank (according to DN Tanks) is from the 1960s that was used for digesters on a coastal military base, still in use today. Concrete tanks have a rated life span of 100 years, but it could be longer. There is no coating required for the tank and virtually no maintenance other than occasional cleaning. One advantage of concrete storage tanks is that they provide a great deal of thermal insulation, preventing water stratification and discouraging algae growth. This enhances the water quality and reduces the maintenance cost associated with cleaning.

**Cost Estimate:** The cost estimate below (Table 12) was prepared based on input from DN Tanks (**Exhibit D**) for a 5 MG tank that is 160 ft in diameter and 35 ft tall. The cost is based on a concrete tank that is uniformly buried. The earthwork cost assumes that the tank will be 50% buried (17.5 feet below an above ground surface). The burial depth does not impact the tank cost but does impact earthwork cost for excavation and off-haul and impacts the size of the site needed. The burial must be at a 1:1 ratio ramp for access and the tank base needs 10 feet all around, thus for a tank buried 17.5 feet, the site will need to be 215 x 215 feet for excavation and construction.

**Table 12: Pre-Stressed Concrete Tank Costs**

Item	Cost	Notes
<b>Construction Costs</b>		
Type I Concrete Tank	\$4,510,000	Source: DN Tanks (enclosed), plus markup
Appurtenance Connections	\$150,000	Source: DN Tanks (enclosed)
Basic Painting	\$40,000	40,000 square feet
Excavation of Tank	\$150,000	(50% buried) 20,000 Cubic Yards
Off-haul	\$100,000	16,000 Cubic Yards
Fill and Compaction	\$50,000	8,000 Cubic Yards
<b>Sub-Total Construction</b>	<b>\$5,000,000</b>	<b>Total construction from above items</b>
Construction contingency	\$500,000	10% of sub-total
Land Acquisition	\$250,000	A minimum cost of \$250K is used
Engineering, surveying, geotechnical, CEQA, special inspection, permitting	\$750,000	Assumes 15% of Construction Cost
<b>Total Capital Cost</b>	<b>\$6,500,000</b>	
<b>Useful Life</b>	<b>100 years</b>	Assumed
<b>Maintenance</b>	<b>\$40,000</b>	Basic coating every 15 years (6 cycles)
<b>Total Life Cycle Cost</b>	<b>\$6,740,000</b>	Present cost, does not include an interest rate for inflation



### 4.3. Site Layout and Total Cost

A conceptual footprint for a concrete tank and booster station on the Sunrise school site is provided in **Exhibit C** (Drawing C-4). For a 5 MG concrete tank that is 160-ft diameter and 35-ft tall, with half of the tank buried in the ground (17.5 feet above and below ground), the recommended site area for construction and operation is 220x220 feet (48,400 square feet). This area accounts for a 160 ft diameter tank and a 1:1 construction ramp to the bottom of the footing. For a welded steel tank that is 160-ft diameter and 35-ft tall, the recommended site area for construction and operation is 200x200 feet (40,000 square feet). This area accounts for the staging required for tank erection and coating during installation and re-coating cycles.

In addition to the storage tank areas above, an area of approximately 4,000 square feet would be needed for a booster pump station, a possible treatment system for the well, and site access integrated with the existing Sunrise Well site. This would also provide reserve space for future Wells on the site.

Based on the above areas, the total recommended land purchase to expand the existing Sunrise Well site would be 52,400 square feet for a concrete tank and booster station or 44,000 square feet for a welded steel tank and booster station. A smaller area could be considered depending on the specific desire for tank construction, height requirements, and operational requirements.

The total cost of the storage tank facility must also consider the costs for construction of the booster pump station and site improvements. These costs will be dependent on many factors including the ultimate pumping capacity, number of pumps, type of pumps, use of VFDs or soft-starters, building materials (CMU, metal or other), selection of security fence materials, and paving. As a preliminary basis for the booster station, the facility could be designed for a capacity of 11,000 gpm at a discharge of 100 psi (as discussed above) but the ultimate objectives and sizing of the booster pump station must still be defined by CHWD.

In comparison to similar projects by LSCE, we estimate the costs related to the booster pump station and other site improvements could be on the order of \$2 to \$3 million. For budgetary purposes, we will assume \$2.5 million in addition to the cost of the storage tank construction. A summary of the total budgetary costs for both tank options including the booster station construction costs is provided in Table 13 below.

**Table 13: Pre-Stressed Concrete Tank Costs**

Item	Welded Steel Tank	Pre-Stressed Concrete Tank
<b>Tank Construction Cost (Tables 11&amp; 12)</b>	\$4,361,500	\$5,500,000
<b>Booster Station and Site Construction Cost</b>	\$2,500,000	\$2,500,000
<b>Land Acquisition Cost (Tables 11 &amp; 12)</b>	\$250,000	\$250,000
<b>Engineering and other cost (Tables 11 &amp; 12)</b>	\$594,750	\$750,000
<b>Total Capital Cost</b>	<b>\$7,706,250</b>	<b>\$9,000,000</b>
<b>Tank Maintenance Cost over 100 Years</b>	\$3,680,000	\$240,000
<b>Total Life Cycle Cost</b>	<b>\$11,386,250</b>	<b>\$9,240,000</b>

## 5. EXHIBITS

Exhibit A: Well Profiles – Figure 1 Palm Well; Figure 2 Sunrise Well

Exhibit B: Filter System Examples - Loprest and ATEC

Exhibit C: Conceptual Site Drawings

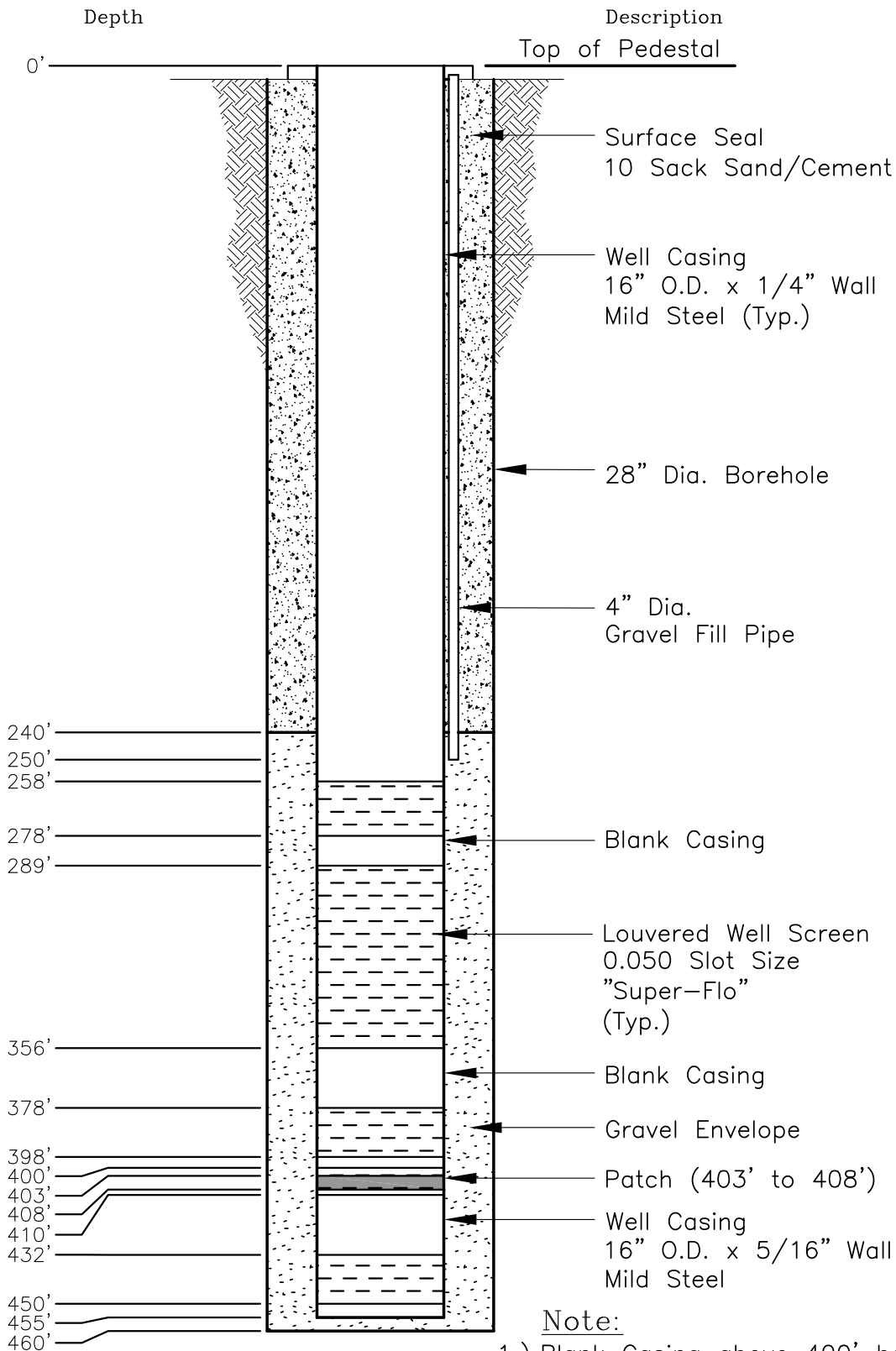
- C-1 and C-2: Palm Well Site Treatment Footprint
- C-2 and C-4: Sunrise Well Site Treatment and Storage Footprint

Exhibit D: DN Tank Budget Estimate and Architectural Finish Examples

**Exhibit A:**  
**Well Profiles**

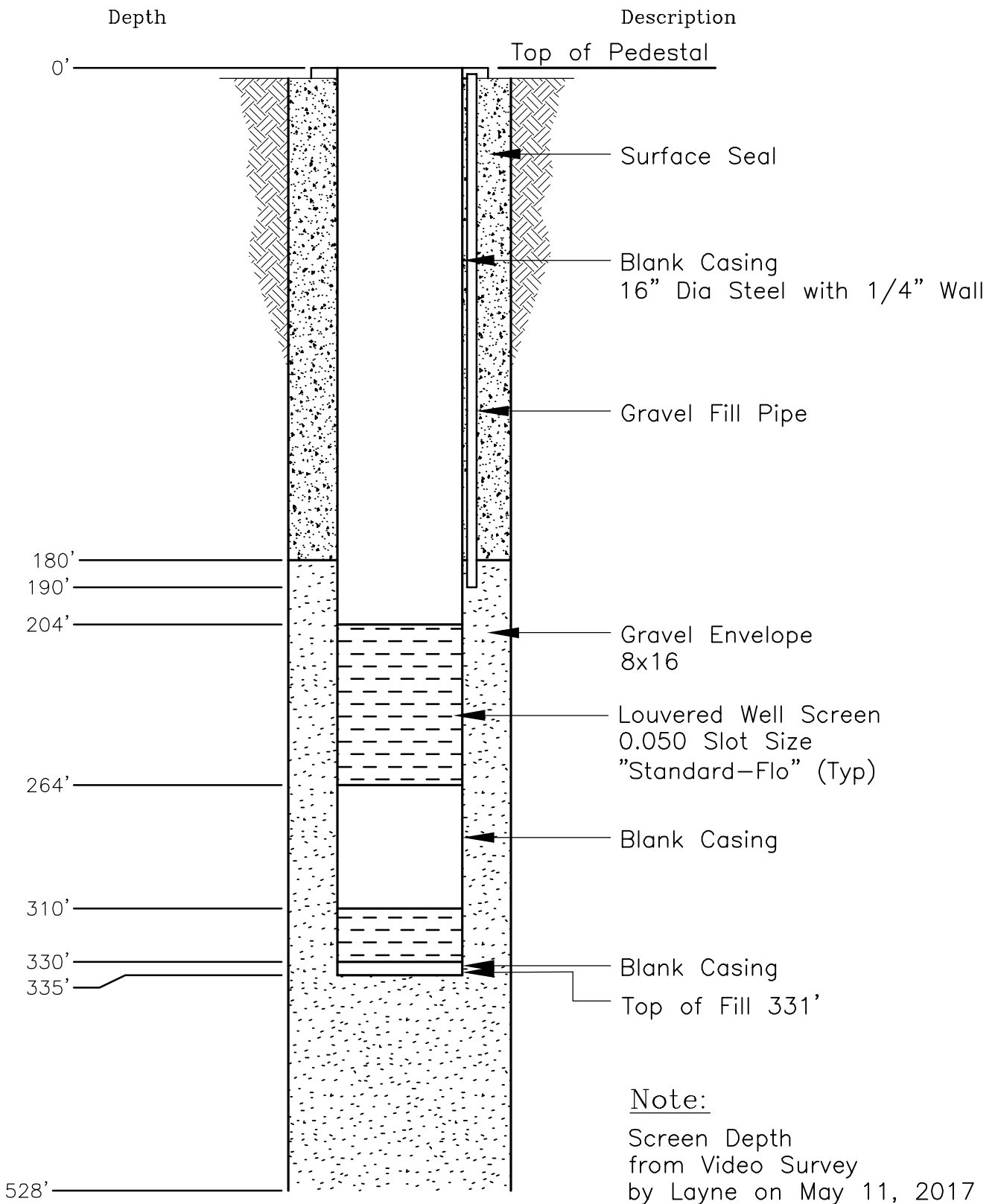
Palm Well

Sunrise Well



**Note:**

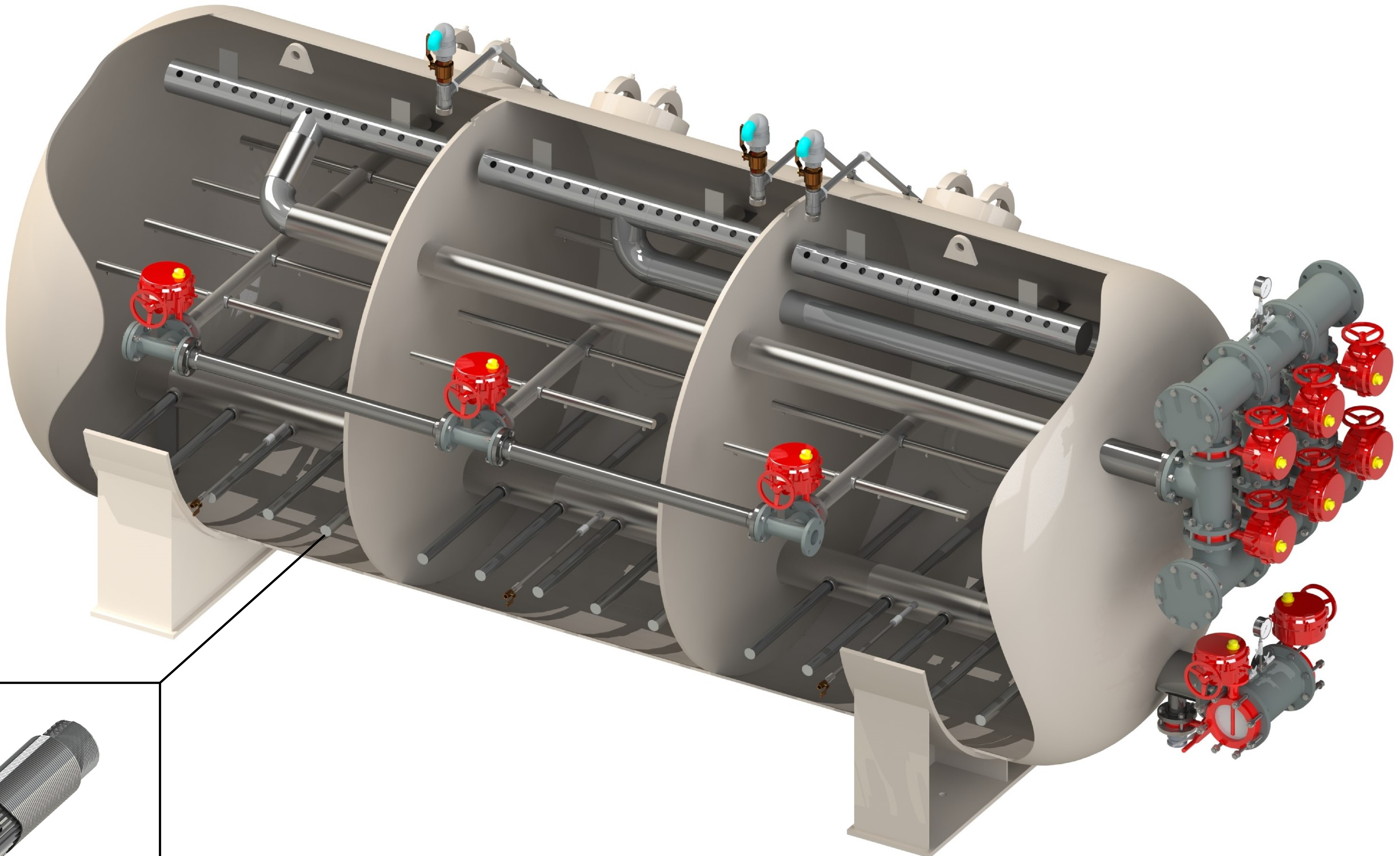
- 1.) Blank Casing above 400' has 1/4" Wall, Below 400' 5/16" Wall
- 2.) Screen Depths from Video Dated 04/11/2017 by West Coast Well Logging



CAD FILE: G:/Projects/Citrus Heights Water District/17-5-017/Sunrise Well.dwg    CFG FILE: LSCE2500.PCP\_MRG    DATE: 08-01-17 2:59pm

**Exhibit B:**  
**Filter System Examples - Loprest and ATEC**

REVISIONS						
REV.	ECO	REVISION DESCRIPTION	DATE	DRAWN BY	CHECKED BY	DATE
A.0	--	INITIAL VAULT CHECK IN	6/11/2020	VAS	MB	6/11/2020



304 SST LATERAL, TYP.

Friday, August 7, 2020

**LOPREST**  
A DIVISION OF WRT

ENGINEERS - MANUFACTURERS - SINCE 1928

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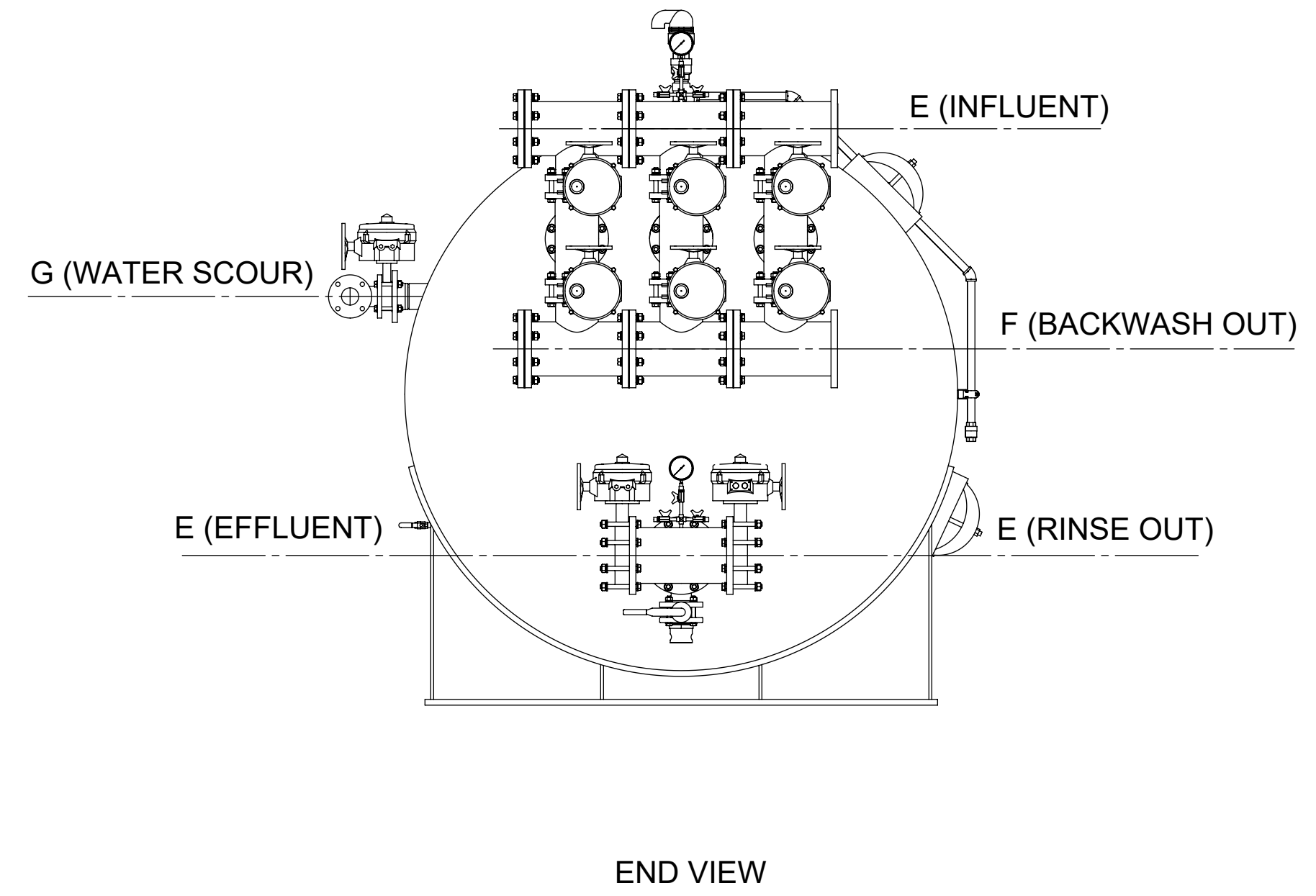
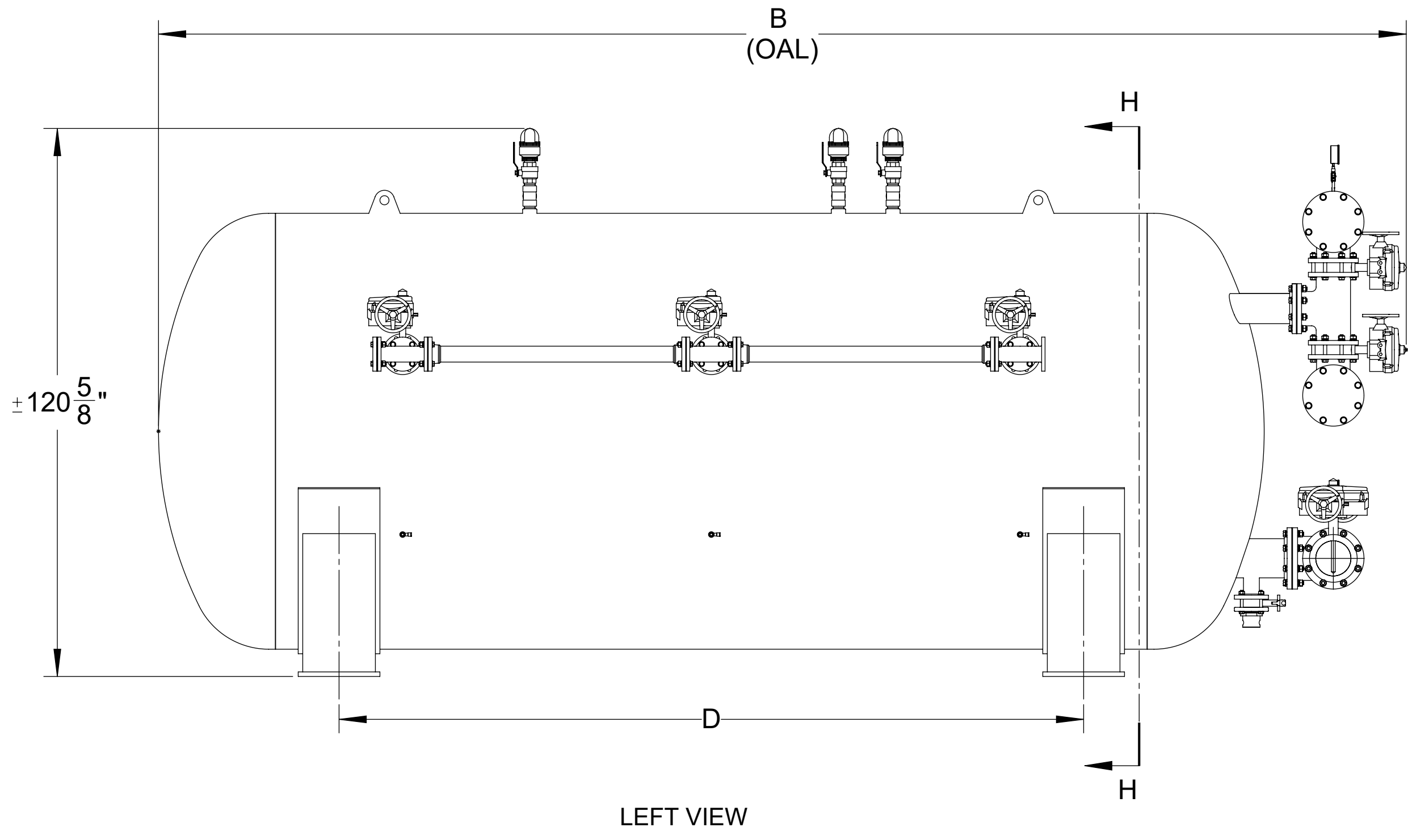
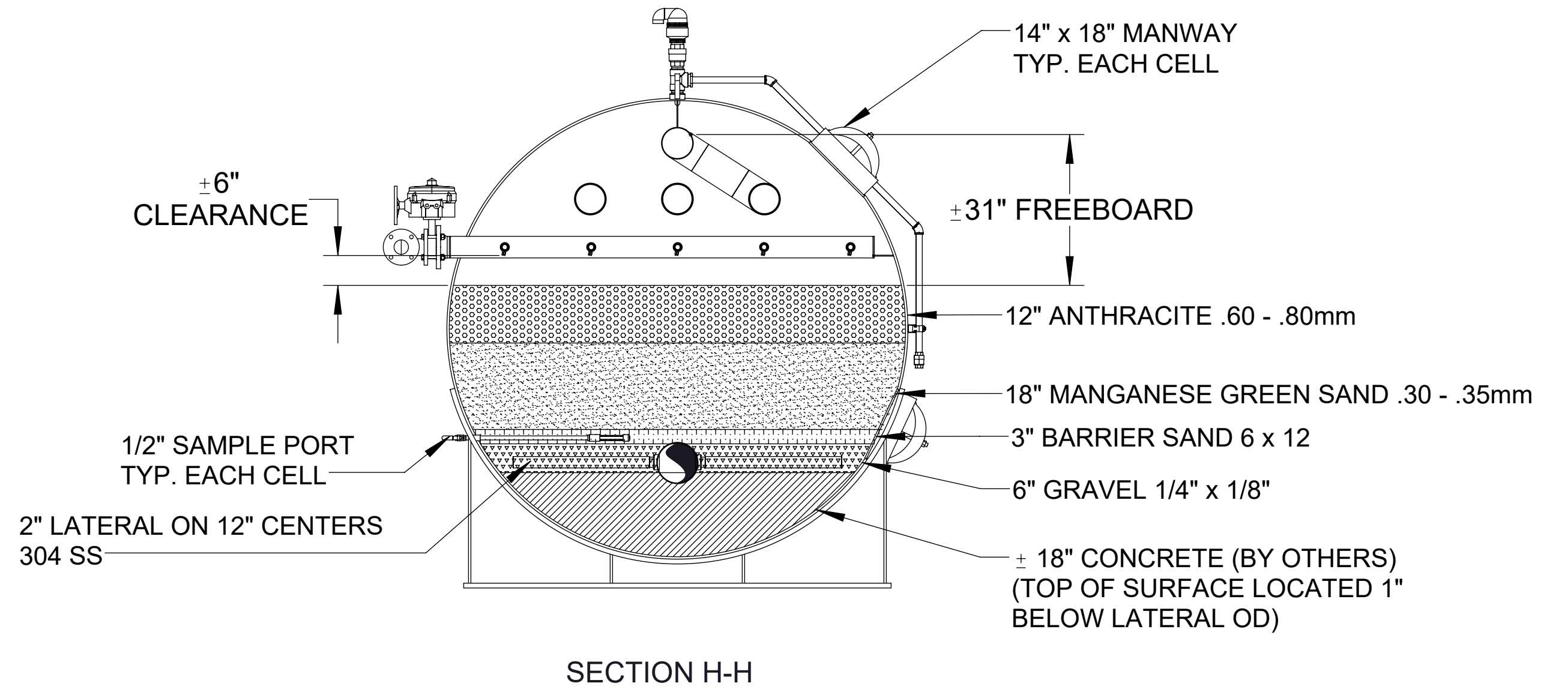
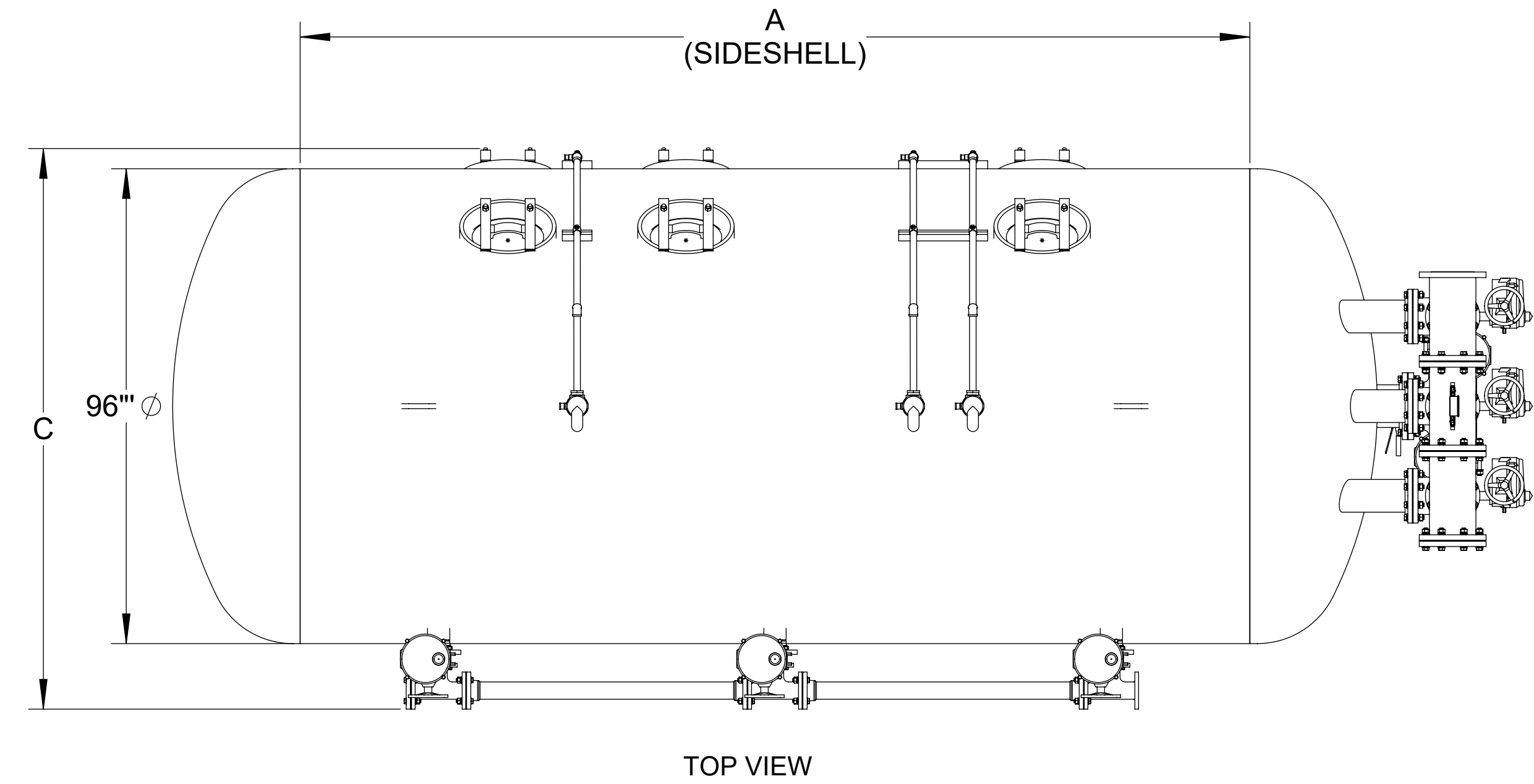
UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE AS FOLLOWS  
1/4" - ± 1/16"  
1/8" - ± 1/32"  
Ø - ± 0.01  
ANGLES - ± 1°

THIRD ANGLE PROJECTION

PROJECT:		TITLE:	
TYPICAL MULTI-CELL FILTER		8' Ø	
SIZE	DWG. NO.	REV	
D	LPTSTD-8xX-9102	A.0	
SCALE:	1:24	ACAD:	
		SHEET 1 OF 2	

WRT DRAWING TEMPLATE D SIZE SHT 1 REV 2.3

REVISIONS						
REV.	ECO	REVISION DESCRIPTION	DATE	DRAWN BY	CHECKED BY	DATE
A.0	--	INITIAL VAULT CHECK IN	6/11/2020	VAS	MB	6/11/2020



**NOTES:**

- 1) TANK TO BE CONSTRUCTED AND STAMPED PER ASME CODE SECTION VIII.
- 2) ALL INTERNAL COMPONENTS ARE 304SS.
- 3) ASSEMBLIES IN SHOWN VIEWS ARE NOT TO BE MODIFIED OR MIRRORRED.
- 4) ALL GASKETS, BOLT KITS, COUPLINGS, AND MISCELLANEOUS FITTINGS TO BE SUPPLIED BY LOPREST AND INSTALLED BY OTHERS.
- 5) VESSEL INTERIOR PAINT SPECIFICATIONS: SURFACES OF TANK SHALL BE BLASTED PER SSPC-SP10, AND LINED WITH THREE (3) COATS OF TNE MEC N140-15BL "TANK WHITE" EPOXY TO GIVE A FINISH OF 12-15 MDFT (THIRD PARTY INSPECTION DOCUMENTATION PROVIDED).
- 6) VESSEL EXTERIOR PAINT SPECIFICATIONS: SURFACES OF TANK SHALL BE BLASTED PER SSPC-SP6, AND PRIMED WITH ONE (1) COAT OF TNE MEC 140 AT 2 TO 4 MILS, AND FINISHED WITH ONE (1) COAT TNE MEC 1074 (COLOR TBD) POLYURETHANE AT 2 TO 4 MILS DFT. STAINLESS STEEL SURFACES SHALL BE COATED (THIRD PARTY INSPECTION DOCUMENTATION PROVIDED).
- 7) ANCHOR BOLTS NOT INCLUDED.
- 8) MEDIA AND ANCILLARY COMPONENTS SHALL BE SHIPPED SEPERATELY FOR INSTALLATION BY CONTRACTOR.

Flow Range (gpm)	Vessel Dimensions (ft/in)				Filter Surface Area (sq ft)	Flowrates* (gpm)		Pipe Diameters (in)			Weights (Est.) (lbs)	
	A	B	C	D		Backwash	Water Scour	E	F	G	Shipping	Operating
500 - 830	12'	18'-11"	112-7/8"	8'	104	416 - 520	69	8"	6"	2"	14,000	85,000
831 - 1,090	16'	22'-11"	113-3/8"	12'	136	544 - 680	91	8"	6"	3"	16,000	110,000
1,091 - 1,600	24'	30'-11"	113-3/8"	20'	200	800 - 1,000	133	10"	8"	3"	20,000	150,000
1,601 - 2,110	32'	38'-11"	113-3/8"	28'	264	1,056 - 1,320	176	12"	10"	3"	26,000	190,000
2,111 - 2,620	40'	46'-11"	114-3/8"	36'	328	1,312 - 1,640	219	12"	10"	4"	38,000	240,000

\*Rinse flowrate is at Service flowrate

ENGINEERS - MANUFACTURERS - SINCE 1928

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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE AS FOLLOWS  
1/16" : ±1/16"  
1/32" : ±1/32"  
.001" : ±.001"  
ANGLES : ±1°

THIRD ANGLE PROJECTION

PROJECT:

TITLE:  
**TYPICAL MULTI-CELL FILTER**  
8' Ø

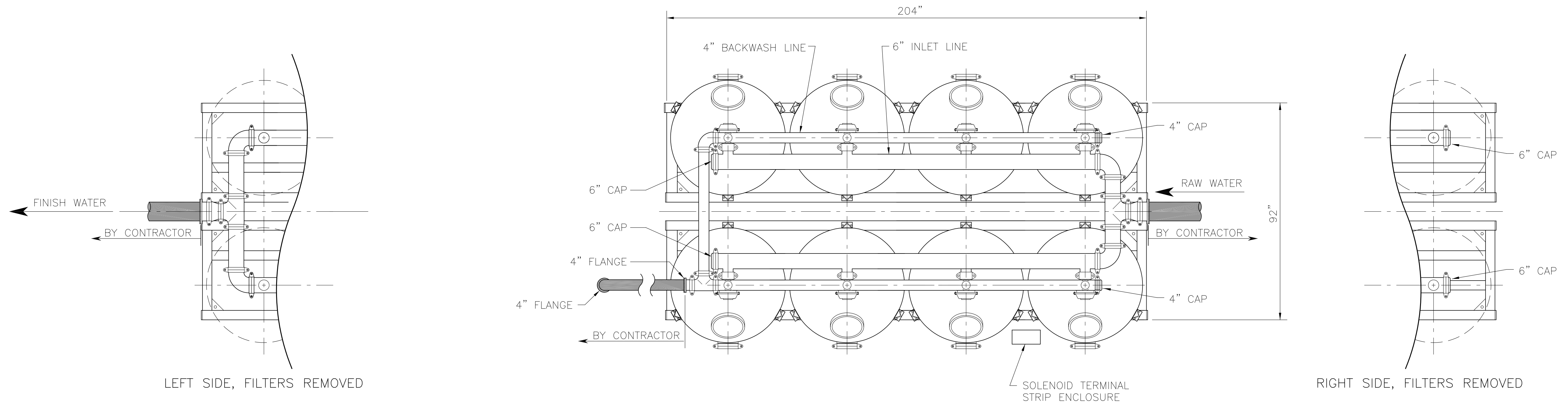
SIZE DWG. NO.  
**D** LPTSTD-8xX-9102

SCALE: 1:24 ACAD: 30

REV  
**A.0**

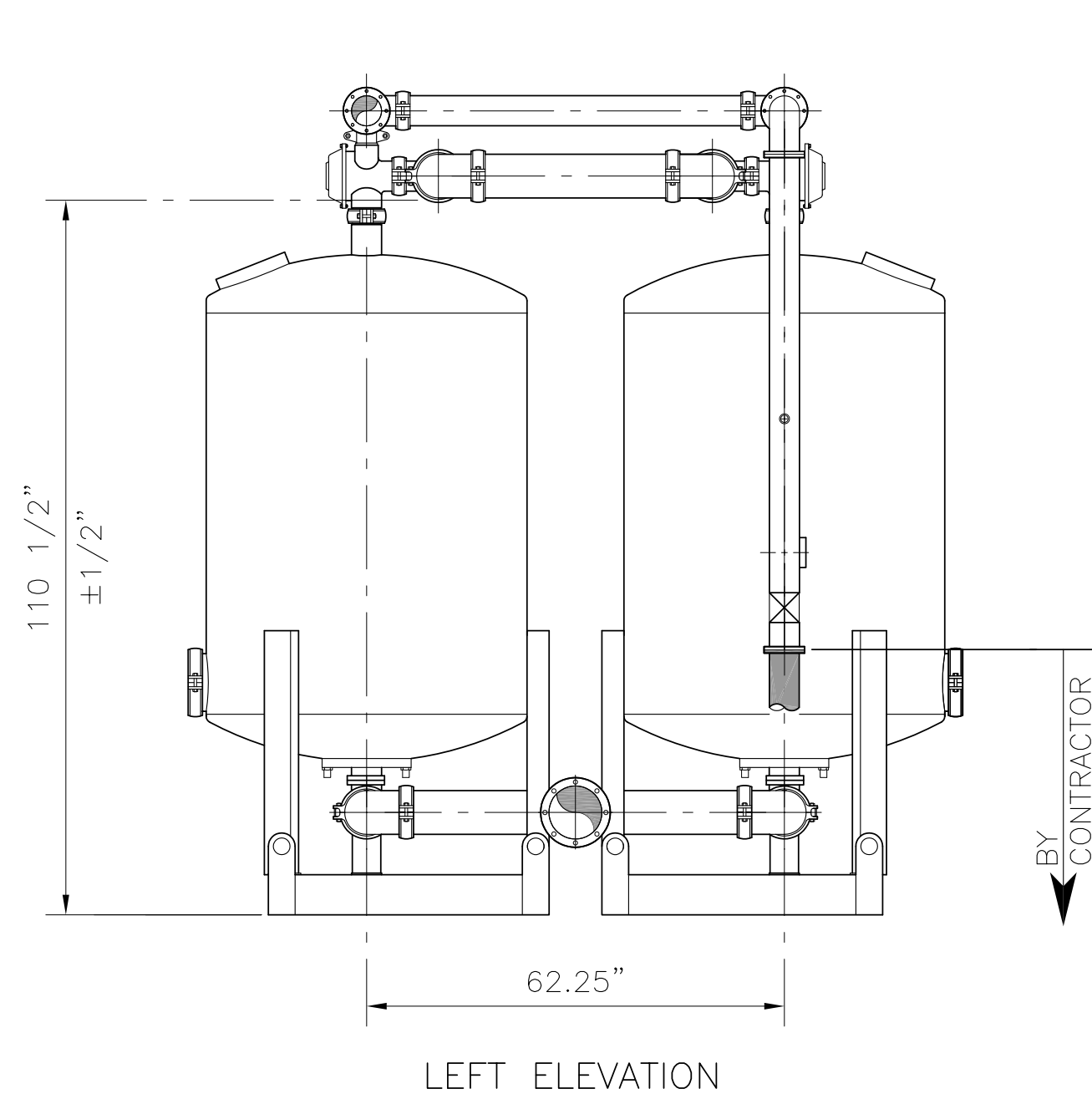
SHEET 2 OF 2



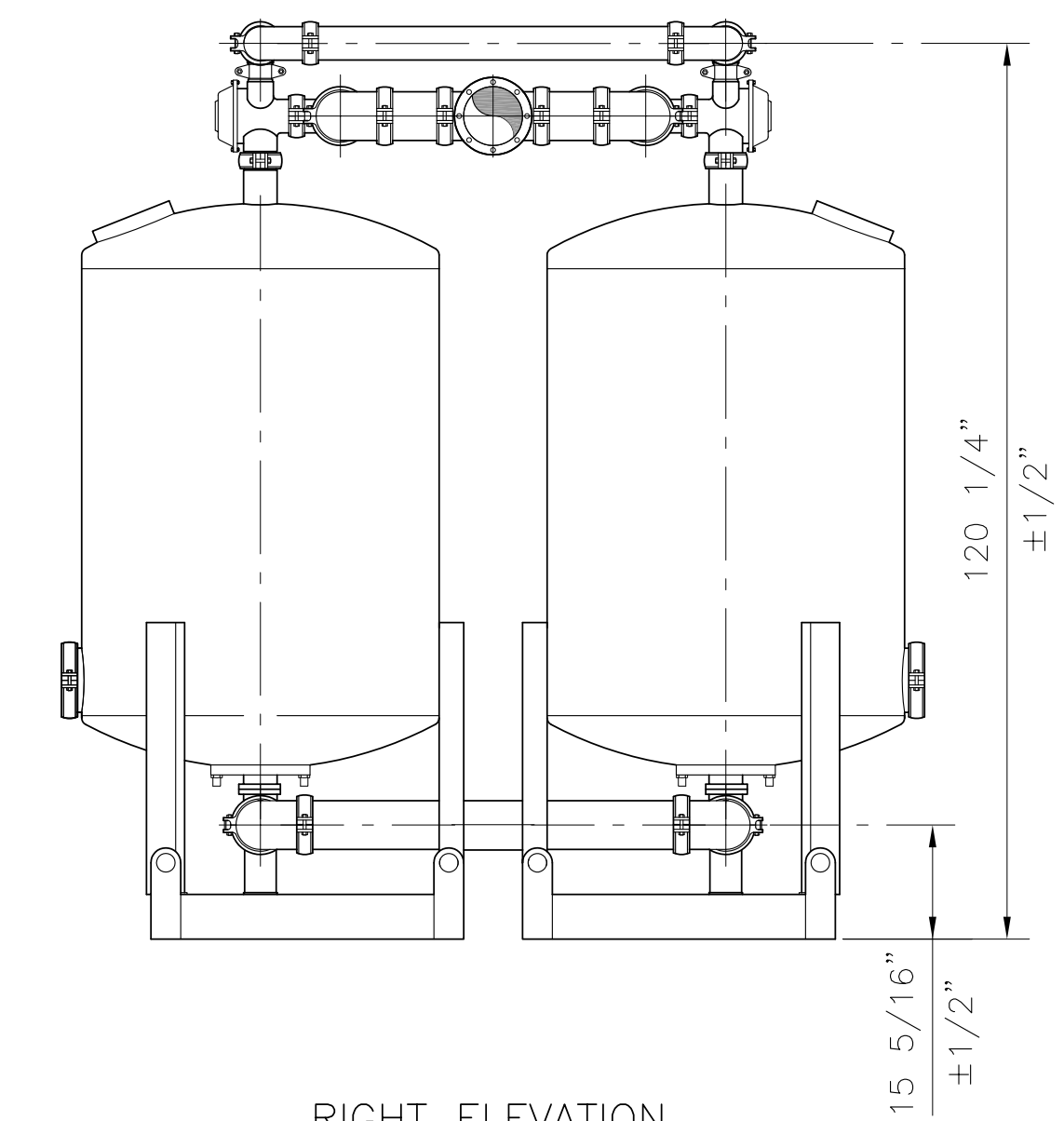
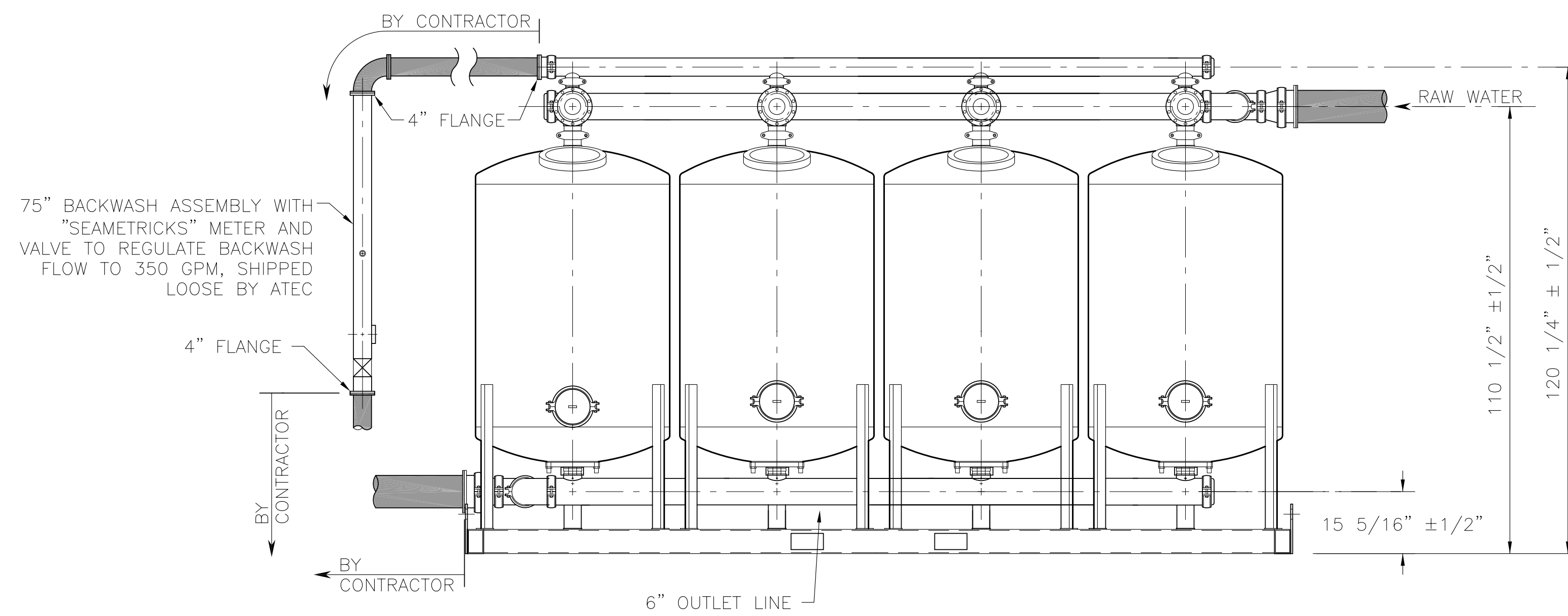


LEFT SIDE, FILTERS REMOVED

RIGHT SIDE, FILTERS REMOVED



LEFT ELEVATION



RIGHT ELEVATION

NOTES:

[A] THE FOUR (6) FILTER SYSTEM IS DELIVERED ON (2) 4 FILTER SKIDS.

[B] AIR RELIEF/VACUUM RELIEF VALVE WILL BE SUPPLIED FOR INSTALL ON 2" COUPLING ON INLET LINE.

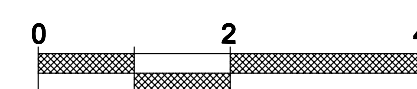
[C] SHADED PIPING BY CONTRACTOR.

[D] FILTER PIPING CONNECTIONS WILL BE PROVIDED TO SUIT FIELD CONDITIONS.



P.O. BOX 10239  
BAINBRIDGE ISLAND, WASHINGTON 98110-0329  
PHONE: (360) 414-9223 FAX: (360) 397-0375

DESIGN BY:					
DRAWN BY:					
CHECKED BY:					
APR'D BY:					
	NO.	DATE		BY	APVD

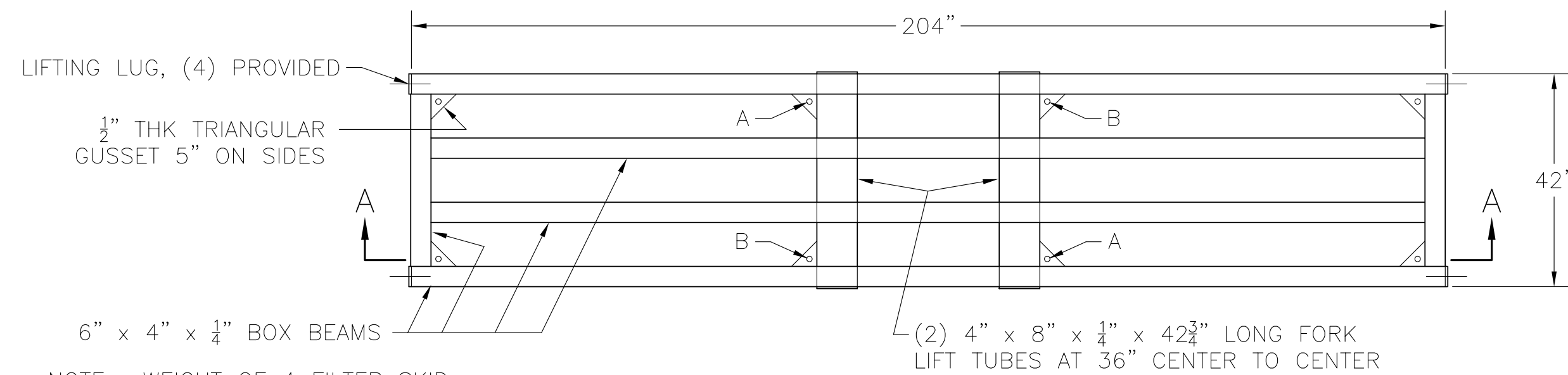


SCALE IN FEET  
NOTE: CHECK SCALE  
SCALEABLE IN 22x34 - 1/2" = 1'-0"  
SCALEABLE IN 11x17 - 1/4" = 1'-0"

STANDARD EIGHT FILTER  
48 - INCH SYSTEM  
ATEC TREATMENT SYSTEM

FILTER DETAILS

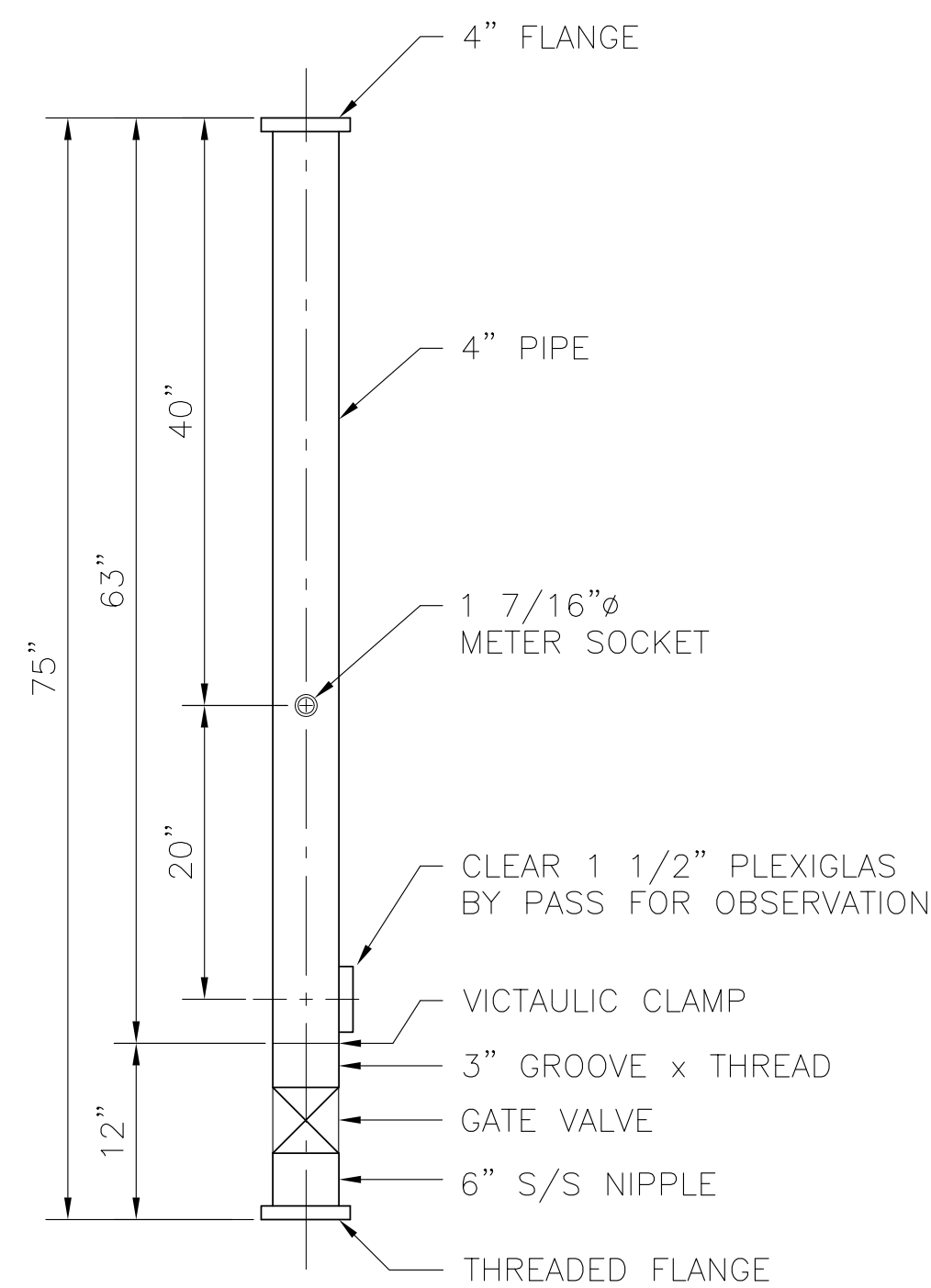
SHEET NO.	1 of 2
DWG. NO.	
DATE:	11-7-2011
FILE:	Standard 8 - Filter 48



NOTE: WEIGHT OF 4 FILTER SKID;  
EMPTY 15,200#  
WITH MEDIA AND WATER 48,000#

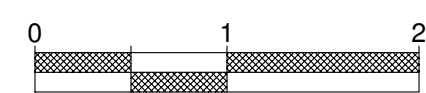
**4 FILTER SKID**  
( 2 REQUIRED )

SCALE IN FEET  
NOTE: CHECK SCALE  
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SCALEABLE IN 11x17 - 1/4" = 1'-0"

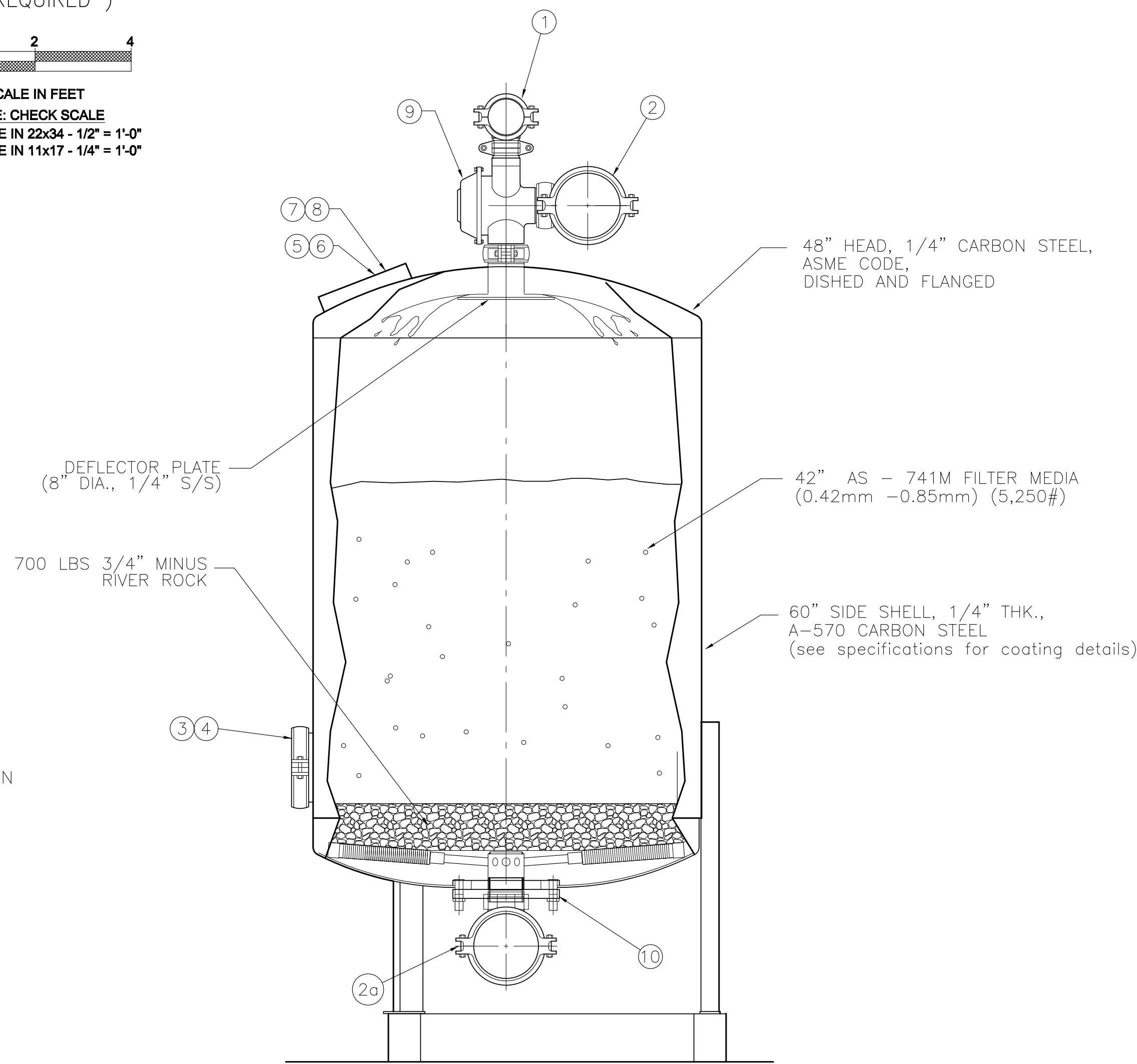


**STANDARD BACKWASH ASSEMBLY**

SCALE: 1" = 1'-0"

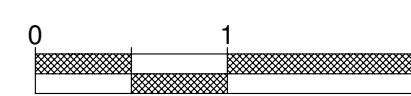


SCALE IN FEET  
NOTE: CHECK SCALE  
SCALEABLE IN 22x34 - 1" = 1'-0"  
SCALEABLE IN 11x17 - 1/2" = 1'-0"



**TANK SECTION**

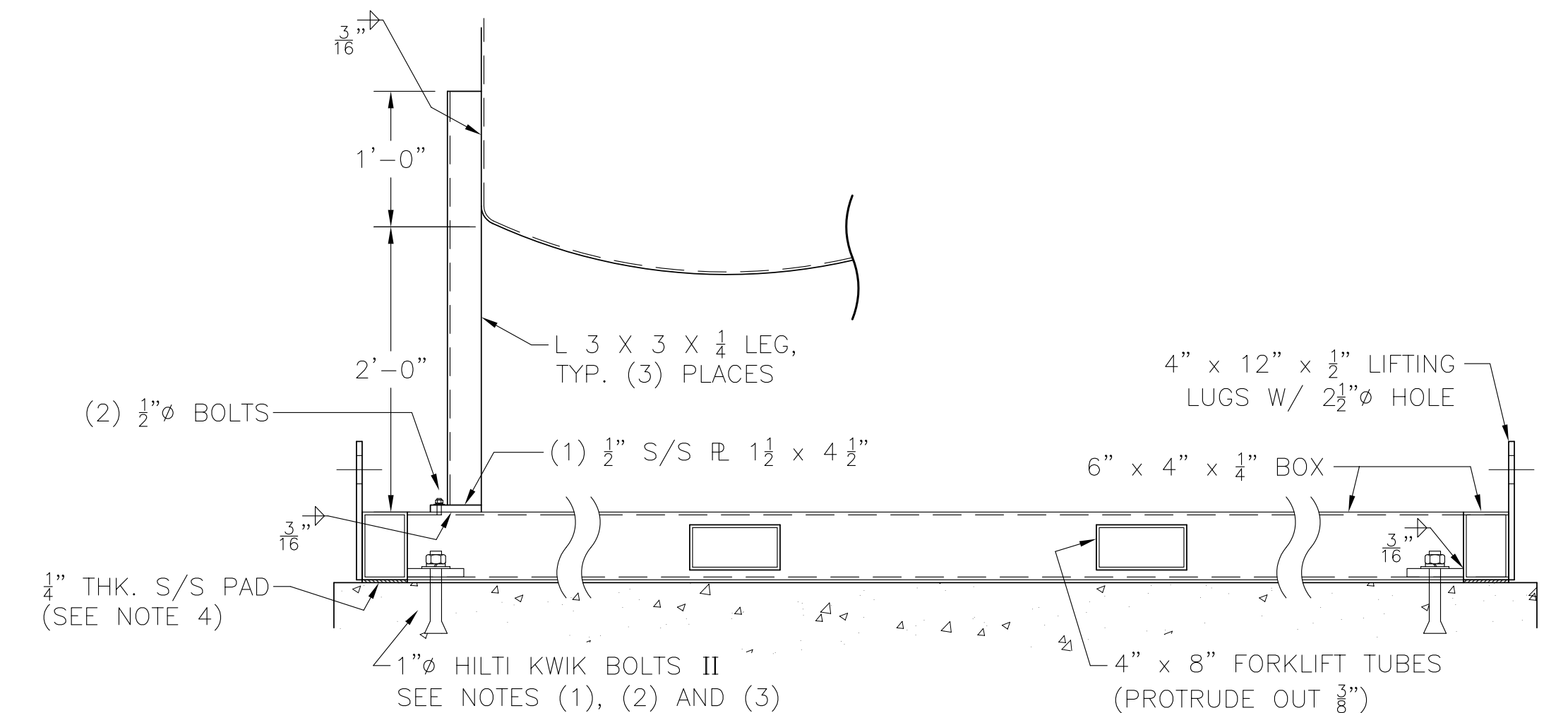
SCALE 1" = 1'-0"



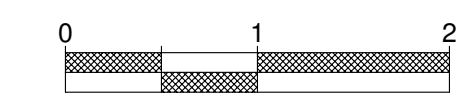
SCALE IN FEET  
NOTE: CHECK SCALE  
SCALEABLE IN 22x34 - 1" = 1'-0"  
SCALEABLE IN 11x17 - 1/2" = 1'-0"

BILL OF MATERIAL			
ITEM	QTY	PART NO.	DESCRIPTION
1	1	PFS-CPL03	4" GROOVED COUPLING, CAST IRON W/ BOLTS & GASKET
2	3	PFS-CPL04	6" GROOVED COUPLING, CAST IRON W/ BOLTS & GASKET
3	1	PFS-CAP08	8" GROOVED END CAP
4	1	PFS-CPL08	8" GROOVED COUPLING, CAST IRON W/ BOLTS & NUTS
5	1	PFS=HHP11	11"x15" HAND HOLE PLATE
6	1	PFS=HHG11	11"x15" HAND HOLE GASKET
7	1	PFS=HHGS11	11"x15" HAND HOLE BOLT SET
8	1	PFS=HHR11	11"x15" HAND HOLE HOLD DOWN CRAB
9	1	V-BF4	4"x4"x3" SERIES 350 BERHAD BACKWASH VALVE
10	1	UA SS48	UNDER-DRAIN ASSEMBLY 316L SS W/ SCH 80 PVC CAP COMPLETE

NOTE: QUANTITIES FOR ONE (1) TANK



**SECTION A-A**  
SCALE 1" = 1'-0"



SCALE IN FEET  
NOTE: CHECK SCALE  
SCALEABLE IN 22x34 - 1" = 1'-0"  
SCALEABLE IN 11x17 - 1/2" = 1'-0"

FILTER/SYSTEM INFORMATION	
ITEM	
CAPACITY	. GPM
Fe	mg/L
mN	mg/L
COLOR	
BACKWASH	350 GPM
.	
.	
.	



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DESIGN BY:					
DRAWN BY:					
CHECKED BY:					
APPR'D BY:					
	NO.	DATE		BY	APVD

SCALE  
AS NOTED

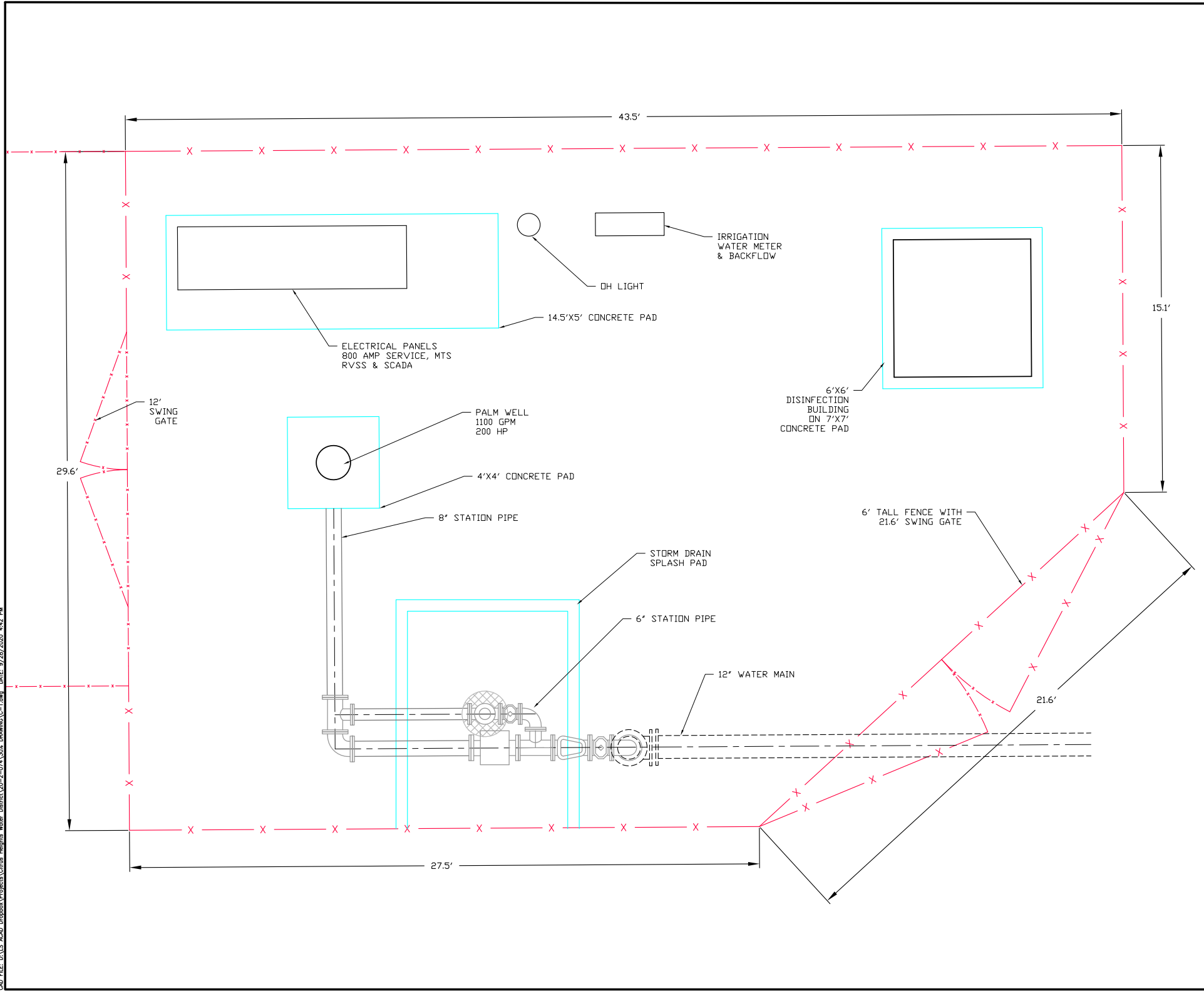
STANDARD EIGHT FILTER  
48 - INCH SYSTEM  
ATEC TREATMENT SYSTEM

FILTER DETAILS

SHEET NO.	2 of 2
DWG. NO.	
DATE:	11-7-2011
FILE:	Standard 8 - Filter 48

**Exhibit C:**  
**Conceptual Site Drawings**

CAD FILE: D:\S\_420D\_Dropbox\Projects\Citrus Heights Water District\20-2-074\2020 DRAWINGS\C-1.dwg DATE: 9/29/2020 4:42 PM



**PALM CONCEPTUAL SITE PLAN**  
 Palm and Sunrise Wells  
 Citrus Heights Water District  
 Carmichael, California



NO.	DATE	REVISIONS

DATE: SEPTEMBER 2020  
 JOB NO.: 20-2-074  
 DESIGN BY: JS/OS  
 DRAWN BY: GRG  
 CHECKED BY: GRG  
 FILE: C01

SHEET:  
**C01**

CAD FILE: D:\LS ACAD Dropbox\Projects\Citrus Heights Water District\20-2-074\_30% DRAWING\C-2.dwg DATE: 9/29/2020 10:05 AM



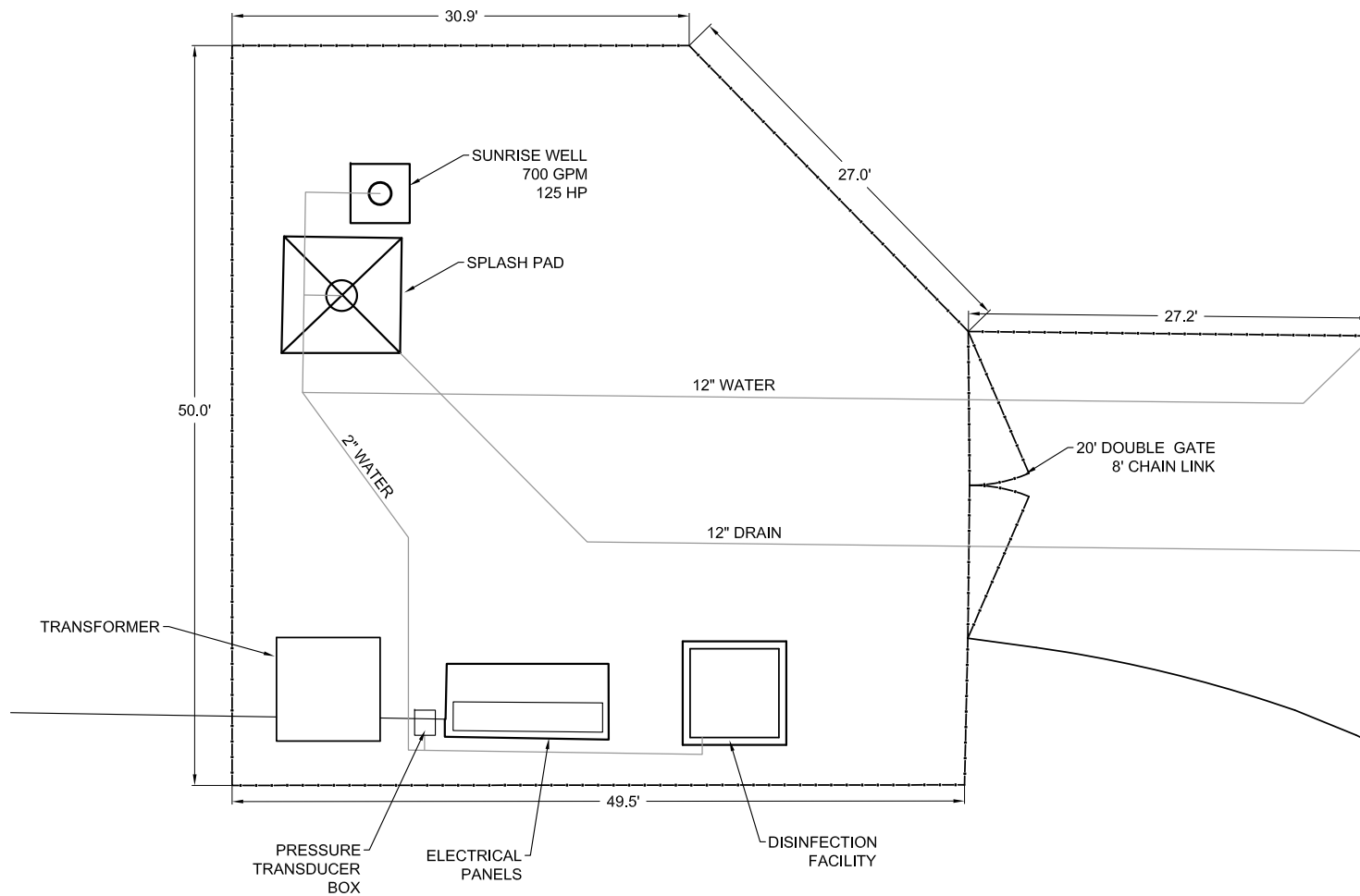
PALM CONCEPTUAL SITE PLAN  
 Palm and Sunrise Wells  
 Citrus Heights Water District  
 Carmichael, California

**Luhdorff & Scalmanini**  
 Consulting Engineers

REVISIONS	
NO.	DATE

DATE: SEPTEMBER, 2020  
 JOB NO.: 20-2-074  
 DESIGN BY: JS/OS  
 DRAWN BY: GRG  
 CHECKED BY: GRG  
 FILE: C02

SHEET:  
 C02



SUNRISE CONCEPTUAL SITE PLAN  
 Palm AND SUNRISE WELLS  
 Citrus Heights Water District  
 Carmichael, California

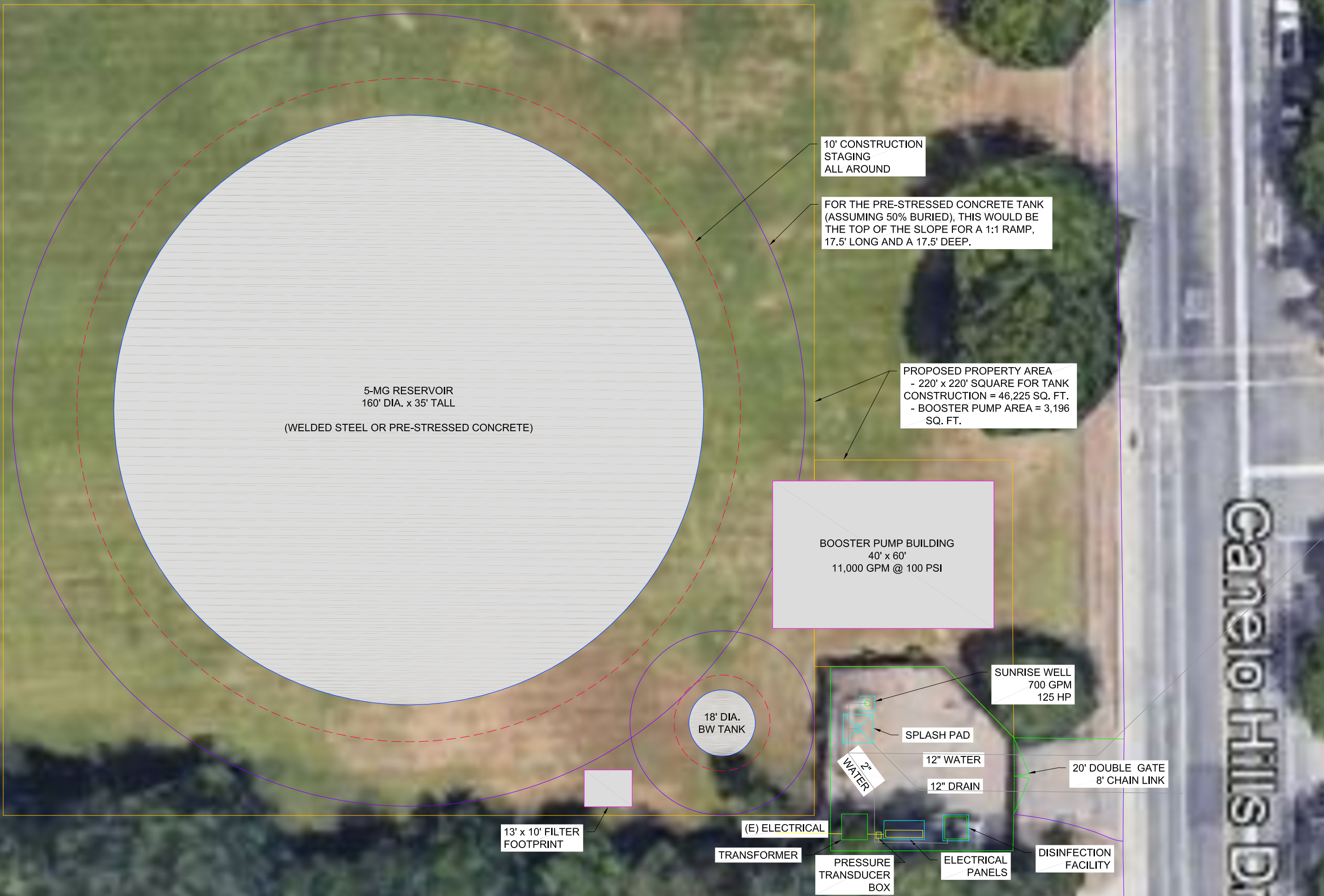


REVISIONS	
NO.	DATE

DATE: SEPTEMBER 2020
JOB NO.: 20-2-074
DESIGN BY: JS/CS
DRAWN BY: GRG
CHECKED BY: GRG
FILE: C03

SHEET:  
 C03

CAD FILE: D:\LS ACAD Dropbox\Projects\Citrus Heights Water District\20-2-074\_30% DRAWING\C-4.dwg DATE: 9/29/2020 9:28 AM



SUNRISE CONCEPTUAL SITE PLAN  
 Palm AND SUNRISE Wells  
 Citrus Heights Water District  
 Carmichael, California



REVISIONS	
NO.	DATE

DATE: SEPTEMBER 2020
JOB NO.: 20-2-074
DESIGN BY: JS/OS
DRAWN BY: GRG
CHECKED BY: GRG
FILE: C04

SHEET:  
 C04

## **Exhibit D:**

### **DN Tank Budget Estimate and Architectural Finish Examples**





Generations Strong

P.O. Box 696, El Cajon, CA 92022 | 619.440.8181 | Fax 619.440.8653

August 28<sup>th</sup>, 2019

Gregory Garrison  
Staff Engineer  
500 First Street  
Woodland, CA 95695

REFERENCE: Prestressed Concrete Tank Budget Letter  
5.0 MG Water Tanks – Citrus Heights, CA

Dear Mr. Garrison,

Thank you for your interest in a concrete water storage tank. Per our meeting and recent correspondence, please find below a budget level estimate for the design and construction of an AWWA D110 Type I circular, prestressed concrete tank in Citrus Heights, California.

Tank Budgeting Information for Prestressed Concrete Tank					
Nominal Capacity <sup>1</sup>	Roof Type	Inside Diameter	Side Water Depth	Assumed Freeboard	Tank Estimate <sup>2</sup>
5.0 MG	Flat Slab Concrete Column Supported	160.00'	35.0'	1.5'	\$4,100,000

- 1) *Nominal Capacity is from finished floor elevation to the top of the overflow at wall to the Side Water Depth indicated. The volume reflects a flat (2.0%) floor slope and the presence of interior columns for the flat slab roof type. Should the outlet be located above the finish floor, a loss in volume will result.*
- 2) *Freeboard is taken from the side water depth as shown. This shall be further developed as the project design progresses. Note that if freeboard is required to be taken from another level, wall height may need to be revised, and subsequently this budget may also need to be revised.*

**The above tank is designed and constructed in accordance with AWWA D110, ACI 350, ASCE 7, Local Building Codes, and National Standards.** The budget figures above include tank structure complete with a standard spread footing, 6" concrete floor slab, concrete roof, thick core bi-axially compressed prestressed tank walls, and shotcrete. The above tank is assumed to be at-grade or uniformly backfilled, with no soil or excessive live loads present on the tank roof. If a deep foundation (e.g. piles or piers), horizontal slab extension, or keyway is required due to additional information provided by the geotechnical engineer, this budget will need to be re-evaluated.

For tank appurtenances shown below, approximately **\$100,000.00** shall be added to the Base Tank Estimate figures above.

- Two, 6" Roof Sleeves
- Aluminum Handrail (100 LF or less)
- FRP interior ladder (38 LF or less) – with access hatch
- Aluminum Exterior Ladder (38 LF or less)

- 4' x 8' Roof Equipment/Access Hatch
- 24" Roof Vent

The figures above exclude site work, subgrade preparation, baffle walls, all piping and mechanical equipment, electrical, instrumentation, SCADA, and any exterior or aesthetics coatings. Per the owner's preference, additive appurtenances not included in the above estimate typically range from \$50,000.00 - \$80,000.00. (e.g. sample taps, additional roof sleeves, additional hatches, handrails, etcetera). The above estimate accounts for construction in 2020 by DN Tanks, should the project be constructed in 2021 or beyond, DN Tanks recommends adding 3% to 5% inflation per year past 2020. Please also note that the budget figures do not account for any markups on the scope from General Contractors or others.

Thank you for this opportunity to be of service. Please feel free to contact me if you have any questions or if I can be of any further assistance.

Sincerely,

**DN TANKS | Generations Strong**



Tyler Bernhard, EIT  
Regional Manager – Northern California  
Mobile: (916) 426-5838  
Email: [tyler.bernhard@dntanks.com](mailto:tyler.bernhard@dntanks.com)



## Prestressed Storage Tanks Architectural Façade Treatments

**Tyler Bernhard**

Regional Manager

c: 916.426.5838

e: [tyler.bernhard@dn tanks.com](mailto:tyler.bernhard@dn tanks.com)



# Architectural Façade Treatments

---

## Section 1. Exterior Aesthetic Painting



**Basic Exterior Paint**  
**~\$70,000.00 for (5.0 MG)**



Shown: 3.0MG Tank  
Fresno, CA (2012)



Exterior Paint with Logos  
~\$175,0,000.00 for (5.0 MG)



Shown: 4.0MG Tank  
Davis, CA (2010)



# Architectural Façade Treatments

---

## Section 2. Exterior Foam System



**Standard Coating + Stone Pilaster + Foam Arches**  
**~\$225,000.00 For (5.0 MG)**



Shown: 5.0MG Tank  
Tinley Park, IL (2000)





**Coating + Foam Pilaster & Banding System  
~\$180,000.00 for (5.0 MG)**



Shown: 4.0 Tank  
Anaheim, CA (2013)



# Architectural Façade Treatments

---

## 3. Structural Systems



**Structural Façade with Stairway Covering  
+\$1,000,000.00 for (5.0MG)**



Shown: 6.0MG Tank  
Ontario, CA (2006)



Structural Façade with Stairway Covering (Same As Previous)  
+\$1,000,000.00 for (5.0 MG)



Shown: 6.0MG Tank  
Ontario, CA (2006)



# Architectural Façade Treatments

---

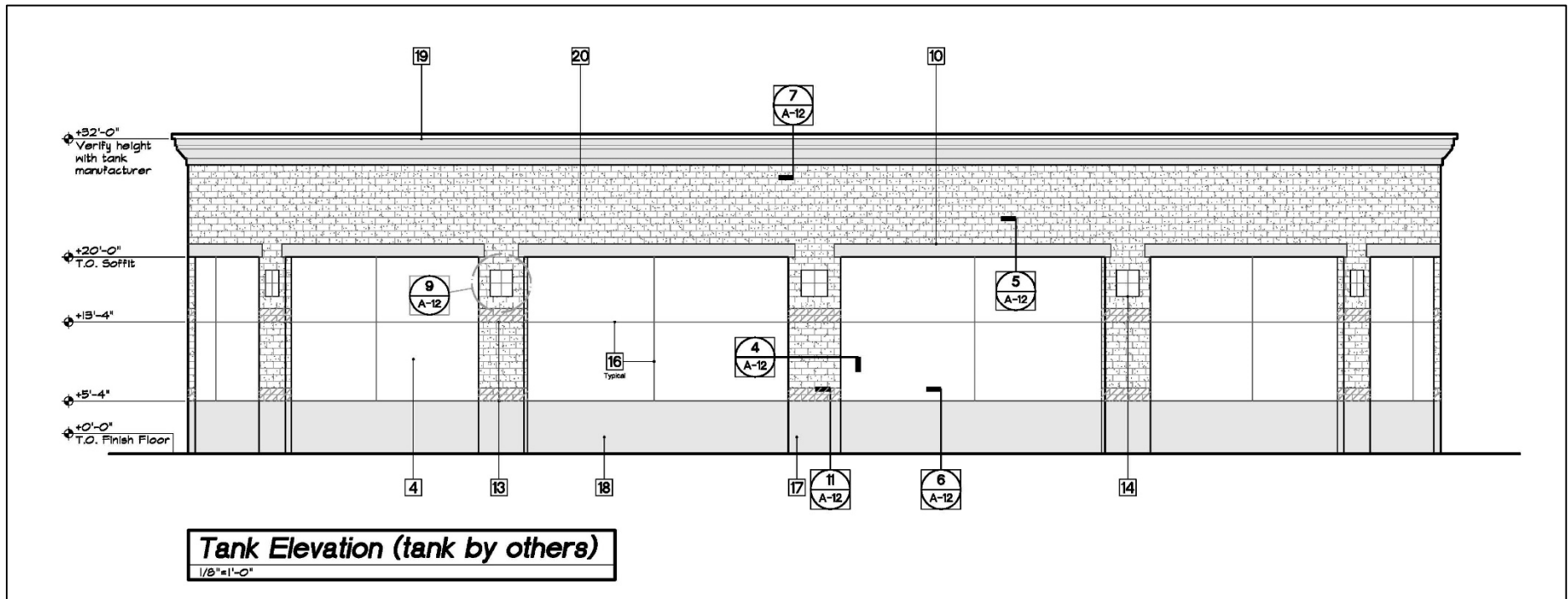
## 4. Stone/CMU Systems



**Stone Banding and Pilasters with Plaster on Walls  
~\$300,000.00 – \$375,000.00 (5.0 MG)**



Shown: 4.0MG Tank  
Stockton, CA (2011)



CMU + Stone + Banding  
 \$350,000.00 – \$450,000.00 for (5.0 MG)



Shown: 3.0MG Tank  
 Fresno, CA

## **ATTACHMENT 2**

### **CHWD Property Acquisition Matrix (Storage)**



Property Address:
APN:
Owner(s):

**LAND ACQUISITION DECISION MATRIX (STORAGE)**

STEP	ITEM	WHO <sup>1</sup>	BOARD (Y/N, O/C) <sup>2</sup>	DESCRIPTION	NOTES	
<b>1. Site Selection</b>						
<input type="checkbox"/>	1.1.	Identify Potential Site	<b>Rebecca, Brian</b> , Realtor <sup>3</sup>	No	Selection based on Lot size, proximity to Transmission Mains and 3-phase power	
<input type="checkbox"/>	1.2.	Conduct Initial Due Diligence	<b>Rebecca, Brian, Hilary</b> , Realtor <sup>3</sup>	No	Review lot size, existing infrastructure, possible improvements, potential CEQA/construction issues (i.e., traffic, noise, compatibility with surrounding uses, oak trees, flood plain). City and County land-use inquiry; as required.	
<input type="checkbox"/>	1.3.	Contact Property Owner	<b>Realtor<sup>3</sup>, Rebecca, Brian</b>	No	Conduct appraisal of property, if owner willing, obtain preliminary title report.	
<b>2. Obtain Right to Purchase Property</b>						
<input type="checkbox"/>	2.1.	Initial Board Review	<b>Hilary, Rebecca, Brian, Susan</b> , Legal	Yes, Closed Session	1. Discuss potential site with Board. 2. Authorize GM to execute Option/Purchase and Sale Agreement (PSA) with negotiation limits set by Board. 3. Complete the environmental review process (administratively).	
<input type="checkbox"/>	2.2.	Execute PSA	<b>Hilary, Realtor<sup>3</sup></b> , Legal	No	Execute PSA with owner.	

**LEGEND:**

- 1) Bolded names in the “WHO” column indicate the project lead(s) for that item.
- 2) (Y/N, O/C): (Yes/No, Open Session/Closed Session).
- 3) Realtor if utilized for Property Purchase only.

Property Address:
APN:
Owner(s):

**LAND ACQUISITION DECISION MATRIX (STORAGE)**

STEP	ITEM	WHO <sup>1</sup>	BOARD (Y/N, O/C) <sup>2</sup>	DESCRIPTION	NOTES
<b>3.</b>	<b>Due Diligence – Conduct Environmental Review</b>				
<input type="checkbox"/>	3.1.	CEQA/Land Use Review <b>Rebecca, Brian,</b> Hilary, Legal	No	Conduct CEQA review necessary to complete site acquisition. Notify City/County of intent to acquire so Planning Commission can review for General Plan consistency.	
<input type="checkbox"/>	3.2.	Water Resources Review <b>Rebecca, Brian,</b> Hilary	No	Conduct Phase I Environmental Assessment Notify CA Division of Drinking Water of potential site acquisition.	
<b>4.</b>	<b>Approve and Finalize Property Acquisition</b>				
<input type="checkbox"/>	4.1.	Final Board Approval <b>Hilary, Rebecca, Brian,</b> Susan, Legal	Yes, Closed Session first and then Open Session	1. Authorize exercise of option to purchase property. 2. Approve CEQA documents. 3. Authorize GM or designee to record grant deed and obtain all necessary entitlements or exempt site from land use regulations.	
<input type="checkbox"/>	4.2.	Finalize Property Acquisition <b>Rebecca, Brian,</b> Hilary, Legal, Realtor <sup>3</sup>	No	Close escrow; record grant deed; ensure general plan/zoning is consistent with use; if not, obtain necessary entitlements or exempt site from land use regulations.	

**LEGEND:**

- 1) Bolded names in the “WHO” column indicate the project lead(s) for that item.
- 2) (Y/N, O/C): (Yes/No, Open Session/Closed Session).
- 3) Realtor if utilized for Property Purchase only.