



ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
ADMINISTRATION FACILITY, BOARDROOM
JANUARY 4, 2023 AT 7:00 AM

COMMITTEE MEMBERS

Stephen Dopudja, Committee Chair
Michael Safranski, Committee Member
Ed Mandich, 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

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | JANUARY 4, 2023

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. December 7, 2022 Committee Meeting

ITEM 2: PARTH DEVELOPMENT EASEMENT

RECOMMENDED ACTION:

Recommend that the Board of Directors receive the Grant of Easement to the Trabuco Canyon Water District by The Frank R. Parth, Trustee of the Frank R. Parth Trust dated August 31, 2015, for Water Pipelines, and authorize the District Secretary to execute said Grant of Easement (Action Calendar).

ITEM 3: SCADA UPGRADE PROJECT ADDENDUM NO. 2 WITH TESCO CONTROLS

RECOMMENDED ACTION:

Recommend the Board of Directors authorize the General Manager to execute Addendum No. 2 for Local HMI Installation to TESCO Controls, Inc. in the not to exceed amount of \$227,350 (Action Calendar).

ITEM 4: GOLF CLUB SEWER LIFT STATION REPAIRS & IMPROVEMENTS

RECOMMENDED ACTION:

Committee to receive information at the time of the Committee meeting.

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Rancho Cielo HOA Recycled Water Retrofit Evaluation
2. El Toro SLS Surge Tank Installation Project
3. Saddleback Meadows Development
4. Other Projects

RECOMMENDED ACTION:

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



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | JANUARY 4, 2023**

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 | JANUARY 4, 2023**

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. *December 7, 2022 Committee Meeting*

CONTACTS (staff responsible): PALUDI/PEREA/SANGI



TRABUCO CANYON WATER DISTRICT ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | DECEMBER 7, 2022

DIRECTORS PRESENT

Stephen Dopudja, Committee Chair
Mike Safranski, Committee Member

STAFF PRESENT

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

PUBLIC PRESENT

None

CALL MEETING TO ORDER

Director Dopudja called the December 7, 2022 Engineering/Operational Committee Meeting to order at 7:00 a.m.

VISITOR PARTICIPATION

No comments were received.

ORAL COMMUNICATION

No comments were received.

COMMITTEE MEMBER COMMENTS

No comments were received.

REPORT FROM THE ASSISTANT 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.

MOTION: Approve the Engineering/Operational Committee Meeting Recap and recommended 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

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | DECEMBER 7, 2022**

ITEM 2: DOVE DAM AIR VENT PIPE REPAIR

Mr. Paludi introduced this matter for Committee consideration. Ms. Lausten provided an overview of the recent repairs to the six-inch PVC air vent pipe that is connected to the discharge drainpipe, and she reported that District staff has requested a proposal from Myers Marine Division LLC for a substantial repair of the vent pipe, including epoxy and fiberglass wrap and supports, for \$95,620 in order to prevent vent pipe failure and loss of Dove Lake water. Discussion occurred concerning the timeline for repair and ongoing challenges for the lake. The Committee expressed concerns with the proposed costs for a temporary repair of the vent pipe and recommended forwarding this matter to the Board of Directors for consideration.

- MOTION:** Forward this matter to the Board of Directors for consideration and approval (Action Calendar) – Director Dopudja
SECOND: Director Safranski
AYES: Directors Dopudja & Safranski
NOES: None
ABSTAIN: None
MOTION PASSED/FAILED: Passed 2 - 0

ITEM 3: PROPOSED CONTRACT CHANGE ORDER WITH FERGUSON WATERWORKS FOR AUTOMATIC METER READING/AUTOMATED METERING INFRASTRUCTURE (AMR/AMI) PROJECT

Mr. Paludi presented this matter for Committee consideration. Mr. Perea provided an update on this project, and he reported that the Ferguson installation team has installed new meters in approximately 85% of the District's service area. Mr. Perea indicated that during the initial review of the bid that he mistakenly read the two-inch meter description as Ferguson had listed all two-inch meters as positive displacement (PD) meters instead of turbine meters. Mr. Perea indicated that a majority of the District's two-inch meters are domestic irrigation meters (DIM) which require turbine meters to monitor higher flowrates. Discussion occurred concerning project impacts and timeline for completion. Mr. Perea indicated that the meters will be delivered later in the year.

- MOTION:** Recommended the Board of Directors approve Contract Change Order No. 1 with Ferguson Waterworks for the District's Automatic Meter Reading/Automatic Metering Infrastructure (AMR/AMI) Project for a not to exceed amount of \$19,076 (Action Calendar) – Director Dopudja
SECOND: Director Safranski
AYES: Directors Dopudja & Safranski
NOES: None
ABSTAIN: None
MOTION PASSED/FAILED: Passed 2 - 0

ITEM 4: OTHER ENGINEERING AND OPERATIONS PROJECTS

1. Other Projects

There were no other projects discussed.

- MOTION:** None – Informational item only.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | DECEMBER 7, 2022**

ITEM 5: WATER SYSTEM UPDATES

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

1. Worked with Ferreira Construction to repair a failed service saddle on Falcon and Santiago.
2. Two Water Department Operators travelled to Tesco Controls in Temecula to field test the PLC's for Falcon Pump Station, Cooks Reservoir, Field Office and Topanga Booster Pump Station.
3. Worked with the Maintenance Department, Hydrotech Electric and Tesco Controls to install a new PLC at the Falcon Pump Station.
4. Worked with Tesco Controls on the radio change over at Falcon Pump Station, Saddle Crest Development, Joplin and Dove Reservoir.
5. Serviced seven (7) Clavals with Delco Sales.
6. Flushed forty-two (42) hydrants in the Robinson Ranch Community.
7. Excavated to locate a Raw Water Line for the new office at Dimension Water Treatment Plant (DWTP) and relocate a sample site.

Mr. Kessler reviewed the Monthly Water System Operations Summary with the Committee.

MOTION: None – Informational item only.

ITEM 6: 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 old solenoids on the surge tank at Golf Club Lift Station in the Dove Canyon Community.
2. Ran a new blow off lines for the surge tank at the Golf Club Lift Station in the Dove Canyon Community.
3. Cleaned a V-Ditch at the Dove Canyon Pump Station.
4. Inspected grease interceptors at the local businesses for Fat, Oil and Grease (FOG).
5. Completed the Cla-Val Maintenance on the recycled distribution system.
6. Assisted divers at the Dove Lake air vent repair.
7. Cleaned the O'Neil wet well.
8. Removed the old lighting at Robinson Ranch Wastewater Treatment Plant (RRWWTP) and replaced it with LED's at key locations.

Mr. Ulloa reviewed the Monthly Non-Domestic Water System Summary with the Committee, and he reported that District staff will be providing a tour of the Robinson Ranch WWTP and Dove Recycled Water Pump Station to the DCMA Water Quality Ad Hoc Committee later that day at their request.

MOTION: None – Informational item only.

ITEM 7: MAINTENANCE DEPARTMENT UPDATES

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

1. Attended the WEROC quarterly meeting in person at the Fountain Valley location.
2. Attended TCWD Master Plan/CIP workshop.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | DECEMBER 7, 2022**

3. Assisted TESCO Controls with upgrading the PLC's at the Falcon booster pump station, and Dove Lake pump station.
4. Assisted Wastewater Operations and Myers Marine (divers) with the air vent repair at Dove Lake.
5. Worked with SS Mechanical starting up the surge tank at El Toro sewer lift station.
6. Picked up truck #12 from the collision center.

MOTION: None – Informational item only.

ITEM 8: OTHER MATTERS/REPORTS

There were no other matters presented.

MOTION: None

ADJOURNMENT

Director Dopudja adjourned the December 7, 2022 Engineering/Operational Committee Meeting at 7:40 a.m.

DRAFT

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JANUARY 4, 2023**

ENGINEERING MATTERS

ITEM 2: PARTH DEVELOPMENT EASEMENT

The Parth development is a proposed single-family residence located at 30845 Hamilton Trail, Trabuco Canyon, CA. District staff executed a Will Serve letter in November 2022, and the owner has completed final plans, including a District easement for execution (Exhibit 1).

FUNDING SOURCE:

Developer Funded

FISCAL IMPACT (PROJECT BUDGET):

None

ENVIRONMENTAL COMPLIANCE:

Any required environmental compliance and permits are to be met by the property owner.

RECOMMENDED ACTION:

Recommend that the Board of Directors receive the Grant of Easement to the Trabuco Canyon Water District by The Frank R. Parth, Trustee of the Frank R. Parth Trust dated August 31, 2015, for Water Pipelines, and authorize the District Secretary to execute said Grant of Easement.

EXHIBIT(S):

1. Grant of Easement to the Trabuco Canyon Water District by The Frank R. Parth, Trustee of the Frank R. Parth Trust dated August 31, 2015, for Water Pipelines

CONTACTS (staff responsible): LAUSTEN

**FREE RECORDING REQUESTED
BY AND RETURN TO:**

**TRABUCO CANYON WATER DISTRICT
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679
Attention: District Secretary**

**ASSESSOR PARCEL NO: 856-111-23 AND 24
PORTION OF LOT 3, 4, AND 5
SECTION 4, T65, R4W, SBM**

(Space above for Recorder's use only)

Exempt from recording fee pursuant to Gov. Code §6103.

Exempt from documentary transfer tax pursuant to Rev. and Tax. Code §11922.

**GRANT OF EASEMENT
TO THE
TRABUCO CANYON WATER DISTRICT
BY
FRANK R. PARTH, TRUSTEE OF THE FRANK R. PARTH TRUST DATED AUGUST 31, 2015
FOR
WATER PIPELINES**

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **FRANK R. PARTH, TRUSTEE OF THE FRANK R. PARTH TRUST DATED AUGUST 31, 2015** ("Grantor") hereby grants and conveys to **TRABUCO CANYON WATER DISTRICT**, a County water district formed and existing pursuant to Water Code Sections 30000 and following ("Grantee"), and its successors and assigns, a perpetual non-exclusive easement and right-of-way for water purposes. This easement shall include, but not by way limitation, the right to install, construct, reconstruct, remove and replace, renew, inspect, maintain, repair, improve, and relocate water pipeline or meter, together with incidental appurtenances, connections and structures in, over, under, upon, along, through and across the respective portions of the real property hereinafter described and depicted.

Said easement shall lie in, over, under, upon, along, through and across that certain real property situated in Unincorporated Territory, Orange County, described in Exhibit "A" and depicted in Exhibit "B", both of which are attached hereto and by this reference incorporated herein (the "Easement Area"), together with the right to enter upon and to pass and repass over and along the Easement Area for the construction, reconstruction, operation, and maintenance of the facilities to be constructed in the Easement Area by Grantee or its successors and assigns, its

officers, agents and employees and by persons under contract with Grantee or its successors and assigns.

It is understood and agreed that the easement and rights-of-way acquired herein are acquired subject to the rights of the Grantor, and its successors and assigns, and any other parties holding easement rights over the Easement Area, to use the surface of the Easement Area to the extent that such use is compatible with the full and free exercise of said easement and rights-of-way by the Grantee, provided, however, that no streets, alleys, roadways, fences, block walls, landscaping, trees, or other structures or other improvements shall be constructed upon, over, and along the Easement Area without first obtaining the prior written consent of the Grantee.

Whenever Grantee, in the exercise of its rights hereunder, makes any repair or replacement which requires the uncovering of its facilities, Grantee shall replace any asphaltic or concrete pavement which may be removed, lost or damaged in connection with making of any such repair or replacement. Grantee shall not be responsible to any person for any damage to any grass, trees, shrubs, sidewalks, ornamental pavement, or structural facilities which may be removed, lost, or damaged in connection with the making of any such repairs or replacements.

No earth, dirt, fill or any other material shall be deposited, placed or maintained on or over the surface of the Easement Area, nor shall any earth be removed from the cover of said pipeline or pipelines and incidental facilities without first obtaining the prior written consent of Grantee.

The Grantor and persons or concerns executing this Grant of Easement represent and warrant to Grantee that Grantor is the owner in fee title of the herein described property, or has the right to make this conveyance, and that it has advised the Grantee in writing of any and all outstanding easements, encumbrances, or deeds of trust.

Grantee shall have the right to use gates in all of Grantor's fences which presently or hereafter cross the easement, and to remove, trim, cut, and clear away any trees and brush whenever in Grantee's reasonable judgment the same shall be necessary for the convenient and safe exercise of the rights granted hereby.

This Grant of Easement and the provisions contained herein shall be binding upon Grantor, Grantee, and their respective successors and assigns.

IN WITNESS WHEREOF, Grantor executed this Grant of Easement as evidenced by Grantor's signature below.

Dated this _____ day of _____, 2022

FRANK R. PARTH, TRUSTEE OF THE FRANK R. PARTH TRUST DATED AUGUST 31, 2015
(Grantor)

By: _____

Title: _____

By: _____

Title: _____

NOTE: Signatures must be notarized

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)

Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed
the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)

Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed
the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(Seal)

**CERTIFICATE OF ACCEPTANCE
TRABUCO CANYON WATER DISTRICT**

This is to certify that the interest in the real property conveyed by that certain GRANT OF EASEMENT dated _____, 2022 from **FRANK R. PARTH, TRUSTEE OF THE FRANK R. PARTH TRUST DATED AUGUST 31, 2015**, to TRABUCO CANYON WATER DISTRICT, a County water district, is hereby accepted by the undersigned officer on behalf of the Board of Directors, pursuant to authority conferred by Resolution No. 99-894 of the Board of Directors, adopted on June 16, 1999, and the TRABUCO CANYON WATER DISTRICT consents to recordation thereof by its duly authorized officer.

Dated this _____ day of _____, 2022

Michael Perea
District Secretary
Trabuco Canyon Water District

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JANUARY 4, 2023**

ENGINEERING MATTERS

ITEM 3: SCADA UPGRADE PROJECT ADDENDUM NO. 2 WITH TESCO CONTROLS

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.

An upgrade to the District’s SCADA System has been phased in over several years. Due to budget concerns during original project scoping, the project calls for an Operator Interface at each remote station that utilizes iPads that all Staff have for remote access. With the removal of the obsolete Rugids/Displays at these locations (RTU program and communication), Operations Staff has requested that sites have local Human Machine Interfaces (HMI’s) built into the panels due to potential loss of cellular connections. TESCO has provided the attached quote which will be used at sites that are deemed critical (Exhibit 1). This change order includes HMI retrofits for eleven (11) sites; however, the quote lists a quantity of thirteen (13) HMIs to account for the two (2) spare units as requested by District staff.

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):

FY 17/18:	SCADA System Assessment Study	\$ 45,000
FY 18/19:	WAN Improvements and Hardware Replacement	\$ 200,000
FY 19/20:	Radio Study and PLC Hardware Purchase	\$ 400,000
FY 20/21:	SCADA Platform, Backbone Installation, TCGWTF Upgrades	\$ 600,000
FY 21/22:	Upgrade 24 Sites	\$ 1,000,000
FY 22/23:	Upgrade 7 Sites, Development of HMI Software	\$ 980,000
Total:		\$ 3,225,000

FY 22/23 CONTRACT SUMMARY:

Original contact	\$ 980,000
Amendment No. 1	\$ 17,376
Amendment No. 2	\$ 227,350
Total Contact	\$1,224,726

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption

RECOMMENDED ACTION:

Recommend the Board of Directors authorize the General Manager to execute Addendum No. 2 for Local HMI Installation to TESCO Controls, Inc. in the not to exceed amount of \$227,350 (Action Calendar).

EXHIBIT(S):

1. TESCO Controls Proposal

CONTACTS (staff responsible): LAUSTEN/PEREA

To: Trabuco Canyon Water District
Attn: Lorrie Lausten
Re: Fiscal Year 2022-2023 Improvements
Local HMIs for Remote Water/Wastewater Sites

Quote Date: 12/28/2022
Quote No.: 22L209Q02
Project No.: T-46178X8 **COQ2**

Dear Lorrie:

Thank you for your continued interest in TESCO products, services, and solutions. We are pleased to quote the following scope of work pertaining to the above-referenced project.

Scope of Work

This change order quote is inclusive of furnishing the new panel HMIs that Trabuco Canyon Water District (District) has requested for local process control and visibility of the remote water/wastewater sites previously equipped with RUGID operator interfaces. Now that the RUGID units have been removed (*or in the process of being removed*), the District requires the ability to locally control/monitor these remote sites in the event of a central SCADA system failure or loss in cellular communications (*required for the remote viewing SCADA tablets*). There are a total of **eleven (11) remote sites** requiring the new panel-mount HMIs, which includes the following:

Barneburg Lift Station, El Toro Lift Station, Heritage Lift Station, O'Neil Lift Station, Plano Lift Station & Booster Pump Station, Santiago Canyon Lift Station, Via Allegre Lift Station, Dove & Robinson Recycled Water Pump Station, El Toro Booster Pump Station, Falcon Booster Pump Station, and Topanga Booster Pump Station.

With the exception of Topanga Booster Pump Station, which requires a new wall-mount enclosure to house the HMI, all other sites will involve either onsite retrofit of the HMIs within existing control panel doors or adding the HMIs to the new RTU panels currently in production at TESCO's manufacturing facility.

The programming and graphic displays of each HMI will be developed in the same Ignition platform that the District will eventually utilize with the upgraded SCADA system TESCO is currently constructing. As part of the current SCADA upgrade project, TESCO and the District will participate in a technical workshop to determine the graphical and screen layout requirements, which will then be leveraged for display purposes at each remote site and corresponding HMI.

Following implementation of the new HMIs, TESCO will perform testing and startup services to ensure the District has complete visibility and local control at each remote site, independent and regardless of the SCADA system status. Refer, to *Scope of Supply* below for a detailed listing of the materials and services to be provided by TESCO as part of this change order.

Please Note: This change order includes HMI retrofits for eleven (11) sites; however, the Scope of Supply below lists a quantity of thirteen (13) HMIs to account for the two (2) spare units requested by the District.

Scope of Supply

Item	Qty	Description
WATER DISTRIBUTION SITES		
1	13	<p>HMI Hardware & Software to include:</p> <ul style="list-style-type: none"> ▪ Advantech Industrial PC <ul style="list-style-type: none"> ▫ 15.6" Display Touch Screen ▫ Intel Core i7-6600U Processor ▫ 16GB DDR4 Memory Built-In ▫ 2.5" 128GB SSD ▫ Microsoft Windows 10 Professional OS 64-Bit ▪ Inductive Automation Ignition Edge Licensing
2	1	<p>Topanga Booster Pump Station to include:</p> <ul style="list-style-type: none"> ▪ Wall-Mount NEMA 12 Galvanized Steel Enclosure <ul style="list-style-type: none"> ▫ 24VDC, 5A, 1-Phase 10kAIC ▫ Dimensions: 30"H x 30"W x 12"D ▫ Back-Panel per Layout ▫ Cutout/Space Provisions for Panel HMI ▫ Exterior Powder Coat: <u>ANSI 61 Grey</u> ▪ Panel Circuit Breaker ▪ Ethernet Patch Cable as required ▪ DIN Rail, Terminal Blocks, Wires, Ground Bus Bar, & Nameplates/Labels as required
3	1	<p>Santiago Canyon Lift Station to include:</p> <ul style="list-style-type: none"> ▪ GracePort+ 16" HMI Cover <ul style="list-style-type: none"> ▫ UV Rated ▫ Polyurethane Gasket Protection
4	Lot	<p>Professional Services to include:</p> <ul style="list-style-type: none"> ▪ <u>Project Management</u> ▪ <u>Engineering</u> <ul style="list-style-type: none"> ▫ update engineered bill of materials, engineered shop drawings, equipment schematics, engineered submittals, technical data, as-built documentation, and project records ▪ <u>Manufacturing</u> <ul style="list-style-type: none"> ▫ fabrication, assembly, equipment wiring, and factory testing ▪ <u>SCADA Programming</u> <ul style="list-style-type: none"> ▫ program the new Advantech HMIs for local display of the respective site processes (<i>reflective of the data and graphics currently under development with the District's new Ignition SCADA application</i>) ▫ test the individual HMI programs for accurate data representation and response to operator control/input; perform I/O checks between each local PLC program and the interfacing HMI ▪ <u>Field Service / Product Startup</u> <ul style="list-style-type: none"> ▫ for the control panels already existing in the field, make cutouts and retrofit the new HMIs accordingly ▫ product quality review, verification of installation, parameter/configuration adjustments as required, software upload/download as required, function checks, and startup

Item	Qty	Description
		<ul style="list-style-type: none"> ▫ onsite training for the District’s operations staff to demonstrate the general usage of the new HMIs, including screen navigation, setpoint controls/adjustment, and alarm event viewing/acknowledgment
		TOTAL (Items 1-4, including applicable sales tax):
		\$227,350.00

Project Clarifications

- Unless otherwise indicated by the Scope of Work above, this quote is to **furnish only** and does not include any trade labor, trade work, construction work, site improvement, contractor services, or any trade installation services. Any trade labor and/or related trade work shall be performed by others/contractor.
- Unless otherwise indicated by the Scope of Work above, the following is **not** included within this quotation:
 - Conduit, field wire, tubing, or basic trade installation materials (brackets, screws, bolts, j-box, stanchions, pull-box, etc.)
 - Instrumentation mounting components, brackets, stanchions, sunshields, etc.
 - Local control stations and/or field mounted disconnects.
 - Instrumentation, devices, components, or equipment not specifically identified in the above quotation.
 - Fiber optic patch panels, cable, splicing or terminations.
 - Networking infrastructure or architecture modifications to existing facilities.
 - Any 3rd party testing, harmonic testing/analysis, protective device coordination study, short-circuit analysis, or Arc-Flash Risk Assessment (AFRA) services.
 - Electrical interconnection diagrams for equipment not furnished by TESCO.
 - ISA process control loop diagrams.
 - Signal loop diagrams for equipment not furnished by TESCO.

Terms & Conditions

- Quote is firm for 30 days unless otherwise stated.
- Intellectual Property and Confidentiality Notice: The scope of work and price quotation shall not be construed as a formal design or recommendations on design for the related project. All content contained within this quotation is the intellectual property under the proprietorship of Tesco Controls, LLC and is subject to applicable copyright laws. Such intellectual property shall not be duplicated, replicated, copied, or shared without explicit written consent from Tesco Controls, LLC, as it contains confidential information and work product developed exclusively for use by Tesco Controls, LLC.
- **HMI Provisions & Integration:** to be scheduled in conjunction with ongoing **Project No. T-46178X8** and following receipt of purchase order, written notice of intent, or notice to proceed.
- Lead-Time & Supply Chain Impacts: Due to the supply chain impacts imposed by the pandemic, all quoted lead-times are subject to change without notice.
- Unless otherwise stated above, price does not include any sales tax, use tax, or applicable fees; please apply any taxes and/or fees as appropriate. Please note that all invoices will include sales tax where applicable.
- TESCO price is FOB factory, full freight allowed.
- TESCO warranties against defect in design, workmanship, and materials for a period of one year from date of installation and does not exceed 18 months from the date of shipment from the factory.
- TESCO carries liability insurance, with full workers’ compensation coverage.
- Terms are net 30 days on approved credit accounts.
- Interest will be applied to all past due invoices.
- All merchandise sold is subject to lien laws.
- Final retention to be paid within 10 days after the project notice of completion.

Please feel free to contact us at (916) 395-8800 to discuss any questions or comments you may have regarding this quotation.

Sincerely,

TESCO CONTROLS

A handwritten signature in black ink, appearing to read 'John Wright', is positioned above the typed name.

John Wright
Technical Sales Supervisor
jwright@tescocontrols.com

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JANUARY 4, 2023**

ENGINEERING MATTERS

ITEM 4: GOLF CLUB SEWER LIFT STATION REPAIRS & IMPROVEMENTS

Trabuco Canyon Water District (District) owns and operates the Golf Club Sewer Lift Station (SLS) in the Dove Canyon community adjacent to the golf club driving range. This station receives wastewater flows from 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 had undergone only minor improvements until Fiscal Year (FY) 2021-22, when a bypass was installed, the surge tank repaired, the force main partially replaced, and the motor control center replaced. Staff identified a series of critical repairs and improvements for the station that have been budgeted for completion in the F Y 2022-23 CIP and are summarized below:

Summary of Fiscal Year 22/23 Golf Club Sewer Lift Station Improvements	
Item	Description
1	Submersible Pumps, guide rails and elbows
2	Wet Well Improvements and Coating
3	Dry Pit Piping Replacement and Flow Meter Installation
4	Surge Tank Replacement and Relocation
5	Security Wall and Gate
6	Electrical Improvements
7	Upgrade Ventilation System
8	Sewer Bypass Plan During Construction

Due to the long procurement time of equipment, Staff pre-purchased the three Cornell pumps (one Spare), two guide rail systems/discharge elbows and the surge tank. The 95% construction plans and project schedule are attached for review (Exhibit's 1 & 2). The project will be going out to bid at the end of January.

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):

\$600,000 in FY 2021-22 (complete)
\$870,000 in FY 2022-23 as described above
\$1,470,000 total CIP budget

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption was filed with the County of Orange on November 1, 2021.

RECOMMENDED ACTION:

Committee to receive information at the time of the Committee meeting.

EXHIBIT(S):

1. Golf Club SLS Improvement Plans
2. Project Schedule

CONTACTS (staff responsible): LAUSTEN/PEREA

TRABUCO CANYON WATER DISTRICT

GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT PROJECT NO. 2122-010



DECEMBER 2022

APPROVED:
TRABUCO CANYON WATER DISTRICT

LORRAINE S. LAUSTEN R.C.E. 67027
DISTRICT ENGINEER

DATE



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



GENERAL NOTES

- NOTIFY TRABUCO CANYON WATER DISTRICT (DISTRICT) 714-858-0277 AT LEAST 48 HOURS BUT NOT MORE THAN 72 HOURS BEFORE STARTING WORK, OR AFTER ANY DELAY, BEFORE RESUMING WORK.
- THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT 811 AT LEAST 48 HOURS PRIOR TO STARTING WORK.
- ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREEN BOOK) LATEST EDITION, AND THE DISTRICT'S STANDARD SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS AND THE SPECIFICATIONS AND THE STANDARD SPECIFICATIONS ON THE JOB AT ALL TIMES.
- CONCRETE WORK SHALL BE PER PLANS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
- PIPELINES SHALL BE PRESSURE TESTED TO 200 PSIG IN ACCORDANCE WITH SECTION 33 08 11.
- CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES. STREETS SHALL BE KEPT OPEN AND CLEAR OF DEBRIS WITH DUST AND NOISES BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY CLEANUP OF ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION. CONTRACTOR TO CLEAN STREET WITH SWEEPER OR EQUIV. PRIOR TO END OF EACH WORK DAY AS A MINIMUM.
- ALL SURPLUS MATERIAL REMOVED, INCLUDING EXCAVATED MATERIALS WHICH ARE NOT SUITABLE FOR USE IN THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER AND AT LOCATION ACCEPTABLE TO ALL AFFECTED AGENCIES.
- THE CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING CROSSING UNDERGROUND UTILITIES AND POINTS OF CONNECTION TWO WEEKS, IN ADVANCE OF THE PIPELINE CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ANY ADDITIONAL COST REQUIRED IN THE EVENT THAT HE HAS NOT CORRECTLY LOCATED THE EXISTING UTILITIES.
- THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING AND BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS. NEITHER THE DISTRICT NOR THE DISTRICT'S ENGINEER SHALL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY.
- ALL BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL. AFTER INSTALLATION, ALL BURIED BOLTS, NUTS, ETC., SHALL BE COATED WITH DEV WRAP OR AN APPROVED EQUIV.
- THE SURROUNDING AREA SHALL BE RETURNED TO THE CONDITION ENCOUNTERED AT THE START OF CONSTRUCTION.
- CONTRACTOR SHALL CONTACT THE DISTRICT A MINIMUM OF 48 HOURS IN ADVANCE FOR SCHEDULING OF ACCESS TO THE PROJECT SITE. CONTRACTOR SHALL ADHERE TO ALL DISTRICT REQUIREMENTS FOR SITE ACCESS AND MAINTAIN CONTINUAL COORDINATION WITH DISTRICT FOR THE DURATION OF CONSTRUCTION.
- PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT BY THE CONTRACTOR. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED AND NEW TIES SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET. THE SHEETS SHALL BE PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR AND SHALL BE DELIVERED TO THE COUNTY OF ORANGE PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT IN PLACE EXISTING SEWER, GAS, WATER LATERALS AND OTHER UTILITIES OR REPLACE IN KIND. LOCATIONS OF EXISTING UTILITIES AND SUBSTRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION IN THE AREA OF THE SPECIFIC SUB-STRUCTURE.
- CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POINTS OF CONNECTION PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES, PAVEMENT, CURB, STRUCTURE, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS AS A RESULT OF HIS OPERATIONS, AND WILL BE REQUIRED TO REPAIR OR REPLACE SAME TO THE SATISFACTORY OF, AND AS DIRECTED BY, THE DISTRICT REPRESENTATIVE OR IMPACTED UTILITY COMPANY.
- CONSTRUCTION SURVEYS FOR THIS PROJECT SHALL BE PROVIDED BY THE DISTRICT. SURVEY POINTS DESTROYED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE PROPER PROTECTION, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN AND PROVIDE THE DISTRICT WITH A "RECORD" SET OF AS BUILT DRAWINGS AT THE COMPLETION OF ALL WORK PER THE PLANS AND SPECIFICATIONS.
- TRENCH COMPACTION AND SUBGRADE COMPACTIONS TESTS SHALL BE PERFORMED BY A LABORATORY DESIGNATED BY THE DISTRICT, UTILIZING CALIFORNIA TEST METHOD NO. 216 AND 231. THE DISTRICT WILL FURNISH FIRST TESTS, WHEN REQUESTED, AT NO COST TO THE CONTRACTOR. ANY RE-TESTING REQUIRED DUE TO FIRST TEST FAILURES SHALL BE MADE AT LOCATIONS ORDERED BY THE ENGINEER, AND SHALL BE AT THE CONTRACTOR'S EXPENSE - COST OF WHICH WILL BE DEDUCTED FROM THE CONTRACTOR'S FINAL PAYMENT.
- LOOSE EXCAVATED MATERIAL SHALL NOT BE PLACED OR STORED IN WATERWAYS OR STORM DRAIN CHANNELS. ALL EXCESS EXCAVATED SOIL AND MATERIALS SHALL BE REMOVED AND DISPOSED OF IN A PROPER AND LEGAL MANNER BY THE CONTRACTOR. ALL DISTURBED SURFACE AREAS SHALL BE SHARPED TO FACILITATE DRAINAGE AND AVOID PONDING AND SHALL BE RESTORED TO NEAR NATURAL OR PRE-CONSTRUCTION CONDITIONS.
- THE CONTRACTOR SHALL CONDUCT HIS CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT STORM OR OTHER WATERS MAY PROCEED UNINTERRUPTED ALONG THE STREET OR DRAINAGE COURSES.

- CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT AN UNANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE.

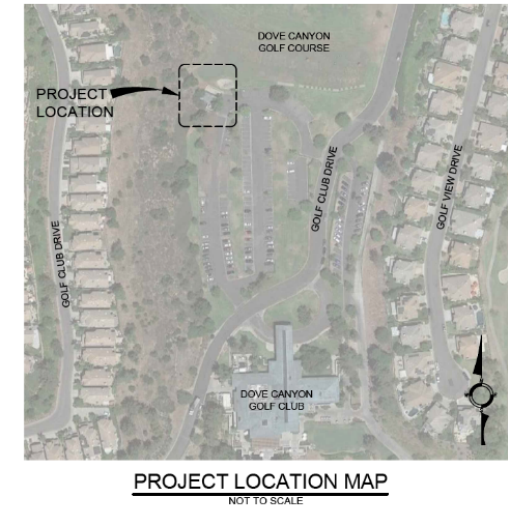
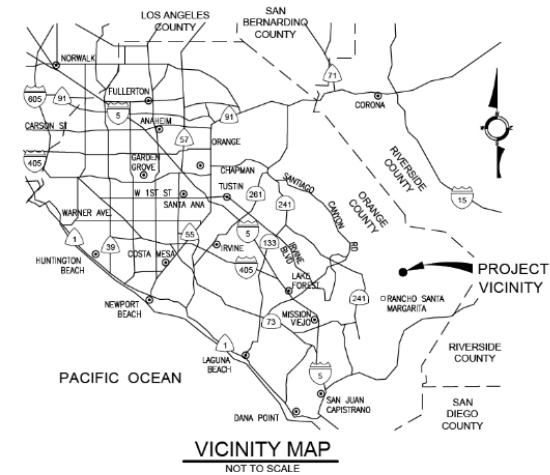
SUCH "DISCHARGES" OF MATERIAL, OTHER THAN STORM WATER ARE ALLOWED ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD, CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.

MATERIALS WHICH MAY HAVE EFFECTS OF POLLUTION INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SOLARIS, GLUES, LAKES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR SLOTTED FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING, AND SUPER CHLORINATED WATER LINE FLUSHINGS.

DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON SITE PHYSICALLY SEPARATED FROM POTENTIAL STORM WATER RUN-OFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- CONTRACTOR SHALL DEMONSTRATE EXTREME CAUTION WHEN TRENCHING IN CLOSE PROXIMITY TO OTHER UTILITIES. ANY SIGN OF DEGRADATION OF THE TRENCH WALL OR STRUCTURE INTEGRITY WILL NOT BE TOLERATED AND WILL FORCE THE STOPPAGE OF WORK UNTIL THE TRENCH OR STRUCTURE INTEGRITY IS ADEQUATELY RESTORED.
- CONSTRUCTION WORK HOURS SHALL BE 8:00 AM TO 4:30 PM EXCLUSIVE OF SATURDAYS, SUNDAYS, OR HOLIDAYS, UNLESS OTHERWISE NOTED.
- BY ACCEPTING THIS CONTRACT, CONTRACTOR HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND, HOLD HARMLESS THE OWNER, TRABUCO CANYON WATER DISTRICT AND ITS REPRESENTATIVES, ENGINEER (HEREINAFTER JIG CONSULTANTS) THEIR PARENT AND SUBSIDIARY COMPANIES, AGENTS, EMPLOYEES, CONSULTANTS AND REPRESENTATIVES FOR ANY AND ALL DAMAGE TO PERSONS OR PROPERTY OR WRONGFUL DEATH REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE, ACTIVE OR PASSIVE, OF OWNER, ENGINEER, THEIR PARENT AND SUBSIDIARY COMPANIES, AS WELL AS THEIR AGENTS AND EMPLOYEES, EXCEPTING ONLY THE SOLE NEGLIGENCE OF OWNER, ENGINEER THEIR PARENT OR SUBSIDIARY COMPANIES AND THEIR AGENTS AND EMPLOYEES TO THE FULLEST EXTENT PERMITTED BY LAW. SUCH INDEMNIFICATION SHALL EXTEND TO ALL CLAIMS, DEMANDS, ACTIONS, OR LIABILITY FOR INJURIES, DEATH OR DAMAGES OCCURRING AFTER COMPLETION OF THE PROJECT, AS WELL AS DURING THE WORK'S PROGRESS. CONTRACTOR FURTHER AGREES THAT IT SHALL ACCOMPLISH THE ABOVE AT ITS OWN COST, EXPENSE AND RISK EXCLUSIVE OF AND REGARDLESS OF ANY APPLICABLE INSURANCE COMPANY REGARDING COVERAGE.

SHEET INDEX

DWG. NO.	SHT. NO.	SHEET TITLE
G-01	1	TITLE SHEET
G-02	2	GENERAL NOTES, SHEET INDEX, VICINITY AND LOCATION MAPS
D-01	3	SURGE TANK DEMOLITION PLAN
D-02	4	WET WELL & DRY PIT DEMOLITION PLAN AND SECTION
C-01	5	SITE PLAN, ROLLING GATE DETAILS, AND ELEVATIONS
M-01	6	SURGE TANK MECHANICAL PLAN, SECTION, AND DETAILS
M-02	7	WET WELL & DRY PIT MECHANICAL PLAN AND SECTION
M-03	8	FLOW METER MECHANICAL PLAN AND SECTION
M-04	9	MISCELLANEOUS MECHANICAL DETAILS
M-05	10	MISCELLANEOUS MECHANICAL DETAILS



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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.

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ORANGE, CA 92867
(714) 978-4407
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NO.	DATE	REVISIONS

DESIGN: MM	DATE
DRAWN: MM	ENGINEER
CHECKED: JG	DISTRICT ENGINEER



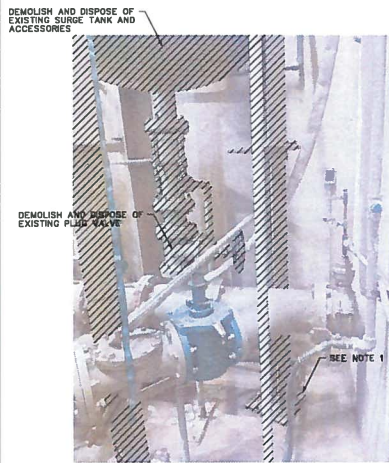
JOSEPH L. GUTIERREZ	NOE 55604	ENGINEER
LOUIE LAUSTEN	NOE 67027	DISTRICT ENGINEER

TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

GENERAL NOTES, SHEET INDEX, VICINITY AND LOCATION MAPS

G-02
SHEET 2 OF 10

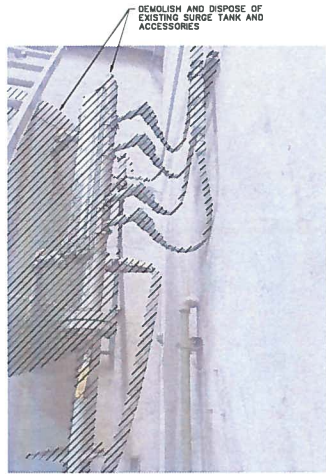
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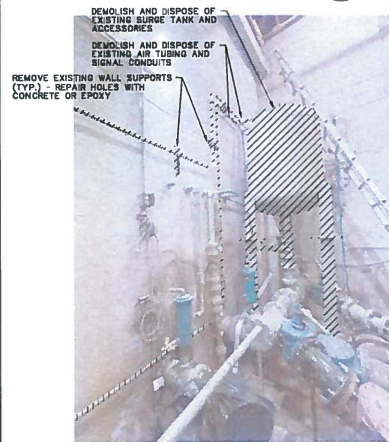
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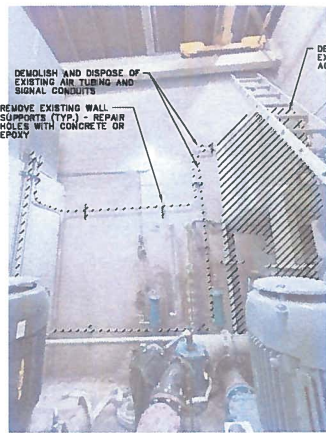
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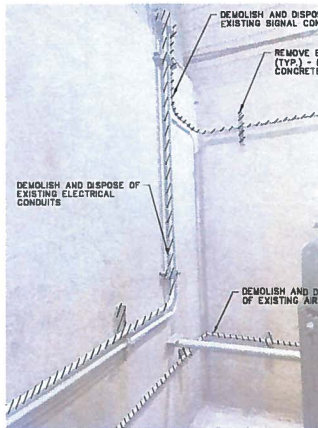
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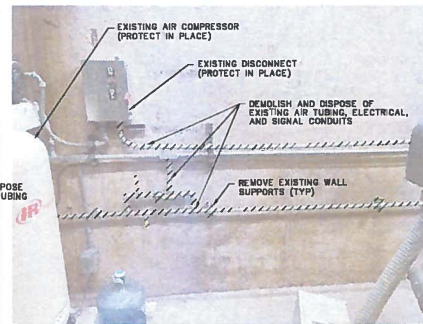
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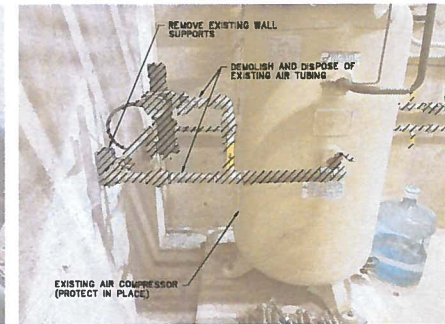
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DEMOLITION DETAIL 6

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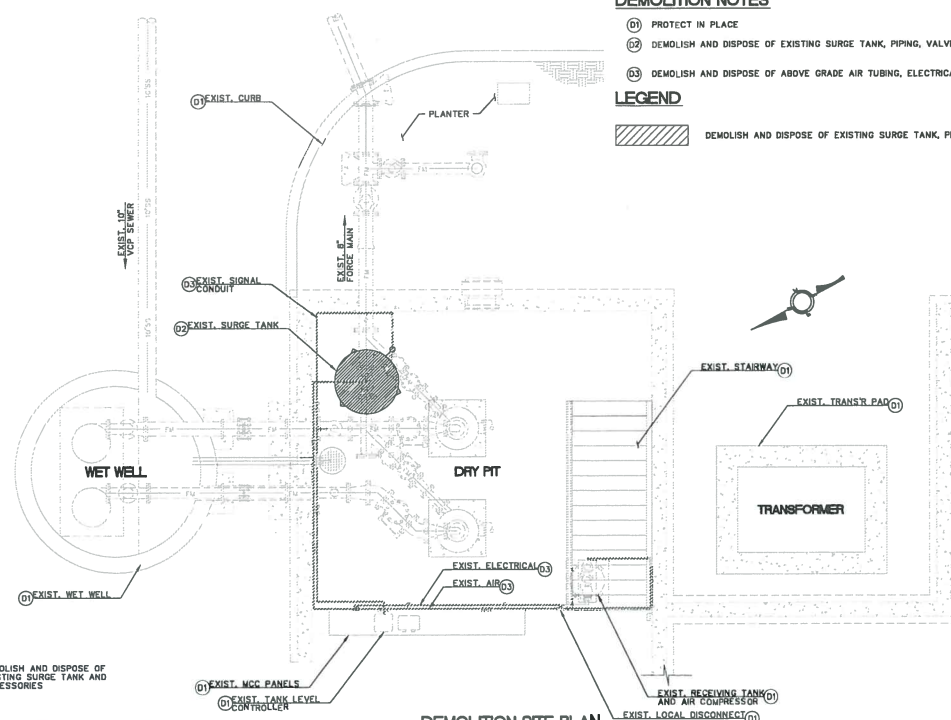
6



DEMOLITION DETAIL 7

NOT TO SCALE

7



DEMOLITION SITE PLAN

SCALE: 3/8" = 1'-0"

DEMOLITION NOTES

- (1) PROTECT IN PLACE
- (2) DEMOLISH AND DISPOSE OF EXISTING SURGE TANK, PIPING, VALVES, AND APPURTENANCES PER (1) (2) (3) (4)
- (3) DEMOLISH AND DISPOSE OF ABOVE GRADE AIR TUBING, ELECTRICAL, AND SIGNAL CONDUITS PER (4) (5) (6) (7)

LEGEND

DEMOLISH AND DISPOSE OF EXISTING SURGE TANK, PIPING, VALVES, AND APPURTENANCES

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REGISTERED PROFESSIONAL ENGINEER
No. C 55604
Exp. 10/9/22
CIVIL
STATE OF CALIFORNIA

NO.	DATE	REVISIONS

DESIGN: MM	DATE:
DRAWN: MM	JOSEPH L. GUTIERREZ RCE 56604 ENGINEER
CHECKED: JG	CORRE LAUSTEN RCE 87027 DISTRICT ENGINEER

TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

SURGE TANK DEMOLITION PLAN

D-01
SHEET 3 OF 10

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DEMOLITION NOTES

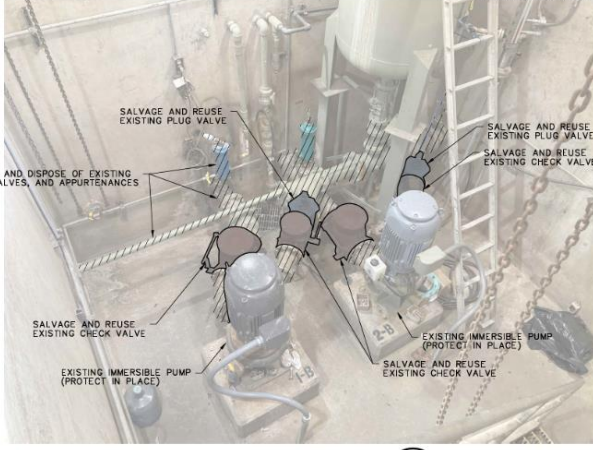
- (D1) PROTECT IN PLACE
- (D2) DEMOLISH AND DISPOSE OF EXISTING PIPING, VALVES, PUMPS, AND APPURTENANCES PER $\frac{1}{2}$
- (D3) SALVAGE AND REUSE EXISTING VALVES PER $\frac{1}{2}$
- (D4) DEMOLISH AND DISPOSE OF EXISTING EXHAUST FAN PER $\frac{1}{2}$
- (D5) SAWCUT, JACK-HAMMER, AND REMOVE EXISTING CONCRETE
- (D6) JACKHAMMER EXISTING CONCRETE ON PILASTER TO ALLOW REMOVAL OF 8" PIPE PER $\frac{1}{2}$
- (D7) DEMOLISH CONCRETE BEAM AND SAWCUT FLUSH WITH WET WELL INTERIOR

LEGEND

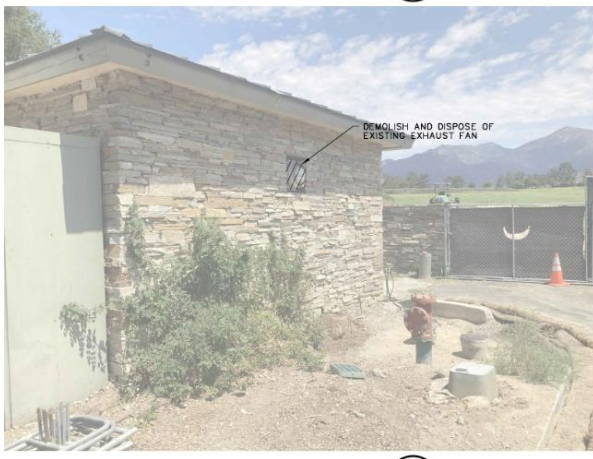
- LIMITS OF EXCAVATION
- DEMOLISH AND DISPOSE OF EXISTING PIPING, VALVES, AND APPURTENANCES
- SALVAGE AND REUSE EXISTING VALVES
- SAWCUT AND REMOVE SECTION OF EXISTING CONCRETE

NOTES

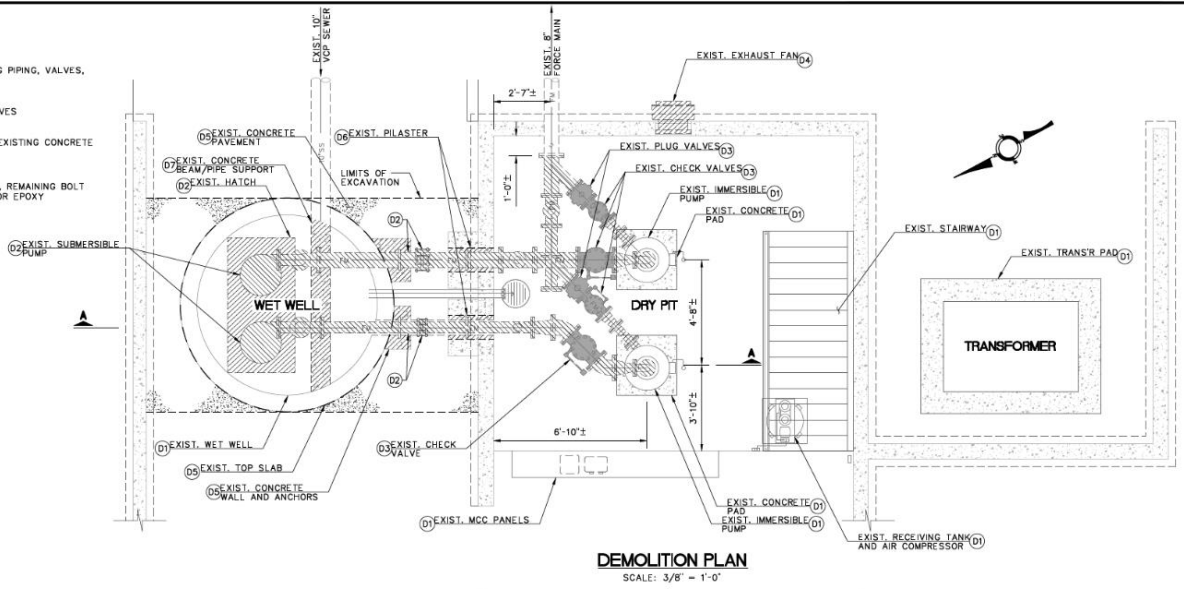
1. AFTER DEMOLITION OF EXISTING PIPE SUPPORTS, REMAINING BOLT HOLES SHALL BE FILLED WITH CONCRETE FILL OR EPOXY



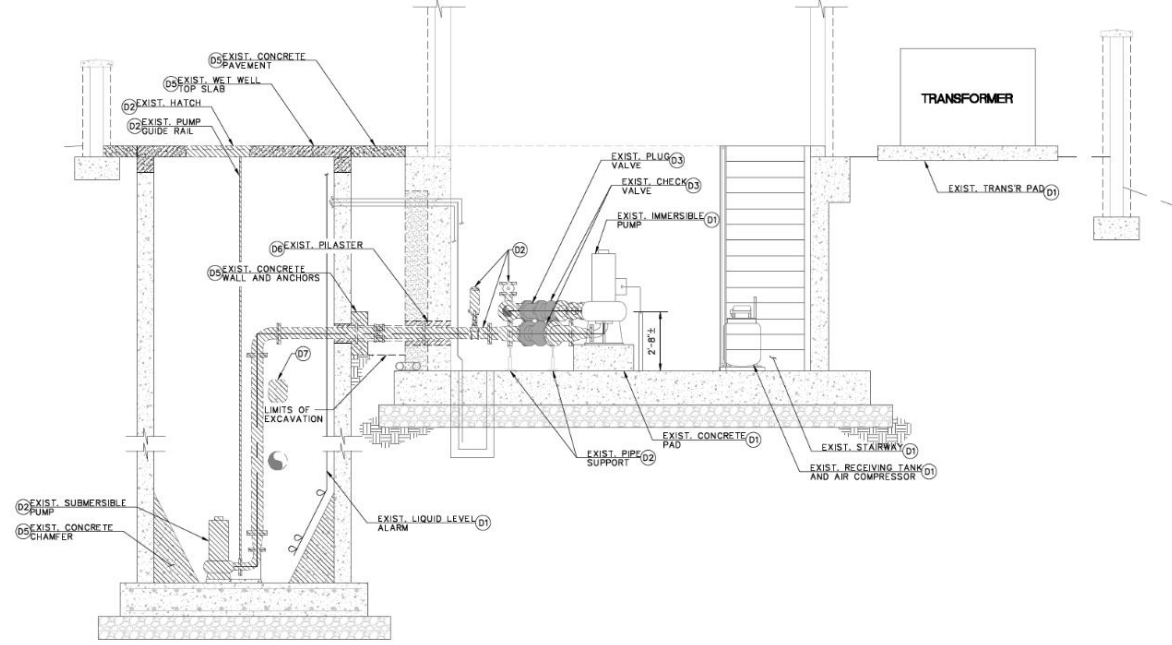
DEMOLITION DETAIL 1
NOT TO SCALE



DEMOLITION DETAIL 2
NOT TO SCALE



DEMOLITION PLAN
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"

DIGALERT CALL TOLL FREE 811
CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. SEE GENERAL NOTES FOR FURTHER INFORMATION.
TWO WORKING DAYS BEFORE YOU DIG

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NO.	DATE	REVISIONS

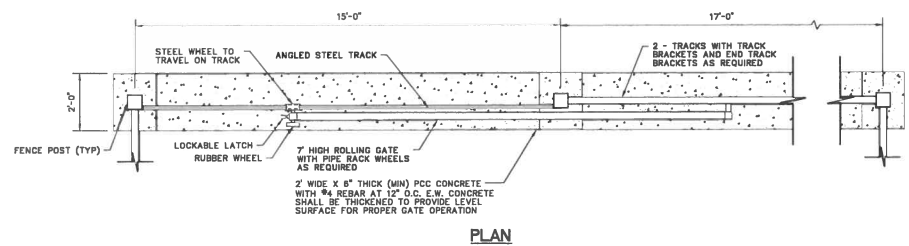
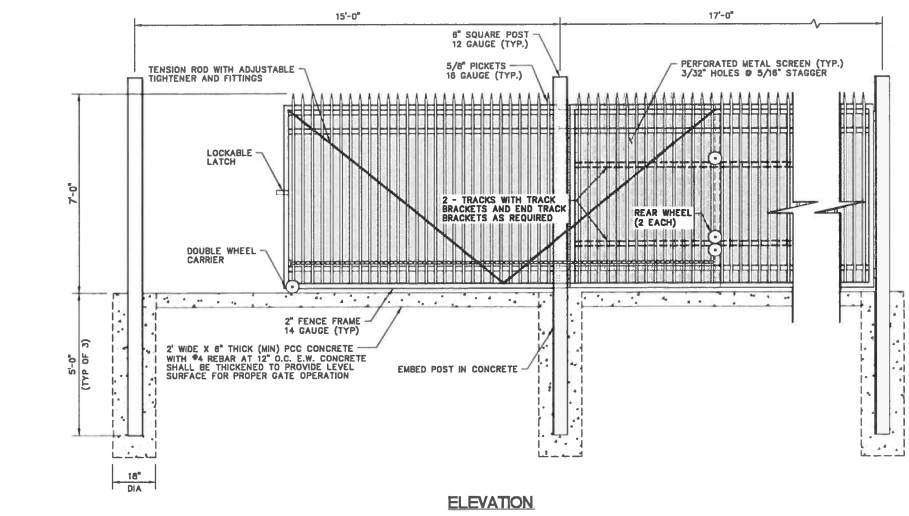
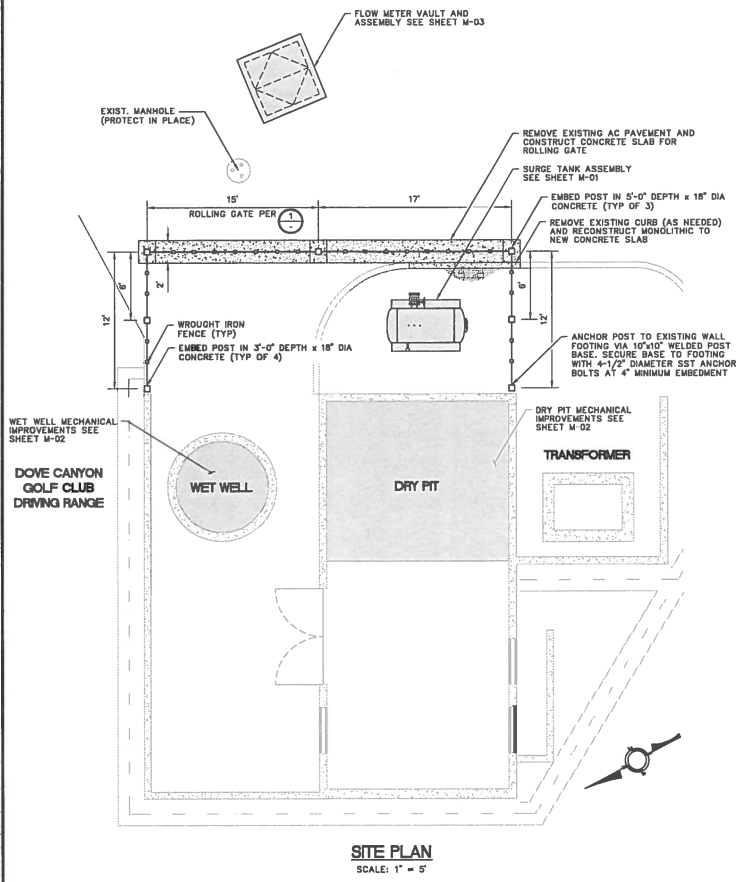
DESIGN: MM	DATE: _____
DRAWN: MM	ENGINEER: JOSEPH L. GUIBEREZ RCE 55604
CHECKED: JG	DISTRICT ENGINEER: CORRIE LAUSTEN RCE 67027

TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

WET WELL & DRY PIT
DEMOLITION PLAN AND SECTION

D-02
SHEET
4
OF
10

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ROLLING GATE 2
NOT TO SCALE

DIGALERT CALL TOLL FREE 811

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

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REGISTERED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA

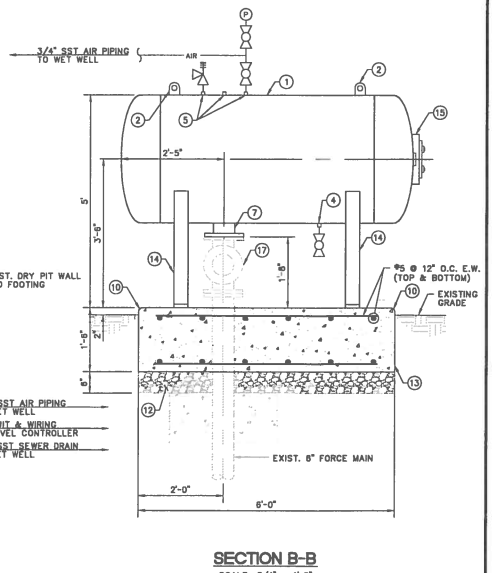
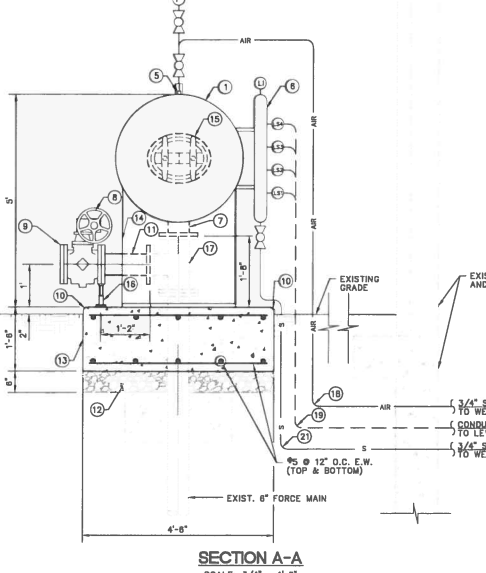
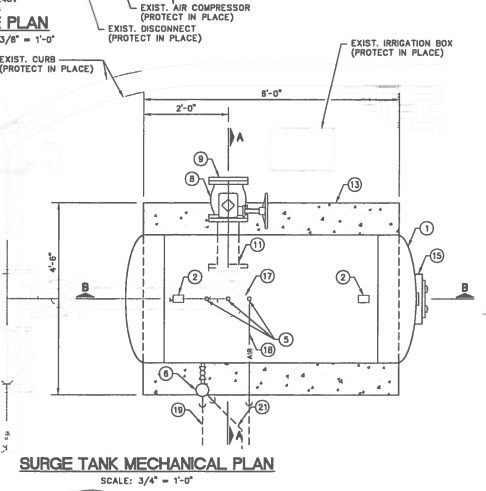
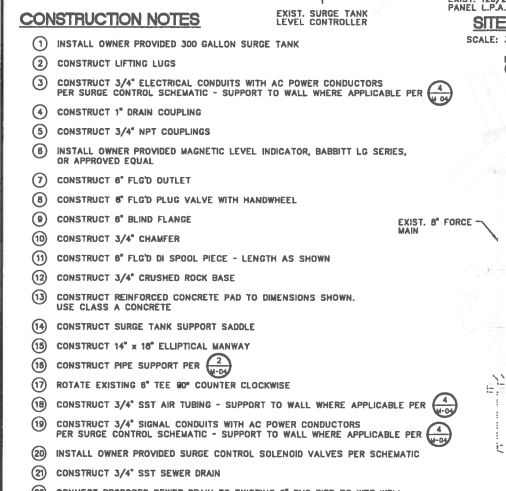
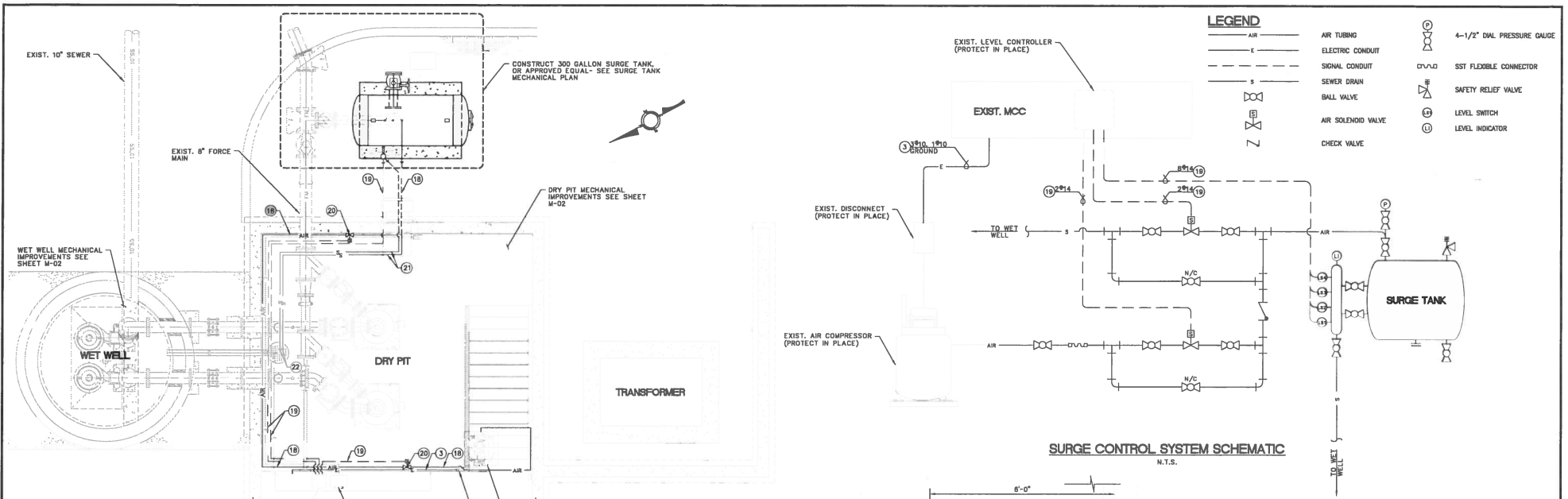
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			JG	

JOSEPH I. GUTIERREZ	RCE 53604	ENGINEER
LOBBE LAUSTEN	RCE 67027	DISTRICT ENGINEER

TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

SITE PLAN, ROLLING GATE DETAILS, AND ELEVATIONS

C-01
SHEET **5** OF **10**



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

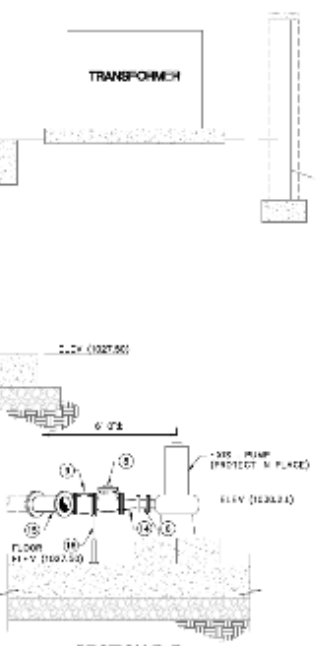
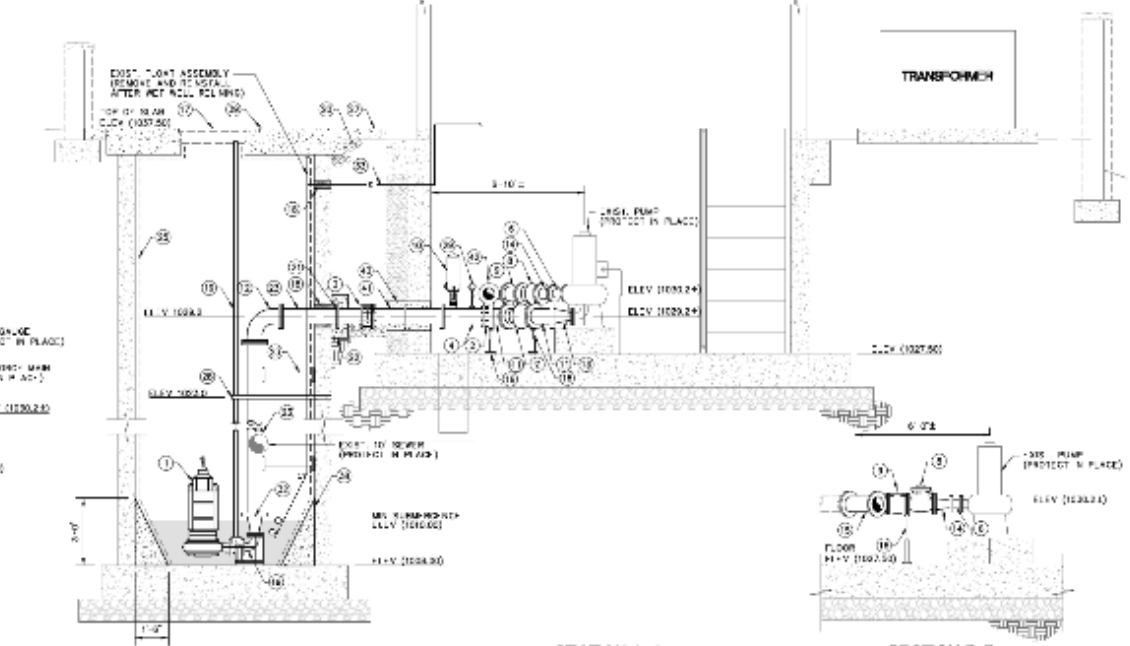
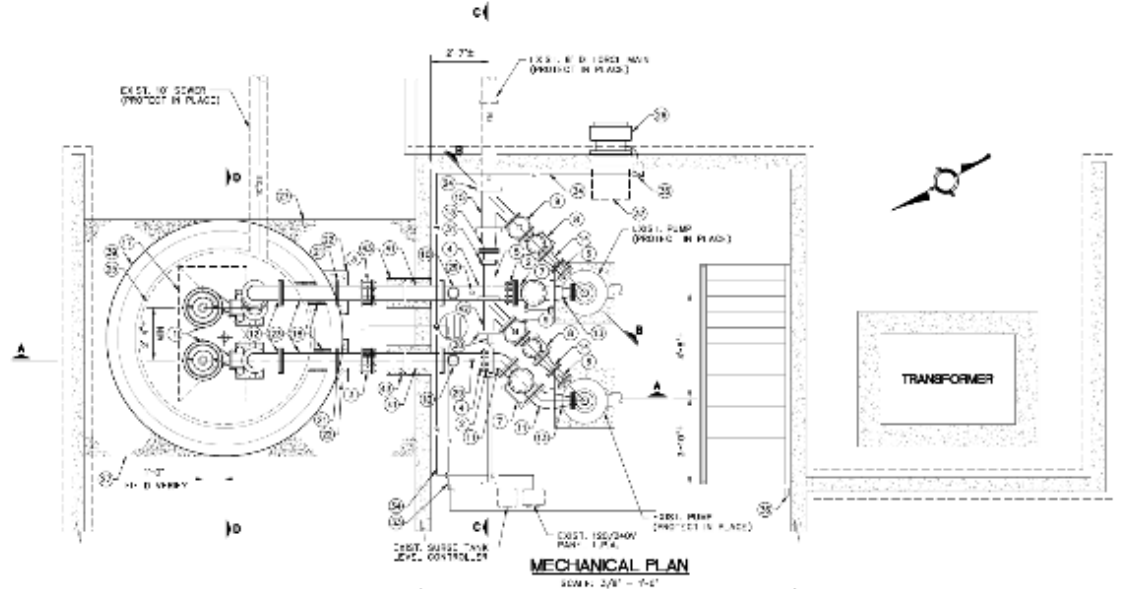
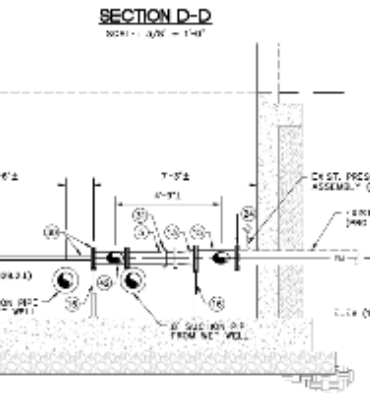
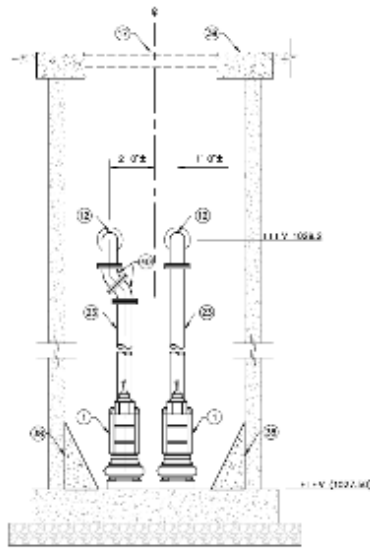
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			MM		PROJECT NO. 2122-010	6
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CONSTRUCTION NOTES

1. INSTALL OWNER SUPPLIED SUBMERSIBLE PUMP (CONCRETE SUB TO SOL 42323 2027A)
2. CONSTRUCT 4" RIGID COUPLING (RSM40 501) OR APPROVED EQUIV.
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ALTERNATE WET WELL RELINING

1. CONSTRUCTION TO EXIST AND CONSTRUCT IN KIND OF EXISTING WET WELL TO BE 18" DIA. 10' DEEP WITH 1" DIA. 10' DEEP 1" DIA. 10' DEEP 1" DIA. 10' DEEP POLYMER LINING (UNLESS OTHERWISE NOTED).
2. CONTRACTOR TO ALLOW 30 DAYS OF CURE TIME FOR NEW CONCRETE SURFACES PRIOR TO APPLYING PVC MEMBRANE LINING.
3. ALL LINING MATERIALS, PRIMS, AND MEMBRANE LINING SHALL BE FULLY INSTALLED AND PROTECTED FROM DAMAGE AND WEAR PRIOR TO COMPLETION.
4. EXISTING AND PROPOSED PIPE SHALL BE FULLY INSULATED AND PROTECTED TO PREVENT COLLAPSE UNDER EXISTING AND PROPOSED LOADS.



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NO.	DATE	DESCRIPTION	BY	CHKD.

DESIGN			
REVISION			
DATE			





TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

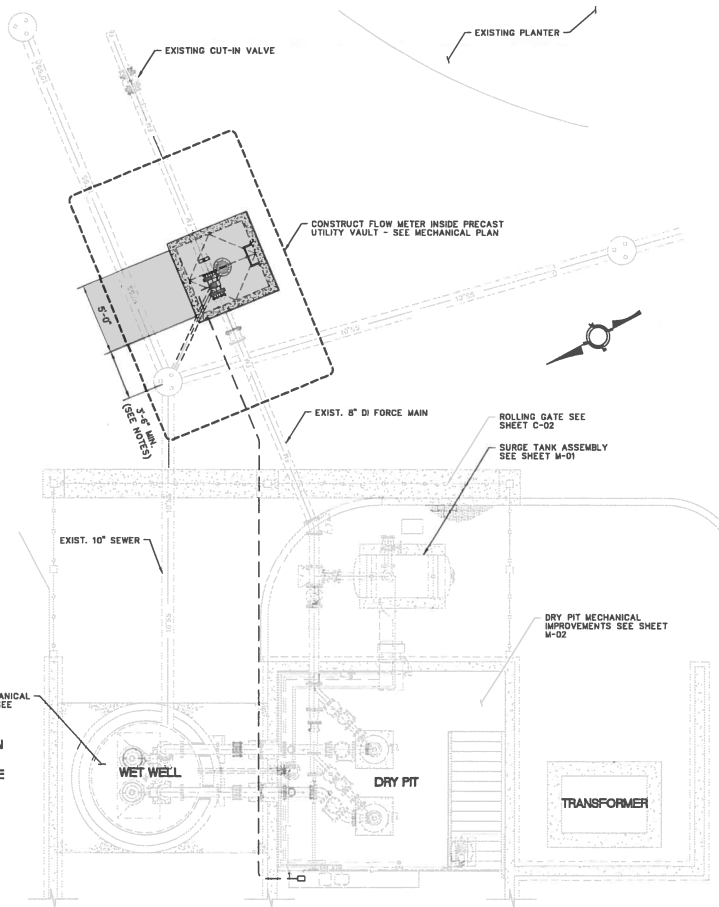
WET WELL & DRY PIT
MECHANICAL PLAN AND SECTION
M-02
7
OF
10

FLOW METER WORK SEQUENCE SUMMARY

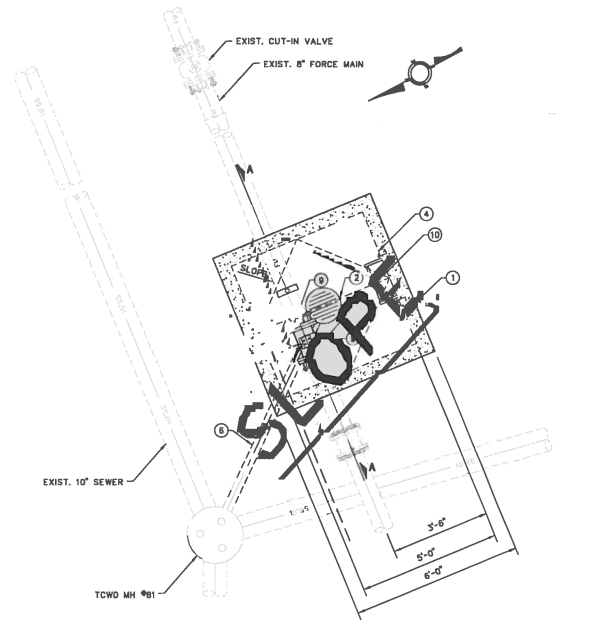
1. CONTRACTOR SHALL POTHOLE EXISTING 8" DI FORCE MAIN AT VAULT LOCATION TO VERIFY DEPTH AND LOCATION OF JOINTS.
2. CONTRACTOR SHALL EXCAVATE AND EXPOSE THE EXISTING FORCE MAIN AND PROVIDE TEMPORARY SUPPORTS.
3. CONTRACTOR SHALL CONSTRUCT CRUSHED ROCK BASE (NOTE 12) AND CAST-IN-PLACE REINFORCED CONCRETE BASE (NOTE 11).
4. CONTRACTOR SHALL SET LOWER SECTION OF UTILITY VAULT (NOTE 14) ON CONCRETE BASE. 20"x20" KNOCKOUTS SHALL BE REMOVED AS NEEDED TO SET LOWER SECTION OVER EXISTING PIPE WHILE 8" FORCE MAIN REMAINS ACTIVE. IT IS NOTED THAT EXISTING FORCE MAIN MAY HAVE A SLIGHT SLOPE, WHICH MUST BE ACCOUNTED FOR. CONCRETE BASE AND PRECAST STRUCTURE MUST REMAIN PLUMB AND NOT NECESSARILY LEVEL WITH EXISTING FORCE MAIN.
5. CONTRACTOR SHALL CONSTRUCT VAULT EXTENSION AND TOP SECTIONS (NOTES 15 AND 16) AS NEEDED TO REACH EXISTING ASPHALT GRADE.
6. CONTRACTOR TO SCHEDULE ONE NIGHT SHIFT WITH TCWD TO CONSTRUCT FLOW METER ON EXISTING FORCE MAIN. THIS WORK SHALL BE SCHEDULED AFTER COMPLETE REMOVAL OF SEWER BYPASS OPERATIONS.
7. NIGHT SHIFT SHALL BE FROM 9:00 PM TO 4:00 AM.
8. DURING NIGHT SHIFT, CONTRACTOR SHALL:
 - A. MOBILIZE EMERGENCY VACUUM TRUCKS TO CONTINUOUSLY EMPTY WET WELL DURING WORK.
 - B. REMOVE GOLF CLUB SEWER LIFT STATION OUT OF SERVICE.
 - C. SCHEDULE WITH TCWD TO CLOSE EXISTING CUT-IN VALVE.
 - D. SAWCUT EXISTING FORCE MAIN INSIDE VAULT AND DRAIN ISOLATED SECTION OF FORCE MAIN.
 - E. CONSTRUCT 8" FLOW METER ON EXISTING FORCE MAIN AND SECURE WITH RESTRAINED FLANGED COUPLING ADAPTERS.
 - F. SCHEDULE WITH TCWD TO OPEN EXISTING CUT-IN VALVE.
 - G. PLACE GOLF CLUB SEWER LIFT STATION BACK IN SERVICE AND CHECK FOR LEAKS.

CONSTRUCTION NOTES

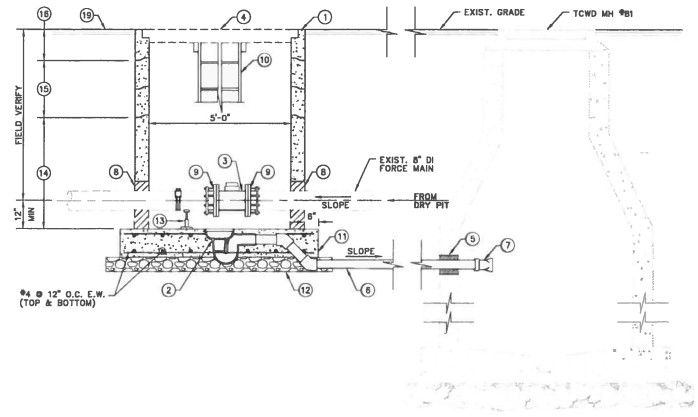
1. CONSTRUCT 5 FT. x 5 FT. OPEN BOTTOM UTILITY VAULT
2. CONSTRUCT 8" FLOOR DRAIN WITH BALL CHECK FEATURE (SMITH MODEL 2530, OR APPROVED EQUAL)
3. CONSTRUCT 8" FLOD MAGNETIC FLOW METER
4. CONSTRUCT 5 FT. x 5 FT. ALUMINUM DOUBLE LEAF, SPRING ASSISTED H-20 TRAFFIC RATED ACCESS HATCH
5. CORE DRILL MANHOLE WALL AND CONSTRUCT WALL PENETRATION PER 
6. CONSTRUCT 4" SCH. 80 PVC DRAIN PIPE
7. CONSTRUCT 4" DUCK BILL CHECK VALVE (TIDEFLEX SERIES TF-2, OR APPROVED EQUAL)
8. REMOVE CONCRETE KNOCKOUTS FROM PRECAST VAULT TO SET STRUCTURE OVER EXISTING FORCE MAIN - REPAIR CONCRETE AROUND 8" PIPE AFTER COMPLETION PER 
9. CONSTRUCT 8" RESTRAINED FLANGE COUPLING ADAPTER (ROMAC R/CA, OR APPROVED EQUAL)
10. CONSTRUCT ALUMINUM ACCESS LADDER WITH WALL BRACKETS ANCHORED INTO VAULT WALL AND SAF-T-CLIMB ACCESSORY PER 
11. CONSTRUCT 12" THICK CAST-IN-PLACE REINFORCED CONCRETE BASE
12. CONSTRUCT 8" LAYER 3/4" CRUSHED ROCK BASE
13. CONSTRUCT PIPE SUPPORT PER 
14. CONSTRUCT UTILITY VAULT 48" LOWER SECTION WITH 20"x20" KNOCK OUTS
15. CONSTRUCT UTILITY VAULT 12" EXTENSION SECTION(S) (QUANTITY AS NEEDED)
16. CONSTRUCT UTILITY VAULT TOP SECTION WITH FLUSH FRAME
17. CONSTRUCT 1" CONDUIT WITH FLOW METER SENSOR CABLE FROM FLOW METER TO REMOTE FLOW METER TRANSMITTER - EXACT ROUTING OF CONDUIT TO BE DETERMINED IN THE FIELD - METER VAULT IS A CLASS 1, DIVISION 2 HAZARDOUS LOCATION - PROVIDE CONDUIT SEAL PER NEC
18. CONSTRUCT FLOW METER REMOTE TRANSMITTER IN EXISTING CONTROL PANEL - CONNECT TO SPARE 120V UPS CIRCUIT
19. REMOVE EXISTING AC PAVEMENT AND RESTORE IN KIND



SITE PLAN
SCALE: 1/4" = 1'-0"



FLOW METER UTILITY VAULT MECHANICAL PLAN
SCALE: 1/2" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

C:\Users\jgall@trabuco.com\Documents\PROJECTS\2122-010 - Golf Club II Improvements\PROJECT\Utility\DWG\DWG2122-010-Mechanical.dwg - Call: (949) 440-1111 - Fax: (949) 440-1112 - Email: jgall@trabuco.com

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Underground Service Alert

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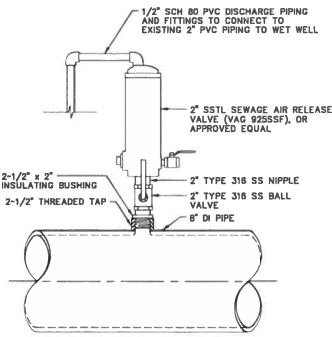
NO.	DATE	REVISIONS

DESIGN: MM	DATE:
DRAWN: MM	ENGINEER: JOSEPH I. GUTIERREZ RCE 55694
CHECKED: JG	DISTRICT ENGINEER: CORNIE LAUSTEY RCE 87027

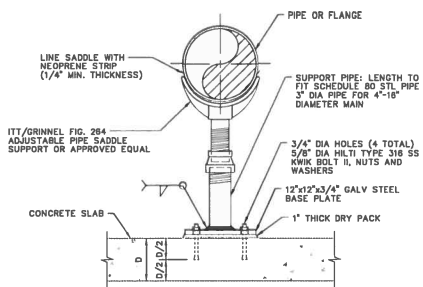
TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

FLOW METER MECHANICAL PLAN AND SECTION

M-03
SHEET **8** OF **10**

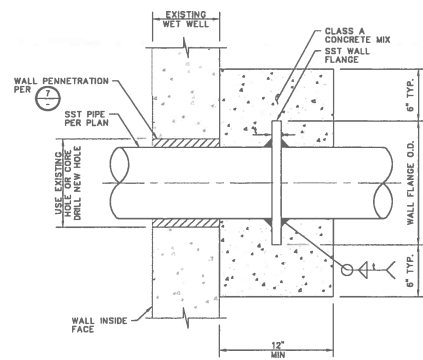


SEWAGE AIR RELEASE VALVE ASSEMBLY 1
NOT TO SCALE

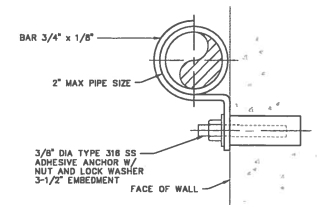


NOTE
PIPE SUPPORT MATERIALS SHALL BE GALVANIZED

PIPE SUPPORT 2
NOT TO SCALE

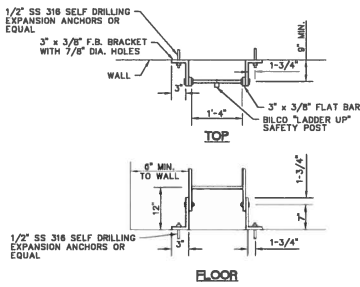


WALL REPAIR AND PIPE PENETRATION 3
NOT TO SCALE



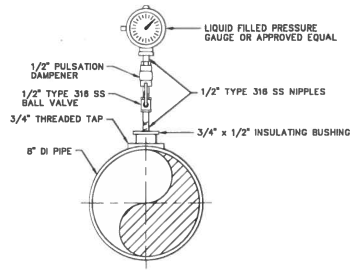
NOTES
1. PIPE CLAMP, WASHER, SHIELD, AND ANCHOR TO BE TYPE 316 STAINLESS STEEL.
2. WRAP SST TUBING WITH 2\"/>

WALL SUPPORT FOR PIPING 4
NOT TO SCALE

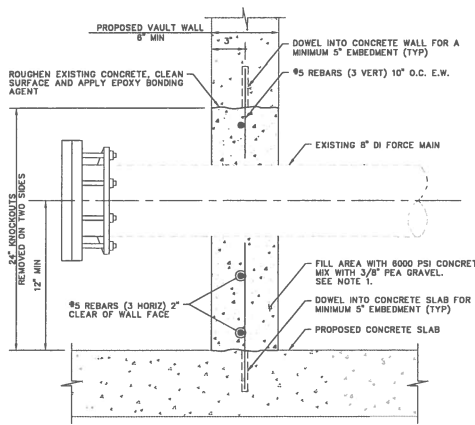


NOTE
LADDER AND BRACKETS SHALL BE ALUMINUM

ACCESS LADDER 5
NOT TO SCALE

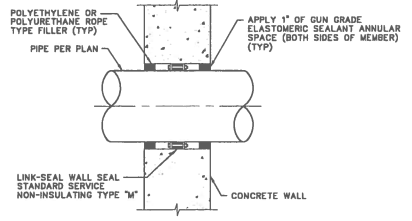
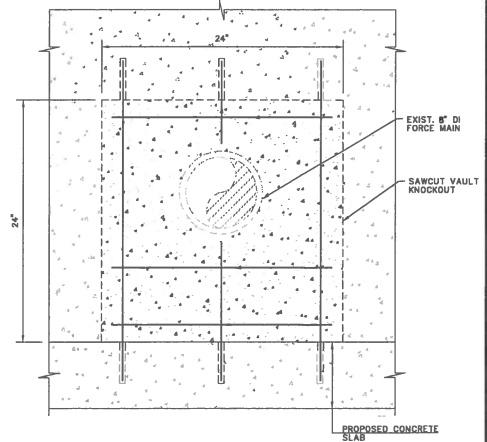


PRESSURE GAUGE ASSEMBLY 6
NOT TO SCALE



NOTES
1. CONTRACTOR TO USE ADMIXTURES TO REDUCE WATER CONTENT AND OBTAIN HIGH EARLY STRENGTH
2. CONTRACTOR TO APPLY SIKATOP 123 PLUS TO CONCRETE VERTICAL SURFACES WHERE VOIDS ARE NOTED AFTER REMOVAL OF FORMS

FLOW METER VAULT WALL REPAIR 8
NOT TO SCALE



WALL PENETRATION 7
NOT TO SCALE

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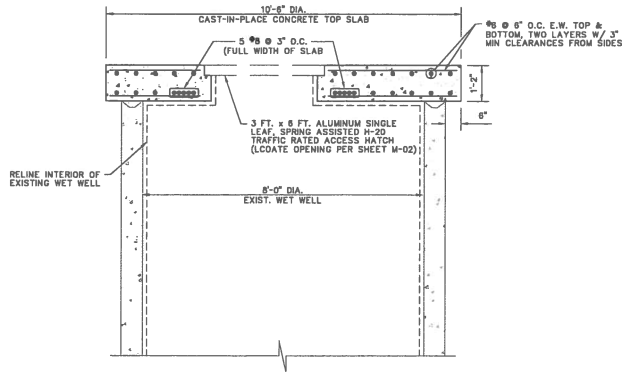
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JOSEPH L. GUTIERREZ	RCE 55604	ENGINEER
LOREE LAUSTEN	RCE 67027	DISTRICT ENGINEER

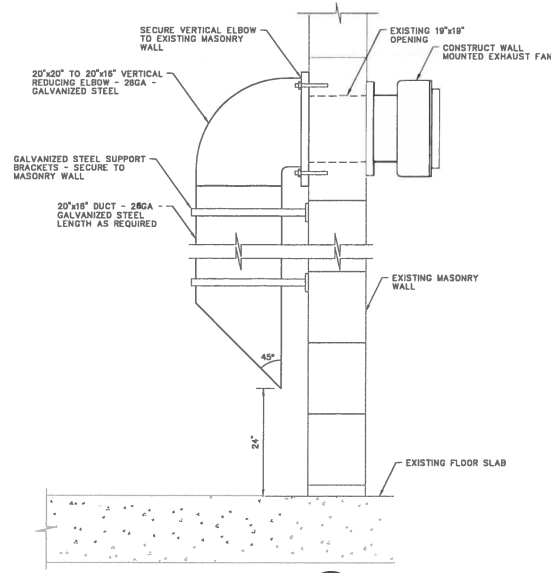
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GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

MISCELLANEOUS MECHANICAL DETAILS

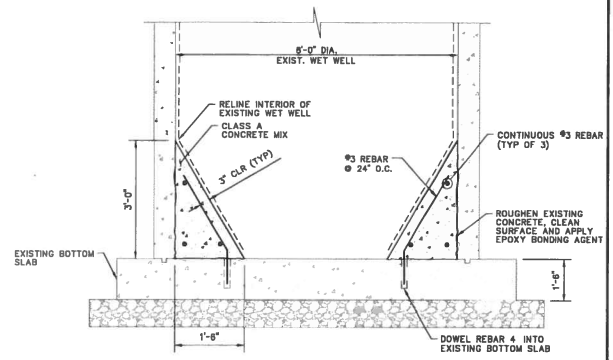
M-04
SHEET 9 OF 10



CONCRETE TOP SLAB FOR EXISTING WET WELL ①
NOT TO SCALE



FAN DUCTING TO DRY PIT ②
NOT TO SCALE



WET WELL CONCRETE CHAMFER ③
NOT TO SCALE

DRY PIT WALL/PILASTER REPAIR AND PIPE PENETRATION ④
NOT TO SCALE

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NO.	DATE	REVISIONS

DESIGN: MM	DATE
DRAWN: MM	
CHECKED: JG	
	JOSEPH I. GUTIERREZ RCE 55604 ENGINEER COREE LAUSTEEN RCE 67027 DISTRICT ENGINEER

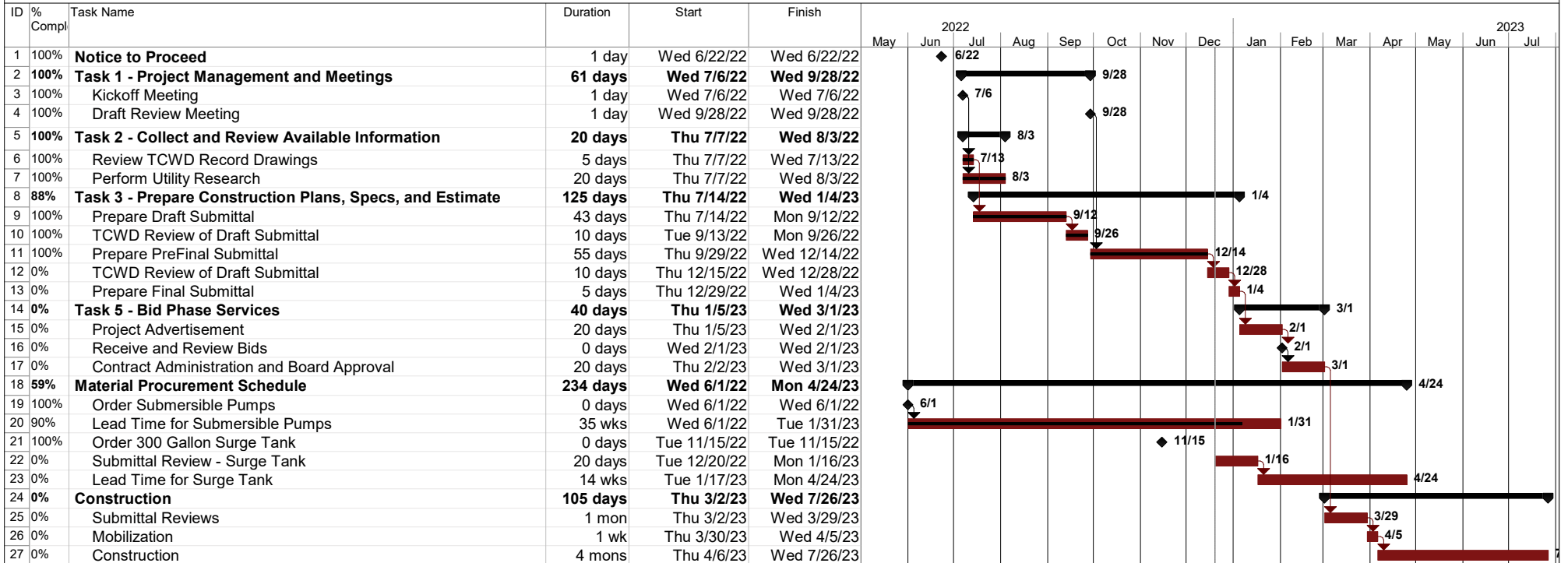
TRABUCO CANYON WATER DISTRICT
GOLF CLUB SEWER LIFT STATION IMPROVEMENTS PROJECT
PROJECT NO. 2122-010

MISCELLANEOUS MECHANICAL DETAILS

M-05
 SHEET 10 OF 10

TRABUCO CANYON WATER DISTRICT
Engineering Design Services for Golf Club Sewer Lift Station Improvements

PROJECT SCHEDULE
December 20, 2022



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JANUARY 4, 2023**

ENGINEERING MATTERS

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Rancho Cielo HOA Recycled Water Retrofit Evaluation
2. El Toro SLS Surge Tank Installation Project
3. Saddleback Meadows Development Status
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 | JANUARY 4, 2023**

OPERATIONAL MATTERS

ITEM 6: WATER SYSTEM UPDATES

The following is a brief report of the water system for **December 2022**.

Projects and Repairs

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

1. Assisted District Customer Service Field Technicians in the replacement of two potable water service curb stops on Trabuco Oaks.
2. Worked with Delco Service, Inc. to service two District pressure reduction valves in the Dove Canyon community.
3. Repaired a fire hydrant bury on Honeysuckle Street in the Walden Homes community.
4. Flushed twenty-two fire hydrants in the Robinson Ranch community.
5. Continues to work with TESCO Controls on SCADA/Telemetry System Project upgrades.

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 - 2022

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
Dimension WTP	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%	
SAC Pipeline Meter	138.0	151.0	51.0	0.0	0.0	0.0	203.0	261.0	229.0	210.4	162.7		1,406.1
Backwash, AF	4.0	4.0	1.0	0.0	0.0	0.2	4.0	5.0	5.0	5.0	4.1		32.3
Flushwater, AF	6.0	7.0	2.0	0.0	0.0	0.5	6.0	9.0	9.0	9.0	6.7		55.2
DWTP Effluent (1)	141.0	151.0	47.0	0.0	0.0	0.0	214.0	262.0	229.0	213.0	165.2		1,422.2
Groundwater, AF													
Trabuco Creek GWTF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
U.S. Well AF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Groundwater (2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Water Purchases, AF													
SMWD Treated Interconnection	0.0	0.0	27.0	57.0	75.0	54.0	3.0	0.0	13.0	0.0	0.0		229.0
IRWD Treated Interconnections	3.0	0.0	80.0	117.0	123.0	115.0	20.0	0.0	0.0	0.0	0.0		458.0
IRWD Irvine Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Purchases (3)	3.0	0.0	107.0	174.0	198.0	169.0	23.0	0.0	13.0	0.0	0.0		687.0
Total Supply													
Total Supply AF (1,2,3)	144.0	151.0	154.0	174.0	198.0	169.0	237.0	262.0	242.0	213.0	176.0		2,120.0
% Year - Peak Prod. - 2,449 AF (2018)	6%	12%	18%	25%	34%	40%	50%	61%	71%	79%	87%		-
AF/Day	4.6	5.4	5.0	5.8	6.4	5.6	7.6	8.5	8.1	6.9	5.9		6.3
CFS/Day, Avg.	2.3	2.7	2.6	2.9	3.2	2.7	3.8	3.6	3.8	3.4	2.9		3.1
Reservoir Storage													
Monthly Average, MG	8.8	9.0	8.9	8.8	9.0	8.9	8.7	8.8	9.0	8.9	8.8		8.9
Monthly Average, AF	27.0	27.6	27.3	27.0	27.6	27.3	26.7	27.0	27.6	27.3	27.0		27.2
Days of Storage	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0		3.5
SYSTEM DEMANDS													
District Operations, AF (1)													
Dimension WTP	0.12	0.10	0.03	0.00	0.00	0.01	0.26	0.23	0.17	0.15	0.21		1.29
Robinson Ranch WWTP	0.002	0.002	0.004	0.005	0.005	0.005	0.005	0.009	0.005	0.005	0.01		0.06
Supplemental Domestic to RW Res.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Subtotal	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.2	0.2		1.3
System Losses, AF (2)													
Flushing	0.00	0.00	0.52	0.00	0.00	0.00	0.63	0.66	0.27	0.3	0.4		2.8
Sewer Cleaning	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		0.2
Line Breaks	0.31	0.15	0.00	0.92	0.08	0.00	0.00	0.23	0.05	0.0	0.3		2.0
Subtotal	0.32	0.17	0.54	0.94	0.09	0.02	0.64	0.91	0.33	0.31	0.72		4.98
Zone Demands, AF (3)													
Topanga Canyon	2.0	2.0	2.0	2.0	2.6	3.0	3.0	3.0	3.0	2.4	1.9		26.9
Falcon Estates	0.4	0.5	0.6	0.7	0.9	0.8	0.8	0.9	0.9	0.7	0.6		7.8
Rose PRV/The Oaks	3.0	2.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	2.8	1.0		31.8
Canyon Creek	0.2	0.5	0.3	0.3	0.3	0.4	0.5	0.5	0.4	Inop.	0.3		3.7
Rose Pump Station	0.4	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1		1.6
Robinson Ranch	32.0	39.0	42.0	43.0	43.0	59.0	80.0	84.0	66.0	61.4	39.5		588.9
Dove Canyon	59.0	62.0	70.0	70.0	81.0	85.0	90.0	88.0	84.0	75.2	57.2		821.4
Subtotal	97.0	106.2	119.1	119.1	131.9	151.2	177.5	179.5	157.4	142.6	100.6		1,482.1
Total System Demand (1,2,3)	97.4	106.5	119.7	120.0	132.0	151.3	178.4	180.6	157.9	143.1	102.5		1,488.4

**TRABUCO CANYON WATER DISTRICT
MONTHLY WATER SYSTEM OPERATIONS SUMMARY - 2022**

System Demands**													
AF/Day	4.6	5.4	5.0	5.8	6.4	5.5	7.6	7.3	7.7	7.0	5.9		6.2
Daily Average, CFS	2.3	2.6	2.6	2.9	3.2	2.8	3.8	3.7	3.9	3.4	2.9		3.1
Other Water Deliveries/Purchases													
Ridgeline (DWTP Delivery)	130.0	140.0	43.0	0.0	0.0	0.0	202.0	247.0	214.0		153.8		1,129.8
El Toro (Interconnection Purchase)	3.0	0.0	80.0	117.0	123.0	115.0	20.0	0.0	0.0	0.0	0.0		458.0
Baker WTP (CSC Delivery)	125.5	114.2	51.3	0.0	0.0	16.8	91.9	112.0					511.7
Portola Hills (Wholesale Purchase)	10.0	10.0	10.0	11.0	12.0	12.0	13.0	13.0	16.0	14.0	11.0		132.0
Skyridge (Wholesale Purchase)	1.7	1.6	2.2	1.9	2.2	2.4	2.3	2.7	2.1	2.4	1.9		23.5
* Usage estimated	** Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)												

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JANUARY 4, 2023**

OPERATIONAL MATTERS

ITEM 7: WASTEWATER SYSTEM UPDATES

The following is a brief report of the wastewater system for **December 2022**.

Projects and Repairs

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

1. Assisted Ferguson Waterworks with the shutdowns of two three-inch meters on Robinson Ranch Road.
2. Conducted a camera inspection of the gravity sewer hot spots throughout the District.
3. Cleaned the Barneburg Sewer Lift Station wet well.
4. Cleaned the check vales at the Golf Club Sewer Lift Station.
5. Ran new lines and installed a new sump pump for the EQ dry pit basin at the Wastewater Treatment Plant.

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	3,000
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	25,029
Cleaning Cycle Period (Mos.) [Start date: 9/1/22]	3
Total Sewer Line Cleaned, %	12%
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>	4Q 2022
SSMP Program Audit – <i>Next Audit Report**</i>	February 2023

**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 | NON-DOMESTIC WATER SYSTEM SUMMARY - 2022

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	49.9	42.6	18.2	44.6	44.1	42.6	44.6	44.1	42.3	43.2	42.3		458.5	534.4
Reclaimed Reservoir Level, FT	1274.5	1,273.8	1,274.2	1,270.5	1,268.0	1,263.5	1,261.0	1,261.4	1,261.0	1,258.8	1,261.4	1,266.0		-	-
Reclaimed Reservoir Free Board, FT	25.5	0.7	0.3	4.0	6.5	11.0	13.5	13.1	13.5	15.7	13.1	8.5		-	-
Reclaimed Reservoir Storage, AF	145.5	138.6	140.5	122.8	108.9	84.8	73.2	75.0	73.2	65.9	75.0	96.4		-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	44.5

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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		2.2	26.3%
Dove Canyon Golf Course	106.7	5.8	13.3	21.1	26.3	34.9	52.9	48.7	54.4	41.0	20.9	12.0		331.4	310.7%
Dove Canyon Master Association	279.3	13.0	5.0	14.0	21.7	28.0	24.8	28.7	24.3	23.9	17.6	6.3		207.2	74.2%
Robinson Ranch	80.2	0.8	1.0	1.2	1.7	2.4	5.0	3.3	3.7	3.0	1.9	0.5		24.3	30.3%
Trabuco Highlands	159.7	1.2	2.3	5.0	6.9	9.8	10.3	10.2	7.5	7.8	4.5	1.7		67.2	42.1%
City of RSM	0.1	0.01	0.0	0.00	0.00	0.00	0.00	0.02	0.07	0.02	0.1	0.0		0.23	178.5%
Construction Water	N/A	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0		0.0	0.0%
SMWD	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	7.7	19.0	34.9		65.9	N/A
TY Nursery	17.9	0.0	0.0	20.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		20.9	116.7%
TOTAL, AF	653.2	21.1	21.7	62.2	56.8	75.2	93.1	91.1	94.6	83.6	64.2	55.6		719.2	110.1%
PERCENTAGE OF NDW ALLOCATION/YEAR		3.2%	6.6%	16.1%	24.8%	36.3%	50.5%	64.5%	79.0%	91.8%	101.6%	110.1%			
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		0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.08		0.19	14.2
Dove Tick Creek Production*	<i>Dry Season</i>	7.4	7.1	1.1	4.6	2.4	2.7	2.2	11.1	1.9	0.0	0.0		40.5	58.8
	TCWD Portion	7.4	7.1	1.1	2.3	1.2	1.4	1.1	5.6	0.9	0.0	0.0		28.0	-
	SMWD Portion	0.0	0.0	0.0	2.3	1.2	1.4	1.1	5.6	0.9	0.0	0.0		12.5	-
Dove Lake Water Pumped		0.0	0.0	0.0	0.0	0.0	40.2	62.7	49.4	30.8	45.6	35.4		264.1	185.8
Dove Lake Free Board, Ft		3.9	3.1	1.2	0.8	0.8	2.5	7.6	12.3	12.7	20.1	16.8		-	-
Dove Lake Storage, AF		161.0	165.0	176.3	177.3	177.3	176.0	95.0	54.0	46.3	28.5	33.2		-	-
Total Rainfall, In.		0.0	0.5	1.5	0.01	0.0	0.0	0.0	0.0	0.0	0.4	5.0		7.5	14.7

* SMWD share of Dove/Tick Pump Station Dry Season Water is 50% of production. Offline during the month of October 2022.

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

**TRABUCO CANYON WATER DISTRICT
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OPERATIONAL MATTERS

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

The following is a brief report of work completed by Maintenance staff for **December 2022**.

Projects and Repairs

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

1. Received and preparing/outfitting vehicle #12 for service consistent with District fleet standards
2. Assisted SS Mechanical on preliminary work for the surge tank replacement project at El Toro Sewer Lift Station
3. Worked with TESCO Controls and Hydrotech Electric on the SCADA Upgrade Project and PLC installations.
4. Completed the annual SMOG Report for 2022
5. Assisted Operations staff at witness testing at TESCO Controls (Temecula) for new SCADA panels.

Projects and Repairs

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

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

None

CONTACTS (staff responsible): PEREA/STROUD

**TRABUCO CANYON WATER DISTRICT
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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