ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
ADMINISTRATION FACILITY, BOARDROOM
JULY 7, 2021 AT 7:00 AM

COMMITTEE MEMBERS
Edward Mandich, Committee Chair
Stephen Dopudja, Committee Member
Michael Safranski, Committee Member Alternate

DISTRICT STAFF
Fernando Paludi, General Manager
Michael Perea, District Secretary
Lorrie Lausten, District Engineer
Gary Kessler, Water System Superintendent
Jason Stroud, Maintenance Superintendent

AGENDA NOTE:
*Due to the spread of COVID-19 and as authorized by the Governor's Executive Order, Trabuco Canyon Water District will be holding this Engineering/Operational Committee Meeting by video broadcast **(Zoom)**, and will be available by either video conference or telephone audio as follows:*

***Video Conferencing:** You can join the meeting from your computer, tablet, or smartphone by clicking on the following link: https://zoom.us/j/97375627682*

Telephone Audio: *1 (669) 900-6833*
Access Code: 973-7562-7682

*Persons desiring to monitor the Committee meeting agenda items may download the agenda and documents on the internet at **www.tcwd.ca.gov**.*

*You may submit public comments by email to the Committee at **mperea@tcwd.ca.gov**. In order to be part of the record, emailed comments on meeting agenda items must be received by the District, at the referenced e-mail address, not later than 7:00 a.m. (PDT) on the day of the meeting.*

CALL MEETING TO ORDER

VISITOR PARTICIPATION
*Members of the public wishing to address the Committee regarding a particular item on the agenda are requested to submit public comments by email to the Committee at **mperea@tcwd.ca.gov**. The Committee Chair will call on the visitor following the Committee's discussion about the matter. Committees do not constitute a quorum of the Board of Directors and Committee Members cannot make decisions on matters. The Committee makes recommendations only to the Board of Directors. Members of the public will be given the opportunity to speak to the Committee prior to making a recommendation on the matter. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.*

ORAL COMMUNICATION
*Members of the public who wish to make comment on matters not appearing on the agenda are requested to submit oral communication by email to the Committee at **mperea@tcwd.ca.gov**. Under the requirements of State Law, Directors cannot take action on items not identified on the agenda and will not make decisions on such matters. The Board President may direct District Staff to follow up on issues as may be deemed appropriate. For*

persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.

COMMITTEE MEMBER COMMENTS

REPORT FROM THE GENERAL MANAGER

ADMINISTRATIVE MATTERS

PRESENTER(S): FERNANDO PALUDI, GENERAL MANAGER
MICHAEL PEREA, DISTRICT SECRETARY

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:
Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar).

1. *June 2, 2021*

ENGINEERING MATTERS

PRESENTER(S): FERNANDO PALUDI, GENERAL MANAGER
MICHAEL PEREA, ASSISTANT GENERAL MANAGER
LORRIE LAUSTEN, DISTRICT ENGINEER

ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT

RECOMMENDED ACTION:
Committee to recommend that the Board of Directors authorize the General Manager to execute the Contract Change Order No. 1 to Ferreira Construction for the Bell Canyon Lift Station Rehabilitation Project in the amount of $28,583.05 (Action Calendar).

ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING GOLF CLUB SEWER LIFT STATION IMPROVEMENTS

RECOMMENDED ACTION:
Committee to recommend that the Board of Directors authorize the General Manager award a Contract to Ferreira Construction for the Sewer Bypass Installation for Golf Club Sewer Lift Station for $78,500 with a 10% contingency of $7,850, for a total not-to-exceed fee of $86,350 (Action Calendar).

ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING DIMENSION WATER TREATMENT PLANT BACKWASH TANK REPLACEMENT PROJECT

RECOMMENDED ACTION:
Committee to receive information at the time of the Committee Meeting.

ITEM 5: DISCUSSION AND POSSIBLE ACTION CONCERNING ASSET MANAGEMENT SOFTWARE PURCHASE

RECOMMENDED ACTION:
Committee to recommend that the Board of Directors authorize the General Manager award a five-year contract to Cartegraph for Computerized Maintenance - Management System Software for a not-to-exceed fee of $100,367 (Action Calendar).

ITEM 6: DISCUSSION AND POSSIBLE ACTION CONCERNING SCADA UPGRADE PROJECT

RECOMMENDED ACTION:
Committee to receive information at the time of the Committee Meeting.

ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Master Plan and Condition Assessment Update
2. Heritage Sewer Lift Station Improvements
3. Oaks at Trabuco Update
4. Other Projects

RECOMMENDED ACTION:
Committee to receive project status updates at time of the Committee Meeting.

OPERATIONAL MATTERS

PRESENTER(S): GARY KESSLER, WATER SYSTEM SUPERINTENDENT
MICHAEL PEREA, ASSISTANT GENERAL MANAGER
JASON STROUD, MAINTENANCE DEPARTMENT SUPERINTENDENT

ITEM 8: WATER SYSTEM UPDATES

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

ITEM 9: WASTEWATER SYSTEM UPDATES

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

ITEM 10: MAINTENANCE DEPARTMENT UPDATES

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

REGULATORY AND OTHER MATTERS

ITEM 11: OTHER MATTERS/REPORTS

RECOMMENDED ACTION:
Hear Other Matters/Reports that may have arisen after the posting of the agenda.

ADJOURNMENT

AVAILABILITY OF AGENDA MATERIALS
Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Trabuco Canyon Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the Trabuco Canyon Water District Administrative Facility, 32003 Dove Canyon Drive, Trabuco Canyon, California (District Administrative Facility) or will be posted online on the District's website located at www.tcwd.ca.gov. If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available online at www.tcwd.ca.gov at the same time as they are distributed to the Board Members, except that, if such writings are distributed immediately prior to or during the meeting, they will be posted online on the District's website located at www.tcwd.ca.gov.

COMPLIANCE WITH THE REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTION 54954.2
In compliance with California law and the Americans with Disabilities Act, if you need special disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 858-0277, at least 48 hours in advance of the scheduled Board meeting. Notification at least 48 hours prior to the meeting will assist the District in making reasonable arrangements to accommodate your request. The Board Meeting Room is wheelchair accessible.

The District may conduct future meetings electronically (via teleconferencing) during the current ongoing emergency situation.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ADMINISTRATIVE MATTERS
ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:
Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar):

1. *June 2, 2021*

CONTACTS (staff responsible): PALUDI/PEREA

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | JUNE 2, 2021

DIRECTORS PRESENT
Ed Mandich, Committee Chair
Stephen Dopudja, Committee Member

STAFF PRESENT
Fernando Paludi, General Manager
Michael Perea, Assistant General Manager
Lorrie Lausten, District Engineer
Karen Warner, Principal Accountant
Gary Kessler, Water Department Superintendent
Jason Stroud, Maintenance Superintendent
Lisa Marie Sangi, Executive Assistant

PUBLIC PRESENT VIA CONFERNECE CALL
None

CALL MEETING TO ORDER
Director Mandich called the June 2, 2021 Engineering/Operational Committee Meeting to order at 7:00 AM. Public access to the meeting was made available by video broadcast.

VISITOR PARTICIPATION
No comments were received.

ORAL COMMUNICATION
No comments were received.

COMMITTEE MEMBER COMMENTS
Director Dopudja expressed his hopes that District staff had an enjoyable extended weekend.

Director Mandich echoed Director Dopudja's comment.

REPORT FROM THE GENERAL MANAGER
No comments were received.

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

Mr. Paludi presented the Engineering/Operational Committee Meeting Recap for Committee review in accordance with the agenda.

RECOMMENDED ACTION
The Committee recommended that the Engineering/Operational Committee Meeting Recap(s) be forwarded to the Board of Directors for approval (Consent Calendar).

ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT

Ms. Lausten provided brief project status update to the Committee, and she highlighted the project construction report that was included for Committee review. Ms. Lausten reported on project change orders to date, and she delivered a presentation which reviewed the witness inspection and pump colling jacket repair of two new pumps for the station rehabilitation project. Ms. Lausten added that the manufacturer has provided a five-year extended warranty for the full replacement of the pumps in the event of failure.

Mr. Paludi provided a handout that highlighted the updated security fence improvements that incorporated feedback and general input from the neighboring property owner. Discussion occurred concerning site security and aesthetics preservation.

RECOMMENDED ACTION:
The Committee received the status update.

ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING HERITAGE SEWER LIFT STATION IMPROVEMENTS

Mr. Paludi introduced this matter to the Committee, and he reported that a budget for facility security improvements was scheduled for Fiscal Year 2020/2021, but that District staff recommends certain critical operational improvements. Ms. Lausten presented a handout which provided an overview of the identified issues, and she reviewed the facility photos. Ms. Lausten recommended contracting with JIG Consultants for engineering services related to improvements to the onsite bypass structure. Discussion occurred concerning certain assumptions in the proposed scope of work and facility characteristics.

RECOMMENDED ACTION:
The Committee recommended the Board of Directors authorize the General Manager to ratify a Contract with JIG Consultants for Engineering Services for Heritage Lift Station Bypass and Piping Improvements in the amount of $43,440 (Action Calendar).

ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING GOLF CLUB SEWER LIFT STATION IMPROVEMENTS

Mr. Paludi introduced this matter for Committee review, and he reported that District staff has completed certain minor improvements at this facility, but that more essential repairs and work is needed. Mr. Perea presented project and equipment photos that demonstrated the condition of the onsite motor control center (MCC), as well as the condition of the wet well coating and appurtenances. Mr. Perea added that the surge tank at this facility and other sewer lift stations will be inspected for repair and/or replacement. Discussion occurred concerning additional electrical work that staff will bring back to the Committee for consideration.

RECOMMENDED ACTION:
The Committee recommended the Board of Directors authorize the General Manager to ratify a Contract with Hydrotech Electric for Golf Club Lift Station Motor Control Center Replacement in the amount of $279,340 with a contingency of $27,934, for a total not-to-exceed amount of $307,274 (Action Calendar).

ITEM 5: PUBLIC HEARING AND ADOPTION OF TRABUCO CANYON WATER DISTRICT'S 2020 URBAN WATER MANAGEMENT PLAN (UWMP), WATER SHORTAGE CONTINGENCY PLAN, AND 2015 UWMP ADDENDUM

Mr. Paludi presented this matter to the Committee, and he highlighted the benefits of contracting through the Municipal Water District of Orange County (MWDOC) with the project consultant Arcadis to meet this regulatory requirement. Mr. Paludi briefly reviewed the Department of Water Resources (DWR) requirements for the 2020

Urban Water Management Plan (UWMP), including the Addendum to the 2015 UWMP and the adoption of an updated Water Shortage Contingency Plan (WSCP). Discussion occurred concerning certain conservation requirements proposed in the WSCP.

RECOMMENDED ACTION:

The Committee recommended that the Board of Directors take the following actions at the June 16, 2021 Regular Board Meeting (Action Calendar):

1. Conduct a Public Hearing to receive public comments related to the approval and adoption of the 2020 Urban Water Management Plan (UWMP) Update, Water Shortage Contingency Plan (WSCP), and 2015 UWMP Addendum.
2. Adopt Resolution No. 2021- 1290 - Resolution of the Board of Directors of Trabuco Canyon Water District 3. Adopting the District's Addendum to the 2015 UWMP to Add Appendix C – Reduced Delta Reliance Reporting.
3. Adopt Resolution No. 2021-1291 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's Revised WSCP.
4. Adopt Resolution No. 2021-1292 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's 2020 UWMP Update.

ITEM 6: PURCHASE OF A CUMMINS EMERGENCY PORTABLE 275KW DIESEL GENERATOR

Mr. Paludi introduced this matter for Committee review, and he reported that the District has received grant funding towards the purchase of a trailer-mounted backup power generator. Mr. Stroud reported that District staff has procured two proposals for an AQMD/CARB Tier 4 compliant generator. Discussion occurred concerning fuel transfer options and potential future grant funding opportunities.

RECOMMENDED ACTION:

The Committee recommended that the Board of Directors ratify the purchase of one Cummins Emergency Portable 275KW Diesel Generator for equipment for $173,981 plus approximately 10% as contingency for a total not-to-exceed amount of $190,000 (Action Calendar).

ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECTS

1. SCADA Project Update

Ms. Lausten provided a brief project status update, and she reported that TESCO Controls and Hydrotech Electric have scheduled the installation of the SCADA antenna repeater equipment at the Joplin Youth Camp reservoir site. Discussion occurred concerning recent SCADA system communication challenges system-wide that District staff will review with TESCO Controls.

2. Other Projects

Ms. Lausten provided an update related to the Silvertree Land pipeline replacement project, and she presented current photos of the street asphalt repairs since the repair was completed approximately six months ago. Ms. Lausten reported the City of Rancho Santa Margarita has scheduled the resurfacing of the street in the near future, and she recommended no further street repairs.

Ms. Lausten provided an update on the District's GIS mapping system and presented updated system maps for Committee review and comment. Discussion occurred concerning the addition of certain facility information.

Ms. Lausten provide a brief update on the Computerized Maintenance Management System (CMMS) proposal review process, and she reported that District staff has identified a proposer shortlist based on system

demonstrations and interviews. Ms. Lausten added that more information will be presented at the next Committee meeting.

RECOMMENDED ACTION
The Committee received the status update. There was no action taken.

ITEM 8: WATER SYSTEM UPDATES

Mr. Kessler reviewed the projects and repairs for May 2021, and he provided the additional highlights:

1. Water Operations staff worked with DMc Engineering to locate and map all water lines at the intersection of El Toro Road and Ridgeline Road leading to the OC Rescue Mission Double R Ranch.
2. Water Operations staff worked with Water System Optimization, to conduct volumetric testing at the Dimension Water Treatment Plant.
3. Water Operations staff replaced a waste valve on Filter #1 at the Dimension Water Treatment Plant.
4. Water Operations staff replaced a six-inch check valve on the 2 CFS pump at the Plano Trabuco Pump Station.

Mr. Kessler expressed his appreciation for Ms. Warner and Ms. Sangi in assisting in the preparation of the 2020 Annual Report to the State Water Resources Control Board. Mr. Kessler reported that an updated Monthly Water System Operations Summary would be provided to the Committee at a later date as reads were captured on the first of the month.

RECOMMENDED ACTION
The Committee received the status update. There was no action taken.

ITEM 9: WASTEWATER SYSTEM UPDATES

Mr. Perea reviewed the projects and repairs for May 2021, and he reported that Wastewater Operations staff had completed the following tasks:

1. Drained and cleaned the Influent Equalization Basin (NEQ) at the Robinson Ranch Wastewater Treatment Plant (WWTP).
2. Drained, cleaned, and performed aeration system repairs on the WWTP East Sequencing Batch Reactor (SBR).
3. Installed a new polymer pump for the Sludge Dewatering Belt Press at the WWTP.
4. Cleaned and removed an old unused filter tank with the assistance of third-party crane company.
5. Assisted Water Operations with V-Ditch cleaning at Dimension Water Treatment Plant.
6. Worked with SS Mechanical on the Barneburg Sewer Lift Station rehabilitation project.
7. Met with the Division of Dam Safety for the annual inspection of the Trabuco Dam/Dove Lake Dam, including emergency drain valve exercise.

Mr. Perea reported that a Monthly Wastewater System Operations Summary would be provided to the Committee at a later date as reads were captured on the first of the month. Mr. Perea reported that Wastewater Operations staff with the assistance of OC Pumping responded to full tanks at the Crystal Canyon WWTP due to the failure of a residential water softener system.

RECOMMENDED ACTION
The Committee received the status update. There was no action taken.

ITEM 10: MAINTENANCE DEPARTMENT UPDATES

Mr. Stroud reviewed the projects and repairs for May 2021, and he provided the additional highlights:

1. Maintenance Department staff worked with Hydrotech Electric on the electrical improvements at the Robinson Ranch Wastewater Treatment Plant.
2. Maintenance Department staff conducted weed abatement at Robinson Ranch Wastewater Treatment Plant and Porter Ranch property.
3. Maintenance Department staff installed new plumbing and a polymer pump for the Filter Belt Press at the Robinson Ranch Wastewater Treatment Plant.
4. Maintenance Department staff finished the upgrade with the Water Operations new District fleet vehicle, Ford F250.
5. Maintenance Department staff assisted Flo-Services with the electric install on the north side of the El Toro Sewer List Station, which is now 90% complete.
6. Maintenance Department staff has completed the EMASS program with TESCO Controls.
7. Maintenance Department staff participated in the Interview process for new CMMS program for Asset Management and a GIS program.
8. Maintenance Department staff assisted with office remodel at the Districts Administration Facility.
9. Maintenance Department staff worked with AT&T to repair a damaged phone line at the Falcon Booster/Santiago Lift Station.
10. Maintenance Department staff worked with Hydrotech Electric on the preparations for the upcoming SCADA improvements.

RECOMMENDED ACTION

The Committee received the status update. There was no action taken.

ITEM 11: OTHER MATTERS/REPORTS

None.

RECOMMENDED ACTION

There was no action taken.

ADJOURNMENT

Director Mandich adjourned the June 2, 2021 Engineering/Operational Committee Meeting at 8:16 AM.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ENGINEERING MATTERS
ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT

Trabuco Canyon Water District (District) owns and operates the Bell Canyon Lift Station (Station) in the Dove Canyon community. The station was built in the late 1980's as part of the Dove Canyon Development and is located at the end of Bell Canyon Drive. The station lifts sewage from 130 homes via a 4" PVC force main, 4500 LF to a manhole at the intersection of Willowglade and Golf Ridge Dr., which then gravity flows to Golf Club Lift Station.

The station footprint is 30'x15' and includes a wet well with two sets of submersible pumps working in series, a dry pit/valve vault, electrical/MCC panel, a chlorine tank and a backup diesel generator. On September 2, 2019, a complete failure of the station occurred and required Wastewater Operations and Maintenance Staff to install an emergency bypass system to prevent a Sanitary Sewer Overflow (SSO). Two days later, operations were able to restore service to one set of pumps, removed the bypass system and installed a temporary pumping system to back up the operational pumps.

District staff, along with JIG Consultants, identified areas that required rehabilitation and replacement, and completed a bid package for this work in April 2020. At the May 20, 2020 Regular Board Meeting, the Board of Directors authorized the General Manager to execute a contract with Ferreira Construction for the Bell Canyon Lift Station Rehabilitation in the amount of $1,496,228, with a $75,000 contingency, for a not to exceed amount of $1,571,228. At the June 15, 2020 Regular Board Meeting, the Board of Directors authorized the General Manager to execute a contract with Butier Engineering, Inc. for Construction Management Services in the amount of $180,830. The construction completion date is July 9, 2021.

The following is the budget for the project:

BELL CANYON LIFT STATION REHABILITATION PROJECT COSTS-UPDATED		
ITEM	**TASK DESCRIPTION**	**BUDGET**
1	Construction Contract – Ferreira Construction (Includes Contingency)	**$1,571,228.00**
2	Geotechnical Site Investigation, Vibration Monitoring, Video Survey, Additional Boring - GMU Geotechnical	***$20,958.75**
3	Engineering Design/Services During Construction – JIG Consultants	**$129,625.00**
4	Construction Management/Inspection-Butier	**$180,830.00**
5	Design Site Survey/Construction Monitoring – DMc Engineering	**$20,280.00**
6	Easement Procurement - DMc Engineering/CPSI Right-of-Way Services	***$7,000.00**
7	Service/Meter Plan/Arc Flash Study - SCE	***$3,000.00**
	Total:	**$1,932,921.75**

**Estimated*

FUNDING SOURCE:
Emergency Reserves

FISCAL IMPACT:
$1,933,000.00 (FY19-20 & FY20-21)

ENVIRONMENTAL COMPLIANCE:
Notice of Exemption was filed with the County of Orange on June 16, 2020

RECOMMENDED ACTION:
Committee to recommend that the Board of Directors authorize the General Manager to execute the Contract Change Order No. 1 to Ferreira Construction for the Bell Canyon Lift Station Rehabilitation Project in the amount of $28,583.05 (Action Calendar).

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

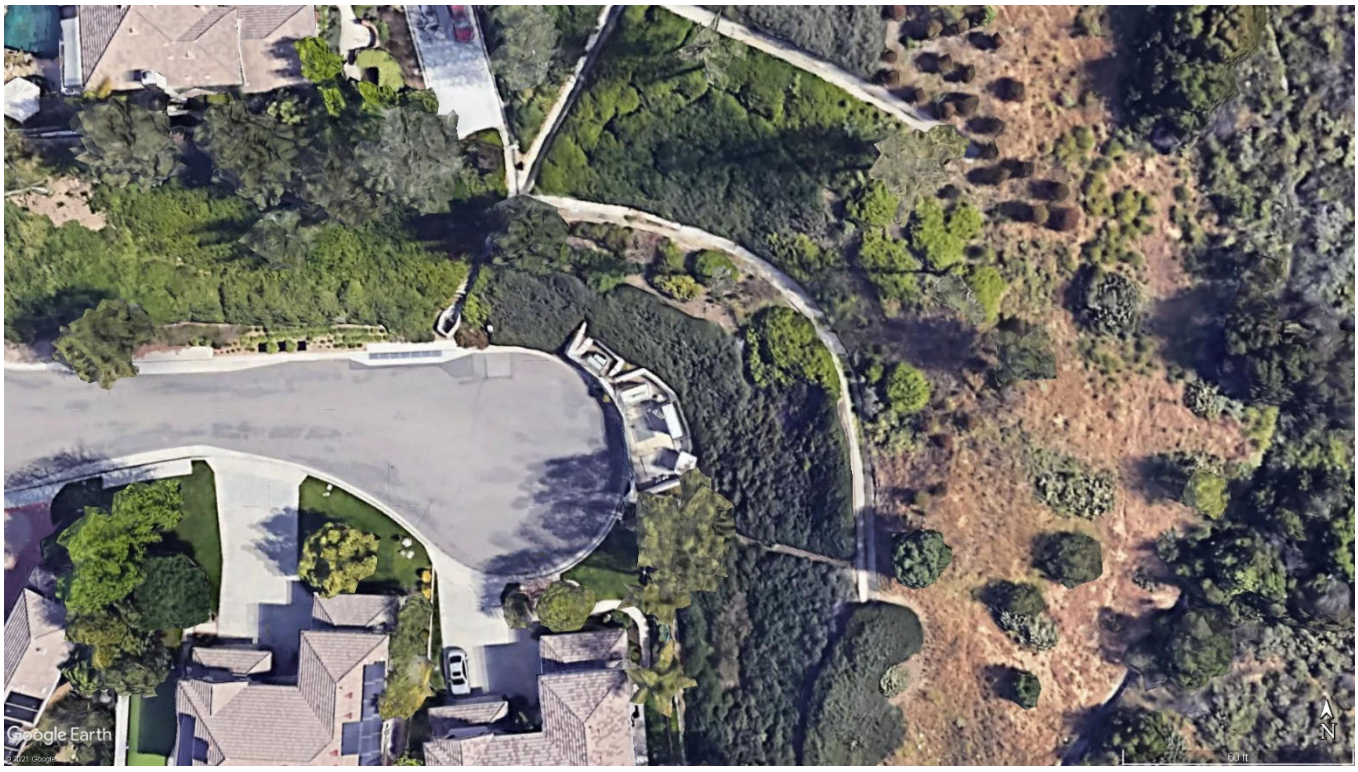
EXHIBIT(S):

1. Construction Report- June 2021
2. Summary of Construction Field Orders/Change Orders
3. Ferreira Construction-Change Order No. 1

CONTACTS (staff responsible): PALUDI/LAUSTEN

Bell Canyon Lift Station Rehabilitation Project
TCWD Project No. 1920-022

Construction Report
June 2021



I. GENERAL PROJECT INFORMATION

Contract	Bell Canyon Lift Station Rehabilitation Project
Contractor	FERREIRA Construction
Contract Time	
Original Calendar Days:	180 Calendar Days from Notice to Proceed
Notice of Award:	June 15, 2019
Notice to Proceed:	June 29, 2020
Original Contract Completion Date:	December 26, 2020
Allowed Calendar Days via Change Orders:	*187 Days (Pending)*
Revised Completion Date via Change Orders:	*July 9, 2021 (Pending)*
Weather-Related Delay Days:	5 Days
Contract Price	
Original Contract Amount:	$1,496,228.00
Approved Change Order Amount:	$0.00
Revised Contract Amount:	$1,496,228.00

II. CONSTRUCTION MANAGER SUMMARY

This report provides a summary of activities for the month of June 2021 for the Bell Canyon Lift Station Project.

Within June 2021, FERREIRA Construction (FERREIRA) and their electrical subcontractor, Halcyon Electrical (Halcyon) continued and completed efforts to pull wire and terminate into the Motor Control Center (MCC). Southern California Edison (SCE) delivered the new Transformer under a separate order, pulled the new wiring from the new Transformer to the MCC and SCE Panel and Meter; and the Lift Station's permanent power was restored and energized.

FERREIRA and their concrete subcontractor, CMC, continued with site improvements, such as form and pour of concrete sidewalk areas and Rolled (or Mountable) Curb. FERREIRA installed the new Gates and Wrought Iron Fence. Also, a new Eye Wash Station and Shower were installed along with water service lateral.

FERREIRA-Halcyon and TESCO performed field testing protocols to the Pumps, MCC Panels, Lighting, Sump Termination Panel, and Surge Tank. TESCO was available to perform to loop checks, and program logic to support the instrumentation and controls.

Through the end of June, FERREIRA continues test features and improvements to the Lift Station in preparation for the Start-Up and anticipated turnover of the facility to TCWD Operations in early July.

III. CONSTRUCTION ACTIVITIES FOR THIS REPORTING PERIOD

The following work activities were performed during this reporting period:

- Completed wiring of features and equipment to the MCC Panel
- SCE completed Transformer and Wiring for the Lift Station
- SCE energized the Lift Station
- Form and poured concret-e sidewalk areas and Rolled Curb
- Complete installation Gates and Wrought Iron Fencing
- Testing of equipment from MCC Panel
- Preparation of Start-Up

IV. ANTICIPATED CONSTRUCTION ACTIVITIES – NEXT REPORTING PERIOD

The following work activities are anticipated to occur during the next reporting period:

- Perform 48-Hour Start-Up
- Touch-Up of Walls and Paint Piping
- Remove Temporary By-Pass Pumps
- Restore Landscaping and Irrigation
- Remove Temporary Fencing and restore Bell Canyon cul-de-sac
- Final Clean-Up and Demobilization

V. CONTRACTOR SUBMITTALS

Through the end of the reporting period, the following submittals have been received:

	Lift Station
Prior Submittals	63
Submittals Received This Period	0
TOTAL SUBMITTALS	63

VI. CONTRACTOR REQUEST FOR INFORMATION (RFIs)

Through the end of the reporting period, the following RFIs have been received:

	Lift Station
Prior RFIs	35
RFIs Received This Period	2
TOTAL RFIs	37

VII. CHANGE ORDERS

No approved change orders were issued to FERREIRA during this reporting period. Change Order Requests were issued, and are being reviewed by TCWD and BUTIER Engineering. A formal Change Order will be prepared and issued based on the merit of these Change Order Requests.

It is anticipated that a separate Change Order Request for the extension of the Contract Completion Date will be issued. This is due to the procurement and fabrication delays of materials, and the scheduled time for power Switch Over controlled by SCE. The new Contract Completion Date of July 9, 2021.

VIII. SCHEDULE

As currently scheduled the Completion Date for the Lift Station is July 9, 2021. See Appendix A.

IX. PHOTOS

Construction photos documenting the FERREIRA's activities and progress during this reporting period are provided in Appendix B.

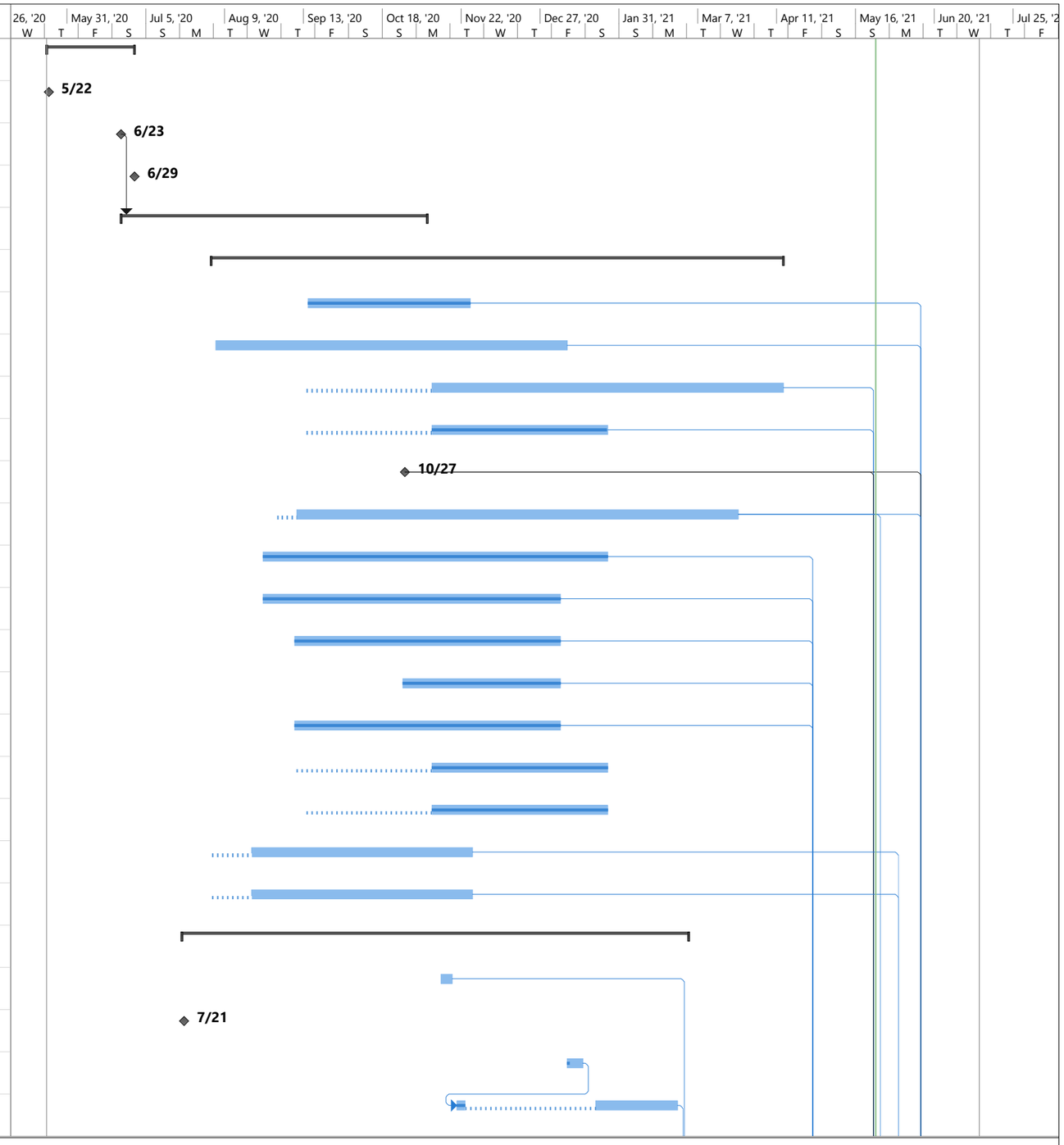
X. BELL CANYON MONITORING

Monitoring field surveys are being performed by DMC Engineering on a periodic basis through the duration of the Project. Monitoring surveys were performed on February 26th-, March 10th-, March 17th-, April 14th-, and April 23rd-2021. The results between these dated Surveys reflected between +0.03-foot and -0.02-foot on established points, and a Monitoring Survey Exhibit is provided in Appendix C.

APPENDIX A

Schedule

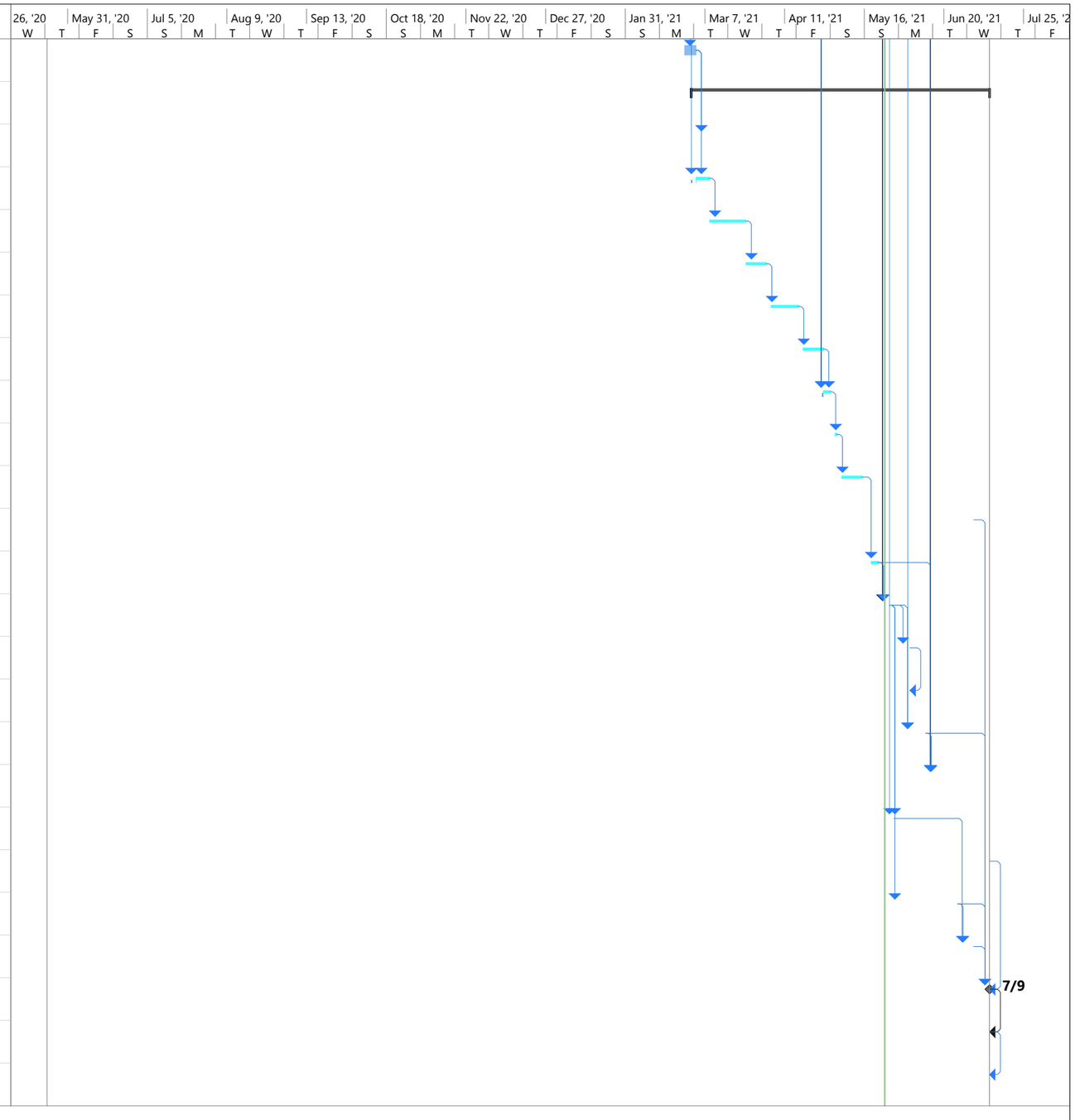
ID	Task Mode	Task Name	Duration	Start	Finish
1		**Project Setup**	**27 days**	**Fri 5/22/20**	**Mon 6/29/20**
2		Notice to Award	1 day	Fri 5/22/20	Fri 5/22/20
3		Pre-Construction Meeting	1 day	Tue 6/23/20	Tue 6/23/20
4		NTP	1 day	Mon 6/29/20	Mon 6/29/20
5		**Submittals**	**98 days**	**Wed 6/24/20**	**Fri 11/6/20**
69		**Material Procurement (Long Lead Items)**	**182 days**	**Mon 8/3/20**	**Tue 4/13/21**
70		Chemical Feed Unit	52 days	Tue 9/15/20	Wed 11/25/20
71		Bladder Surge Tank	112 days	Wed 8/5/20	Thu 1/7/21
72		Tesco Motor Control Center	112 days	Mon 9/14/20	Tue 4/13/21
73		Tesco Switch Board	56 days	Mon 9/14/20	Mon 1/25/21
74		ASCO ATS	0 days	Tue 9/1/20	Tue 10/27/20
75		CAT Generator	140 days	Tue 9/1/20	Wed 3/24/21
76		Sump Pump	109 days	Wed 8/26/20	Mon 1/25/21
77		Plug Valves	94 days	Wed 8/26/20	Mon 1/4/21
78		Check Valves	84 days	Wed 9/9/20	Mon 1/4/21
79		Sewer Air/Vac	50 days	Tue 10/27/20	Mon 1/4/21
80		Flow Meter	84 days	Wed 9/9/20	Mon 1/4/21
81		Sump Termination Panels	56 days	Wed 9/9/20	Mon 1/25/21
82		Instrumentation and Control	56 days	Mon 9/14/20	Mon 1/25/21
83		E-4 LED Wall Packs	70 days	Mon 8/3/20	Thu 11/26/20
84		Light Pole	70 days	Mon 8/3/20	Thu 11/26/20
85		**Project Start Up**	**161 days**	**Tue 7/21/20**	**Tue 3/2/21**
86		Call in USA	3 days	Fri 11/13/20	Tue 11/17/20
87		Assess Wet Well	1 day	Tue 7/21/20	Tue 7/21/20
88		TCWD Inspect and Release Panel/Temp Fence/TPP	5 days	Fri 1/8/21	Thu 1/14/21
89		Power for Bypass Pumps	28 days	Fri 11/20/20	Thu 2/25/21



Project: FCC5342 - TCWD Bell C
Date: Tue 5/25/21

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Progress
Manual Progress

ID	Task Mode	Task Name	Duration	Start	Finish
90		Setup Bypass	3 days	Fri 2/26/21	Tue 3/2/21
91		**Project Demo and Installation**	**95 days**	**Mon 3/1/21**	**Fri 7/9/21**
92		Surveying	3 days	Wed 3/3/21	Fri 3/5/21
93		Demo of Above Ground Structures, Gates, Wall	6 days	Mon 3/1/21	Mon 3/8/21
94		Shoring, Footings and Wall	12 days	Tue 3/9/21	Wed 3/24/21
95		Wall Cure/Waterproofing	7 days	Thu 3/25/21	Fri 4/2/21
96		Pull Shoring, Backfill Wall, Demo and Install Wet Well	10 days	Mon 4/5/21	Fri 4/16/21
97		Demo and Install Dry Well with CIP Slab	7 days	Mon 4/19/21	Tue 4/27/21
98		Install Piping	3 days	Tue 4/27/21	Fri 4/30/21
99		Trench for Electrical Conduits	1 day	Mon 5/3/21	Mon 5/3/21
100		Site Underground Conduit System	7 days	Thu 5/6/21	Fri 5/14/21
101		Level Transducer/Floats at Well, Cond. Inst at Vault	5 days	Mon 6/28/21	Fri 7/2/21
102		Form & Pour Concrete Slabs	3 days	Wed 5/19/21	Fri 5/21/21
103		Install MCC & Generator	3 days	Mon 5/24/21	Wed 5/26/21
104		Wet Well (Elect. Prep/Epoxy/Pipe & Pumps)	3 days	Wed 6/2/21	Fri 6/4/21
105		Concrete Sub	1 day	Fri 6/4/21	Fri 6/4/21
106		Electrical (Wet Well/Sub Panel/Light Pole) & Paint Pipe and Wall	6 days	Fri 6/4/21	Fri 6/11/21
107		Chemical Feed & Surge Tank	5 days	Mon 6/14/21	Fri 6/18/21
108		Conduit Connection at Generator & Dry Well)	2 days	Thu 5/27/21	Fri 5/28/21
109		Ornamental Fence	4 days	Tue 7/6/21	Fri 7/9/21
110		SCE Metering/Cable Install for Power to Switchboard	22 days	Thu 5/27/21	Fri 6/25/21
111		Testing & Remove Bypass	5 days	Mon 6/28/21	Fri 7/2/21
112		Substantial Completion	1 day	Fri 7/9/21	Fri 7/9/21
113		Punch List	4 days	Tue 7/6/21	Fri 7/9/21
114		Project Complete	1 day	Fri 7/9/21	Fri 7/9/21



Project: FCC5342 - TCWD Bell C
Date: Tue 5/25/21

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress	
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline		
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress		

APPENDIX B

Construction Photos

Continuing with wiring in MCC Panel

Base Paving for Sidewalk Areas

Base Paving for Sidewalk Areas

Bae Paving of Sidewalk Areas

Base Paving of Sidewalk Areas

Form & Pour of Rolled (Mountable) Curb

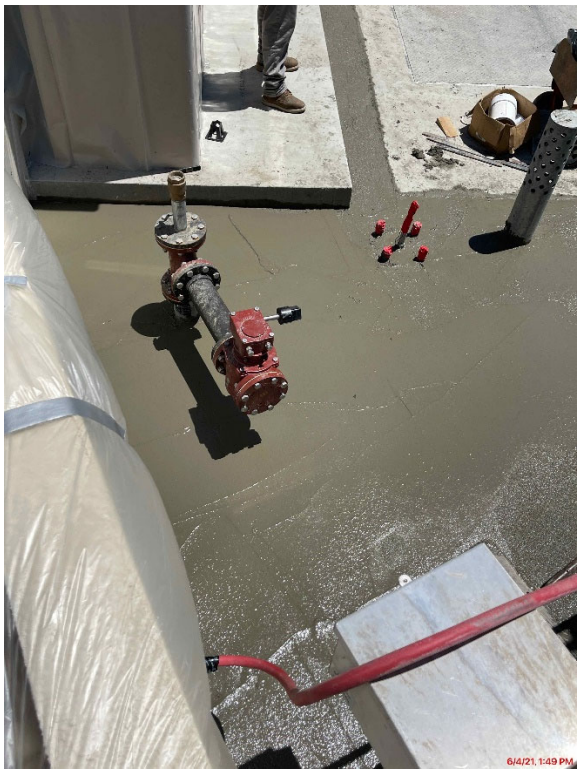
Form & Pour of Rolled (Mountable) Curb

Coating of Wet Well

Wet Well Coated

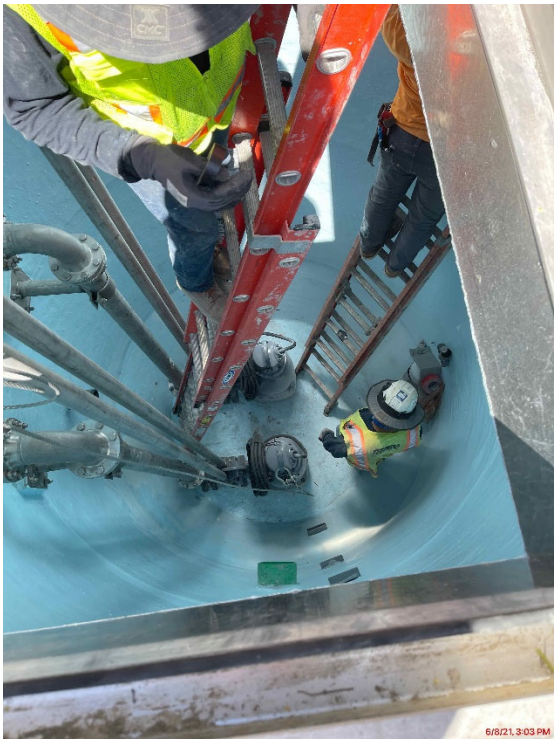
Reinforcement of Sidewalk Areas

Concrete Pour of Sidewalk Areas



Concrete Pour of Sidewalk Areas

Placement of Pumps



Pump placed in Wet Well

Surge Tank & Chemical Feed Tank Delivered to Lift Station

Surge Tank Delivered to Lift Station

SCE Transformer Delivered to Lift Station

Former Transformer being disconnected and removed

New Transformer Installed

SCE Meter Installed and Lift Station Energized

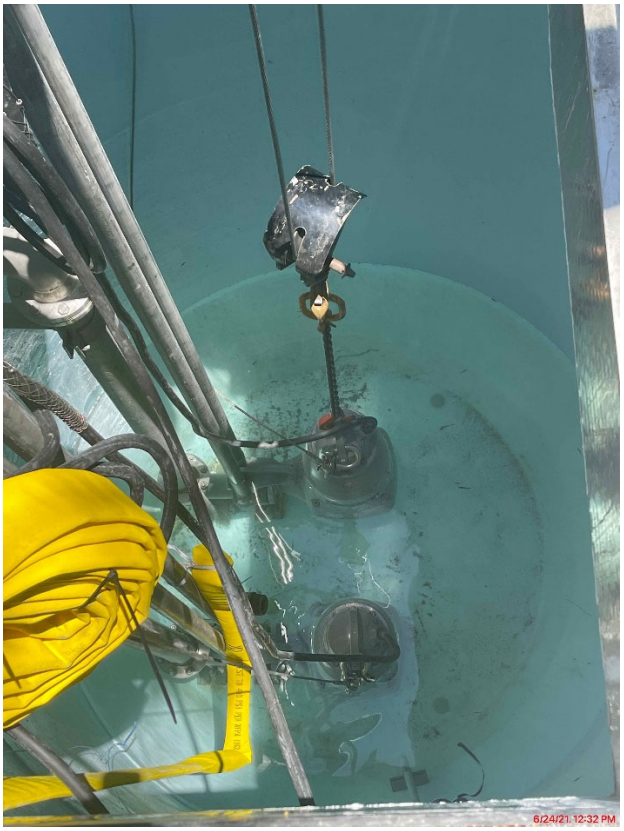
Gates Installed

Gates Installed

Wrought Iron Fencing Installed

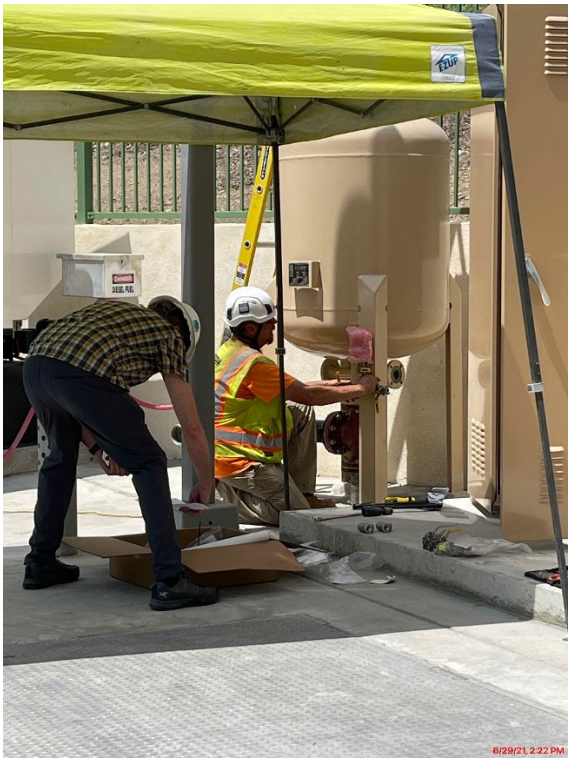
Wrought Iron Fencing Installed

Testing Pumps



Pumps Submerged and Tested

Surge Tank Being Tested



Surge Tank Being Tested

APPENDIX C

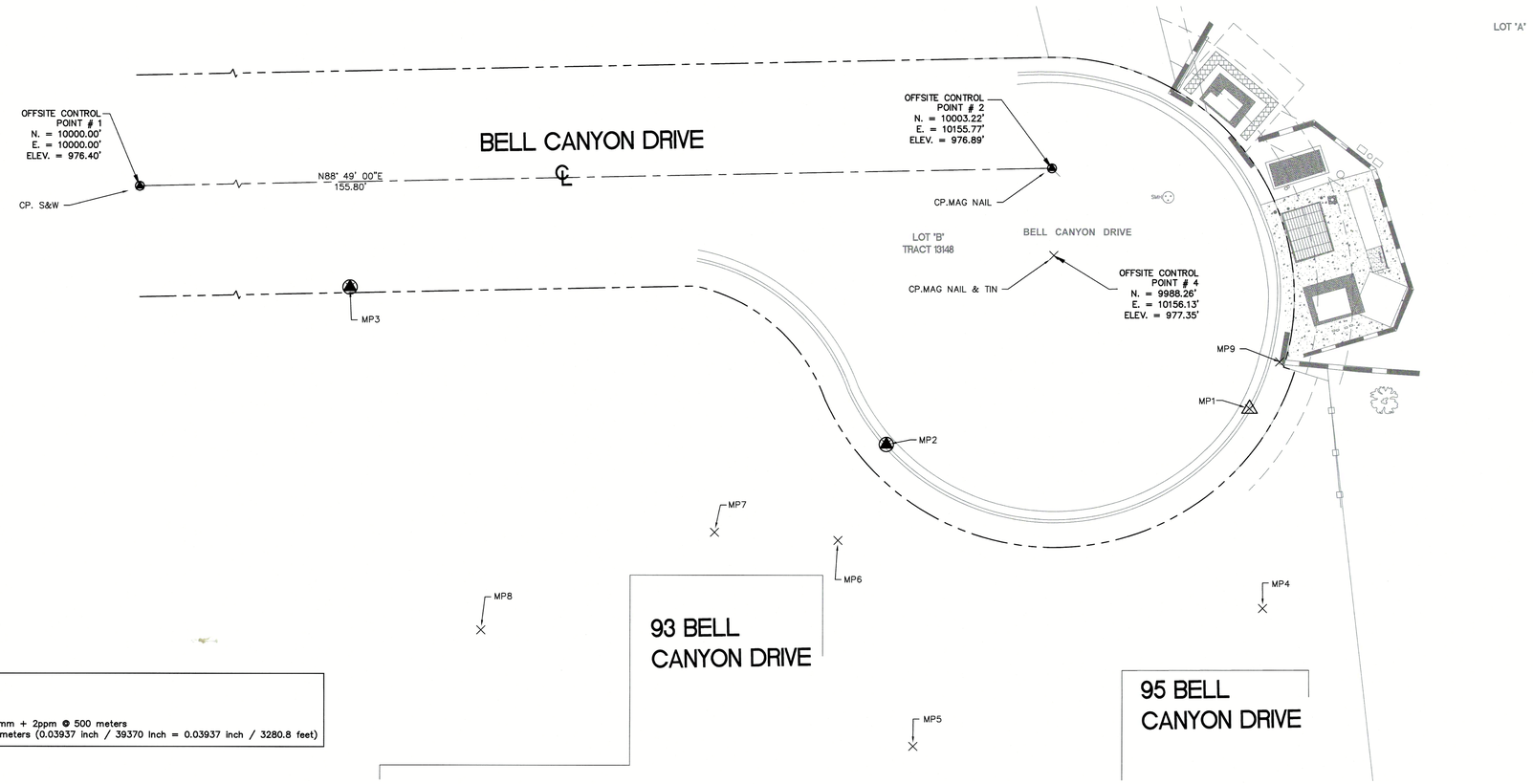
Monitoring Survey Exhibit

EXHIBIT "A"
BELL CANYON MONITORING POINTS

PREPARED FOR:

TRABUCO CANYON WATER DISTRICT

32003 DOVE CANYON DRIVE
TRABUCO CANYON, CA 92679
PHONE: (949) 858-0277
FAX: (949) 858-3025



LEGEND

SYMBOLS

△	SCRIBED "X" IN TC
●	FD "X" IN TC

LINE TYPES

— — —	PROPERTY LINE
—·—·—	CENTERLINE

ABBREVIATIONS

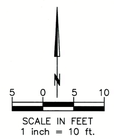
N.	NORTHING
E.	EASTING
ELEV.	ELEVATION
DIFF.	DIFFERENCE
CN.	CONCRETE NAIL

SURVEY INSTRUMENT USED:

LEICA TCRP 1203T R400
SERIAL NO. 269046
ACCURACY – std. dev. ISO 17123–4: 2mm + 2ppm @ 500 meters
ppm = parts per million = mm/1000 meters (0.03937 inch / 39370 inch = 0.03937 inch / 3280.8 feet)

MONITORING POINTS SUMMARY

POINT #	DESCRIPTION	INITIAL SURVEY DATE: 02.26.2021	SECOND SURVEY DATE: 03.10.2021	DIFF. +/–	THIRD SURVEY DATE: 03.17.2021	DIFF. +/–	FORTH SURVEY DATE: 04.14.2021	DIFF. +/–	FIFTH SURVEY DATE: 04.23.2021	DIFF. +/–
MP1	SCRIBED "X" IN TC	N. = 9962.05'	N. = 9962.05'	0.00	N. = 9962.05'	0.00	N. = 9962.05'	0.00	N. = 9962.05'	0.00
		E. = 10189.60'	E. = 10189.60'	0.00	E. = 10189.59'	–0.01	E. = 10189.59'	–0.01	E. = 10189.60'	0.00
		ELEV. = 977.27'	ELEV. = 977.28'	+0.01	ELEV. = 977.28'	+0.01	ELEV. = 977.28'	+0.01	ELEV. = 977.27'	0.00
MP2	FD "X" IN TC	N. = 9955.84'	N. = 9955.84'	0.00	N. = 9955.84'	0.00	N. = 9955.84'	0.00	N. = 9955.84'	0.00
		E. = 10127.56'	E. = 10127.57'	+0.01	E. = 10127.57'	+0.01	E. = 10127.56'	0.00	E. = 10127.57'	+0.01
		ELEV. = 976.82'	ELEV. = 976.82'	0.00	ELEV. = 976.81'	–0.01	ELEV. = 976.82'	0.00	ELEV. = 976.81'	–0.01
MP3	FD "X" IN TC	N. = 9982.69'	N. = 9982.70'	+0.01	N. = 9982.69'	0.00	N. = 9982.72'	+0.03	N. = 9982.69'	0.00
		E. = 10035.89'	E. = 10035.89'	0.00	E. = 10035.89'	0.00	E. = 10035.89'	0.00	E. = 10035.89'	0.00
		ELEV. = 975.74'	ELEV. = 975.74'	0.00	ELEV. = 975.74'	0.00	ELEV. = 975.74'	0.00	ELEV. = 975.73'	–0.01
MP4	CORNER OF PILASTER AT NE CORNER OF THE RESIDENCE OF 95 BELL CANYON DR.	N. = 9927.81'	N. = 9927.81'	0.00	N. = 9927.81'	0.00	N. = 9927.80'	–0.01	N. = 9927.81'	0.00
		E. = 10191.89'	E. = 10191.88'	–0.01	E. = 10191.89'	0.00	E. = 10191.87'	–0.02	E. = 10191.89'	0.00
		ELEV. = 985.19'	ELEV. = 985.19'	0.00	ELEV. = 985.19'	0.00	ELEV. = 985.18'	–0.01	ELEV. = 985.18'	–0.01
MP5	CORNER OF PILASTER AT NW CORNER OF THE RESIDENCE OF 95 BELL CANYON DR.	N. = 9904.09'	N. = 9904.09'	0.00	N. = 9904.09'	0.00	N. = 9904.10'	+0.01	N. = 9904.09'	0.00
		E. = 10132.17'	E. = 10132.18'	+0.01	E. = 10132.17'	0.00	E. = 10132.15'	–0.02	E. = 10132.17'	0.00
		ELEV. = 985.92'	ELEV. = 985.92'	0.00	ELEV. = 985.92'	0.00	ELEV. = 985.92'	0.00	ELEV. = 985.92'	0.00
MP6	STICK ON SURVEY TARGET (BY OTHERS) ON NLY BRICK WORK 93 BELL CANYON DR.	N. = 9939.36'	N. = 9939.35'	–0.01	N. = 9939.35'	–0.01	N. = 9939.37'	+0.01	N. = 9939.35'	–0.01
		E. = 10119.31'	E. = 10119.31'	0.00	E. = 10119.31'	0.00	E. = 10119.30'	–0.01	E. = 10119.31'	0.00
		ELEV. = 985.08'	ELEV. = 985.08'	0.00	ELEV. = 985.07'	–0.01	ELEV. = 985.08'	0.00	ELEV. = 985.07'	–0.01
MP7	TOP RIGHT CORNER OF EXTERIOR DOOR FRAME 1 IN SIDE OF RESIDENCE	N. = 9940.75'	N. = 9940.74'	–0.01	N. = 9940.74'	–0.01	N. = 9940.76'	+0.01	N. = 9940.74'	–0.01
		E. = 10098.25'	E. = 10098.25'	0.00	E. = 10098.25'	0.00	E. = 10098.24'	–0.01	E. = 10098.25'	0.00
		ELEV. = 985.06'	ELEV. = 985.06'	0.00	ELEV. = 985.06'	0.00	ELEV. = 985.06'	0.00	ELEV. = 985.06'	0.00
MP8	TOP RIGHT CORNER OF EXTERIOR WINDOW FRAME 1 IN SIDE OF RESIDENCE	N. = 9923.98'	N. = XXXX'	XXX	N. = 9923.96'	–0.02	N. = 9923.99'	+0.01	N. = 9923.96'	–0.02
		E. = 10058.30'	E. = XXXX'	XXX	E. = 10058.31'	+0.01	E. = 10058.31'	+0.01	E. = 10058.31'	+0.01
		ELEV. = 983.31'	ELEV. = XXXX'	XXX	ELEV. = 983.31'	0.00	ELEV. = 983.31'	0.00	ELEV. = 983.30'	–0.01
MP9	SET MAG NAIL AT TOP WLY FACE OF PILASTER		INITIAL SURVEY N. = 9970.10'	XXX	N. = 9970.10'	0.00	SURVEY MONITORING POINT WAS COMPROMISED BY SITE CONSTRUCTION			
			E. = 10194.72'	XXX	E. = 10194.72'	0.00				
			ELEV. = 983.83'	XXX	ELEV. = 983.83'	0.00				



PREPARED BY:
DMc ENGINEERING
CIVIL ■ SURVEYING ■ PLANNING ■ CONSTRUCTION
18 Technology Drive, Suite 100, Irvine, CA 92618
E-Mail: dmc@dmceng.com (949) 753-9393

05.25.21
04.27.21
04.16.21
03.16.21
03.15.21
03.01.21

JN: 728–45

Plotted: May 25, 2021 – 10:11am by: dmcpdf\Drawing Name: J:\JOBS\728–45 Bell #5 station\Design Data\Drawings\BELL CANYON MONITORING POINTS EXHIBIT A.dwg

Construction Change Orders/Credits

Item No.	*Description*	*Cost*
1	Temporary Fence Revisions	*$12,468.00*
2	Wet Well-2' Deeper	*$10,852.93*
3	Surge Tank- Bypass POC	*$5,369.67*
4	Item 8-Credit for wet wet rehab	*($29,500.00)*
5	Item 25-Reconcillation for FO	*$29,500.00*
6	South Ret.Wall & Irrig. Wiring	*$6,599.53*
7	Odor Control-Due to Complaints	*$11,341.97*
8	Sewer By-Pass Riser Conflicts	*$5,911.62*
9	Wall Sub-Drain Ext.	*$2,066.14*
10	Time Extension due to Equip delay	*TBD*
11	Item 26-Credit Paving	*($28,340.00)*
12	Item 26-Credit Paving	*$28,340.00*
13	Item 8A-Alt Wet Well	*$71,600.00*
14	Sump Termination Panel	*$3,489.83*
15	AT&T -utility conflict -conduit	*$4,434.53*
16	Swing Check Valve Switches	*$1,247.77*
17	Backflow Relocation and Eye Wash Add.	*$11,141.89*
18	Existing Wall-Sandblast, Stucco& Paint	*$7,167.86*
19	Rolled Curb Installation	*$4,145.00*
20	Additional Wrought Iron Fence	*$5,026.00*
21	SCE Transformer Swap Out	*$2,971.78*
22	Relocation of Eye Wash	*$2,000.00*
23	DMc Field Surveying (Deductive Change Order)	*($6,580.00)*
	Total:	***$161,254.52***

Field Order Allowance	*$75,000.00*
Wet Well Credit	*$29,500.00*
Paving Credit	*$28,340.00*
Allowable CREDIT Allowance:	**$132,840.00**
Total Change Order Requests within Allowance:	**$132,671.47**
Total Change Order Requests outside Allowance:	**$28,583.05**

TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DRIVE
TRABUCO CANYON, CA 92679
TELEPHONE: (949) 858-0277
FACSIMILE: (949) 858-3025

CONTRACT CHANGE ORDER

Project Title:	**Bell Canyon Sewer Lift Station Rehabilitation Project**	**Contractor:**	**Ferreira Construction**
Project No:	1920-022		**10370 Commerce Center Drive, Suite B200**
C.C.O. #	1		**Rancho Cucamonga, CA 91730**
Date:	06/29/21		**(909) 606-5900**

C.C.O. DESCRIPTION:

Extra work due to unforeseen conditions - conflicts with existing AT&T utility conduits; additional site improvements; additional wrought iron fencing; installation of Eye Wash; relocation and installation of backflow preventer; and procurement of Swing Check Valves to meet Electrical and Fire Codes. A deductive cost for Field Surveying/Staking where Contractor utilized TCWD's Surveyor, DMc Engineering.

Attachments: [X] **Yes** [ ] **No**

The following change to the contract, drawings, and specifications is proposed:

SCOPE OF WORK AND COSTS:	$ Additions	$ Deletions	Days (+/ -)
AT&T Utility Conflict & Conduit Installation	$4,434.53		
Per RFI #034 - Swing Check Valves to be compliant Div.1, Class II	$1,247.77		
Relocate Backflow Prevente per TCWD Standards & Eye Wash Station	$11,141.89		
Improve Existing Walls - Sandblast, Stucco, and Paint	$7,167.86		
Install Rolled (Mountable) Curb in front of Lift Station	$4,145.00		
Install Additional Wrought Iron Fence between Lift Station & Residence	$5,026.00		
Relocate Eye Wash Station adjacent to Chemical Feed Tank	$2,000.00		
DMc Engineering Field Surveying		($6,580.00)	
TOTAL =	$35,163.05	($6,580.00)	
NET TOTAL/DAYS		$ $28,583.05	

Contract Change Order Net Amount	$28,583.05
Total of Previous Change Orders	$0.00
Total of All Change Orders	$28,583.05
Original Contract Amount	$1,496,228.00
New Contract Amount	$1,524,811.05
Percent Original Contract (all changes order to date)	1.91%

Net Change Order **$28,583.05**

Schedule Impact [x] **Yes** [ ] **No** 217 **Calendar Days**

CONTRACTOR/TITLE **Date:**

CHANGE ORDER REQUESTED BY:

[X] Trabuco Canyon Water District [ ] Contractor Other:

TRABUCO CANYON WATER DISTRICT

Approved By: Lorrie Lausten, P.E.
District Engineer

Approved By: Fernando Paludi
General Manager

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are hereto and made a part hereof. This Order shall not be considered as such until it has been signed by the Owner and Contractor. Upon final approval, distribution of copies will be made as required.

CHANGES: All workmanship and materials called for by this Order shall be fully in accordance with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Order. The time for completing the contract will not be extended unless expressly provided for in this Order.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ENGINEERING MATTERS
ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING GOLF CLUB SEWER LIFT STATION IMPROVEMENTS

Trabuco Canyon Water District (District) owns and operates the Golf Club Sewer Lift Station in the Dove Canyon community adjacent to the golf club driving range (Exhibit 1). This station receives wastewater flows from the majority of the community by way of Bell Canyon and Barneburg Sewer Lift Stations and gravity sewer flows, and then conveys the wastewater to the Robinson Ranch Wastewater Treatment Plant via a sewer force main on Hillrise. The station was constructed in the early 1990s and has undergone minor improvements since that time, but there are a series of critical repairs and improvements that Wastewater Operations and Maintenance Department (O/M) staff have identified for the station, some of which has been completed. The station will be fully evaluated during the upcoming condition assessment.

At the June 16, 2021 Regular Board Meeting, the Board of Directors authorized the General Manager to execute a contract with Hydrotech Electrical for Golf Club Lift Station Motor Control Center (MCC) Replacement in the amount of $279,340 with a contingency of $27,934, for a total not-to-exceed amount of $307,274. To support the MCC upgrade and provide an emergency bypass pumping system, staff procured bids for the bypass pumping mechanical work.

CONSTRUCTION BIDS	
Company	**Bid**
Ferreira Construction	$78,500.00
S.S. Mechanical	Non-Responsive

FUNDING SOURCE:
Emergency Reserves.

FISCAL IMPACT:
FY 21/22 Budget: $320,000
FY 21/22 Revised Budget: $395,000

ENVIRONMENTAL COMPLIANCE:
Notice of Exemption.

RECOMMENDED ACTION:
Committee to recommend that the Board of Directors authorize the General Manager award a Contract to Ferreira Construction for the Sewer Bypass Installation for Golf Club Sewer Lift Station for $78,500 with a 10% contingency of $7,850, for a total not-to-exceed fee of $86,350 (Action Calendar).

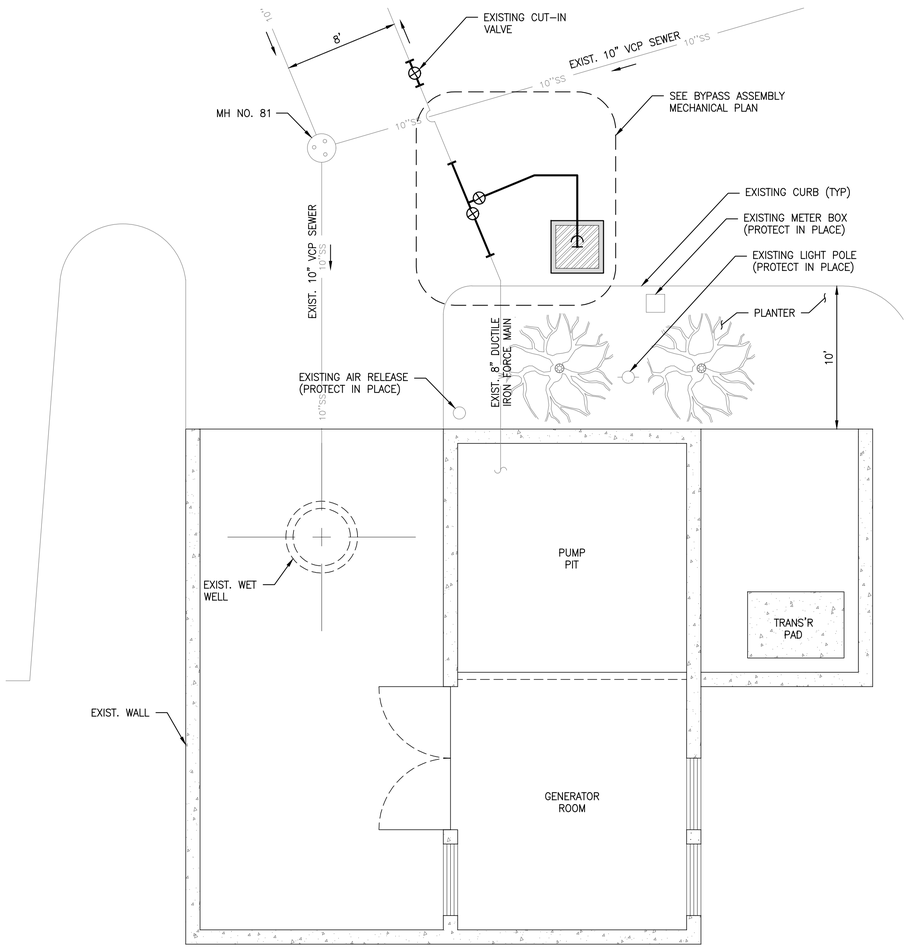
EXHIBIT(S):
1. Project Site Map
2. Bypass Plan

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

TRABUCO CANYON WATER DISTRICT	**Location Map**	Golf Club Sewer Lift Station
	Area of Work	Address: 22881 Golf Club Drive Trabuco Canyon CA 92679

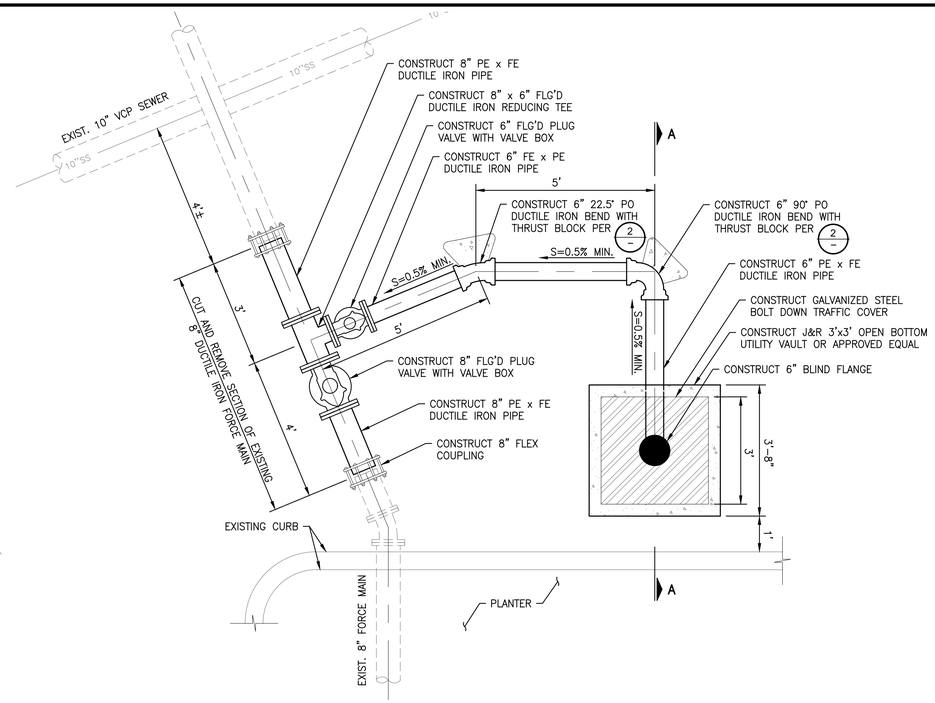
NOTES:

1. CONTRACTOR TO CONSTRUCT 8" DUCTILE IRON PIPE TO MATCH SLOPE OF EXISTING FORCE MAIN.
2. CONTRACTOR TO USE EXISTING CUT–IN VALVE TO ISOLATE AND DRAIN CONTENTS OF FORCE MAIN PRIOR TO CONSTRUCTING BYPASS PIPING ASSEMBLY. DISTRICT OPERATIONS STAFF WILL OPERATE THE CUT–IN VALVE AT CONTRACTORS REQUEST.
3. DUCTILE IRON PIPE SHALL BE CLASS 50 WALL THICKNESS WITH FUSION BONDED OR CERAMIC EPOXY LINING, 1 MIL ASPHALTIC COATING, ENCASED IN TWO LAYERS OF POLYETHYLENE BAGS.
4. ALL PLUG VALVES SHALL BE ECCENTRIC WITH 100% PORT SIZE.
5. ALL NUTS, BOLTS, AND FASTENERS SHALL BE TYPE 316 STAINLESS STEEL.



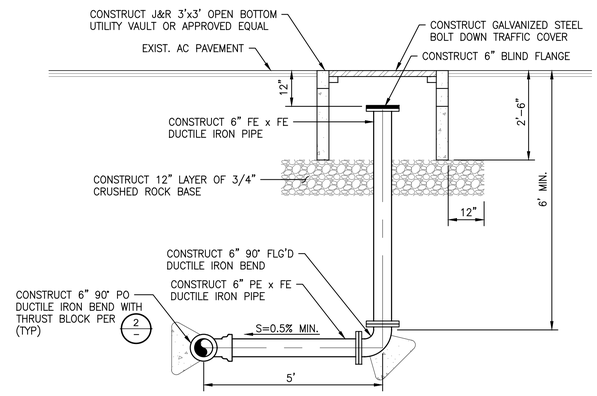
GOLF CLUB LIFT STATION SITE PLAN

SCALE: 1" = 5'



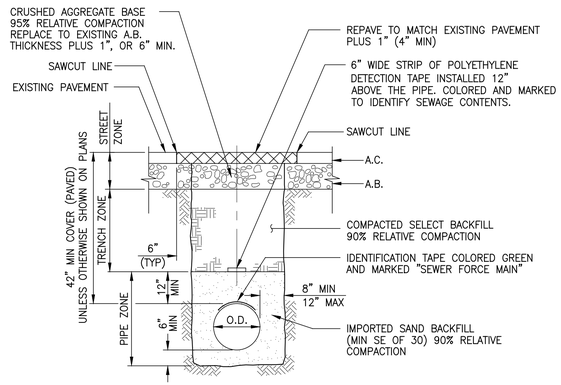
BYPASS ASSEMBLY MECHANICAL PLAN

SCALE: 1/2"=1'–0"



SECTION A-A

SCALE: 1/2"=1'–0"

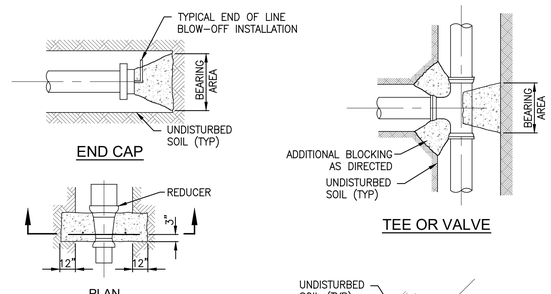


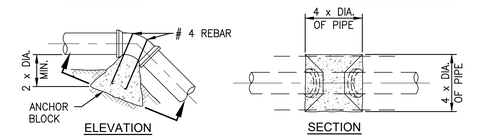
TYPICAL TRENCH SECTION 1/–

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL REPLACE AC TO THE LIMITS SHOWN ON THE TYPICAL TRENCH SECTION SHOWN ABOVE AND TO THE THICKNESS PLUS 1" OF THE EXISTING AC UNLESS OTHERWISE DIRECTED ON THE PLANS.
2. ALL PAVEMENT AND SIDEWALK REMOVAL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE SAWCUT PRIOR TO REMOVAL. THE OWNER SHALL BE REQUESTED BY CONTRACTOR TO APPROVE EXTENT OF PAVEMENT AND SIDEWALK REMOVAL PRIOR TO STARTING WORK. DISPOSAL OF REMOVED A.C. PAVEMENT AND CONCRETE SHALL BE AT AN APPROVED OFF–SITE DUMP SITE.





VERTICAL BEND

THRUST BLOCK 2/–

NOT TO SCALE

MINIMUM THRUST BLOCK AND ANCHOR BLOCK SIZE										
PIPE SIZE	11 1/4" BEND		22 1/2" BEND		45° BEND		90° BEND		DEAD ENDS & TEES	
	HORIZ. L_1 X L_2	VERT. C.Y.	HORIZ. L_1 X L_2	VERT. C.Y.	HORIZ. L_1 X L_2	VERT. C.Y.	HORIZ. L_1 X L_2	VERT. C.Y.	HORIZ. L_1 X L_2	VERT. C.Y.
6"	22" X 4"	0.04	22" X 8"	0.08	22" X 15"	0.16	20" X 20"	0.28	22" X 19"	–

NOTES:

1. THRUST BLOCK BEARING AREA BASED ON ALLOWABLE SOIL BEARING VALUE OF 1500 psf AND 150 psi LINE PRESSURE.
   FOR BEARING = 1000 psf, 1.5 x AREA SHOWN
   FOR BEARING = 500 psf, 3.0 x AREA SHOWN
2. ALL THRUST BLOCKS SHALL BE CLASS "B" CONCRETE AND PLACED AGAINST UNDISTURBED SOIL. DESIGN ENGINEER SHALL DETERMINE SIZES NOT SHOWN.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A15 AND A305 INTERMEDIATE GRADE.
4. CONCRETE SHALL NOT EXTEND ONTO FLANGE OR ADJOINING PIPE.

DIGALERT CALL TOLL FREE 811 TWO WORKING DAYS BEFORE YOU DIG Underground Service Alert

CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. SEE GENERAL NOTES FOR FURTHER INFORMATION.

JIG CONSULTANTS
318 W KATELLA AVE, SUITE A
ORANGE, CA 92867
(714) 978-4407
www.jigconsultants.com

REGISTERED PROFESSIONAL ENGINEER JOSEPH I. GUTIERREZ No. C 55604 Exp. 12/31/22 CIVIL STATE OF CALIFORNIA

NO.	DATE	REVISIONS

DESIGN: MM
DRAWN: MM
CHECKED: JG

TRABUCO CANYON WATER DISTRICT

DATE
ENGINEER
JOSEPH I. GUTIERREZ RCE 55604
PRINCIPAL ENGINEER
LORRIE LAUSTEN RCE 67027

TRABUCO CANYON WATER DISTRICT

GOLF CLUB LIFT STATION BYPASS IMPROVEMENTS
PROJECT NO. XXXX-XX

SITE PLAN / MECHANICAL PLAN AND SECTION

C-1
SHEET 1 OF 1

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ENGINEERING MATTERS

ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING DIMENSION WATER TREATMENT PLANT BACKWASH TANK REPLACEMENT PROJECT

Trabuco Canyon Water District (District) owns, operates, and maintains the Dimension Water Treatment Plant (WTP) in the City of Lake Forest. This plant receives untreated imported water from Metropolitan Water District (MWD), via the Baker Pipeline, and produces the majority of the water distributed to District customers. Within the WTP is the backwash waste sump pump which houses two pumps (10hp and 40hp) that transfer the backwash filter wastewater to two bolted steel waste settling tanks. Theses tanks hold the backwash and flush water and release it to the sewer system at approximately 250 gpm.

The two waste tanks are 42,000 gallons and the newest tank was constructed in 1987. The tanks are in poor condition due to severe corrosion and need replacement. JIG Consultants was retained by the District to research the existing infrastructure and determine which facilities are in service, provide recommendations for the upgrade to the tanks and demolition of abandoned facilities.

The District considered three types of tanks for replacement, including bolted steel, polyethylene, and fiberglass reinforced plastic (FRP). Based on the analysis of these tank materials and their relative costs and design limitations, the recommended tank material was a bolted steel.

At the February 17, 2021 Regular Board Meeting, the Board of Directors authorized the General Manager to execute a contract with Superior Tank for the Dimension Water Treatment Plant Backwash Settling Tank Improvements in the amount of $249,876, with a contingency of $25,000, for a not to exceed amount of $274,876.

FUNDING SOURCE:
General Fund

FISCAL IMPACT (PROJECT BUDGET):
$274,876 total revised project budget, with $150,000 included in the Capital Improvement Program budget for FY 2020-21.

ENVIRONMENTAL COMPLIANCE:
Notice of Exemption was filed with the County of Orange on February 2, 2021.

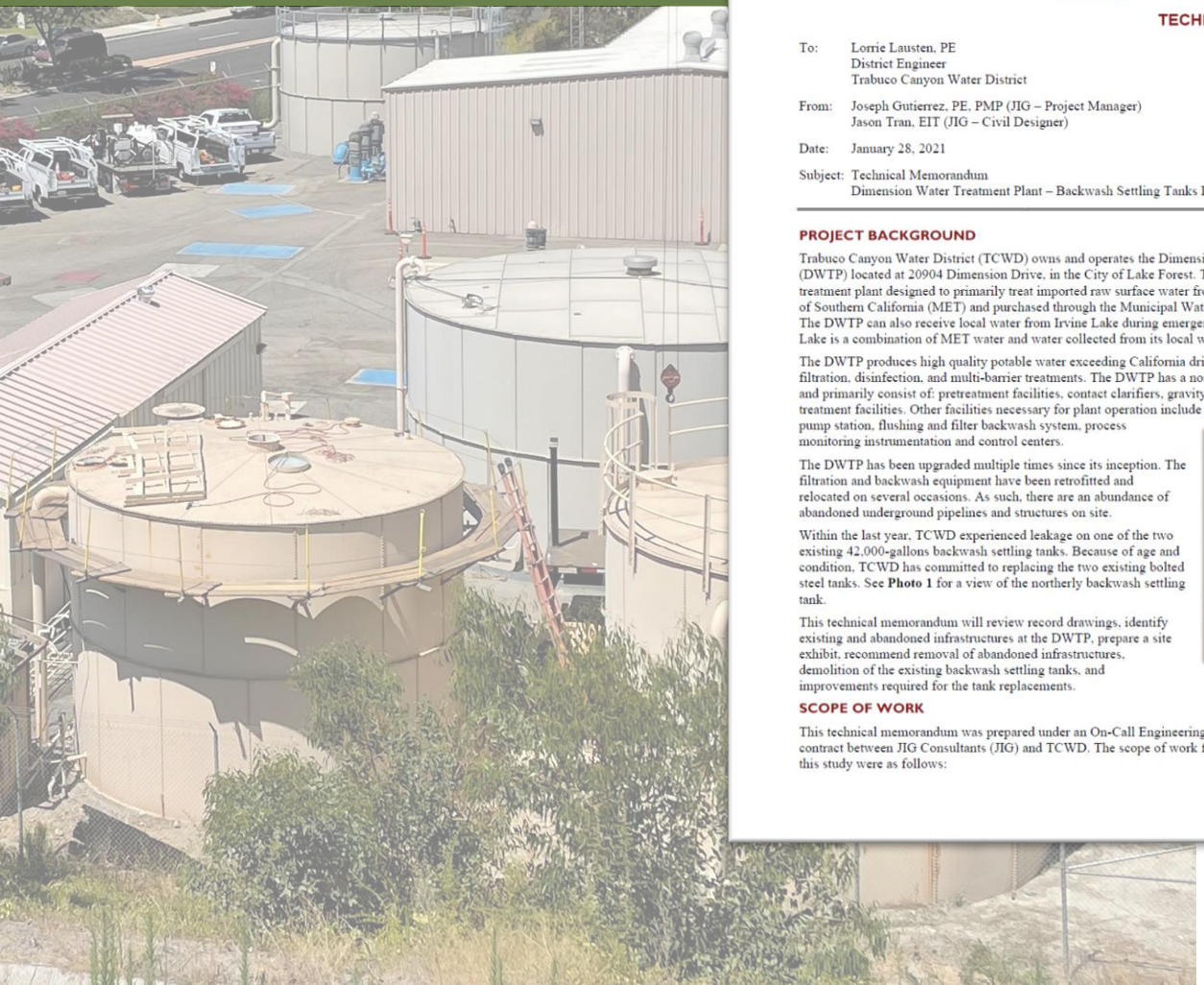
RECOMMENDED ACTION:
Committee to receive information at the time of the Committee Meeting.

EXHIBIT(S):
1. Project Photos

CONTACTS (staff responsible): PALUDI/LAUSTEN

DIMENSION WTP BACKWASH TANK REMOVAL

Trabuco Canyon Water District
July 7, 2021 E&O Committee



DRAFT

JIG CONSULTANTS

TECHNICAL MEMORANDUM

To: Lorrie Lausten, PE
District Engineer
Trabuco Canyon Water District

From: Joseph Gutierrez, PE, PMP (JIG – Project Manager)
Jason Tran, EIT (JIG – Civil Designer)

Date: January 28, 2021

Subject: Technical Memorandum
Dimension Water Treatment Plant – Backwash Settling Tanks Improvements

PROJECT BACKGROUND

Trabuco Canyon Water District (TCWD) owns and operates the Dimension Water Treatment Plant (DWTP) located at 20904 Dimension Drive, in the City of Lake Forest. The DWTP is a surface water treatment plant designed to primarily treat imported raw surface water from Metropolitan Water District of Southern California (MET) and purchased through the Municipal Water District of Orange County. The DWTP can also receive local water from Irvine Lake during emergencies. Water stored in Irvine Lake is a combination of MET water and water collected from its local watershed.

The DWTP produces high quality potable water exceeding California drinking water standards by using filtration, disinfection, and multi-barrier treatments. The DWTP has a nominal design capacity of 6 cfs and primarily consist of: pretreatment facilities, contact clarifiers, gravity tri-media filters, and post treatment facilities. Other facilities necessary for plant operation include a final effluent clear well and pump station, flushing and filter backwash system, process monitoring instrumentation and control centers.

The DWTP has been upgraded multiple times since its inception. The filtration and backwash equipment have been retrofitted and relocated on several occasions. As such, there are an abundance of abandoned underground pipelines and structures on site.

Within the last year, TCWD experienced leakage on one of the two existing 42,000-gallons backwash settling tanks. Because of age and condition, TCWD has committed to replacing the two existing bolted steel tanks. See **Photo 1** for a view of the northerly backwash settling tank.

This technical memorandum will review record drawings, identify existing and abandoned infrastructures at the DWTP, prepare a site exhibit, recommend removal of abandoned infrastructures, demolition of the existing backwash settling tanks, and improvements required for the tank replacements.

Photo 1 – Existing 42,000-Gallon Backwash Settling Tank

SCOPE OF WORK

This technical memorandum was prepared under an On-Call Engineering contract between JIG Consultants (JIG) and TCWD. The scope of work for this study were as follows:

318 W. Katella Ave., Suite A
Orange, CA 92867
Office (714) 978.4407
Fax (714) 908.4654
www.jigconsultants.com

North Tank

Empty South Tank

Roof Removal North Tank


TCWD

North tank concrete base

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ENGINEERING MATTERS
ITEM 5: DISCUSSION AND POSSIBLE ACTION CONCERNING ASSET MANAGEMENT SOFTWARE PURCHASE

The District provides water and recycled water distribution, wastewater collection, and treatment (water and wastewater) to a population of approximately 13,700 people throughout the Cities of Lake Forest, Mission Viejo, Rancho Santa Margarita and the County of Orange. Staff is currently utilizing a Geographical Information System (GIS) that tracks operational work such as line cleaning, fire hydrant flushing, valve turning, storing as-built drawings and tracking leaks. Staff desires to expand this system to schedule and track preventative maintenance (PM) on vertical assets and to support preliminary efforts related to an asset management program. MKN & Associates was retained by the District to provide engineering support, procure proposals from qualified vendors and produce a technical memorandum detailing the selection process (Exhibit 1). The following vendors provided initial proposals:

PROPOSAL BIDS	
Company	**Implementation Cost**
iWater	$56,460
Mentor APM	$160,000
NexGen	$299,500
Cartegraph	$40,400
Sedaru	$122,500

After reviewing the initial proposals, three vendors were selected for a more in-depth evaluation to include Sedaru, iWater, and Cartegraph. Demonstrations with operations/engineering were conducted which resulted in iWater and Cartegraph being shortlisted. The District checked references, asked for multi-year support costs and was provided with final proposals, which are detailed as follows:

Final AMS Cost Comparisons		
Cost Item	**Cartegraph**	**iWater**
Onetime Implementation Cost		
Baseline Implementation[1]	$22,350	$33,260
SCADA (rounds form only, no integration to system)	Included in baseline fee	$1,200
Wachs Integration	$3,000	No Charge
Tokay Integration	Included in baseline fee	$3,000
811 Positive Response	Included in baseline fee	$2,000
Subtotal of Items Above	$25,350	$39,460
Recurring Annual Fee	$12,700	$12,000
Total First Year Cost	**$38,050**	**$51,460**
Project Contingency	**$10,000**	**$10,000**
Total First Year Cost with Contingency	**$48,050**	**$61,460**
Year 2 Cost	$12,850	$12,000
Year 3 Cost	$13,002	$12,000
Year 4 Cost	$13,155	$12,000
Year 5 Cost	$13,310	$12,000
Total 5-Year Cost	**$100,367**	**$109,460**
Schedule		
Implementation Time	6-9 Months	6 weeks

Optional Features		
Tyler Billing Integration Implementation	$6,000	$25,000
GIS updates (provide hourly rates or package)	District or consultant to maintain and provide updates	$5,760 (12 hours per quarter with total of 48 hrs per year)
Additional software training	$175 per hour	Virtual Training: $120 On-Site Training: $150

Operations staff ranked each software package/vendor on their dashboard customization, flexibility of reports, ability to provide preventative maintenance tasks along with the depth of the implementation team and support staff. To that end, staff is recommending Cartegraph as the GIS/CMMS vendor.

FUNDING SOURCE:
General Fund

FISCAL IMPACT:
First year cost of $48,050 and five-year total cost of $101,000.

ENVIRONMENTAL COMPLIANCE:
Not Applicable

RECOMMENDED ACTION:
Committee to recommend that the Board of Directors authorize the General Manager award a five -year contract to Cartegraph for the Computerized Maintenance - Management System Software for a not-to-exceed fee of $100,367.

EXHIBIT(S): EXHIBIT(S):
1. MKN Technical Memorandum

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

TECHNICAL MEMORANDUM

To: Lorrie Lausten, PE, Trabuco Canyon Water District

From: Rob Lepore, GISP, MKN

Reviewed: Ryan Gallagher, PE, MKN

Date: July 1, 2021

Re: Asset Management Procurement

INTRODUCTION

MKN & Associates, Inc., (MKN) was retained by Trabuco Canyon Water District (District) to support preliminary efforts related to developing a comprehensive asset management program. In support of this effort, MKN provided the following services for this project:

- Project management and QA/QC
- Project meetings
- Data request and review
- Initial vendor outreach
- Vendor short list and evaluation
- Attendance at vendor software demonstrations
- Preparation of summary letter documenting the selection process

The overall project schedule is summarized in **Table 1** below:

Table 1: Project Schedule

Item	Date
Kickoff Meeting	02/11/2021
Vendor Data Request Issued	03/01/2021
Vendor Summary Prepared	03/16/2021
Progress Meeting with District	03/30/2021
Vendor Demonstrations	05/25/2021 - 05/27/2021
Vendors Selected for Final Interviews	06/01/2021
Final Vendor Interviews	06/11/2021
Draft Summary Letter and Final Proposals to District	06/18/2021
Proposal Review Meeting	06/21/2021
Final Summary Letter to District	06/25/2021
Engineering Committee Board Packet	6/29/2021
Board Review	July 2021

BACKGROUND

The District is seeking to implement an asset management system (AMS). The District provides water and recycled water distribution, wastewater collection, and treatment (water and wastewater) to a population of approximately 13,700 people throughout the communities of Trabuco Canyon, Robinson Ranch, Trabuco Highlands, Walden, Rancho Cielo, Portola hills, Santiago Canyon Estates, and Dove Canyon in Orange County, California. The following provides a summary of existing District systems/facilities:

- Water Distribution System
- Wastewater Collection System
- Water Treatment Plant
- Wastewater Treatment Plant
- Recycled Water System

OBJECTIVES

During the project kickoff meeting the District identified the following goals for the implementation of a web-based online AMS:

1. ***Goal 1:*** Consolidate or integrate existing software packages (see **Table 2** below).

Table 2: Existing District Software Programs

System	Name	Vendor	Notes
SCADA	Wonderware and ifix	Wonderware and ifix	Function to allow operators to *view* *without control* specific SCADA information through AMS. The goal is to allow operators to see this information (pump run time, tank level, etc) as they complete their daily rounds.
GIS	Inframap	iWater	It is important to integrate or replace the GIS interface in the new AMS. Currently, the District gives verbal direction for hydrant flushing, manhole inspections/line cleaning, dead end flushing, etc. Data is inputted directly into iWater during field visits.
CMMS	Manager Plus	Manager Plus	This is a key function of the new software. It is important to replace this software and translate current assets into new AMS.
Backflow	Tokay Navigator	Aquametric	Integrate where feasible
Billing, Accounting, Meter Reading	Incode VX production	Tyler	Optional. Currently used for billing and work orders. Work orders include potential leaks, meter replacement, etc.

2. ***Goal 2:*** Optimize current processes

3. ***Goal 3:*** Access for up to twenty (20) users in the following categories:
    a. Operations (would require mobile capabilities):
        i. 5 water
        ii. 5 sanitation

iii. 4 maintenance
iv. 2 extra licenses

b. Admin (1 with mobile capability, 3 with NO mobile capabilities): 4 licenses

4. ***Goal 4:*** Online storage of all GIS data files, with capability to update infrastructure on a quarterly basis

5. ***Goal 5:*** Provide asset management assignment and tracking for the following infrastructure (***14 current work order processes identified***):
    a. Fire Hydrant Flushing
    b. Deadline Flushing
    c. Valve Exercising
    d. Sewer Line Cleaning
    e. Manhole Inspections
    f. Grease Interceptor Inspection
    g. Lift Stations/ Pump Stations/ Reservoirs
    h. Pressure Reducing Valve Vault Inspections (1-year inspection/ 3-year maintenance)
    i. Pipeline Failure Repair
    j. Treatment Plants (assume 5)

6. ***Goal 6:*** Additional features, including:
    a. Offline capabilities for operations staff in the field
    b. Wachs valve machine integration

PROCESS

During the project kickoff meeting, the District worked with MKN to confirm the list of AMS vendors to contact as part of the initial vendor outreach. That list included the following vendors:

- iWater
- MentorAPM
- NexGen
- Cartegraph
- Sedaru
- Asset Works
- CityWorks

MKN prepared a request for qualifications which was then completed by each vendor. The vendor request is included as **Attachment A** at the end of this technical memorandum. The request included questions related to number of installations, time of operation, information on how infrastructure is updated in the program, implementation time from notice to proceed, and estimated annual costs and implementation costs associated with set up. The vendors also provided initial proposals that highlighted any software differentiators. The preliminary implementation and annual costs provided by each AMS vendor is included in **Table 3**.

Table 3: Initial AMS Vendor Response				
Vendor	**Implementation Cost**	**Annual Cost**	**Total First Year Cost**	**References**
iWater	$44,460	$12,000	**$56,460**	Santa Ana, La Habra, Big Bear City CSD
MentorAPM	$100,000	$60,000	**$160,000**	West View Water Authority
NexGen	$249,500	$50,000	**$299,500**	Moulton Niguel Water District
Cartegraph	$32,600	$7,800	**$40,400**	Santa Barbara, Laguna Beach, City of Industry
Sedaru	$86,500	$36,000	**$122,500**	East OCWD, Laguna Beach CWD

Asset Works and CityWorks declined to provide a response for this project. The detailed vendor summary is included as **Attachment B** at the end of this technical memorandum.

After reviewing initial responses and proposals, three vendors (iWater, Cartegraph, and Sedaru) were selected for a more in-depth evaluation. Demonstrations and product discussions were coordinated with each of the three shortlisted, and the District contacted reference agencies for the three vendors shortlisted.

Following these more in-depth interviews and reference reviews, two vendors (iWater and Cartegraph) were selected for final proposals. iWater and Cartegraph provided refined proposals which included additional and modified services based on negotiations including the following critical items:

- Baseline Implementation (including features listed in **Table 4**)
- SCADA Rounds Forms
- Wachs Integration
- Tokay Integration
- 811 Positive Response

Table 4: Required AMS Functionality		
Water	**Wastewater**	**Maintenance / Admin.**
Facility Rounds	Facility Rounds/SSMP	PM/Work Orders
Hydrant/Dead End Flushing	Sewer Line Cleaning	Fleet Management
Valve Exercising	FOG Inspections	Service Schedule (DOT)
Pipeline Location/Repairs	Pipeline Location/Repairs	Asset Tracking
PRV/AV/ClaVal	Inventory Management	CIP Budgeting
Inventory Management	PRV/AV/ClaVal	Service Orders
Water Quality Sampling	Manhole Inspection	811 Positive Response
Backflow Device Testing	Wet Well Cleaning	-
811 Positive Response	811 Positive Response	-
Notes: Water and wastewater would include all above ground and underground facilities.		

SHORTLIST FINAL PROPOSAL SUMMARY

Table 5 provides a breakdown of costs and schedules related to implementing the iWater or Cartegraph AMS platforms, as presented in each vendor's final proposal.

Table 5: Final AMS Cost Comparisons		
Cost Item	**Cartegraph**	**iWater**
Onetime Implementation Cost		
Baseline Implementation[1]	$22,350	$33,260
SCADA (form only, no SCADA integration)	Included in baseline	$1,200
Wachs Integration	$3,000	No Charge
Tokay Integration	Included in baseline	$3,000
811 Positive Response	Included in baseline	$2,000
Cost Summary		
Subtotal of Items Above	$25,350	$39,460
Recurring Annual Fee	$12,700	$12,000
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Project Contingency	**$10,000**	**$10,000**
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Total 5-Year Cost	**$100,367**	**$109,460**
Schedule		
Implementation Time	6-9 Months	6 weeks
Optional Features		
Tyler Billing Integration Implementation	$6,000	$25,000
GIS updates (provide hourly rates or package)	District to maintain/ provide updates	$5,760 (12 hrs/quarter w/ total of 48 hrs/year)
Additional software training (provide hourly rates or package)	$175 per hour	Virtual Training: $120 On-Site Training: $150
*Notes: Baseline implementation costs include development of workflows identified in **Table 4** and noted in AMS vendor final proposals.*		

Based on the final proposals, both AMS vendors can provide the District with the requested functional and features, which includes the following:

- 20 users
- 14 workflows
- Separate configurations for water and wastewater to do USA markings
- Work order for vertical assets
- Customizable dashboards

Table 6 summarizes observations from the demonstrations and final proposals were made by MKN for comparison of the two shortlisted AMS. In addition, the AMS vendors provided responses to several additional questions from the District.

Table 6: Firm Response Summary		
Item	**Cartegraph**	**iWater**
Year Established	1994	2004
Number of Installations	600+	138
Office Assigned to Project	Dubuque, Iowa	Irvine
Staff Allocation	5	5
Hosting Environment	Amazon Web Services	Microsoft Azure with servers are in Los Angeles, Dallas, Orlando, and Chicago
Hosting Security	http://aws.amazon.com/security/	https://azure.microsoft.com/en-us/services/security-center/
5-Year Hosting Fee	2% annual increase	0% annual increase
Other Factors	GIS data maintenance would require additional GIS and District staff training or supported by outside consultant	- iWater can maintain District data and provide quarterly GIS updates - iWater is currently working with the District to provide GIS updates and desktop software implementation

RECOMMENDATIONS

Based on review of the final proposals, evaluation by District staff and vendor demonstrations, Cartegraph is the recommended AMS vendor. As demonstrated by Table 6, Cartegraph's qualifications lead in both track record and number of installations. In addition, the user interface for Cartegraph, as experienced during vendor demonstrations, was shown to be more refined and provide superior ease of use. The latter is a significant finding, as the operability of the user interface is critical to ensuring use and integration of the AMS by District staff.

Attachment A

Vendor Data Request

DATA REQUEST – DUE 3/16

1. DEADLINE FOR RESPONSE

Requesting response by Tuesday, March 16th.

2. BACKGROUND

Trabuco Canyon Water District (District) is seeking to implement an asset management system (AMS). The District provides water and recycled water distribution, wastewater collection, and treatment to a population of approximately 13,700 people throughout the communities of Trabuco Canyon, Robinson Ranch, Trabuco Highlands, Walden, Rancho Cielo, Portola hills, Santiago Canyon Estates, and Dove Canyon in Orange County, California. The following provides a summary of existing District assets:

1. Water Distribution System
    a. 53 miles of potable water pipeline ranging from 2 to 24 inches in diameter
    b. 555 fire hydrants
    c. 1,750 Valves
    d. 4,000 water meter connections
    e. Six (6) storage reservoirs
    f. Eight (8) booster pump stations
    g. Nine (9) pressure regulating stations
    h. Two (2) Wells

2. Wastewater Collection System
    a. 36 miles of sewer pipeline ranging from 8 to 15 inches in diameter
    b. 9 miles of force mains
    c. Eight (8) Lift Stations
    d. 794 Manholes

3. Water Treatment Plant
    a. DWTP Filtration Plant
    b. Trabuco Creek Well Treatment Plant (filter and disinfection)

4. Wastewater Treatment Plant
    a. Digester
    b. Blower room
    c. Chlorination room
    d. Belt press
    e. 2 SBRs
    f. Equalization Basin

5. Recycled Water
    a. 5.1 miles of non-potable pipeline
    b. Two (2) booster pump stations
    c. One recycled water reservoir
    d. One urban water runoff reservoir

3. OBJECTIVE

The District is seeking to select a web-based online asset management platform with the following capabilities:

1. ***Goal 1:*** Consolidate or integrate existing software packages (see Table 1 below). The District has contracts with these companies that may not expire until the following year.

Table 1: District Software Programs

System	Name	Vendor	Notes
SCADA	Wonderware and ifix	Wonderware and ifix	Optional function to allow operators to *view without control* specific SCADA information through AMS. The goal is to allow operators to see this information (pump run time, tank level, etc) as they complete their daily rounds.
GIS	Inframap	iwater	It is important to integrate or replace the GIS interface in the new AMS. Currently, the District gives verbal direction for hydrant flushing, manhole inspections/line cleaning, dead end flushing, etc. Data is inputted directly into iWater during field visits.
CMMS	Manager Plus	Manager Plus	This is a key function of the new software. It is important to replace this software and translate current assets into new AMS.
Billing, Accounting, Meter Reading	Incode VX production	Tyler	Currently used for billing and work orders. Work orders include potential leaks, meter replacement, etc. ***It would be helpful to assign work orders through new system***.
Backflow	Tokay Navigator	Aquametric	Integrate where feasible

2. ***Goal 2:*** Optimize current processes

3. ***Goal 3:*** Access for up to twenty (20) users in the following categories:
    a. Operations (would require mobile capabilities):
        i. 5 water
        ii. 5 sanitation
        iii. 4 maintenance
        iv. 2 extra licenses

   b. Admin (1 with mobile capability, 3 with NO mobile capabilities): 4 licenses

4. ***Goal 4:*** Online storage of all GIS data files, with capability to update infrastructure on a quarterly basis

5. ***Goal 5:*** Provide asset management assignment and tracking for the following infrastructure (***14 current work order processes identified***):
   a. Fire Hydrant Flushing
   b. Deadline Flushing
   c. Valve Exercising
   d. Sewer Line Cleaning
   e. Manhole Inspections
   f. Grease Interceptor Inspection
   g. Lift Stations/ Pump Stations/ Reservoirs
   h. Pressure Reducing Valve Vault Inspections (1-year inspection/ 3-year maintenance)
   i. Pipeline Failure Repair
   j. Treatment Plants (assume 5)

6. ***Goal 6:*** Additional features, including:
   a. Offline capabilities for operations staff in the field
   b. Wachs valve machine integration
   c. In addition, please provide any other optional capabilities that could benefit the District.

4. PROCESS

The asset management implementation includes the following key actions and milestones:

1. Planning
   a. Procure initial proposals by 3/16
   b. Conduct demonstrations week of 3/29
   c. Update/final proposal mid-April
   d. Bring Final Proposal to mid-May Board Workshop

2. Implementation
   a. Engineering Committee June 2nd and Board of Directors June 16th
   b. Notice to Proceed by July 1st

5. DATA REQUEST

QUESTION	VENDOR RESPONSE
1. Vendor contact information for future inquiries.	
2. Number of Agencies utilizing your software?	
3. How long has your software been in operation?	
4. Based on our size and water/wastewater focus, provide a reference agency with contact information (Orange County or Southern California preference).	
5. Does your company provide any unique or differentiating capabilities?	
6. Of the above District software, which can you consolidate? For the software that cannot be consolidated, which can be integrated into the software interface? Describe how integration would be done.	
7. Does your software host GIS services? If not, how does your software integrate into GIS?	
8. How does your software manage assets inside a WWTP and WTP?	
9. Based on the stated Objectives, please provide a ***budgetary*** quote and a proposal for the startup and annual maintenance cost. Please include a quote for the services from questions 6,7, and 8 as optional additions.	
10. How is infrastructure in the model updated? If the District needs to make updates once per quarter, how is this completed and is there additional cost to this?	

QUESTION	VENDOR RESPONSE
11. Please provide any optional costs for training, technical support or additional modules.	
12. How long to implement following notice to proceed?	

Attachment B

Vendor Summary

TRABUCO CANYON WATER DISTRICT

PRELIMINARY VENDOR SUMMARY FOR ASSET MANAGEMENT

VENDOR & CONTACT INFO	INSTALLATIONS	YEAR FOUNDED	SIMILAR REFERENCE	REFERENCE CONTACT INFORMATION	GIS UPDATES	BASELINE IMPLEMENTATION COST	SCADA IMPLEMENTATION COST	TYLER BILLING INTEGRATION IMPLEMENTATION COST	WACHS INTEGRATION COST	TOKAY INTEGRATION COST	TOTAL SET UP AND IMPLEMENTATION COST	ESTIMATED ANNUAL AMS COST
iWater Adam Hagee, 949-584-4093 ahagee@iwater.org http://iwater.org/	302	2004	City of Santa Ana, City of La Habra, Big Bear City CSD	-	Through iWater software	$8,460	$8,000	$25,000	No charge	$3,000	$44,460	$12,000
MentorAPM Jennifer Zach, 480-760-5374 jennifer@mentorapm.com https://mentorapm.com/	8+	2017	LA County San, City of Riverside, Rancho California Water District	Did not provide reference contact information	Integration to iWater or through map	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included	$20,000 - $100,000	$60,000
NexGen Adam Schmidt 916-779-7310 https://www.nexgenam.com/	200+	2008	Moulten Niguel Water District	Matthew Brown: 949-425-3564	Integration to iWater or through NexGen's map viewer	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included.	Breakdown of integration costs not included	Breakdown of integration costs not included. However, this feature can be consolidated in NexGen	$249,500	$50,000
Cartegraph Dalton Gilbert, 909-630-2408, daltongilbert@cartegraph.com https://www.cartegraph.com/	600+	1994	City of Santa Barbara, City of Laguna Beach, City of Industry	Did not provide reference contact information	Ideally through ESRI	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included	Breakdown of integration costs not included	$17,800-$32,600	$7,800
Sedaru Aaron Wilberding, 714-348-9018, aaronwilberding@sedaru.com https://sedaru.com/	100+	2012	Phelan Pinon Hills CSD, East Orange County Water District, Laguna Beach County Water District	**Reference 1:** Jerry Mendzer at East Orange County WD **Phone #:** 714-538-5815 **Email:** jmendzer@eocwd.com	Sedaru can host - recommends replacing iWater	$54,540	$10,260	$16,200	$5,500	No integration costs included	$86,500	$36,000

TRABUCO CANYON WATER DISTRICT

PRELIMINARY VENDOR SUMMARY FOR ASSET MANAGEMENT

VENDOR & CONTACT INFO	ADDITIONAL GIS HOSTING REQUIRED	VERTICAL ASSET SOLUTION	IMPLEMENTATION TIME	OPTIONAL ITEMS	DIFFERENTIATORS
iWater	Cloud-based hosting by iWater - no additional GIS licensing needed	No solution provided other than to work directly with the District	3 weeks	USA Dig Alert Integration - **$2,000** SCADA Integration to read alarm/event data, assuming SCADA Historian is available - **$8,000** Quarterly updates (12 hours) - **$5,760** (District already has full access to add/delete items)	Already works with District - most likely easy integration process Low cost option
MentorAPM	1 ArcGIS Online log-in needed or ArcGIS Enterprise required District can also provide static copy of GIS data for MentorAPM to use	Vertical and horizontal assets are interconnected and functionality allows you to manage them in parallel	4-12 weeks	Unsure what is included in base price, as this is a budgetary estimate	Scalability - unlimited licenses, data storage, etc. included in annual cost Cloud based - reduces IT infrastructure requirements Premium features, including criticality analyzer, risk analysis, condition management, work order management, project management features, lifecycle management, and capital planning
NexGen	1 ArcGIS Online log-in needed or ArcGIS Enterprise required	Vertical assets are managed through locations and classes. Locations are organized by locations, systems, and process areas, while classes are organized by lifecycle plans and maintenance plans	Within 6 months	Everything is included in base price	Cloud based - reduces IT infrastructure requirements Premium features, including lifecycle plans, funding forecasts, risk analysis, and CIP scenario planning.
Cartegraph	Multiple ArcGIS Online log-ins needed - District needs to determine how many licenses needed **OR** ArcGIS Enterprise required	Connect each treatment structure to related processes in software	4-6 months	Additional training can be purchased	Built-in CIP Planning tool Single point of contact Ease of use
Sedaru	Sedaru can host	Hierarchal relationships between treatment plant assets, i.e. dropdown menu for any child assets to support work orders	6-months	Silver Level Subscription - **$5,600/yr** Wachs Valve Machine - **$1,400/truck/yr** DigAlert 811 tickets - **$3,600 - $12,000/yr depending on number of tickets; Implementation is ~ $10,000**	Wachs valve machine integration - allows remote control and data access of Wachs valve turning machine in Sedaru Hydraulic modeling functionality Turnkey pipeline leak and break response Capital planning features

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ENGINEERING MATTERS
ITEM 6: DISCUSSION AND POSSIBLE ACTION CONCERNING ASSET MANAGEMENT SOFTWARE PURCHASE

The District's Supervisory Control and Data Acquisition (SCADA) System is a critical system used for the daily operation and monitoring of facilities in the water, wastewater, and recycled water systems. The SCADA system includes alarms, remote monitoring and controls, and data logging of the District's various facilities including the water and wastewater treatment plants, pump stations, sewage lift stations, and reservoirs. The SCADA system consists of various telemetry, programmable logic computers, PCs, radios, controllers, and antennas of various heights and types. The SCADA system continuously monitors the District's facilities and reports alarm conditions to the operators on a twenty-four hour per day basis every day.

At times, the SCADA system requires complex programming of different software, some of which is outdated and not supported by the original software developer. In addition, the programming and applications are custom to water and wastewater systems and an understanding of operations is necessary when working on the SCADA system. In addition, the District's geography, varying elevations, and remote facilities require the use of different methods of communicating within the SCADA system, including low and ultra-frequency radios, licensed and unlicensed frequencies, and the internet. Over the past 25 years or more, the SCADA system has undergone upgrades and replacement of components with several no longer supported or available for replacement. The maintenance of the SCADA system is performed by one of the District's Mechanical Technologists with assistance from both Beavens Systems and TESCO Controls, Inc.

Staff has implemented a phased approach to update the District's SCADA System, as summarized below:

1. Phase 1 - SCADA System Assessment Study (Completed December 2017).
2. Phase 2 - Wide Area Network Improvements and Hardware Replacement (Completed January 2019).
3. Phase 3 - Radio Frequency system Analysis and Field Study (Exhibit 1), Software Platform Evaluation and Selection and Purchasing of the Remote PLC Hardware (Completed June 2020).
4. Phase 4- Consolidation of the existing SCADA platforms, Implementation of a high-speed radio backbone network throughout the water/wastewater system, Upgrade of the existing main control panel PLC and HMI at the Trabuco Creek Groundwater Treatment Facility (TCGWTF) (Completed July 2021).
5. Phase 5 - Upgrade Remote Sites/DWTP and PLC's, Install new SCADA Software and Hardware.
6. Phase 6 - Upgrade Remaining Remote Sites, WWTP and PLC's.

Staff will present a revised proposal from TESCO for work included in Phase 5 of the Project at the time of the Committee meeting.

FUNDING SOURCE:
General Fund

FISCAL IMPACT (PROJECT BUDGET):
Phase 1: $45,000
Phase 2: $200,000
Phase 3: $400,000
Phase 4: $600,000 (FY21/22)
Phase 5: $1,000,000 (FY21/22)
Phase 6: $500,000 (FY22/23)

COSTS TO DATE
Phase 1: $ 44,777 - Study (TESCO/Beavens)
Phase 2: $ 182,520 - WAN Improvements/Hardware/Licensing/Programming/Virtualization (TESCO/Beavens)
Phase 3: $ 386,840 – Radio Frequency Study, Software Evaluation and Purchase of Remote Site PLC's (TESCO)
Phase 4: $ 594,708 – Consolidation of SCADA Platforms, Implementation of high-speed backbone and upgrade of TCGWTF (TESCO/Hydrotech Electrical)

TRABUCO CANYON WATER DISTRICT
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ENVIRONMENTAL COMPLIANCE:
Notice of Exemption

RECOMMENDED ACTION:
Committee to receive project status updates at time of the Committee Meeting.

EXHIBIT(S):
None

CONTACTS (staff responsible): PALUDI/LAUSTEN

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

ENGINEERING MATTERS
ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Master Plan and Condition Assessment Update
2. Heritage Sewer Lift Station Improvements
3. Oaks at Trabuco Update
4. Other Projects

RECOMMENDED ACTION:
Committee to receive project status updates at time of the Committee Meeting.

EXHIBIT(S):
None.

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

OPERATIONAL MATTERS
ITEM 8: WATER SYSTEM UPDATES

The following is a brief report of the water system for **June 2021**.

Projects and Repairs

1. Water Operations staff replaced the effluent valve on Filter Three (3), influent valves on Filters; One (1), Three (3) and Four (4), and check valves on Filters one (1) and three (3).
2. Water Operations staff replaced one (1) fire hydrant on the El Toro Bike Trail and converted one (1) dry barrel hydrant to wet barrel on Fall River Road in the Trabuco Highlands Community.
3. Water Operations staff worked with the Maintenance Department to replace one (1) pump motor and service all flow control valves at the Field Office.
4. Water Operations staff worked with Superior Tank and their subcontractors to clean out and remove existing Backwash Recovery Tanks and removed the old abandon wet well.
5. The Dimension Water Treatment Plant was taken offline at 10:00 am on June 18, 2021.

Monthly Water System Operations Summary

The Monthly Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

1. Monthly Water System Operations Summary

CONTACTS (staff responsible): PALUDI/KESSLER

TRABUCO CANYON WATER DISTRICT
MONTHLY WATER SYSTEM OPERATIONS SUMMARY

2021													
DIMENSION WTP													
	JAN	**FEB**	**MARCH**	**APRIL**	**MAY**	**JUNE**	**JULY**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	***TOTAL***
SAC METER AC/FT	160	125	75	176									
BACKWASH AC/FT	4	4	2.0	6	5								
FLUSHWATER AC/FT	7	6	3.0	9	9								
WTP EFFLUENT AC/FT	175	124	83	176	213								
Wells													
TRABUCO CREEK GWTF	0	0	0	0	0								
US WELL AC/FT	0	0	0	0	0								
AMP WATER													
SMWD AC/FT	0.12	2	8	0	0								
IRWD AC/FT	0	12.4	53.4	10	0								
TOTAL SUPPLY													
AC/FT	175	138	145	186	213								
CFS DAILY AVERAGE	2.8	2.5	2.3	3.1	3.4								
AC/FT PER DAY	5.6	5.0	4.6	6.2	6.9								
OPERATIONS in GAL.													
WTP DOMESTIC	32,239	27,377	29,845	35,380	41,215								
WWTP DOM	17,354	18,176	8,751	7,629	10,322								
OPERATIONS (AF)													
SUPPLEMENT TO RW	0	0	0	0	0								
LOSSES in GAL.													
FLUSHING (gal.)	0	0	0	0	0								
SEWER CLEANING (gal.)	5,000	5,000	5,000	5,000	5,000								
LINE BREAKS (gal.)	100,000	24,000	200,000	50,000	0								
SYSTEM DEMAND **													
CFS DAILY AVERAGE	2.8	2.5	2.3	3.0	3.4								
AC/FT PER DAY	5.6	5.0	4.6	6.2	6.9								
RESERVOIR STORAGE													
MONTHLY AVG (MG)	9.0	8.8	8.4	8.1	8.0								
DAYS OF STORAGE	4	3	3	3	3								
ZONES (AF)													
RIDGELINE PS	127	107	73	127	199								
EL TORO P.S.	18	20	53	10	0								
TOPANGA	2	2	2	3	4								
FALCON	0.3	0.2	2.4	0.7	0.7								
ROSE PRV/ OAKS	1	1	1	Inop.	Inop.								
CANYON CREEK	0.1	0.2	0.2	0.3	0.4								
ROSE P.S.	0.3	0.3	0.2	0.2	0.2								
ROBINSON RANCH	31	31	34	53	63								
DOVE CANYON	61	54	62	75	84								
PORTOLA HILLS	11	10	10	11	12								
* Usage estimated new meter installed					** Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)								

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

OPERATIONAL MATTERS
ITEM 9: WASTEWATER SYSTEM UPDATES

The following is a brief report of the wastewater system for **June 2021.**

Projects and Repairs

Wastewater Operations staff performed and/or completed the following tasks and projects:

1. Responded to a Category 3 Sanitary Sewer Overflow (SSO) [*<1,000 gallons*] at the intersection of Robinson Ranch and High Country on Saturday, June 26. The SSO was caused by a clog of solidified detergent and debris. Currently, Operations and Maintenance are working with DMc Engineering to perform a condition assessment (video) of the segment of pipeline to determine its condition.
2. Drained, cleaned, and performed aeration system repairs/improvements on the WWTP West Sequencing Batch Reactor (SBR) due to the failure of a significant amount of diffuser sheaths and performed minor aeration header repairs.
3. Responded to filled tanks at the Crystal Canyon WWTP in The Oaks private community due to a residential water softener system valve failure.
4. Worked with SS Mechanical to remove and install a temporary surge tank assembly at El Toro Sewer Lift Station due to the failure of the existing surge tank assembly.
5. Worked with Maintenance Department staff to install a new stainless-steel cabinet for secondary effluent turbidimeter and replaced a section of ductile iron pipe.,
6. Lead Wastewater System Operator Blake Smith successfully passed his CWEA Laboratory Analyst I certificate exam.

Sewer System Management Plan (SSMP) Report

The purpose of the program is to communicate on a regular basis with the public on the development, implementation, and performance of TCWD's SSMP. Status updates on the work and type of work performed on the sewer system will be provided, including sewer line and manhole cleaning, system repairs, lift station cleaning, and updates from satellite facilities:

Sewer System Management Plan (SSMP) Monthly Update	
Total Sewer Line, Feet*	210,495
Total Sewer Line Cleaned (Ft) – Month	**30,132**
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	180,065
Cleaning Cycle Period (Mos.)	16
Total Sewer Line Cleaned, %	**79%**
The Oaks at Trabuco – Pumping Frequency for the Month	20
O'Neill Park Sewer System Status	Ok
O'Neill Park Sewer System Repairs	None
SSMP Quarterly Report – *Next Quarterly Report*	3Q 2021
SSMP Program Audit – *Next Audit Report***	January 2022

**This amount includes the OC Parks-owned O'Neill Park sewer system the District is contracted to clean.*
***Periodic internal audits shall be conducted, at a minimum every two years, with reports kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and TCWD's compliance with the mandatory elements of TCWD's SSMP:*

Monthly Recycled Water System Operations Summary

The Monthly Recycled Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

EXHIBITS

1. Monthly Recycled Water System Operations Summary
2. SSMP Quarterly Report – 2Q 2021

CONTACTS (staff responsible): PALUDI/PEREA

TRABUCO CANYON WATER DISTRICT | NON-DOMESTIC WATER SYSTEM SUMMARY - 2021

RECYCLED WATER SUPPLY	MAX	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	50.6	43.9	52.8	42.8	46.2	44.1							280.4	550.04
Reclaimed Reservoir Level, FT	1274.5	1,266.0	1,268.5	1,270.8	1,268.9	1,268.2	1,264.0							-	-
Reclaimed Reservoir Free Board, FT	25.5	8.5	6.0	3.7	5.6	6.3	10.5							-	-
Reclaimed Reservoir Storage, AF	145.5	96.4	112.5	125.2	115.4	110.4	87.5							-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0	0.0	0.0							0.0	72.88

RECYCLED WATER SYSTEM DEMAND															
NON DOMESTIC WATER USER	ALLOC. AF	8% JAN	17% FEB	25% MAR	33% APR	42% MAY	50% JUN	58% JUL	67% AUG	75% SEP	83% OCT	92% NOV	100% DEC	TOTAL	ALLOC. %
Dahlia Court	8.2	0.2	0.2	0.2	0.3	0.3	0.3							1.5	18%
Dove Canyon Golf Course	106.7	6.6	7.1	10.6	25.6	37.2	42.2							129.2	121%
Dove Canyon Master Association	279.3	5.5	5.7	7.1	16.1	22.3	30.4							87.1	31%
Robinson Ranch	80.2	0.9	1.3	1.3	2.4	4.1	4.9							14.8	19%
Trabuco Highlands	159.7	3.7	3.0	2.1	6.6	8.8	10.0							34.2	21%
City of RSM	0.1	0.00	0.00	0.00	0.30	0.01	0.01							0.3	245%
Construction Water	N/A	0.0	0.0	0.0	0.0	0.0	0.0							0.0	N/A
Sakaida Nursery	1.1	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0%
SMWD	N/A	0.0	0.0	0.0	6.6	2.8	2.2							11.7	N/A
TY Nursery	17.9	0.0	5.8	4.0	6.2	0.0	0.0							16.1	90%
TOTAL, AF	**653.2**	**16.8**	**23.1**	**25.3**	**64.1**	**75.6**	**90.0**							**294.8**	**45%**
PERCENTAGE OF NDW ALLOCATION/YEAR		**3%**	**6%**	**10%**	**20%**	**31%**	**45%**								
TOTAL ANNUAL AVG. NDW AVAILABLE**	**774.36**														

URBAN RUNOFF CAPTURE AND REUSE															
DISTRICT FACILITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
Shadow Rock Detention Basin Production		0.0	0.0	0.1	0.01	0.01	0.01							0.1	21.2
Dove | Tick Creek Production*	*Dry Season*	0.0	0.0	0.0	7.0	6.8	5.3							19.2	102.7
	TCWD Portion	0.0	0.0	0.0	3.5	3.4	2.7							9.6	-
	SMWD Portion	0.0	0.0	0.0	3.5	3.4	2.7							9.6	-
Dove Lake Water Pumped		0.0	0.0	0.0	11.3	28.5	20.0							59.8	201.7
Dove Lake Free Board, Ft		5.6	5.3	3.2	4.1	5.9	7.2							-	-
Dove Lake Storage		128.0	131.5	166.4	158.1	117.2	107.0							-	-
Total Rainfall, In.		1.7	0.0	1.2	0.0	0.0	0.0							2.9	14.5

**** SMWD share of Dove/Tick Pump Station Dry Season Water is 50% of production.***

***** Based on 5-Year Average Reclaimed Water Reservoir Base Supply & Recycled Water Production***

TRABUCO CANYON WATER DISTRICT

Sewer System Management Plan (SSMP) Quarterly Report

Report Date: June 30, 2021
Report Period: Second Quarter 2021 - April to June 2021
Prepared By: Oscar Ulloa, Wastewater Operations Chief Plant Operator

District Sub-Section	Santiago/Portola Hills			Dove Canyon			Rancho Cielo/Walden			Robinson Ranch/Trabuco Highlands		
	Total Amount	Amount Completed	% Completed	Total Amount	Amount Completed	% Completed	Total Amount	Amount Completed	% Completed	Total Amount	Amount Completed	% Completed
Sewer Line Cleaned, Feet	44,625	44,625	100%	64,135	64,135	100%	29,865	29,865	100%	59,170	57,039	96%
Manholes, Inspected/Cleaned	205	205	100%	212	212	100%	124	124	100%	236	228	97%
Manholes Needing Repair	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Wet Wells, Inspected/Cleaned	2	2	100%	3	3	100%	1	1	100%	2	1	50%
Lift Stations, Inspected/Maintained	2	2	100%	3	3	100%	1	1	100%	2	2	100%
Grease Interceptors Inspected	1	0	0%	2	2	100%	5	5	100%	n/a	n/a	n/a

Note: All Sewage Lift stations are inspected 3-4 times a week

Contract Services	O'Neill Park/OCFA		
	Total Amount	Amount Completed	% Completed
Sewer Line Cleaned, Feet	12,700	0	0%
Manholes, Inspected/Cleaned	95	0	0%
Manholes Needing Repair	0	0	0%
Wet Wells, Inspected/Cleaned	1	1	100%
Lift Stations, Inspected/Maintained	1	1	100%
Grease Interceptors Inspected	0	0	0%

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

OPERATIONAL MATTERS
ITEM 10: MAINTENANCE DEPARTMENT UPDATES

The following is a brief report of the wastewater system for **June 2021.**

Projects and Repairs

1. Maintenance Department staff scheduled work at the Field Office (booster one) with the following contractors: Flo-Services, CLA-VAL and Hydrotech Electric.
2. Maintenance Department staff performed ongoing Preventative Maintenance on the emergency generators with Duthie Electric Power Services.
3. Maintenance Department staff scheduled Hydrotech Electric to work on the SCADA upgrades at the Joplin site.
4. Maintenance Department staff procured one new Godwin mobile transfer pump from Zylem.
5. Maintenance Department staff procured one new Cummins powered mobile diesel generator.
6. Maintenance Department staff assisted Wastewater Operations with the repairs at the Robinson Ranch Wastewater Plat, West SBR (aeration header failed).
7. Maintenance Department staff continued work at the Robinson Ranch Wastewater Plant troubleshooting electrical issues and repairs.
8. Maintenance Department staff worked with consultant, JIG Engineering to start a Surge Analysis Report to replace the damaged surge tank at El Toro Sewer Lift Station (which is offline and bypassed until further notice).

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

None

CONTACTS (staff responsible): PALUDI/STROUD

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JULY 7, 2021

REGULATORY AND OTHER MATTERS
ITEM 11: OTHER MATTERS/REPORTS

Other Matters/Reports from the General Manager and/or District staff may be provided at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:
Hear Other Matters/Reports that may have arisen after the posting of the agenda.

EXHIBITS
None

CONTACTS (staff responsible): PALUDI