



ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
ADMINISTRATION FACILITY
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
SEPTEMBER 4, 2024 AT 7:00 AM

COMMITTEE MEMBERS

Michael Safranski, Committee Chair
Stephen Dopudja, Committee Member
Don Chadd, Committee Member Alternate

DISTRICT STAFF

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

AGENDA NOTE:

Trabuco Canyon Water District (District) will make this Engineering/Operational Committee Meeting available by telephone audio as follows:

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

ENGINEERING MATTERS

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

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. *August 7, 2024 Committee Meeting*

ITEM 2: DOVE RECYCLED PUMP STATION IMPROVEMENTS DESIGN AWARD

RECOMMENDED ACTION:

Committee to receive information and take action(s) as deemed appropriate.

ITEM 3: HERITAGE SEWER LIFT STATION DESIGN COMPLETION

RECOMMENDED ACTION:

1. *Recommend the Board of Directors authorize the General Manager to execute Amendment No. 3 to JIG Consultants for the Heritage Sewer Lift Station Mechanical Improvements in the not-to-exceed amount of \$66,050 (Action Calendar).*
2. *Recommend the Board of Directors authorize the General Manager to execute Amendment No. 2 to DMc Engineering for the Heritage Sewer Lift Station Site Improvements in the not-to exceed amount of \$23,580 (Action Calendar).*

ITEM 4: QUARTERLY CIP UPDATE

RECOMMENDED ACTION:

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

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Robinson Ranch Wastewater Treatment Plant Blower Replacement Project-Sound Study
2. Barneburg Manhole and Wet Well Recoating Summary
3. Golf Club Sewer Lift Station Construction Report
4. Santa Margarita Parkway Force Main Rehabilitation
5. WWTP Handrailing Improvements

RECOMMENDED ACTION:

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



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | SEPTEMBER 4, 2024**

OPERATIONAL MATTERS

**PRESENTER(S): GARY KESSLER, WATER SYSTEM SUPERINTENDENT
OSCAR ULLOA, WASTEWATER OPERATIONS SUPERINTENDENT
JASON STROUD, MAINTENANCE DEPARTMENT SUPERINTENDENT**

ITEM 6: WATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 7: WASTEWATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

REGULATORY AND OTHER MATTERS

ITEM 9: 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.



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

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. August 7, 2024 Committee Meeting*

CONTACTS (staff responsible): PALUDI/PEREA



TRABUCO CANYON WATER DISTRICT ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | AUGUST 7, 2024

DIRECTORS PRESENT

Mike Safranski, Committee Chair
Stephen Dopudja, Committee Member

STAFF PRESENT

Fernando Paludi, General Manager
Michael Perea, Assistant General Manager
Gary Kessler, Water Superintendent
Oscar Ulloa, Wastewater Superintendent
Jason Stroud, Maintenance Superintendent
Phil Serpas, CMMS/SCADA Administrator
Roseann Lejsek, Administrative Assistant
Lorrie Lausten, District Engineer

STAFF ABSENT

None

PUBLIC PRESENT

None

CALL MEETING TO ORDER

Director Safranski called the August 7, 2024 Engineering/Operational Committee Meeting to order at 7:01 a.m.

VISITOR PARTICIPATION

No comments were received.

ORAL COMMUNICATION

No comments were received.

COMMITTEE MEMBER COMMENTS

None

REPORT FROM THE GENERAL MANAGER

Mr. Paludi reported that an emergency line break of the 16" potable water transmission pipeline occurred the prior week near the Dimension Water Treatment Plant (DWTP). Mr. Paludi reported that the break occurred in a commercial center parking lot near an auto repair shop and a Montessori Preschool. Mr. Paludi reported that District staff and Ferreira Construction (contractor) was on-site quickly and repaired the pipeline. Mr. Paludi commended staff for their assistance in the site clean-up, and that both he and Mr. Perea met with a school representative to assess potential damage. Discussion occurred regarding the possible causes for the line break as well as cost-estimating a plan for reinforcing the interior of the pipeline, starting with the most critical segments in order to avoid property damage in the future. Director Dopudja commended Operations for their quick response and clean up.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | AUGUST 7, 2024**

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

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

- MOTION:** Approve the Engineering/Operational Committee Meeting Recap and recommend that the Board receive and file the same (Consent Calendar) – Director Dopudja
- SECOND:** Director Safranski
- AYES:** Directors Dopudja & Safranski
- NOES:** None
- ABSTAIN:** None
- MOTION PASSED/FAILED:** Passed 2 – 0

ITEM 2: DOVE RECYCLED WATER PUMP STATION IMPROVEMENTS – RFP ISSUED

Mr. Paludi presented this matter for Committee consideration. Ms. Lausten provided a brief background of phase 1 portion of this project, and she stated that the District is ready to begin the second phase, which includes project design. Ms. Lausten stated that a Request for Proposals (RFP) was sent to 8 firms, and she provided a brief overview of the planned improvements which were included in the RFP. Ms. Lausten noted that cost increases have been accounted for in the budget.

- MOTION:** None – Informational item only.

ITEM 3: ROBINSON RANCH WASTEWATER TREATMENT PLANT (RRWWTP) BLOWER ROOM RE-DESIGN

Mr. Paludi presented this matter for Committee consideration. Ms. Lausten reported that Engineering and Operations have collaborated for the modified design for the blower replacements, which will include placing the blowers outside of the building. Ms. Lausten provided the blower design budget, the Motor Control Center (MCC) replacement budget, and budgetary estimates for the construction of each. Ms. Lausten provided information on the conceptual layout of the modifications, and she reported that noise-testing found almost no noise. Ms. Lausten added that placing the blowers outside of the building will improve access for maintenance of the blowers. Mr. Ulloa commented that placing the blowers outside will relieve the electrical components from heat stress and will also allow the MCC to have a dedicated building. Ms. Lausten noted that the quote did not include flow meters, which will cost an additional approximate \$13,000. Mr. Paludi stated that long-term energy cost-savings should be realized from the design improvements and energy improvements.

- MOTION:** Recommend the Board of Directors authorize the General Manager to Amendment No. 1 to JIG Consultants for the Blower Room Improvements in the not-to-exceed amount of \$81,985 (Action Calendar) – Director Dopudja
- SECOND:** Director Safranski
- AYES:** Directors Dopudja & Safranski
- NOES:** None
- ABSTAIN:** None
- MOTION PASSED/FAILED:** Passed 2 – 0

ITEM 4: DIMENSION WATER TREATMENT PLANT (DWTP) OFFICE TRAILER REHAB PROJECT COMPLETION REPORT

Mr. Paludi presented this matter for Committee consideration, and he reported that the Dimension Water Treatment Plant (DWTP) office rehabilitation project has been completed. Ms. Lausten provided a summary of

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the improvements with photos of the exterior and interior of the building. Discussion occurred regarding security improvements at the facility.

MOTION: None – Informational item only.

ITEM 5: THE OAKS AT TRABUCO DEVELOPMENT UPDATE

Mr. Paludi presented this matter for Committee consideration, and he reported that the District contracted with Hazen & Sawyer to perform a cost-of-service study of the plant's operation and replacement. Mr. Paludi reported that staff is working with General Counsel on the best way to assess the condition ahead of the District's acceptance of the facility. Discussion occurred regarding possible changes to reduce operating costs.

MOTION: None – Informational item only.

ITEM 6: LEAD AND COPPER RULE REVISIONS (LCRR) SERVICE LINE INVENTORIES PROJECT

Mr. Paludi presented this matter for Committee consideration. Ms. Lausten reported that the District has completed the field verification testing as required by the United States Environmental Protection Agency (USEPA). Ms. Lausten stated that although service connections installed after January 1, 1986 are assumed not to contain lead, the rule requires agencies to complete an inventory of each service. Ms. Lausten reported that the District worked with the Municipal Water District of Orange County (MWDOC) on a shared services contract with other Orange County agencies on the project and that MWDOC selected Hazen & Sawyer to perform the LCRR field work. Ms. Lausten reported that the District opted to do the field verification with internal staff as a cost-saving effort. Ms. Lausten reported that staff conducted 247 field inspections and that no lead was found on either the utility or owner side of services. Ms. Lausten stated that Hazen & Sawyer will summarize the District's compliance efforts in a report and submit it to the State in time for the October 16, 2024 submission deadline. Ms. Lausten noted that as a result of performing the field verifications in-house, the District saved \$65,000 on the contract.

MOTION: None – Informational item only.

ITEM 7: BELL CANYON AND BARNEBURG SEWER LIFT STATION EASEMENTS

Mr. Paludi presented this matter for Committee consideration, and he commended Ms. Lausten for discovering the lack of easements for both Bell Canyon and Barneburg Sewer Lift Stations. Ms. Lausten reported that both Grants of Easement have been completed and that with the Committee's recommendation, staff will bring these items to the Board for receipt and execution.

MOTION: Recommend that the Board of Directors receive the Grants of Easement to the Trabuco Canyon Water District by Dove Canyon Master Association for the Bell Canyon and Barneburg Sewer Lift Stations and authorize the District Secretary to execute said Grants of Easement (Action Calendar)
– Director Dopudja

SECOND: Director Safranski

AYES: Directors Dopudja & Safranski

NOES: None

ABSTAIN: None

MOTION PASSED/FAILED: Passed 2 – 0

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ITEM 8: TCWD BUSINESS SYSTEM SERVER REPLACEMENT PROJECT – PHASE ONE

Mr. Paludi presented this matter for Committee consideration. Mr. Perea reported that the District’s servers were last updated in 2016, and he stated that the District has fully maximized the storage expansion capacity since that time, with approximately ten percent of storage capacity remaining. Mr. Perea reported that staff has been working with the District’s independent contract IT manager, Highroad IT, to budget for a two-phased upgrade approach for this project, which has been built into the CIP budget. Mr. Perea also reported that the State of California has released Cybersecurity Grant Program funding, and he stated that he has started a dialogue with Soto Resources to explore possible grant funding opportunities to offset project costs.

- MOTION:** Recommend the Board of Directors authorize the General Manager to approve the Server Replacement Project Quote No. TCWD24-0726A from Highroad IT in the amount of \$99,648 (Action Calendar) – Director Dopudja
- SECOND:** Director Safranski
- AYES:** Directors Dopudja & Safranski
- NOES:** None
- ABSTAIN:** None
- MOTION PASSED/FAILED:** Passed 2 – 0

ITEM 9: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. **Santa Margarita Parkway Force Main Repair Completion**
Ms. Lausten provided an update on this matter, and she provided a summary of the repairs that were completed. Ms. Lausten reported that the 8” pipeline is in better condition than the 12” pipeline and she stated that a possible solution would be to do a slip line on the transition.
2. **Live Oak Pipeline Design – PDR Received**
Ms. Lausten provided an update on this matter, and she stated that the design contract has been awarded. Ms. Lausten stated that an aerial survey is being conducted and that Engineering will be meeting with Operations to discuss the materials. Ms. Lausten noted that the project is in its early stages and progress is being made.
3. **Other Projects**
Heritage Sewer Lift Station – Mr. Ulloa provided an update on this matter, and he reported that the station lost power last Monday and is currently running on backup generator power. Mr. Ulloa reported that the connections from Southern California Edison’s (SCE) transformer to the station’s junction box were observed to be damaged during ARC Flash inspections. Mr. Ulloa explained that it is believed that the condition is due to tension on the cables and that the SCE transformer needs replacement along with the junction box. Discussion occurred regarding possible reasons for the connection issues. Ms. Lausten reported that she spoke with a representative from SCE and a transformer has been secured and is scheduled to be completed in the next week.

ITEM 10: WATER SYSTEM UPDATES

Mr. Kessler reviewed the projects and repairs for the prior month, and he reported that Water Operations staff had completed the following tasks:

1. Conducted Lead and Copper sampling as required every three years.
2. Worked with contractor to replace 2” air vac on Rose Canyon.
3. Worked with Engineering to complete the Lead Line Survey.

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4. Repaired 2" Service on Live Oak Canyon.
5. Worked with resident to replace and raise 2" meter on Hamilton Trail.
6. Started/stopped Dimension Water Treatment Plant.

Mr. Kessler presented the Water System Summary for Committee review, and he reported that the District is utilizing Irvine Lake water via Baker Treatment facility and monitoring the distribution system water quality with the introduction of the source water. Mr. Kessler stated that Irvine Ranch Water District (IRWD) is operating the facility with a 17/83 percent blend of Irvine Lake Water and untreated MET water, and that no water quality or operating issues have been observed at this time.

MOTION: None – Informational item only.

ITEM 11: WASTEWATER SYSTEM UPDATES

Mr. Ulloa reviewed the projects and repairs for the prior month, and he reported that Wastewater Operations staff had completed the following tasks:

1. Replaced a 40HP pump for the equalization basin at the Wastewater Treatment Plant (WWTP)
2. Cleaned Barneburg Sewer Lift Station wet well
3. Cleaned sanitary sewer system "hot spots" that lead to Via Allegre Sewer Lift Station
4. Replaced the air solenoids for a backwash filter at the WWTP

Mr. Ulloa presented the Recycled Water System Summary for Committee review, and he reported Dove Lake freeboard was currently 2 feet with the lake pump online. Mr. Ulloa reported that Santa Margarita Water District received 7.7 acre feet on the intertie. Mr. Paludi reported that staff is preparing for inspection of the outlet gate to replace and rehab the outlet gate system. Mr. Paludi stated that the District will contract with divers to re-inspect and assess the gate, and provide us with a quote for the project.

MOTION: None – Informational item only.

ITEM 12: MAINTENANCE DEPARTMENT UPDATES

Mr. Stroud reviewed the projects and repairs for the prior month, and he reported that Maintenance staff completed the following tasks:

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

Water Operations

1. Troubleshoot and replaced damaged ROTRON blower at Dimension Water Treatment Plant (DWTP)
2. Worked with Hydrotech Electric to troubleshoot failed #3 booster pump at DWTP

Wastewater Operations

1. Assisted Wastewater Operations, Hydrotech Electric, and WM Lyles at Plano Lift Station with PLC failure.
2. Participated in a field meeting on Robinson Ranch Wastewater Treatment Plant (WWTP) Blower Room project.
3. Participated in a field meeting on Dove Recycle Booster Station.
4. Replaced damaged EQ basin pump at WWTP
5. Golf Club bypass startup job walk with Pacific Hydrotech

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6. Prepped Barneburg Sewer Lift Station for wet well rehab
7. Assisted Hydrotech Electric at Via Allegre Sewer Lift Station with newer dialer upgrade
8. Stage one wet well pump failed at Golf Club Sewer Lift Station. Swapped in new Cornell pump.
9. ARC Flash inspection found failure of electrical distribution bar leading to Heritage Sewer Lift Station. Prepped station for power outage until further notice. Met with Southern California Edison (SCE) representatives to discuss the electrical service repairs needed.
10. VFD lunch and learn meeting at WWTP

District Fleet Upgrades & Other Projects

1. Completed required Sexual Harassment Prevention Training through ACWA JPIA
2. LOF truck #29

MOTION: None – Informational item only.

ITEM 13: OTHER MATTERS/REPORTS

Mr. Perea requested that any Directors who have completed their Ethics Training through ACWA JPIA, please provide their certificate to the District Secretary.

Mr. Perea stated that ACWA JPIA sponsored Sexual Harassment Prevention Training for Managers, Supervisors, and Elected Officials will be held virtually on August 27, 2024 at 10:00 a.m. at the District’s administration building, and he extended an invitation to the Directors.

MOTION: None

ADJOURNMENT

Director Safranski adjourned the August 7, 2024 Engineering/Operational Committee Meeting at 8:21 a.m.

DRAFT

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

ENGINEERING MATTERS

ITEM 2: DOVE RECYCLED PUMP STATION IMPROVEMENTS DESIGN AWARD

Dove-Robinson Ranch Recycled Pump Station serves irrigation water to the Dove Canyon, Robinson Ranch and Trabuco Highlands Communities. The Station underwent an upgrade in 2019 to replace the motor control center, SCE transformer/service meter, and the exterior suction and discharge piping. There are additional improvements that have been scheduled for FY 24/25 and FY 25/26 to include the following:

- Three new centrifugal pumps and motors
- Replacement of all interior piping and valves
- Magnetic flow meter
- Filter system
- Chemical feed system

Staff sent out Request for Proposals for the Design portion of the project to seven (7) firms and five (5) firms attended the pre-proposal meeting. The following are the firms that were invited to propose:

Consultants
AKM Consulting Engineers
JIG Consultants
DRP Engineering
MKN
Lee & Ro
Tetra Tech
Carollo

On August 26, 2024, Staff received one (1) proposal from JIG Consultants in the amount of \$266,160. Staff are currently evaluating the proposal. More information may be presented at the time of the meeting.

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET)

FY24-25: \$133,000

FY25-26: \$1,126,000

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption

RECOMMENDED ACTION:

Committee to receive information and take action(s) as deemed appropriate

EXHIBIT(S):

None

CONTACTS (staff responsible): PALUDI/LAUSTEN

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

ENGINEERING MATTERS

ITEM 3: HERITAGE SEWER LIFT STATION DESIGN COMPLETION

Trabuco Canyon Water District (District) owns and operates the Heritage Sewer Lift Station (SLS) located on Heritage Drive between Robinson Ranch Road and Silvertree Lane in the Trabuco Highlands Community. The Heritage SLS is a critical pump station that conveys pumped wastewater flows from a portion of the lower Dove Canyon community and Rancho Cielo community (from Via Allegre SLS), Walden Homes, Trabuco Marketplace, Dahlia Court community, and lower Robinson Ranch (from Plano Trabuco SLS) via a sewer force main. The facility also receives gravity sewer flows from the upper Robinson Ranch community and Trabuco Highlands community and serves as the final pump station of the sanitary sewer system before the Robinson Ranch Wastewater Treatment Plant (WWTP).

In FY 22/23, a sewer bypass valve assembly was installed for emergency and maintenance work. In FY 23/24 construction was awarded for the installation of an in-stock pump, including new discharge header improvements and isolation valves. The remaining full site upgrades are budgeted for FY 25/26 – FY 26/27, which include dry pit and yard piping improvements, installation of a bypass wet well, wet well lid replacement and site/security improvements. The design for the full upgrade was started in 2021, but due to the prioritization of the Golf Club SLS, the project was put on hold and the plans were not completed.

Staff have solicited proposals from the original design engineers for the mechanical, electrical and site improvements. The scope of the project has been revised to address additional asset condition information from the conditional assessment performed by Hazen Sawyer. The project will be put out to bid in one package in December 2024.

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET)

FY24-25: \$133,000

FY25-26 & FY26-27: \$1,367,000

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption was filed with the County of Orange on October 21, 2021

RECOMMENDED ACTION:

1. *Recommend the Board of Directors authorize the General Manager to execute Amendment No. 3 to JIG Consultants for the Heritage Sewer Lift Station Mechanical Improvements in the not-to-exceed amount of \$66,050 (Action Calendar).*
2. *Recommend the Board of Directors authorize the General Manager to execute Amendment No. 2 to DMc Engineering for the Heritage Sewer Lift Station Site Improvements in the not-to exceed amount of \$23,580 (Action Calendar).*

EXHIBIT(S):

1. JIG Consultants Amendment 3 Proposal
2. DMc Amendment 2 Proposal

CONTACTS (staff responsible): PALUDI/LAUSTEN



August 6, 2024

Lorrie Lausten, PE
District Engineer
Trabuco Canyon Water District
32003 Dove Canyon Drive
Rancho Santa Margarita, CA 92679

Subject: Proposal for Amendment No. 3
Update of the Heritage Sewer Lift Station Improvements

Dear Lorrie:

JIG Consultants (JIG) is submitting this letter in response to a request from Trabuco Canyon Water District (TCWD) to resume with design for the Heritage Sewer Lift Station Improvements project. Engineering design of the Heritage Sewer Lift Station Improvements project was contracted under a Professional Services Agreement, dated June 18, 2021. JIG completed engineering design and submitted bid documents to TCWD in February 9, 2022. TCWD opted to delay the Heritage Sewer Lift Station Improvements project to address other immediate needs including the replacement of one failed pump inside the dry well.

Amendment No. 1 was authorized in May 8, 2023. Amendment No. 1 was for engineering design of the Heritage Sewer Lift Station Dry Well Improvements. JIG completed this secondary project and submitted bid documents to TCWD in June 19, 2023. Ferreira Construction is in contract to build the Heritage Sewer Lift Station Dry Well Improvements. Construction is expected to begin in late 2024.

Amendment No. 2 was authorized in December 21, 2023. Amendment No. 2 was for construction administration services for the Heritage Sewer Lift Station Dry Well Improvements.

This proposal is for Amendment No. 3 and will update the completed Heritage Sewer Lift Station Improvements project. TCWD requested the following additional design scope to the Professional Services Agreement.

- ▶ Remove and replace the remaining two pumps with suction and discharge piping in the dry pit.
- ▶ Connect the discharge piping to the new discharge manifold.
- ▶ Demolish the existing discharge piping and old discharge manifold. Reconstruct a section of the manifold to incorporate the flow meter vault and air release valve outside of the building.
- ▶ Demolish and replace the existing electrical panels on the top floor of the building.
- ▶ Electrical improvements will include variable frequency drives for the three pumps in a new MCC with design modifications to the existing TESCO PLC panel. The construction scope to remove and replace the electrical equipment will be coordinated with TCWD staff.

The following design elements are excluded from this proposal:

- ▶ Site improvements (designed by DMc Engineering)
- ▶ Geotechnical investigations (to be provided by TCWD)
- ▶ Structural design
- ▶ Permitting with outside agencies
- ▶ Utility potholing
- ▶ Construction administration, management, or inspection services
- ▶ Preparing record drawings of completed work

JIG will perform the following as the Scope of Work.

SCOPE OF WORK

Task 1 – Project Management and Meetings

JIG will continue to provide project management throughout the engineering design of the Heritage Sewer Lift Station Improvements.

Task 2 – Electrical Preliminary Design

1. Review record documents and visit the project site to confirm and document existing conditions.
2. Perform an assessment of existing equipment and materials and prepare a draft memo outlining items recommended for replacement and any other improvements discovered.
3. Meet with TCWD staff to discuss the assessment findings. TCWD to confirm and approve the final scope of improvements.

Task 3 – Update Construction Plans, Specifications and Cost Estimate (PSE)

1. Update construction plans to include the additional infrastructure described with sufficient details for construction. The construction drawings will include the following sheets with the additional/revised sheets in bold fonts.

Sheet No.	Dwg. No.	Sheet Description
1	G-01	Title Sheet
2	G-02	Location and Vicinity Map, General Notes, Sheet Index
3	D-01	Site Demolition Plan
4	D-02	Top Floor Electrical Demolition Plan and Details
5	D-03	Bottom Floor Mechanical Dry Pit Demolition Plan and Sections
6	C-01	Heritage Sewer Lift Station Bypass Plan
7	C-02	Site Plan and Profile of 8-inch Influent Sewer
8	C-03	Bypass Wet Well – Plan and Sections
9	M-01	Mechanical Plan and Sections
10	M-02	Flow Meter Mechanical Plan and Sections
11	M-03	Miscellaneous Mechanical Details
12	E-01	Electrical Sheets - To Be Determined

2. Update the technical specifications and front-end documents to supplement the construction drawings for bidding purposes. Update the construction cost estimate to include the additional work.
3. Submit the PSE for Draft Submittal to TCWD. Draft submittal will include one full size copy of the plans, three 11 x 17 copies of the plans, and one bound copy of the specifications.
4. Receive comments and revise the PSE for final. Final submittal will include one full size copy of the plans, three 11 x 17 copies of the plans, and one bound copy of the specifications. Final submittal will also include a USB drive with pdf and AutoCAD files of the construction plans and Microsoft Word documents for the technical specifications.

Task 4 – Assistance during Project Bid

1. Perform administrative support for bid phase services including answering Contractor questions, attending pre-bid meeting, and preparing one project addenda.
2. Prepare conformed plans and specifications and submit to TCWD.

FEE SUMMARY

JIG will complete the above Scope of Work for a total fee of **\$66,050**. A breakdown of the fee is presented in the attached Fee Proposal.


The following is a summary of the value of the existing contract with amendments.

<u>Contract</u>	<u>Description</u>	<u>Amount</u>
PSA	Original Heritage Sewer Lift Station Improvements	\$ 43,440.00
Amendment No. 1	Dry Pit Improvements and Flow Meter	\$ 53,390.00
Amendment No. 2	Dry Pit Improvements Construction Admin	\$ 15,130.00
<u>Amendment No. 3</u>	<u>Update the Heritage Sewer Lift Station Improvements</u>	<u>\$ 66,050.00</u>
	Total	\$178,010.00

We appreciate this opportunity to work with TCWD. If you have questions regarding this proposal, please do not hesitate to contact our office.

Sincerely,

JIG CONSULTANTS


Joseph Gutierrez, PE, PMP
President / Project Manager

Enc.

TRABUCO CANYON WATER DISTRICT
Heritage Sewer Lift Station Improvements
Amendment No. 3 - Update of the Heritage Sewer Lift Station Improvements
Fee Proposal

Task	Description	Project Mgr.		Project Engineer		Civil Designer		Admin		Subtotal	Sub Electric	Direct Costs	Total Fee
		Hrly Rate	\$200	Hrly Rate	\$195	Hrly Rate	\$150	Hrly Rate	\$90				
		Hours	Fee	Hours	Fee	Hours	Fee	Hours	Fee				
1	Project Management and Meetings	12	\$2,400	0	\$0	0	\$0	0	\$0	\$2,400	\$0	\$0	\$2,400
2	Electrical Preliminary Design	4	\$800	0	\$0	0	\$0	0	\$0	\$800	\$5,000	\$0	\$5,800
3	Update Construction Plans, Specifications, and Estimates	12	\$2,400	70	\$13,650	88	\$13,200	8	\$720	\$29,970	\$24,040	\$270	\$54,280
4	Assistance during Bid Phase	2	\$400	8	\$1,560	8	\$1,200	4	\$360	\$3,520	\$0	\$50	\$3,570
TOTAL (TASKS 1 to 4)		30	\$6,000	78	\$15,210	96	\$14,400	12	\$1,080	\$36,690	\$29,040	\$320	\$66,050



DMc ENGINEERING

CIVIL • SURVEYING • PLANNING • CONSTRUCTION

August 28, 2024

JN 728-42
TCWD Amendment 2

Ms. Lorrie Lausten, District Engineer
Trabuco Canyon Water District
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679

**SUBJECT: HERITAGE DRIVE SEWER LIFT STATION – ENGINEERING,
SURVEYING & PROJECT COORDINATION SERVICES**

Dear Ms. Lausten:

In accordance with your request regarding finalizing the work effort, project design and project coordination, DMc Engineering is pleased to provide Trabuco Canyon Water District with this Amendment 2 for engineering, surveying and project coordination services associated with this project.

We appreciate the opportunity to work with you and Trabuco Canyon Water District on this project. Upon acceptance, it is our understanding that we will receive authorization in the form of a new agreement professional services agreement. Should you have any questions, please do not hesitate to call us.

Sincerely,

DMc Engineering

Derek J. McGregor, PE, PLS, QSP, QSD
Principal

Trabuco Canyon Water District

Lorrie Lausten, District Engineer

Date

DJM: dm



**JN 728-42
AMENDMENT 2
SCOPE OF WORK
HERITAGE DRIVE SEWER LIFT STATION
ENGINEERING, SURVEYING & PROJECT COORDINATION SERVICES**

Client (**Trabuco Canyon Water District**) and Consultant (**DMc Engineering**) for mutual consideration herein set forth, agree as follows:

Consultant agrees to perform the following services:

ENGINEERING, SURVEYING AND PROJECT COORDINATION SERVICES

DMc Engineering will revise the construction plans in accordance with the update of the Heritage Sewer Lift Station proposal from JIG Consultants dated July 16, 2024. This proposal for the project includes the following:

SURVEYING SERVICES

1. Provide supplemental topographic surveying services based on recent construction activity at the site and revisions to the site layout.
2. Incorporate supplemental topographic survey into existing base map previously prepared by DMc Engineering.

ENGINEERING SERVICES

1. Provide supplemental engineering design services based on the revised site layout and site upgrades including site grading, utility coordination and appurtenances.
2. Prepare an Engineering's Cost Estimate based on the final bid package including civil plans prepared by DMc Engineering and mechanical and electrical plans prepared by JIG Consultants.
3. Prepare a project schedule based on final design plans, equipment lead time, bidding and construction schedule.

PROJECT COORDINATION SERVICES

1. Coordination final plans and specifications with JIG Consultants on the mechanical and electrical plan including front end specifications provided by TCWD.
2. Bid Package – prepare a final bid package in PDF format per TCWD bidding requirements including the civil, mechanical and electrical plans and specifications. Assist TCWD staff with presentation at Engineering/Operations Committee meeting and approval for advertisement for bids by TCWD's Board of Directors.
3. Bidding Process – Attendance at the pre-bid meeting and provide written response to RFI's during the bid process. Provide bid proposal analysis after the bid opening and provide a bid project summary for presentation at TCWD's Board of Directors for approval.



**JN 728-42
AMENDMENT 2
FEE SCHEDULE
HERITAGE DRIVE SEWER LIFT STATION
ENGINEERING, SURVEYING & PROJECT COORDINATION SERVICES**

Client agrees to compensate consultant for the services as noted below:

Consultant shall perform the services outlined above in accordance with the Fee Schedule below that includes the estimated cost for reproductions, computer plotting, copying and messenger services.

Consultant shall invoice client on a monthly basis. Upon client authorization, additional services not identified herein will be billed on a fixed fee or time and material basis in accordance with the enclosed Hourly Rate Schedule.

Trabuco Canyon Water District								
Heritage Sewer Lift Station - Amendment 2								
Additional Engineering Services								
PROJECT FEE SCHEDULE	PM \$200	PE \$170	SE \$140	PS \$160	SURVEY \$230	ADMIN \$100	MATERIALS	FEE
Surveying Services								
1. Supplemental Field Topographic Survey		2	4	4	8			\$ 3,380.00
2. Incorporate supplemental topographic survey into existing base map		2	12					\$ 2,020.00
Engineering Services								
1. Civil Design - Upgrade Civil Plans per updated plans prepared by JIG Co	2	8	32					\$ 6,240.00
2. Prepare a Engineering Cost Estimate based on revised Civil Plans and updated plans prepared by JIG Consultants	2	8	4			2		\$ 2,520.00
3. Prepare a project schedule based on final design plans, equipment lead time, bidding and construction schedule.	1	8				1		\$ 1,660.00
Project Coordination Services								
1. Coordination with JIG Consultants on the final plans and specifications	2	6	2			4		\$ 2,100.00
2. Bid Package - Coordination & prepare final plans and specifications in PDF format for bidding purposes.		4	2			8		\$ 1,760.00
3. Bidding Process – Attendance at the pre-bid meeting and provide written response to RFI's during the bid process	1	4	2			2		\$ 1,360.00
Project Meetings	1	2						\$ 540.00
Reimbursables							\$ 2,000	\$ 2,000.00
Total Project Fee								
	9	44	58	4	8	17	\$ 2,000	\$23,580.00



**JN 728-42
AMENDMENT 2
CONDITIONS AND/OR EXCLUSIONS
HERITAGE DRIVE SEWER LIFT STATION
ENGINEERING, SURVEYING & PROJECT COORDINATION SERVICES**

This proposal is based on receipt of the following items and conditions:

1. Receipt of Executed TCWD Amendment 2

Services that are specifically *excluded from this proposal, but could be provided as additional services, are as follows:

1. Services not identified in the Scope of Work
2. Attendance at TCWD Board meetings
3. Coordination with SCE
4. Shop Drawing Review
5. Construction Management & Inspection Services
6. Construction Staking Services

**** Exclusions are not limited to the above.***



DMc Engineering
Civil • Surveying • Planning • Construction

Hourly Rate Schedule
(Effective July 1, 2024 through June 30, 2025)

OFFICE PERSONNEL	Cost/Hour
Principal (<i>PR</i>).....	\$ 240.00
Project Manager (<i>PM</i>)	\$ 200.00
Construction Manager (<i>CM</i>)	\$ 180.00
Project Engineer (<i>PE</i>)	\$ 170.00
Project Surveyor (<i>PS</i>)	\$ 160.00
Senior Engineer (<i>SE</i>)	\$ 140.00
Associate Engineer (<i>AE</i>)	\$ 120.00
Administration (<i>ADMIN</i>)	\$ 100.00

FIELD SURVEY	Cost/Hour
Field Survey (<i>FS</i>)	\$ 230.00
GPS Survey (<i>GPS</i>)	\$ 250.00

NOTE: Reproductions, computer plotting, copying, messenger services and other direct expenses will be billed per our reimbursement fee schedule. No additional charges for mileage, supplies or telephone expenses will be included.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

ENGINEERING MATTERS

ITEM 4: QUARTERLY CIP UPDATE

This report summarizes the status of Trabuco Canyon Water District’s (District’s) twenty-three Capital Improvement Program (CIP) Update as summarized below. Project specific information will be presented to the Committee at the time of the meeting.

Status of the CIP Projects	
No.	Status
0	Completed
0	Out to Bid
8	Design/Planning
3	Bids Received
5	Ongoing
7	In Construction

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):

\$6,203,844

ENVIRONMENTAL COMPLIANCE:

Not Applicable

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBIT(S):

CIP Summary to be distributed at the time of the meeting

CONTACTS (staff responsible): PALUDI/LAUSTEN

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

ENGINEERING MATTERS

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Robinson Ranch Wastewater Treatment Plant Blower Replacement Project-Sound Study
2. Barneburg Manhole and Wet Well Recoating Summary
3. Golf Club Sewer Lift Station Construction Report
4. Santa Margarita Parkway Force Main Rehabilitation
5. WWTP Handrailing Improvements

RECOMMENDED ACTION:

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

EXHIBIT(S):

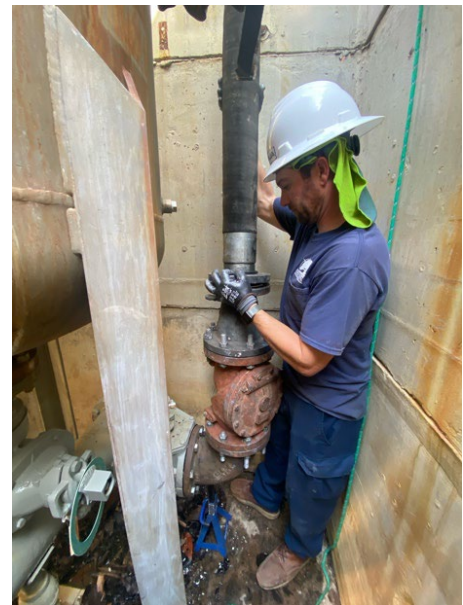
1. Barneburg Recoating Summary and Photos
2. Golf Club Sewer Lift Station Construction Report
3. SMP Force Main Replacement Exhibit
4. WWTP Handrail Improvements - Drawing & Proposal

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

Barneburg Wet Well/Manhole Re-Coating Project

The Barneburg sewer lift station, located in the Dove Canyon Community, required re-coating to maintain the integrity of the wet well. This re-coating project aimed to extend the life of the structure and prevent damage caused by corrosive gases and root intrusion. The same protective coating was also applied to the manhole.

During the project, the on-site manhole served as a temporary bypass wet well while the primary wet well underwent rehabilitation. Once the primary wet well was completed, the manhole used as the bypass was then rehabilitated. Preparation for the job, including setting up the bypass and removing obsolete pipes, took one week. The actual bypass operation and re-coating process took an additional week, resulting in a total project duration of two weeks. The total cost of the project was \$58,000.



BY-pass pumps- one electric tied to our panel to reduce noise complaints to customers and one diesel as back up in case electric failed.



Confined space was performed to remove old piping and prep manhole to serve as by-pass for the primary wet well.



Before and after of manhole used as by-pass wet well.



Before and After of Primary wet well





**Golf Club Sewer Lift Station
Improvement Project
TCWD Project No. 2122-010**

Construction Report
June – August 2024



I. GENERAL PROJECT INFORMATION

Contract Golf Club Sewer Lift Station Improvement Project

Contractor Pacific Hydrotech Corporation (PHC)

Contract Time

Original Calendar Days: 200 Calendar Days
from Notice to Proceed

Notice to Proceed: January 29, 2024

Original Contract Completion Date: August 16, 2024

*Revised Completion Date due to Long
Lead Material Deliveries* October 4, 2024

Weather-Related Delay Days: 3 Days

Contract Price

Original Contract Amount: \$1,889,300.00

Approved Change Order Amount: \$0.00

Revised Contract Amount: \$1,889,300.00

II. CONSTRUCTION MANAGER SUMMARY

This report provides a summary of activities from May 14th through August 28th, 2024 for the Golf Club Sewer Lift Station Project.

Pacific Hydrotech Corporation (PHC) temporarily, demobilized from the project site on May 14, 2024, due to long lead items for delivery to support the Temporary Bypass System. Ultimately, PHC returned the project site at around July 22, 2024.

During the time PHC was temporarily demobilized, work was not being performed, and periodic visits to the project site were conducted to observe any issues. It was observed that existing irrigation water, results of surface drainage of water from Golf Club's Driving Range area and landscape medians and parkways were impacting the project site. The Golf Club management was notified, and it was observed that any irrigation lines encroaching into the project site were cut-and-capped. Generally, during this time of temporary demobilization, the project site was left secure, and no signs of vandalism appeared. In the interim, the Golf Club Lift Station was operating well during the temporary demobilization.

Before PHC remobilized onto the project site, material deliveries were conducted to support the improvements of the Dry Pit Well and Temporary Bypass System. PHC remobilized onto the project site on July 22, 2024. At the same time, the vendor, HERC Rentals, provided and installed the Temporary Bypass System. Upon completion of the installation of the Temporary Bypass System, TCWD's Engineering and Operations staff were available to observe the functionality of the System, and to provide a "Go or No-Go," on its operation.

Around August 19, 2024, the Temporary Bypass System was deemed a "Go," by TCWD Operations for the Temporary Bypass System. As such, sewage flow tributary to the Golf Club Lift Station was being supported by the Temporary Bypass System. PHC proceeded to clean, drain, and prepare the existing Golf Club Lift Station while being isolated.

PHC continued to start demolition of the Golf Club Lift Station – removing and salvaging mechanical piping and appurtenances. Preparation of scaffolding inside of the existing Wet Well to allow for sandblasting and rehabilitating started, and PHC's coating subcontractor, Techno Coatings, will be performing these efforts. PHC continued to install new mechanical piping and improvements in the existing Dry Well.

III. CONSTRUCTION ACTIVITIES FOR THIS REPORTING PERIOD

The following work activities were performed during this reporting period:

- PHC temporarily demobilized from the project site from May 14th through July 20th, 2024.
- The project site was left secured and no signs of vandalism; and material deliveries for components of the Lift Station Improvements were conducted.
- PHC re-mobilized onto the project site on July 22, 2024, and proceeded to install the Temporary Bypass System with HERC Rentals.
- PHC along with TCWD Operations' signal to "Go," the Temporary Bypass System was functional on August 19, 2024.
- While the Golf Club Lift Station is isolated and sewage flow is handled by the Temporary Bypass System, PHC proceeded to start clean-up and demolition of the Golf Club Lift Station.
- PHC's coating subcontractor, Techno Coatings, started setting up scaffolding to support sandblasting and preparing the surface of the Existing Wet Well.
- PHC continued with installation of the mechanical piping in the Existing Dry Well.

IV. ANTICIPATED CONSTRUCTION ACTIVITIES – NEXT REPORTING PERIOD

The work activities anticipated in the next reporting period:

- PHC to continue completion for the installation of mechanical piping in the Existing Dry Well and into the Existing Wet Well.
- PHC to "dry-fit" the submersible pumps into the Existing Wet Well.
- Techno Coatings to complete preparation of the surface prior to installation of the epoxy lining in the Existing Wet Well.
- PHC to install submersible pumps into the Existing Wet Well.
- PHC to start excavation of the new Flow Meter Vault.

V. CONTRACTOR SUBMITTALS

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

	Lift Station
Prior Submittals	62
Submittals Received This Period	9
TOTAL SUBMITTALS	71

VI. CONTRACTOR REQUEST FOR INFORMATION (RFIs)

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

	Lift Station
Prior RFIs	8
RFIs Received This Period	1
TOTAL RFIs	9

VII. CHANGE ORDERS

No change order requests were submitted by PHC and change orders process by TCWD.

VIII. SCHEDULE

The Notice to Proceed (NTP) is based on January 29, 2024, as an immediate need to start and install the Surge Tank directed by TCWD. The Contract Duration is 200 Calendar Days, and this results in a Contract Completion on August 16, 2024.

It was discussed at the Pre-Construction Meeting that because of the immediate need to start the Surge Tank, and the sum of the materials being procured and delivered for the Temporary Bypass System and stainless steel, Air Release Valves, it is anticipated that the Contract Completion will be extended.

As such, an updated Progress Schedule prepared by PHC reflects a Contract Completion of October 4, 2024. This will result in an anticipated non-compensable, time extension under a separate Change Order to be issued to Pacific Hydrotech Corporation.

IX. PHOTOS

Construction photos documenting PHC's activities and progress during this reporting period are provided in Appendix A.

APPENDIX A

Construction Photos



Temporary Demobilization, Project Site – Golf Club surface drainage runoff from irrigation.



Temporary Demobilization, Project Site – Golf Club surface drainage runoff from irrigation into Project Site.



Temporary Demobilization, Project Site – mitigated surface drainage runoff from irrigation into Project Site.



Temporary Demobilization, Project Site – mitigated surface drainage runoff from irrigation into Project Site.



Temporary Demobilization, Project Site – site secured.



Temporary Demobilization, Project Site – site secured.



Temporary Demobilization, Project Site – material deliveries. Pumps (covered in tarp) delivered separately by TCWD Operations.



Temporary Bypass System – PHC and HERC Rentals re-mobilized onto the Project Site to start installation of Bypass System.



Temporary Bypass System – PHC and HERC continued installation of Bypass System.



Temporary Bypass System – PHC and HERC continued installation of Bypass System.



Temporary Bypass System – PHC and HERC continued installation of Bypass System.



Temporary Bypass System – PHC and HERC continued installation of Bypass System.



Temporary Bypass System – TCWD Operations given the “Go” to switch over to Temporary Bypass System, and PHC installing mechanical plug for isolation of the Golf Club Lift Station



Golf Club Lift Station Demolition – cleanup of Existing Wet Well to start demolition.



Existing Wet Well – removals being performed.



Existing Dry Well – removals being performed, pre-existing Surge Tank being removed.



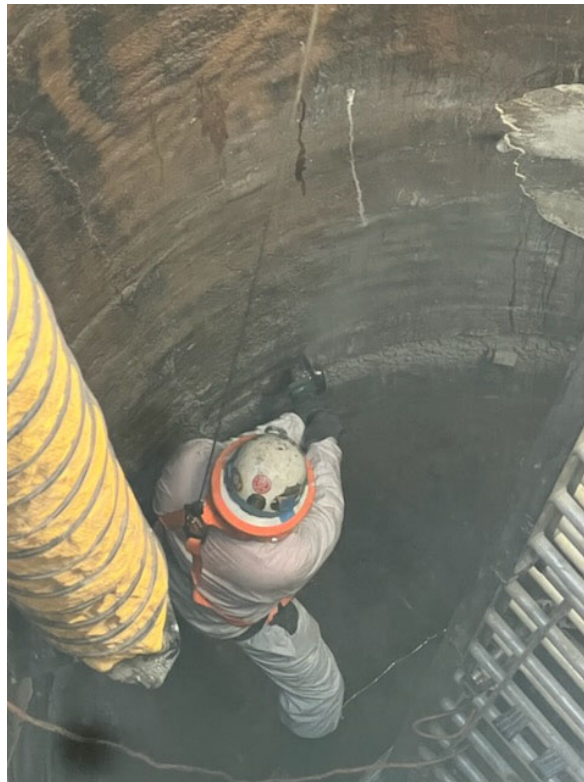
Existing Dry Well – pre-existing Surge Tank being removed.



Existing Dry Well – removals being performed.



Existing Wet Well – Techno Coatings placing scaffolding.



Existing Wet Well – Techno Coatings performing initial surface preparation efforts.

TECHNICAL MEMO

August 26, 2024

REHAB OF EXISTING 8" AND 12" DUCTILE IRON PIPE FORCE MAINS ALONG THE SANTA MARGARITA PARKWAY PROJECT

Conclusions/Recommendations:

- 1) The primary two established methods of pipe rehab were researched for the existing 8" and 12" ductile iron pipe force mains. One being CIPP and Sliplining of both pipes for a total of 4,117 linear feet for one pipe or a total of 8,233 linear feet for both pipes.
- 2) The most cost effective pipe rehab method is the Primus Liner for both the 8" and 12" ductile iron pipe force mains.
- 3) Primus Liner is more than just an HDPE lining for the host pipe. It is a multilayer CIPP system that consists of an abrasion-resistant PE outer layer, a woven Kevlar middle layer, and a media-specific inner layer.
- 4) The total estimated cost to install the Primus Liner into both the 8" and 12" ductile iron pipe force mains is between 1.2 to 1.4 million dollars.
- 5) The estimated cost of 1.2 to 1.4 million dollars includes:
 - a) The design of the 8" and 12" pipe Primus Liners
 - b) Traffic control
 - c) Installation pits (The Primus Liner can be pulled further than a standard CIPP liner.)
 - d) CCTVing both pipelines twice
 - e) Cleaning both pipelines
 - f) Construction
 - g) Commissioning
- 6) The information and cost estimates as presented above is based upon the attached SOW for the 8" and 12" ductile iron pipe force mains and the estimated costs for the Primus Liners were provided by Gene Glassburner from Performance Pipeline Technologies located in Huntington Beach, California.

SCOPE OF WORK

REHAB OF EXISTING 8" AND 12" DUCTILE IRON PIPE FORCE MAINS ALONG THE SANTA MARGARITA PARKWAY PROJECT

Background:

Existing 8" and 12" force main ductile iron pipes were constructed in 1985 and both pipes have been in continuous service. The 12" ductile iron pipe failed due to severe corrosion on June 24, 2024, located on Santa Margarita Parkway approximately 250 linear feet from El Toro Road, see attached redlined As-built Drawing Sheet 4 of 15.

Total linear footage of the 12" ductile iron pipe is 4,117 feet. Total linear footage of both the 8" and 12" ductile iron pipes is 8,233 linear feet.

Both the 8" and 12" ductile iron pipes were CCTV'ed on June 24, 2024 and their reports are attached and their CCTV videos are available for review.

Rehabilitation Options:

- 1) Method 1 – Slipline both the 8" and 12" ductile iron pipes which will require the following:
 - a) Traffic control
 - b) Dewatering and cleaning of pipes
 - c) Excavation pits for sliplining method
 - d) Disassembling of pipes at selected pipe joints for the sliplining process
 - e) Field testing of both the 8" and 12" pipes
 - f) Backfilling and asphaltting of the excavation pits/locations

- 2) Method 2 - CCIP both the 8" and 12" ductile iron pipes which will require the following:
 - a) Traffic control
 - b) Dewatering and cleaning of pipes
 - c) Excavation pits for CIPP method
 - d) Disassembling of pipes at selected pipe joints for the CIPP process
 - e) Field testing of both the 8" and 12" pipes
 - f) Backfilling and asphaltting of the excavation pits/locations

Note: Not sure the number of excavations pits required for the sliplining method or the CIPP method. I have gone through the attached As-built drawing and have noted a possibility of 17 excavation pits required to slipline approximately 4,117 linear feet of 8" ductile iron pipe and approximately 4,117 linear feet of 12" ductile iron pipe.

**REHAB OF EXISTING 8" AND 12" DUCTILE IRON PIPE FORCE MAINS
ALONG THE SANTA MARGARITA PARKWAY PROJECT**

Total Distance of 8" and 12" Linear Feet of Ductile Iron Pipe to be Either Sliplined or CIPP Rehabbed				
	Stations No.	Dwg. Sheet No.	Pipe Material	Distance (feet)
1	26+00.00	3	Ductile Iron Pipe	
2	29+17.00	3	Ductile Iron Pipe	317
3	29+17.00	3	Ductile Iron Pipe	
4	30+00.00	3	Ductile Iron Pipe	83
5	30+00.00	4	Ductile Iron Pipe	
6	34+00.00	4	12" Ductile Iron Pipe Break	250
7	40+50.00	4	Ductile Iron Pipe	1050
8	40+50.00	5	Ductile Iron Pipe	
9	52+00.00	5	Ductile Iron Pipe	1150
10	52+00.00	6	Ductile Iron Pipe	
11	64+66.73	6	Ductile Iron Pipes Transitions to PVC	1267
			Total Linear Feet for One Ductile Iron Pipe	4,117
			Total Linear Feet for Two Ductile Iron Pipe (8-inch and 12-inch)	8,233

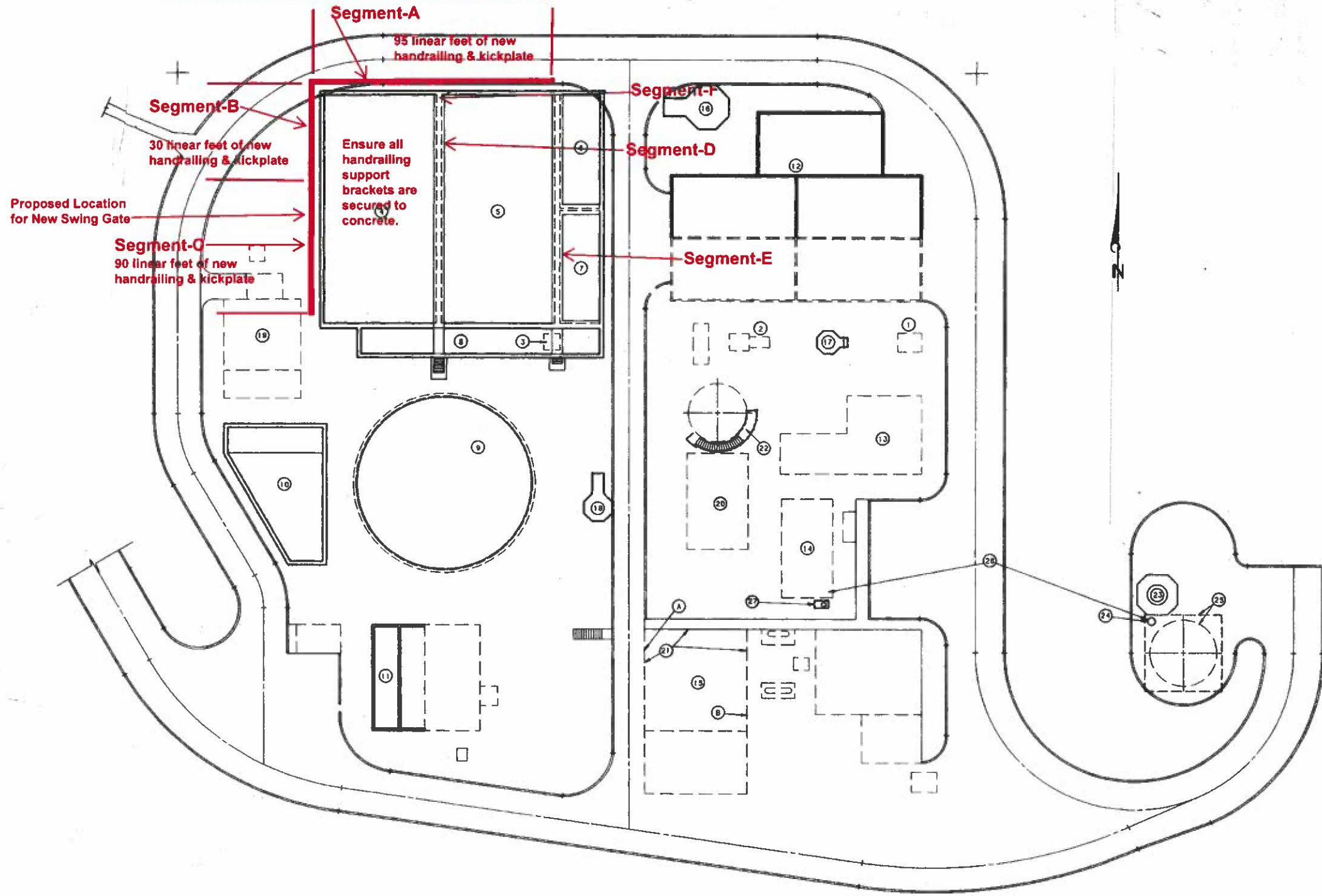


12" Ductile Iron Force Main Pipe Field Repairs Made on June 24, 2024



12" Ductile Iron Force Main Pipe Field Repairs Made on June 24, 2024

Note: Solid Red Line Represents New Handrailing and Kickplate



LEGEND

- ① COMMUNICATOR BOX MODS (NEW) (SEE SHT. 02-FACTORY)
- ② FLOW BOX MODS
- ③ (E) SPLITTER BOX
- ④ BATCH REACTOR E (BR-E) **west not east**
- ⑤ BATCH REACTOR W (BR-W) **east not west**
- ⑥ AEROBIC DIGESTOR S (AD-S)
- ⑦ AEROBIC DIGESTOR S (AD-S)
- ⑧ REACTOR DRY WELL (RDW)
- ⑨ BATCH REACTOR S (BR-S)
- ⑩ EQUALIZATION WET WELL AND PUMPING STATION
- ⑪ CHLORINE CONTACT TANK ADDS
- ⑫ SLUDGE BED ADDS
- ⑬ 1ST STAGE FILTRATION MODS AND NEW 2nd STG FILTERS
- ⑭ (E) 2ND STAGE FILTRATION MODS
- ⑮ DEMINERALIZATION MODS
- ⑯ FOUL AIR 12" DIA. ACTIVATED CARBON TREATMENT UNIT ON REIN. CONC. PAD
- ⑰ FOUL AIR 4" DIA. ACTIVATED CARBON TREATMENT UNIT ON REIN. CONC. PAD
- ⑱ FOUL AIR 8" DIA. ACTIVATED CARBON TREATMENT UNIT ON REIN. CONC. PAD
- ⑲ (E) BLOWER, RAD/WAS AND 1ST STG FILTER FEED PUMPING STATION STRUCTURE MODS.
- ⑳ (E) BACKWASH, PROCESS, 2ND STG FILTER FEED PUMPING STATION STRUCTURE MODS.
- ㉑ ENCLOSE (E) RO AREA WITH STEEL SIDING FROM ORIGINAL BUILDING MANUFACTURER. PROVIDE FIVE DOOR IN NORTH FACE AND 10'x10' EQUIPMENT/ACCESS DOORS AT A AND B
- ㉒ ADD-ON PLATFORM AND STAIRWAY FOR (E) BACKWASH STORAGE TANK SEE SHT. FOR DETAILS
- ㉓ 3000 GALLON 103" OD x 155" H. CONICAL BOTTOM, CONCENTRATED SULFURIC ACID BULK STORAGE TANK. HALGENE 4330B-3000, OAE. INSTALL ON OCTAGONAL CONCRETE PAD. 150" DIA. CROSS THE PLATE. 200 90° FT. 10 1/2" DIA. STEEL. STRUCTURAL DETAIL FOR THIS TANK AND 4" DIA. TANK SHALL BE COMPLETE. THE TANK SHALL BE CONCRETE WITH 3/4" STL. REINFORCING BARS. SHALL INCLUDE A 3" VALVED PURSUIT SUPPORT COMMERCIAL BULK TRUCK LOADING DUCT. DISCONNECT CONNECTION ON THE EAST SIDE. INSTALL A 3" DIA. TANK TOP VENT AND PIPE AND 3" DIA. TANK TOP VENT TO THE RO BUILDING DAY TANK FEED BELOW. INSTALL FLOW SENSOR AND AN AUDIBLE AND VISUAL ALARM ON OVERFLOW LINE.
- ㉔ 65 GALLON CONICAL BOTTOM, SULFURIC ACID DILUTION (DAY) TANK. HALGENE 43300005 OAE
- ㉕ (E) BRINE STORAGE TANK ON CONCRETE PAD
- ㉖ INSTALL 2" DIA DILUTED ACID PIPING TO RO SYSTEM PH ADJUSTMENT PUMP. SEE SHT. C2
- ㉗ RO BOOSTER PUMP (5 HP) AND SULFURIC ACID CHEMICAL FEED PUMP

ABOVE GRADE SITE PLAN
SCALE: 1" = 20'-0"

PRIVATE ENGINEERING NOTE
CONTRACTOR AGREES THAT IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR SHALL BE RESPONSIBLE TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY TO ALL CONTRACTORS AND NOT BE LIMITED HEREON. HEREON, OWNER AND ARCHITECT FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HAPLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, BE INCURRED BY THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

DESIGNED: W.H.S.	REVISIONS
DRAWN: R.F.C./T.R.V.	
CHECKED: W.H.S.	

APPROVED:	DATE:
PROJECT ENGINEER:	DATE:
RECOMMENDED:	DATE:

NBS/LOWRY
ENGINEERS & PLANNERS
17748 SKYPARK BLVD., SUITE 100
IRVINE, CALIFORNIA 92714
(714) 261-7046

SANTA ANA MOUNTAINS COUNTY WATER DISTRICT
TRABUCO WASTEWATER TREATMENT
FACILITY EXPANSION

ABOVE GRADE SITE PLAN

DATE:	
SCALE:	
NO. SHEETS:	



SIGNATORY TO THE LABORERS, OPERATING ENGINEERS, AND TEAMSTERS UNIONS
 License #985180
 DIR #1000001634

BID DATE: 6/13/2024

BID TIME: 10:00am

PROJECT NAME: Robinson Ranch Wastewater Treatment Plant

LOCATION: Trabuco Canyon

BOND RATE: 1%

ADDENDUMS NOTED: 2

ITEM #	DESCRIPTION	QUANTITY	UM	UNIT PRICE	TOTAL
	Segment A:	1	ls		\$ 77,755.00
	Furnish and Install Approx 95lf of New Handrailing and				
	no New Kickplate (per Add 2) on North Side of the				
	Existing EQ Basin				
	Segment B:	1	ls		\$ 30,750.00
	Furnish and Install Approx 30lf of New Handrailing and				
	no New Kickplate (per Add 2) on East Side of the				
	Existing EQ Basin				
	Segment C:				\$ 77,077.00
	Furnish and Install Approx 95lf of New Handrailing and	1	ls		
	no New Kickplate (per Add 2) and (1) new Access				
	Swin Gate on the East Side of the Existing EQ Basin				
	Segment D:	1	ls		\$ 24,230.00
	Reattach Existing Handrail Support Brackets at				
	(20) Separate Locations to Both Sides of the Existing				
	Concrete Access Walkway at the EQ Basin				
	Attache New Kickplate (per Add 2)				
	Do Not Patch Holes				
	Segment E:	1	ls		\$ 22,800.00
	Reattach Existing Handrail Support Brackets at				
	(15) Separate Locations to Both Sides of the Existing				
	Concrete Access Walkway at the EQ Basin				
	Attache New Kickplate (per Add 2)				
	Do Not Patch Holes				
	Segment F:	1	ls		\$ 22,800.00
	Reattach Existing Handrail Support Brackets at				
	(15) Separate Locations to Both Sides of the Existing				
	Concrete Access Walkway at the EQ Basin				
	Concrete Access Walkway at the EQ Basin				
	Attache New Kickplate (per Add 2)				

	Do Not Patch Holes				
	Cut all Existing Steel Anchor Studs Flush to the Existing Concrete Basin Wall.	1	ls		\$ 15,310.00
	Do Not Patch Holes per Add. 2)				
	Demo Approx 215lf of Existing Steel Vertical Posts and Chain Do Not Patch Holes				
TOTAL BID:				\$	270,722.00

- NOTE: This bid offer and price is withdrawn if subcontract is not received within 90 days.
- NOTE: These terms control scope and shall be included in any later sub-contract or change order
- NOTE: OCIP: If the Project is OCIP, Cost Credit is Accounted For in the Bid. Credits Will Not Be Given Later.
- NOTE: Contractor to provide a minimum of 6 weeks notification prior to mobilization. If fabrication is required, allow 6-8 weeks from time measurements are taken.
- NOTE: Should underground manmade buried objects be encountered affecting our ability to perform the work as originally bid, work will be tracked using tentative agreements and submitted for payment under T&M.
- NOTE: Total Bid price includes 2 move-ins, any additional move-ins required add \$4,175.00 each.
- NOTE: Ferreira Construction must be given a minimum of 72 hours notice for cancelling or scheduling Ferreriras work on project look-a-head schedule or an additional move-in charge will be added
- NOTE: Total bid price cannot be separated without prior approval unless noted (Optional) above
- NOTE: Ferreira is not responsible for any damage to Fiber Optic lines if not clearly marked and properly located.
- NOTE: Price contingent upon access of Equipment.
- NOTE: A minimum of 15' is required for Equipment.
- NOTE: General Contractor to provide secure laydown yard for Ferreira Construction.
- NOTE: All Temporary fencing is excluded unless separate pricing is provided.
- NOTE: For Subcontracts \$250,000.00 or less, Ferreira excludes withholding any retention.

FERREIRAS GENERAL STANDARD EXCLUSIONS:

TRAFFIC CONTROL, FLAGGING, CONCRETE ANCHOR BLOCKS, CONCRETE PADS/SLABS, CONCRETE MOW STRIP, ASPHALT OR CONCRETE PATCH WORK, MINOR CONCRETE VEGETATION CONTROL, UNDERGROUND UTILITIES, EXCAVATION, FILL, EXTRA DIRT FOR BACKFILLING, GRADING, STAKING, SURVEYING, SPOILS REMOVAL FROM POINT OF EXCAVATION, CLEARING & GRUBBING OF GUARDRAIL & FENCE LINE, BLOCKOUTS CORE-DRILLING, DRILLING BOLT PATTERNS IN BARRIERS, DRILLING IN COBBLE AND ROCK FORMATIONS, PAINTING, SAWCUTTING, GOUNDING, MAINTENANCE OF INSTALLED FENCING AND GUARDRAIL, POTHOLING, CONCRETE WASHOUTS, ENGINEERING, BOND FEES, PERMITS AND/OR MISCELLANEOUS FEES.

Thank You,

Charles Hill

Charles Hill

Estimator

Ferreira Construction Co., Inc.
 dba Ferreira Coastal Construction Co.
 10370 Commerce Center Dr., Suite B-200
 Rancho Cucamonga, CA 91730

Cell (909) 202-8312
 Fax (909) 606-7711
 E-mail CHill@ferreiraconstruction.com

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

OPERATIONAL MATTERS

ITEM 6: WATER SYSTEM UPDATES

The following is a brief report of the water system through **August 2024**.

Projects and Repairs

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

1. Responded to 16" main break across from Dimension Water Treatment Plant (DWTP) along with Maintenance and Wastewater Departments.
2. Worked with contractor to repair 16" main and add a blow off on bike trail
3. Repaired stuck hydrant on Flannigan Road
4. Replaced broken hydrant auxiliary valve on Banstead in Dove Canyon
5. Worked with the Maintenance Department to install a new 8" meter at Topanga Booster Pump Station
6. Worked with developer to repair struck Air Vac in Saddle Crest development
7. Diagnosed and repaired filter #4 "lifting issue" at DWTP

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): PEREA/KESSLER

TRABUCO CANYON WATER DISTRICT
MONTHLY WATER SYSTEM OPERATIONS SUMMARY - 2024

SYSTEM PRODUCTION/SUPPLIES	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
Number of Days	31	28	31	30	31	30	31	31	30	31	30	31	365
<i>Dimension WTP</i>	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%	
SAC Pipeline Meter	0.0	61.3	52.5	0.0	0.0	0.0	0.0						113.8
Backwash, AF	0.0	2.2	1.6	0.0	0.0	0.0	1.2						5.0
Flushwater, AF	0.0	3.7	1.8	0.0	0.0	0.0	1.9						7.4
DWTP Effluent (1)	0.0	65.0	49.3	0.0	0.0	0.0	26.9						141.2
Groundwater, AF													
Trabuco Creek GWTF	0.0	0.0	32.6	98.1	115.2	111.7	91.2						448.8
U.S. Well AF	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0
Total Groundwater (2)	0.0	0.0	32.6	98.1	115.2	111.7	91.2						448.8
Water Purchases, AF													
SMWD Treated Interconnection	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0
IRWD Treated Interconnections	96.1	17.0	9.6	0.0	34.2	71.2	92.3						320.4
IRWD Irvine Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0
Total Purchases (3)	96.1	17.0	9.6	0.0	34.2	71.2	92.3						320.4
Total Supply													
Total Supply AF (1,2,3)	96.1	82.0	91.5	98.1	149.4	182.9	210.4						910.4
% Year - Peak Prod. - 2,449 AF (2018)	4%	7%	11%	15%	21%	29%	37%						37%
AF/Day	3.1	2.8	3.0	3.3	4.8	6.1	6.8						4.3
CFS/Day, Avg.	1.5	1.4	1.5	1.6	2.4	3.0	3.4						2.1
Reservoir Storage													
Monthly Average, MG	9.1	9.1	9.0	9.0	9.1	9.0	9.0						9.0
Monthly Average, AF	27.9	27.9	27.0	27.0	27.9	27.0	27.0						27.4
Days of Storage	4.0	4.0	4.0	4.0	4.0	4.0	4.0						4.0
SYSTEM DEMANDS													
District Operations, AF (1)													
Dimension WTP	0.00	0.00	0.12	0.00	0.00	0.00	1.90						2.02
Robinson Ranch WWTP	0.004	0.004	0.004	0.004	0.004	0.004	0.020						0.044
Supplemental Domestic to RW Res.	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.00
Subtotal	0.004	0.004	0.124	0.004	0.004	0.004	1.920						2.06
System Losses, AF (2)													
Flushing	0.00	3.00	3.00	2.80	3.00	3.00	1.50						16.30
Sewer Cleaning	0.02	0.02	0.02	0.02	0.02	0.02	0.02						0.14
Line Breaks	0.00	0.00	0.23	0.00	0.27	0.02	0.01						0.53
Subtotal	0.02	3.02	3.25	2.82	3.29	3.04	1.53						16.97
Zone Demands, AF (3)													
Topanga Canyon	Inop.	Inop.	Inop.	Inop.	Inop.	Inop.	Inop.						0.00
Falcon Estates	0.13	0.1	0.1	0.0	0.1	0.8	0.9						2.16
Rose PRV/The Oaks	1.5	2.5	1.4	1.04	1.9	3.4	3.0						14.74
Canyon Creek	0.2	0.1	0.2	0.2	0.2	0.3	0.3						1.37
Rose Pump Station	0.5	1.5	0.4	0.8	0.7	0.3	0.2						4.42
Robinson Ranch	21.1	12.4	6.1	19.2	39.2	41.9	56.9						196.80
Dove Canyon	45.2	37.5	36.1	43.3	63.5	77.7	84.7						388.00
Subtotal	68.6	54.1	44.3	64.6	105.6	124.4	146.0						607.49
Total System Demand (1,2,3)	68.6	57.1	47.7	67.4	108.9	127.4	149.5						626.52

TRABUCO CANYON WATER DISTRICT
MONTHLY WATER SYSTEM OPERATIONS SUMMARY - 2024

System Demands**													
AF/Day	3.1	2.8	3.0	3.3	4.8	6.1	6.8						4.3
Daily Average, CFS	1.5	1.4	1.5	1.6	2.4	3.0	3.4						2.1
Other Water Deliveries/Purchases													
Ridgeline (DWTP Delivery)	0.0	51.5	43.4	0.0	0.0	0.0	26.9						121.8
El Toro (Interconnection Purchase)	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0
Baker WTP (CSC Delivery)	89.1	89.7	106.2	106.3	115.6	119.4	104.9						731.2
Portola Hills (Wholesale Purchase)	8.5	7.5	7.0	7.2	7.5	11.0	11.0						59.7
Skyridge (Wholesale Purchase)	1.7	1.5	1.5	1.5	1.6	2.0	1.9						11.7

* Usage estimated

** Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

OPERATIONAL MATTERS

ITEM 7: WASTEWATER SYSTEM UPDATES

The following is a brief report of the wastewater system through **August 2024**.

Projects and Repairs

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

1. Set up bypass at Heritage Lift Station during SCE repairs to electrical feed to the station
2. Set up bypass at Barneburg Lift Station to recoat wet well and manhole
3. Installed a backup level control system for Via Allegre Lift Station
4. Repaired to check valves at O’Neill Lift Station
5. Assisted in the bypass for Golf Club Lift Station

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*	212,045
Total Sewer Line Cleaned (Ft) – Month	5,200
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	78,114
Cleaning Cycle Period (Mos.) [Start date: 1/1/24]	8
Total Sewer Line Cleaned, %	36%
The Oaks at Trabuco – Pumping Frequency for the Month	13
O’Neill Park Sewer System Status	Ok
O’Neill Park Sewer System Repairs	None
SSMP Quarterly Report – <i>Next Quarterly Report</i>	3Q 2024
SSMP Program Audit – <i>Next Audit Report**</i>	February 2025

**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.

EXHIBITS

1. Monthly Recycled Water System Operations Summary

CONTACTS (staff responsible): PEREA/ULLOA

TRABUCO CANYON WATER DISTRICT | RECYCLED WATER SYSTEM SUMMARY - 2024

RECYCLED WATER SUPPLY															
	MAX	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	39.4	40.0	42.4	42.1	41.7	39.1	39.1						283.9	517.2
Reclaimed Reservoir Level, FT	1274.5	1,272.8	1,273.0	1,273.5	1,273.5	1,271.0	1,266.0	1,250.5						-	-
Reclaimed Reservoir Free Board, FT	25.5	1.7	1.5	1.0	1.0	3.5	8.5	24.0						-	-
Reclaimed Reservoir Storage, AF	145.5	134.3	135.7	137.5	137.5	126.8	96.4	37.1						-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	5.2

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	0.00	0.1	0.1	0.2	0.2	0.2	0.4						1.21	14.7%
Dove Canyon Golf Course	106.7	0.54	1.1	0.4	8.5	29.7	38.8	49.3						128.30	120.3%
Dove Canyon Master Association	279.3	0.90	1.2	3.0	4.6	23.2	24.5	28.9						86.28	30.9%
Robinson Ranch	80.2	0.78	1.1	0.3	0.4	2.2	3.0	4.1						11.89	14.8%
Trabuco Highlands	159.7	1.97	2.0	0.2	1.7	6.8	5.9	7.7						26.32	16.5%
City of RSM	0.1	0.03	0.00	0.00	0.01	0.04	0.03	0.06						0.17	128.5%
Construction Water	N/A	0.00	0.0	0.0	0.0	0.0	0.0	0.0						0.00	N/A
Sakaida Nursery	1.1	0.00	0.0	0.0	0.0	0.0	0.0	0.0						0.00	0.0%
SMWD	N/A	-	-	-	0.0	2.4	5.1	7.7						15.16	N/A
TY Nursery	17.9	0.00	0.00	0.0	0.0	0.0	0.0	11.5						11.51	64.3%
TOTAL, AF	653.2	4.2	5.5	4.0	15.4	64.5	77.5	109.6						280.83	43.0%
PERCENTAGE OF NDW ALLOCATION/YEAR		0.6%	1.5%	2.1%	4.5%	14.3%	26.2%	43.0%							
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		0.06	0.06	0.00	0.00	0.00	0.00	0.00						0.12	14.2
Dove Tick Creek Production*	<i>Dry Season</i>	4.9	0.0	0.0	0.0	0.0	0.0	0.0						4.9	43.5
	TCWD Portion	4.9	0.0	0.0	0.0	0.0	0.0	0.0						4.9	-
	SMWD Portion	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-
Dove Lake Water Pumped		0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	183.0
Dove Lake Free Board, Ft		0.0	0.0	0.0	0.0	0.0	0.0	0.5						-	-
Dove Lake Storage, AF		331.0	331.0	331.0	331.0	331.0	331.0	328.2						-	-
Total Rainfall, In.		4.7	11.0	4.5	1.6	0.4	0.0	0.0						22.3	14.7

* 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
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

OPERATIONAL MATTERS

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

The following is a brief report of work completed by Maintenance staff through **August 2024**

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

Water Operations

1. Worked with Operations and Ferreira Construction on the 16" potable water transmission line break across from the Dimension Water Treatment Plant. Assisted with post-repair cleanup at the impacted Montessori Pre-School
2. Investigated issues with hydro-pneumatic system air compressor at Canyon Creek Booster Pump Station
3. Booster #3 and Blower #2 issues at Dimension Water Treatment Plant. Hydrotech Electric troubleshooting and sourcing parts. MCC is outdated and obsolete.
4. Flowmeter installation at Topanga Booster Pump Station

Wastewater Operations

1. Attended meeting with Operations and Pacific Hydrotech (contractor) to review the Golf Club Sewer Lift Station bypass
2. New transformer pad and transformer install with Southern California Edison (SCE) at Heritage Sewer Lift Station
3. Barneburg Sewer Lift Station bypass for wet well coating
4. Job walk with Ferreira Construction (contractor) at Heritage Sewer Lift Station

District Fleet Upgrades & Other Projects

1. Coyote Flats cleanup
2. LOF truck #2 Toyota Tundra
3. New front tires installed on Vactor truck with Daniel's Tire Service (vendor)

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

None

CONTACTS (staff responsible): PEREA/STROUD

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | SEPTEMBER 4, 2024**

**REGULATORY AND OTHER MATTERS
ITEM 9: 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/PEREA