



**ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
ADMINISTRATION FACILITY, BOARDROOM
NOVEMBER 3, 2021 AT 7:00 AM**

COMMITTEE MEMBERS

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

DISTRICT STAFF

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

AGENDA NOTE:

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

ADMINISTRATIVE MATTERS

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

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:

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

1. *October 6, 2021 Committee Meeting*
2. *October 18, 2021 Special Committee Meeting*

ENGINEERING MATTERS

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

ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING FISCAL YEAR 2021/2022 CAPITAL IMPROVEMENT PROGRAM BUDGET REALLOCATIONS

RECOMMENDED ACTION:

Receive information at the time of the meeting and recommend forwarding DRAFT Proposed Reallocated Fiscal Year 2021/2022 Capital Improvement Program Budget to the Board of Directors (Action Calendar).

ITEM 3: DIMENSION WATER TREATMENT PLANT BACKWASH TANK REPLACEMENT PROJECT UPDATE

RECOMMENDED ACTION:

Receive information at the time of the meeting. No action required.

ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING HERITAGE SEWER LIFT STATION REHABILITATION PROJECT

RECOMMENDED ACTION:

Receive information at the time of the meeting, and take action as deemed appropriate.

ITEM 5: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING EL TORO SEWER LIFT STATION SURGE TANK REHABILITATION PROJECT

RECOMMENDED ACTION:

Receive information at the time of the meeting, and take action as deemed appropriate.



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ITEM 6: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING ADOPTION OF MEMORANDUM OF UNDERSTANDING BETWEEN THE COUNTY OF ORANGE FOR USE OF COUNTYWIDE MASS NOTIFICATION SYSTEM (ALERTOC)

RECOMMENDED ACTION:

Recommend the Board of Directors approve and authorize the General Manager to execute the Memorandum of Understanding Between the County of Orange and Participants for Use of Countywide Mass Notification System (Action Calendar).

ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Saddle Crest Development
2. Dimension Water Treatment Plant Office and Storage Project
3. Other Projects

RECOMMENDED ACTION:

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

OPERATIONAL MATTERS

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

ITEM 8: WATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 9: WASTEWATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 10: MAINTENANCE DEPARTMENT UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

REGULATORY AND OTHER MATTERS

ITEM 11: OTHER MATTERS/REPORTS

RECOMMENDED ACTION:

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

ADJOURNMENT



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | NOVEMBER 3, 2021**

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 | NOVEMBER 3, 2021**

ADMINISTRATIVE MATTERS

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:

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

- 1. October 6, 2021 Committee Meeting*
- 2. October 18, 2021 Special Committee Meeting*

CONTACTS (staff responsible): PALUDI/PEREA/SANGI



TRABUCO CANYON WATER DISTRICT ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | OCTOBER 6, 2021

DIRECTORS PRESENT

Ed Mandich, Committee Chair
Stephen Dopudja, Committee Member

STAFF PRESENT

Fernando Paludi, General Manager
Michael Perea, Assistant General Manager
Lorrie Lausten, District Engineer
Karen Warner, Principal Accountant
Gary Kessler, Water Superintendent
Jason Stroud, Maintenance Superintendent
Oscar Ulloa, Wastewater Chief Plant Operator
Lisa Marie Sangi, Executive Assistant

PUBLIC PRESENT

None

PUBLIC PRESENT VIA CONFERENCE CALL

There were members of the public on the conference call.

CALL MEETING TO ORDER

Director Mandich called the October 6, 2021 Engineering/Operational Committee Meeting to order at 7:00 AM. Public access to the meeting was made available by teleconference broadcast.

VISITOR PARTICIPATION

No comments were received.

ORAL COMMUNICATION

No comments were received.

COMMITTEE MEMBER COMMENTS

No comments were received.

REPORT FROM THE GENERAL MANAGER

Mr. Paludi expressed his appreciation for the Directors' participation at the Special Board Meeting the prior evening.

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

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

RECOMMENDED ACTION

Director Mandich and Mr. Perea recommended that the Engineering/Operational Committee Meeting Recap(s) be forwarded to the Board of Directors for approval (Consent Calendar).

ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING THE CONTRACT CHANGE ORDER NO. 2 TO BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT

Mr. Paludi introduced this matter to the Committee for consideration, and he reported that this project is functionally complete. Ms. Lausten presented a contract change order for Committee review which included certain project costs and a proposed improvement for facility security fence. Ms. Lausten reviewed the proposed improvement design and dimensions. Discussion occurred concerning certain facility screening challenges and costs associated with the security fence improvements.

RECOMMENDED ACTION:

The Committee recommended the Board of Directors authorize the General Manager to execute Contract Change Order No. 2 with Ferreira Construction in the amount of \$53,883.00. (Action Calendar).

ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING PARTICIPATION IN THE COUNTY OF ORANGE JOINT AGREEMENT FOR 800MHz COUNTYWIDE COORDINATED COMMUNICATIONS SYSTEM

Mr. Perea presented this matter for Committee consideration, and he provided a brief overview of the benefits associated with the WEROC radio communication system which uses the Orange County Sheriff's Department 800 MHz system. Mr. Perea reported that the County of Orange has updated the joint agreement for participation in the system with associated nominal annual costs. Mr. Perea recommended that Board of Directors approve the joint agreement for continued participation in the communication system.

RECOMMENDED ACTION:

The Committee recommended the Board of Directors authorize the General Manager to execute the County of Orange Joint Agreement for the Orange County 800 MHz Emergency Communications System (Action Calendar).

ITEM 4: OTHER ENGINEERING AND OPERATIONS PROJECTS

1. Trabuco Creek Wells Facility

Mr. Paludi introduced this matter for Committee consideration, and he provided a brief review of the current condition of the facility. Discussion occurred concerning planned improvements to the pump equipment and wells.

2. Saddleback Meadows Development

Ms. Lausten provided an update on the Sub-Area Master Plan (SAMP), and she provided a handout which highlighted the onsite potable water distribution system. Discussion occurred concerning certain system improvements.

3. Saddlecrest Development

Mr. Paludi reported that District staff will be meeting with the developer and their team to review the facility start-up plan and schedule.

4. Heritage Sewer Lift Station

Ms. Lausten provided a brief update on the planned improvements to this facility, and she reported that staff will review the rehabilitation design.

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ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | OCTOBER 6, 2021**

5. El Toro Sewer Lift Station

Mr. Perea reported that District staff are working with an independent, third-party surge tank manufacturer for the appropriate surge tank for the facility. Mr. Perea added that District staff will coordinate with its electrical and mechanical contractors for the planned improvements.

5. Dimension Water Treatment Plant Backwash Tank Replacement Project

Ms. Lausten provided a brief project update for Committee review, and she highlighted the benefits of the single backwash tank at the facility. Ms. Lausten provided a brief update on the budgeted improvements to the onsite office trailer improvements.

6. Other Projects

Mr. Paludi provided a brief update on the City of Rancho Santa Margarita (City) street improvement project delays and the impact to the District's previous pipeline repairs on Silvertree Lane. Discussion occurred concerning the City's requirements on street improvements post-emergency pipeline repairs; Ms. Lausten reported that the District has satisfied the City's requirements on this matter. The Committee recommended that District staff follow up with City staff to confirm the timeline for planned street improvements.

RECOMMENDED ACTION

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

ITEM 5: WATER SYSTEM UPDATES

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

1. Responded to an emergency leak and subsequent repair at the Orange County Fire Authority (OCFA) Station 18 two-inch domestic water service lateral.
2. Responded to an emergency eight-inch line break on Live Oak Canyon Road and worked with Ferreira Construction to repair the pipeline and install an additional eight-inch isolation valve.
3. Restarted the Dimension Water Treatment Plant on September 15th after the completion of the Backwash Tank Replacement Project
4. Continued with the Dead-End Flushing Program in the District's service area.

Mr. Kessler reported that operations has completed the required lead & copper sampling the prior month. Mr. Kessler provided a review of the Monthly Water System Operations System Summary for September 2021, and he reported that supplemental domestic water had been provided to the reclaimed water reservoir to meet system demands.

RECOMMENDED ACTION

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

ITEM 6: WASTEWATER SYSTEM UPDATES

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

1. Annual maintenance for the District's Non-Domestic Water Cla-Vals for the Dove Canyon service connections.
2. Replaced four valves on the secondary effluent filter system at the Wastewater Treatment Plant (WWTP)
3. Met with GMU & JES to discuss options for dredging the recycled water reservoir at the WWTP.
4. Worked with Maintenance staff to replace discharge side check valve at Plano Sewer Lift Station.

**TRABUCO CANYON WATER DISTRICT
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5. Worked with Maintenance staff and Xylem Pumping to install a backup pump solution at Golf Club Sewer Lift Station.

Mr. Perea provided a review of the Monthly Non-Domestic Water (NDW) System Summary report for September 2021, and he reported that operations is currently supplementing the reclaimed water reservoir with domestic water to system demands. Mr. Perea added that District staff will track total user demands and supplementally invoice users in accordance with the Board adopted NDW allocation policy.

Mr. Ulloa provided an update on the potential dredging of the reclaimed water reservoir, and he reported that that District staff met with GMU Engineering and JES Construction to evaluate the current challenges with the reservoir. Discussion occurred concerning the budgetary order of magnitude and planning efforts for this work, and the potential for dredging Dove Lake.

RECOMMENDED ACTION

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

ITEM 7: MAINTENANCE DEPARTMENT UPDATES

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

1. Performed backup generator preventative maintenance and repairs at booster pump stations and sewer lift stations.
2. Worked with Wastewater Operations staff to replace the secondary effluent filter system valves at the Wastewater Treatment Plant.
3. Worked with Wastewater Operations to replace discharge side check valve at Plano Sewer Lift Station.
4. Assisted the Customer Service Field Technician with annual backflow device testing and repairs in the District's service area.
5. Worked with TESCO Controls with the SCADA upgrade project at the Dimension Water Treatment Plant and WWTP.
6. Worked with Wastewater Operations and Xylem Pumping to install a backup pump solution at Golf Club Sewer Lift Station.

Mr. Stroud provided a brief update concerning facility and vehicle fire extinguisher servicing and employee fire extinguisher use training.

RECOMMENDED ACTION

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

ITEM 8: OTHER MATTERS/REPORTS

There were no other matters or reports received.

RECOMMENDED ACTION

There was no action taken.

ADJOURNMENT

Director Mandich adjourned the October 6, 2021 Engineering/Operational Committee Meeting at 8:05 AM.



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE SPECIAL MEETING RECAP
OCTOBER 18, 2021**

DIRECTORS PRESENT

Ed Mandich, Committee Chair
Stephen Dopudja, Committee Member

STAFF PRESENT

Michael Perea, Assistant General Manager
Lorrie Lausten, District Engineer
Lisa Marie Sangi, Administrative Assistant

DISTRICT CONSULTANTS PRESENT

Cindy Miller, Hazen & Sawyer
Tory Yokoyama, Hazen & Sawyer

PUBLIC PRESENT VIA CONFERENCE CALL

None

CALL MEETING TO ORDER

Director Mandich called the October 18, 2021 Engineering/Operational Committee Special Meeting to order at 5:00 p.m. Public access to the meeting was made available by telecommunication.

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

Mr. Perea provided a report on the following matters:

- General Manager Fernando Paludi was out of the office.
- District's Administration Facility experienced an overnight flooding due to a failed toilet in a restroom in the customer service side of the building. Mr. Perea reported that District staff were working with a remediation contractor to affect the necessary repairs.

ITEM 1: APPROVAL OF CONTRACT WITH HAZEN SAWYER FOR THE DISTRICT'S 2021 SYSTEMWIDE MASTER PLAN AND CONDITION ASSESSMENT

Mr. Perea presented this matter for Committee consideration, and he reported that this matter was budgeted for Fiscal Year 2021/2022. Ms. Lausten introduced Ms. Miller and Mr. Yokoyama to the Committee, and she reported that District staff issued a Request for Proposals (RFP) for the preparation of a Master Plan and Condition Assessment to five firms and received three proposals. Ms. Lausten reviewed the RFP scope of work with the

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SPECIAL ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | JUNE 9, 2021**

Committee, and she highlighted the anticipated level of effort and the goals of the final work product. Ms. Lausten added that both Hazen Sawyer and MKN submitted revised cost proposals for District consideration after conducting consultant interviews and reference checks. Discussion occurred concerning similar project examples prepared by the consultants, labor hour allocation per task, and total project cost concerns. Ms. Lausten recommended Hazen Sawyer for preparation of the District's 2021 Master Plan and Condition Assessment. Director Mandich recommended that District staff present all three proposals to the Board with a cost analysis that segregates certain costs and labor hours as discussed.

RECOMMENDED ACTION

The Committee recommended forwarding the information and presentation to the Board of Directors for their consideration (Action Calendar).

ADJOURNMENT

Director Mandich adjourned the October 18, 2021 Engineering/Operational Committee Special Meeting at 5:18 p.m.

DRAFT

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENGINEERING MATTERS

ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING FISCAL YEAR 2021/2022 CAPITAL IMPROVEMENT PROGRAM BUDGET REALLOCATIONS

Trabuco Canyon Water District’s (District) fiscal year runs from July 1 through June 30 each year, and District staff prepares a list of proposed capital improvement projects (CIP) for Board consideration and adoption at the June Regular Board Meeting. On June 16, 2021, the Board of Directors approved the following CIP Budget:

ITEM NO.	PROJECT	PROJECT BASIS	APPROVED BUDGET
WATER			
1	PRV Improvements	Reliability	\$ 55,000
2	Valve Replacement Program	End of Service Life	\$ 37,500
3	DWTP Chlorine Building Improvements - Doors & Roof	Safety; End of Service Life	\$ 35,000
4	DWTP Office & Storage	Safety; End of Service Life	\$ 200,000
5	Live Oak Transmission Main Upgrade	Reliability	\$ 900,000
WATER SUBTOTAL			\$ 1,227,500
DISTRICT-WIDE			
6	SCADA System Upgrades	Reliability; End of Service Life	\$ 1,000,000
7	Meter Replacement Program	Water Use Efficiency	\$ 35,000
8	AMR/AMI System Implementation - Grant Funding	Water Use Efficiency	\$ 600,000
9	District Facility Security Improvements	Security	\$ 100,000
10	Skiploader - AQMD Tier 1 Compliant	End of Service Life	\$ 100,000
11	Pump Replacement Program	End of Service Life	\$ 100,000
12	Portable Generator - Grant Funding	Reliability	\$ 300,000
13	Master Plan and Condition Assessment	Reliability; Safety	\$ 600,000
14	Field Office Remediation-Excavation, French Drain, Retaining Wall	Safety	\$ 20,000
DISTRICT-WIDE SUBTOTAL			\$ 2,855,000
WASTEWATER / RECLAIMED / RECYCLED			
15	Wet Well Recoating Program - Sewer	General Maintenance	\$ 25,000
16	Manhole Recoating Program - Sewer	General Maintenance	\$ 20,000
17	PRV Vault Improvements Program - Reclaimed	Reliability	\$ 45,000
18	SLS Surge Tank Improvements/Rehabilitation Program - Sewer	General Maintenance	\$ 25,000
19	Heritage SLS Improvements - Security, Asphalt ,Piping, Bypass, Elect.	End of Service Life	\$ 240,000
20	Golf Club SLS Improvements - MCC & Sewer Bypass	End of Service Life	\$ 150,000
21	WWTP Headworks Climber Screen - Sewer	End of Service Life	\$ 110,000
22	Recycled Water Pump Station Improvements- Header, Filters	End of Service Life	\$ 120,000
WASTEWATER / RECLAIMED / RECYCLED SUBTOTAL			\$ 735,000
TOTAL ANNUAL CIP			\$ 4,817,500

After a careful review of the adopted FY 2021/2022 CIP and recognizing the impacts of current supply chain challenges as well as the critical nature of high priority projects, District staff proposes to reallocate certain approved budgets to other projects within the respective funds (Exhibit 1). More information will be provided at the time of the meeting.

FUNDING SOURCE:

General Fund

FISCAL IMPACT:

Adopted FY 2021/2022 CIP Budget: \$4,817,500
Proposed Reallocated FY 2021/2022 CIP Budget: \$4,705,500

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENVIRONMENTAL COMPLIANCE:

Not applicable

RECOMMENDED ACTION:

Receive information at the time of the meeting and recommend forwarding DRAFT Proposed Reallocated Fiscal Year 2021/2022 Capital Improvement Program Budget to the Board of Directors (Action Calendar).

EXHIBIT(S):

1. DRAFT Proposed Reallocated Fiscal Year 2021/2022 Capital Improvement Program Budget

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

TRABUCO CANYON WATER DISTRICT
CAPITAL IMPROVEMENT PLAN BUDGET - REALLOCATION
FY 21/22

ITEM NO.	PROJECT	PROJECT BASIS	APPROVED BUDGET	GRANT FUNDS	REVISED BUDGET
WATER					
1	PRV Improvements	Reliability	\$ 55,000		\$ 55,000
2	Valve Replacement Program	End of Service Life	\$ 37,500		\$ 37,500
3	DWTP Chlorine Building Improvements - Doors & Roof	Safety; End of Service Life	\$ 35,000		\$ 35,000
4	DWTP Office & Storage	Safety; End of Service Life	\$ 200,000		\$ 400,000
5	Live Oak Transmission Main Upgrade	Reliability	\$ 900,000		\$ -
5B	DWTP Tanks	End of Service Life	\$ -		\$ 90,000
5C	Live Oak Pipeline Scoping	Reliability	\$ -		\$ 200,000
WATER SUBTOTAL			\$ 1,227,500	\$ -	\$ 817,500
DISTRICT-WIDE					
6	SCADA System Upgrades	Reliability; End of Service Life	\$ 1,000,000		\$ 1,000,000
7	Meter Replacement Program	Water Use Efficiency	\$ 35,000		\$ 35,000
8	AMR/AMI System Implementation - Grant Funding	Water Use Efficiency	\$ 600,000	\$ 250,000	\$ 850,000
9	District Facility Security Improvements	Security	\$ 100,000		\$ 100,000
10	Skiploader - AQMD Tier 1 Compliant	End of Service Life	\$ 100,000		\$ -
11	Pump Replacement Program	End of Service Life	\$ 100,000		\$ 250,000
12	Portable Generator - Grant Funding	Reliability	\$ 300,000	\$ 99,750	\$ 190,000
13	Master Plan and Condition Assessment	Reliability; Safety	\$ 600,000		\$ 600,000
14	Field Office Remediation-Excavation, French Drain, Retaining Wall	Safety	\$ 20,000		\$ 15,000
DISTRICT-WIDE SUBTOTAL			\$ 2,855,000	\$ 349,750	\$ 3,040,000
WASTEWATER / RECLAIMED / RECYCLED					
15	Wet Well Recoating Program - Sewer	General Maintenance	\$ 25,000		
16	Manhole Recoating Program - Sewer	General Maintenance	\$ 20,000		\$ 20,000
17	PRV Vault Improvements Program - Reclaimed	Reliability	\$ 45,000		\$ -
18	SLS Surge Tank Improvements/Rehabilitation Program - Sewer	General Maintenance	\$ 25,000		\$ -
19	Heritage SLS Improvements - Security, Asphalt ,Piping, Bypass, Elect.	End of Service Life	\$ 240,000		\$ -
20	Golf Club SLS Improvements - MCC & Sewer Bypass	End of Service Life	\$ 150,000		\$ 420,000
21	WWTP Headworks Climber Screen - Sewer	End of Service Life	\$ 110,000		\$ -
22	Recycled Water Pump Station Improvements- Header, Filters	End of Service Life	\$ 120,000		\$ -
23	El Toro SLS Surge Tank Improvements	End of Service Life	\$ -		\$ 225,000
24	El Toro SLS Improvements - Electrical for pumps/MCC	End of Service Life	\$ -		\$ 193,000
WASTEWATER / RECLAIMED / RECYCLED SUBTOTAL			\$ 735,000	\$ -	\$ 858,000
TOTAL ANNUAL CIP			\$ 4,817,500	\$ 349,750	\$ 4,715,500

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENGINEERING MATTERS

ITEM 3: DIMENSION WATER TREATMENT PLANT BACKWASH TANK REPLACEMENT PROJECT UPDATE

Trabuco Canyon Water District (District) owns, operates, and maintains the Dimension Water Treatment Plant (WTP) in the City of Lake Forest. This plant receives untreated imported water from Metropolitan Water District (MWD), via the Baker Pipeline, and produces the majority of the water distributed to District customers. Within the WTP is the backwash waste sump pump which houses two pumps (10hp and 40hp) that transfer the backwash filter wastewater to two bolted steel waste settling tanks. These tanks hold the backwash and flush water and release it to the sewer system at approximately 250 gpm. The two 42,000 gallon tanks have been replaced with one 94,000 gallon bolted steel tank, along with abandonment of equipment that was not in use, grading to improve site drainage, concrete gutter and paving. The project cost is estimated at \$365,000 due to unknown underground conditions and the addition of cathodic protection for two on-site tanks (pending change order).

FUNDING SOURCE:

General Fund

FISCAL IMPACT (PROJECT BUDGET):

\$274,876 (FYE 2021)

\$365,000 (Revised-Includes Engineering/Construction Management)

ENVIRONMENTAL COMPLIANCE:

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

RECOMMENDED ACTION:

Receive information at the time of the meeting. No action required.

EXHIBIT(S):

1. Project Photos

CONTACTS (staff responsible): PALUDI/LAUSTEN



Dimension Water Treatment Plant Backwash Settling Tank Improvements

Dimension Water Treatment Plant Backwash Settling Tank Improvements



Original 2 Tanks



New Tank, Abandonments,
Paving and Drainage.

Dimension Water Treatment Plant Backwash Settling Tank Improvements



Original 2 Tanks



New Tank

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENGINEERING MATTERS

ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING HERITAGE SEWER LIFT STATION REHABILITATION PROJECT

Trabuco Canyon Water District (District) owns and operates the Heritage Sewer Lift Station (Heritage SLS) is located on Heritage Drive between Robinson Ranch Road and Silvertree Lane in the Trabuco Highlands Community (Exhibit 1). The Heritage SLS is a critical pump station that conveys pumped wastewater flows from a portion of the lower Dove Canyon community, 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).

For Fiscal Year 2020-2021, Heritage SLS is budgeted for a site and security upgrade project which includes a block wall, drainage repairs, paving and a new gate; however, during the design, staff re-evaluated the station due to ground subsidence around an existing manhole/sewer pipeline and operations request of the installation of a sewer by-pass valve assembly for emergency and maintenance work. Staff contracted JIG Consultants for the mechanical design and the 100% Plans and Engineers Estimate are included as Exhibit 2.

FUNDING SOURCE:

General Fund

FISCAL IMPACT (PROJECT BUDGET):

\$240,000

\$445,000 (Revised-Includes Engineering)

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption

RECOMMENDED ACTION:

Receive information at the time of the meeting, and take action as deemed appropriate.

EXHIBIT(S):

1. Project Site Map
2. 100% Engineering Plans/Cost Estimate


CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN



Project Location



Location Map

 Area of Work

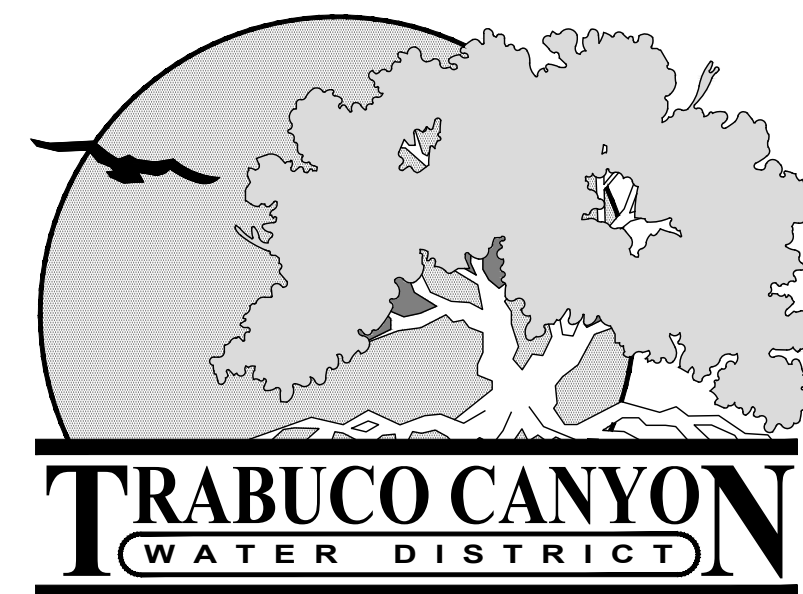
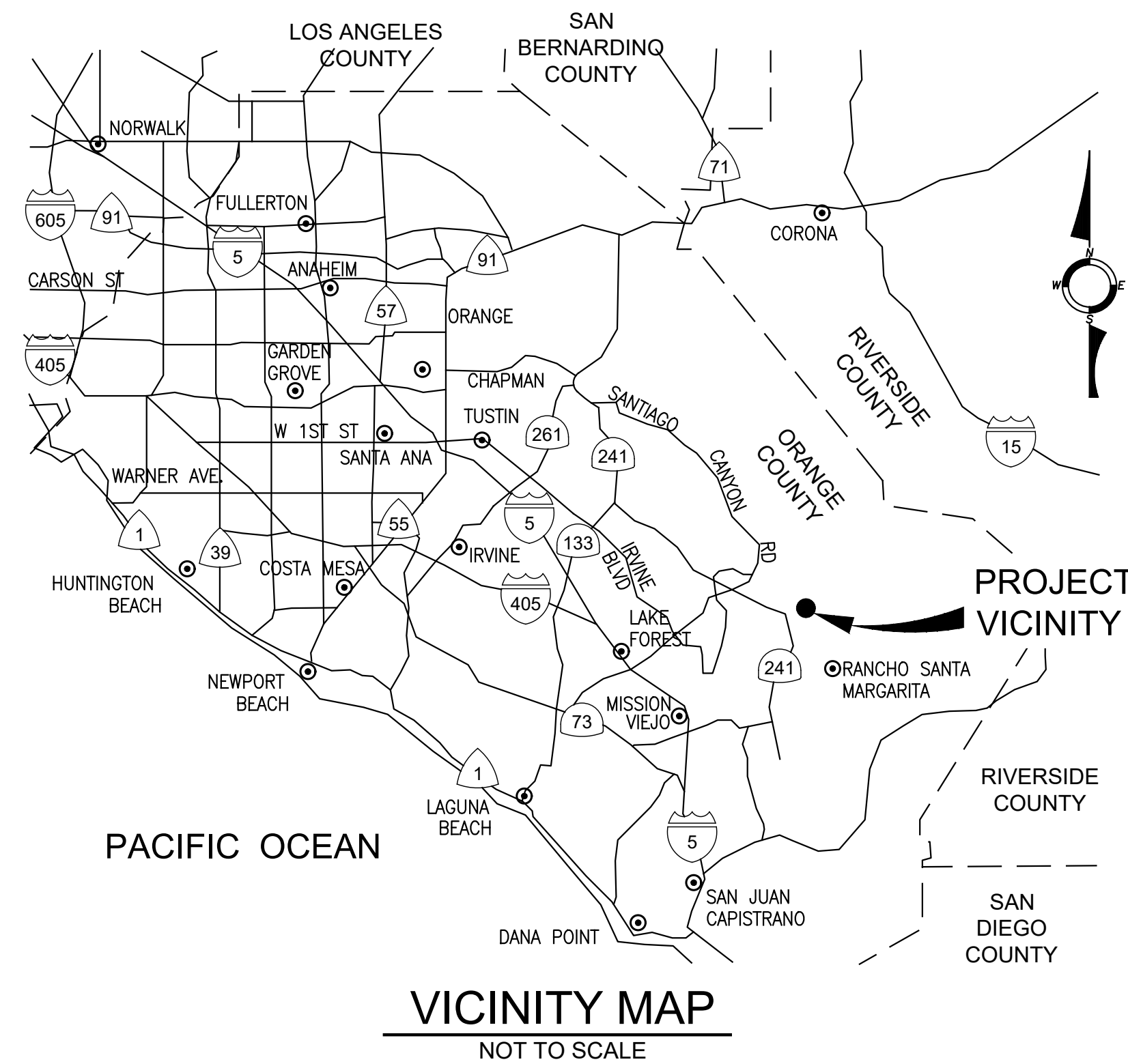
Heritage Sewer Lift Station

Address: 21494 Plano Trabuco Road
Trabuco Canyon CA 92679

TRABUCO CANYON WATER DISTRICT

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

PROJECT NO. 2122-009



OCTOBER 2021



SHEET INDEX

DWG. NO.	SHT. NO.	SHEET TITLE
G-1	1	TITLE SHEET, SHEET INDEX, VICINITY AND LOCATION MAP
G-2	2	GENERAL NOTES, ABBREVIATIONS, LEGEND, AGENCY INDEX, BENCHMARK, DEMOLITION NOTES, AND CONSTRUCTION NOTES
D-1	3	SITE DEMOLITION PLAN AND MECHANICAL DRY PIT IMPROVEMENTS
C-1	4	PLAN & PROFILE OF 8-INCH INFLUENT SEWER
C-2	5	BYPASS WET WELL PLAN AND SECTIONS
C-3	6	MISCELLANEOUS CIVIL DETAILS

APPROVED:	
TRABUCO CANYON WATER DISTRICT	
FERNANDO PALUDI R.C.E. 55245 GENERAL MANAGER	DATE
LORRAINE S. LAUSTEN R.C.E. 67027 PRINCIPAL ENGINEER	DATE



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.
- TRENCH BACKFILL FOR PIPELINES SHALL BE PER $\text{\textcircled{2}}_{\text{C-3}}$
- 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.
- THE CONTRACTOR SHALL SUBMIT A SHORING PLAN PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER AS REQUIRED PER SECTION 7-8 OF THE GENERAL PROVISIONS.
- PIPELINES SHALL BE PRESSURE TESTED 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 CLEAN OF DEBRIS, WITH DUST AND NOISANCE 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 EQUAL 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 BURIED BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL. AFTER INSTALLATION, ALL BURIED BOLTS, NUTS, ETC., SHALL BE COATED PER SECTION 33 05 31.
- 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.
- 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. SEE NOTE 9.
- 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 CONTRACTORS 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 SHAPED 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 COMPLETIONS 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 NOISANCE; 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, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR STUCCO 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.
- 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.

ABBREVIATIONS:

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
CF	CURB FACE
CL OR $\text{\textcircled{C}}$	CENTERLINE
A.	CONCRETE
DI	DUCTILE IRON
DIA	DIAMETER
DW	DOMESTIC WATER
ELEC	ELECTRIC
EX. OR EXIST	EXISTING
FS	FINISHED SURFACE
FH	FIRE HYDRANT
FT	FEET
INV	INVERT ELEVATION
IW	IRRIGATION WATERLINE
L=	LENGTH
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN.	MINIMUM
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
No.	NUMBER
NTS	NOT TO SCALE
OCFA	ORANGE COUNTY FIRE AUTHORITY
PB	PULL BOX
PED	PEDESTAL
PL OR $\text{\textcircled{P}}$	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
R/W	RIGHT OF WAY
FW	RECLAIMED WATER
SD	STORM DRAIN
SDR	STANDARD DIMENSIONAL RATIO
S OR SS	SANITARY SEWER
SL	STREET LIGHT
SMH	SEWER MANHOLE
STA	STATION
STD	STANDARD
TB	TOP OF BERM
TOWD	TRABUCO CANYON WATER DISTRICT
TYP	TYPICAL

AGENCY INDEX

TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DR.
TRABUCO CANYON, CA. 92679

AT&T
1265 N VAN BUREN ST #180
ANAHEIM, CA. 92807

SOUTHERN CALIFORNIA EDISON
14155 BAKE PARKWAY
IRVINE, CA. 92718

(800) SOUTHERN CALIFORNIA GAS CO.
1919 STATE COLLEGE BLVD
ANAHEIM, CA. 92806

CONTACT

LORRIE LAUSTEN

RYAN SAWASAKI

PHONE

(949) 858-0277 X130

(714) 507-3526

(714) 514-5654

(800) 427-2200

BENCHMARK

OCs BENCHMARK NAVD 85/1995 OCs ADJUSTMENT
BM # 3PP-28-59 ELEVATION = 1155.201'

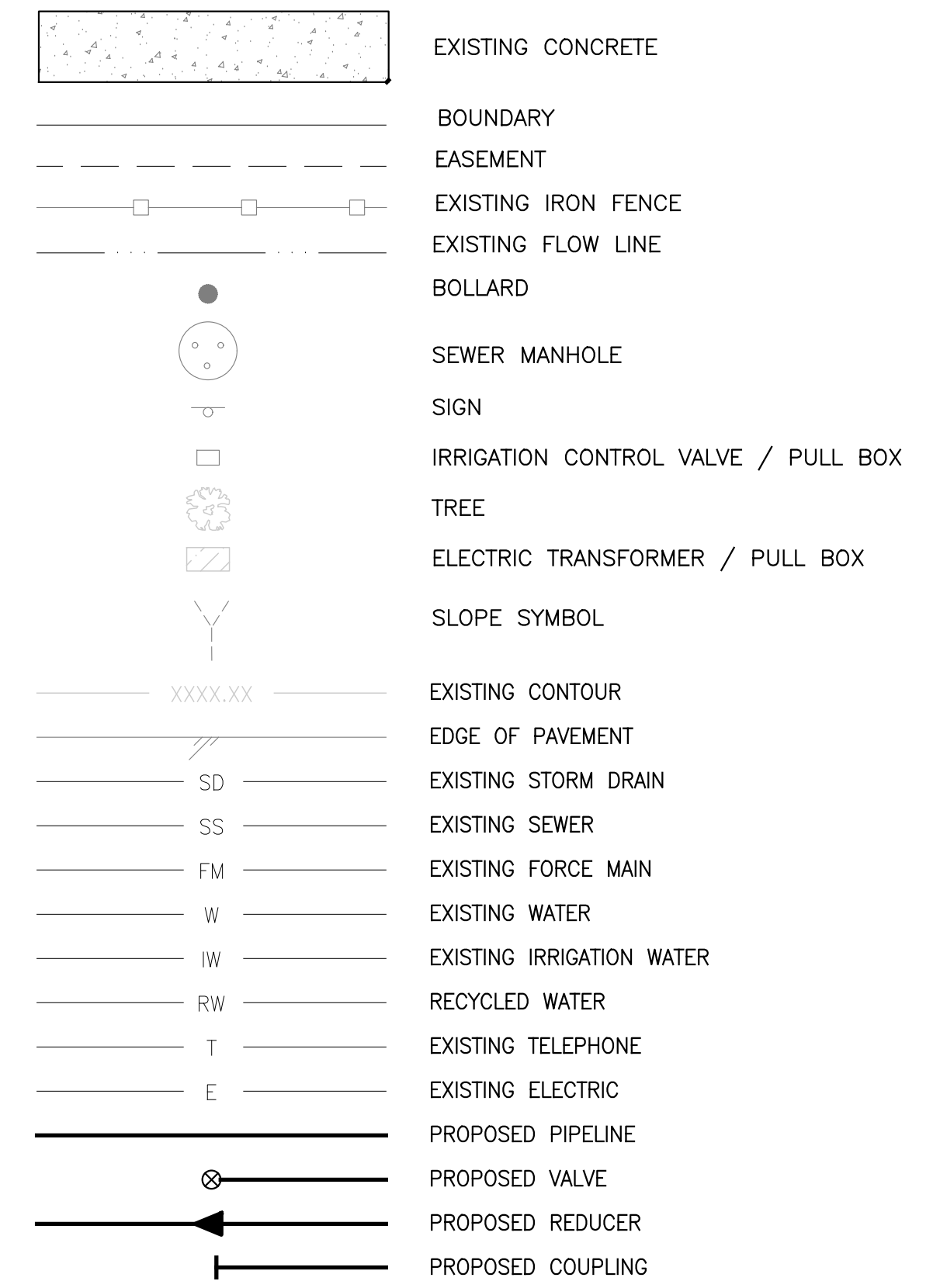
DEMOLITION NOTES

- DEMOLISH EXISTING WET WELL, PIPING, VALVES, AND APPURTENANCES
- REMOVE AND DISPOSE OF ALL EQUIPMENT INSIDE EXISTING BYPASS STRUCTURE AS SHOWN
- PROTECT IN PLACE
- RELOCATE EXISTING WATER SERVICE LINE AND ELECTRICAL CONDUIT. PULL NEW CONDUCTORS THROUGH CONDUIT
- REMOVE AND DISPOSE OF EXISTING DUCTILE IRON PIPE, SUPPORTS, VALVES, AND APPURTENANCES
- CUT AND REMOVE SECTIONS OF EXISTING FORCE MAIN
- DEMOLISH EXISTING BYPASS/BLOW-OFF ASSEMBLY
- DEMOLISH EXISTING AIR RELEASE VALVE ASSEMBLY AND UNDERGROUND STRUCTURE

CONSTRUCTION NOTES

- CONSTRUCT 4" DUCTILE IRON BLIND FLANGE (EPOXY COATED)
- CONSTRUCT 8" DUCTILE IRON BLIND FLANGE (EPOXY COATED)
- CUT EXISTING 8" PVC SEWER
- CONSTRUCT INTERIM RETROFIT OF EXISTING SEWER MANHOLE FRAME AND COVER PER $\text{\textcircled{1}}_{\text{C-3}}$
- CONSTRUCT 7'-0" I.D. PRECAST CONCRETE BYPASS WET WELL WITH BOTTOM SLAB PER SHEET C-2
- CONSTRUCT 8" SDR 26 PVC SEWER PER $\text{\textcircled{2}}_{\text{C-3}}$
- CONSTRUCT 3 FT x 4 FT ALUMINUM SINGLE LEAF, SPRING ASSISTED H-20 TRAFFIC RATED ACCESS HATCH
- JOIN EXISTING 8" SEWER WITH STAINLESS STEEL SHIELDED RUBBER COUPLING
- REMOVE EXISTING 8" PVC SEWER
- CONSTRUCT PERMANENT 6" BYPASS PIPING, PLUG VALVES, AND STRUCTURE PER $\text{\textcircled{5}}_{\text{C-3}}$
- CONSTRUCT 2" AIR RELEASE ASSEMBLY WITH STRUCTURE PER $\text{\textcircled{6}}_{\text{C-3}}$
- REMOVE EXISTING 10" PVC FORCE MAIN AND REPLACE WITH 10 LF OF 10" DI FORCE MAIN, 10" PLUG VALVE WITH VALVE BOX, AND 10" X 6" REDUCER PER $\text{\textcircled{1}}_{\text{C-1}}$
- CONSTRUCT 8" INFLUENT SEWER WYE CONNECTION WITH PLUG VALVES PER $\text{\textcircled{2}}_{\text{C-1}}$
- CONSTRUCT TEMPORARY PLUG ON EXISTING MANHOLE OUTLET

LEGEND:



Drawing Name: C:\Users\Public\Desktop\JIG\Consultants\Projects\Heritage Sewer Lift Station Improvements\2021\2021-08-20\2021-08-20.dwg
 Date: 08/20/2021 10:22am By: JIG DAD 2
 Drawing Name: C:\Users\Public\Desktop\JIG\Consultants\Projects\Heritage Sewer Lift Station Improvements\2021\2021-08-20\2021-08-20.dwg

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

DIGALERT

CALL BEFORE YOU DIG

TOLL FREE 1-800-227-2800

A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

TWO WORKING DAYS BEFORE YOU DIG

REV.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

DESIGN BY: J.T.

REVIEWED BY: J.C.

JIG CONSULTANTS

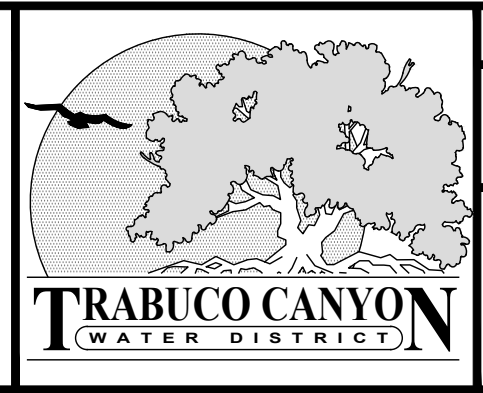
318 W KATELLA AVE, SUITE A
ORANGE, CA 92867
(714) 978-4407
www.jigconsultants.com

APPROVED

TRABUCO CANYON WATER DISTRICT

DATE

LORRAINE S. LAUSTEN, P.E. RCE #67027
DISTRICT ENGINEER



TRABUCO CANYON WATER DISTRICT

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

GENERAL NOTES, ABBREVIATIONS, LEGEND, AGENCY INDEX, BENCHMARK, DEMOLITION NOTES, AND CONSTRUCTION NOTES

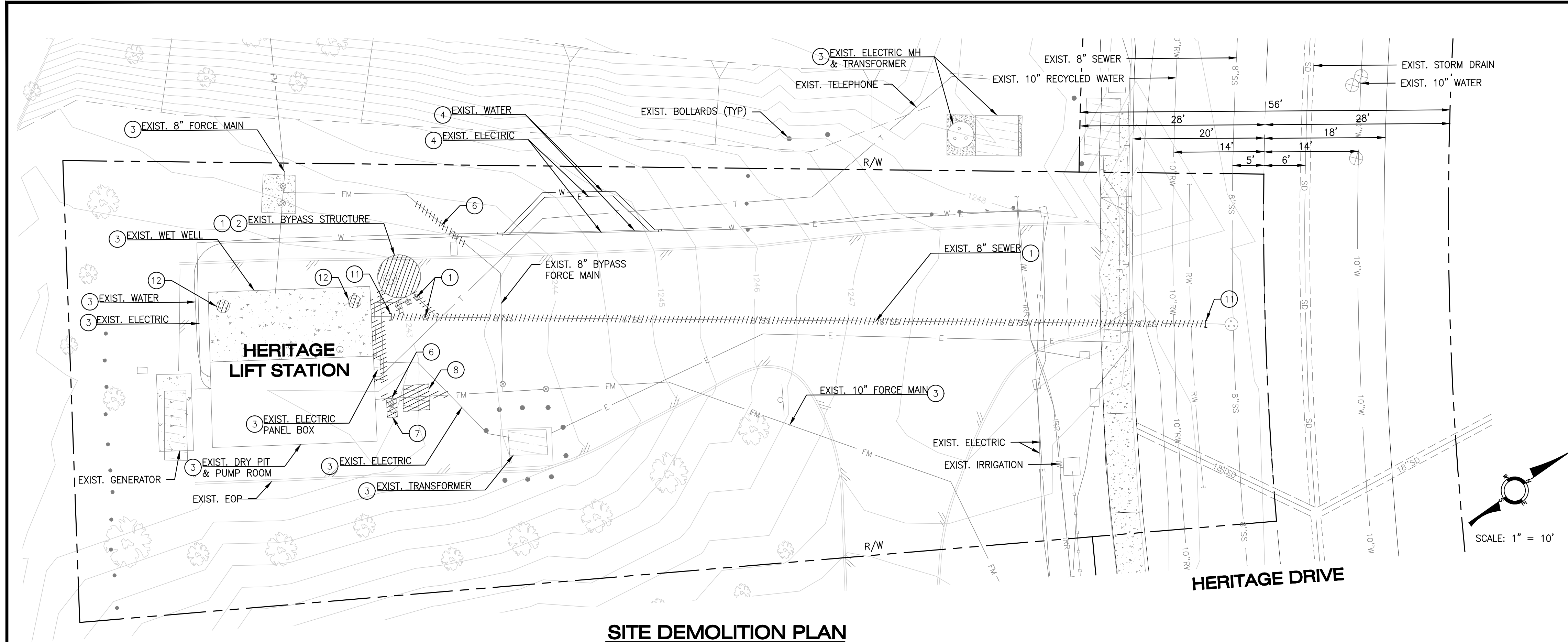
G-2

SHEET

2

OF 6 SHEETS

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT



SITE DEMOLITION PLAN

LEGEND

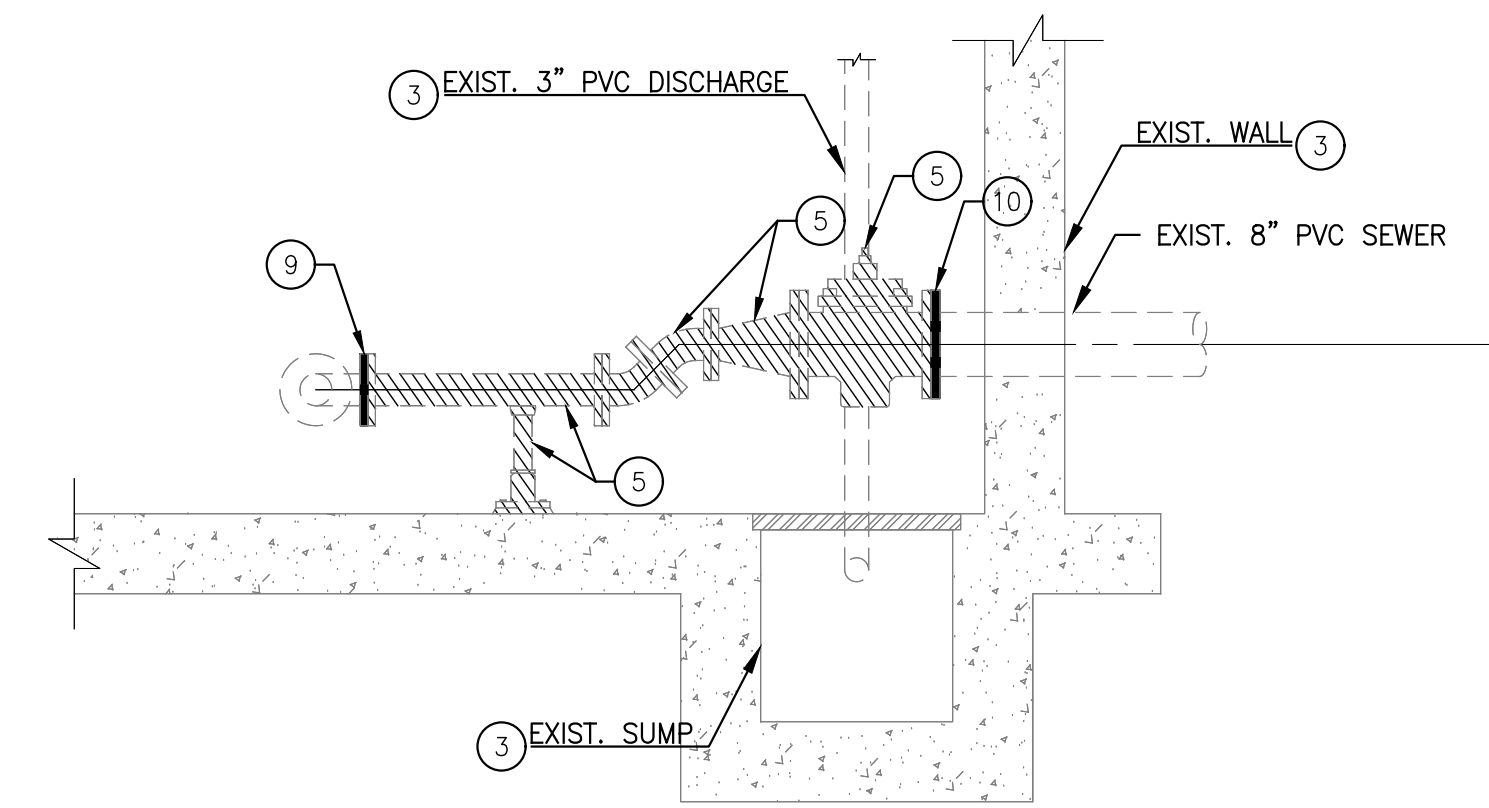
DEMOLISH AND DISPOSE OF EXISTING WET WELL, SEWER PIPING, VALVES, AND APPURTENANCES

DEMOLITION NOTES

- 1 DEMOLISH EXISTING WET WELL, PIPING, VALVES, AND APPURTENANCES
- 2 REMOVE AND DISPOSE OF ALL EQUIPMENT INSIDE EXISTING BYPASS STRUCTURE AS SHOWN
- 3 PROTECT IN PLACE
- 4 RELOCATE EXISTING WATER SERVICE LINE AND ELECTRICAL CONDUIT. PULL NEW CONDUCTORS THROUGH CONDUIT
- 5 REMOVE AND DISPOSE OF EXISTING DUCTILE IRON PIPE, SUPPORTS, VALVES, AND APPURTENANCES
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- 7 DEMOLISH EXISTING BYPASS/BLOW-OFF ASSEMBLY
- 8 DEMOLISH EXISTING AIR RELEASE VALVE ASSEMBLY AND UNDERGROUND STRUCTURE

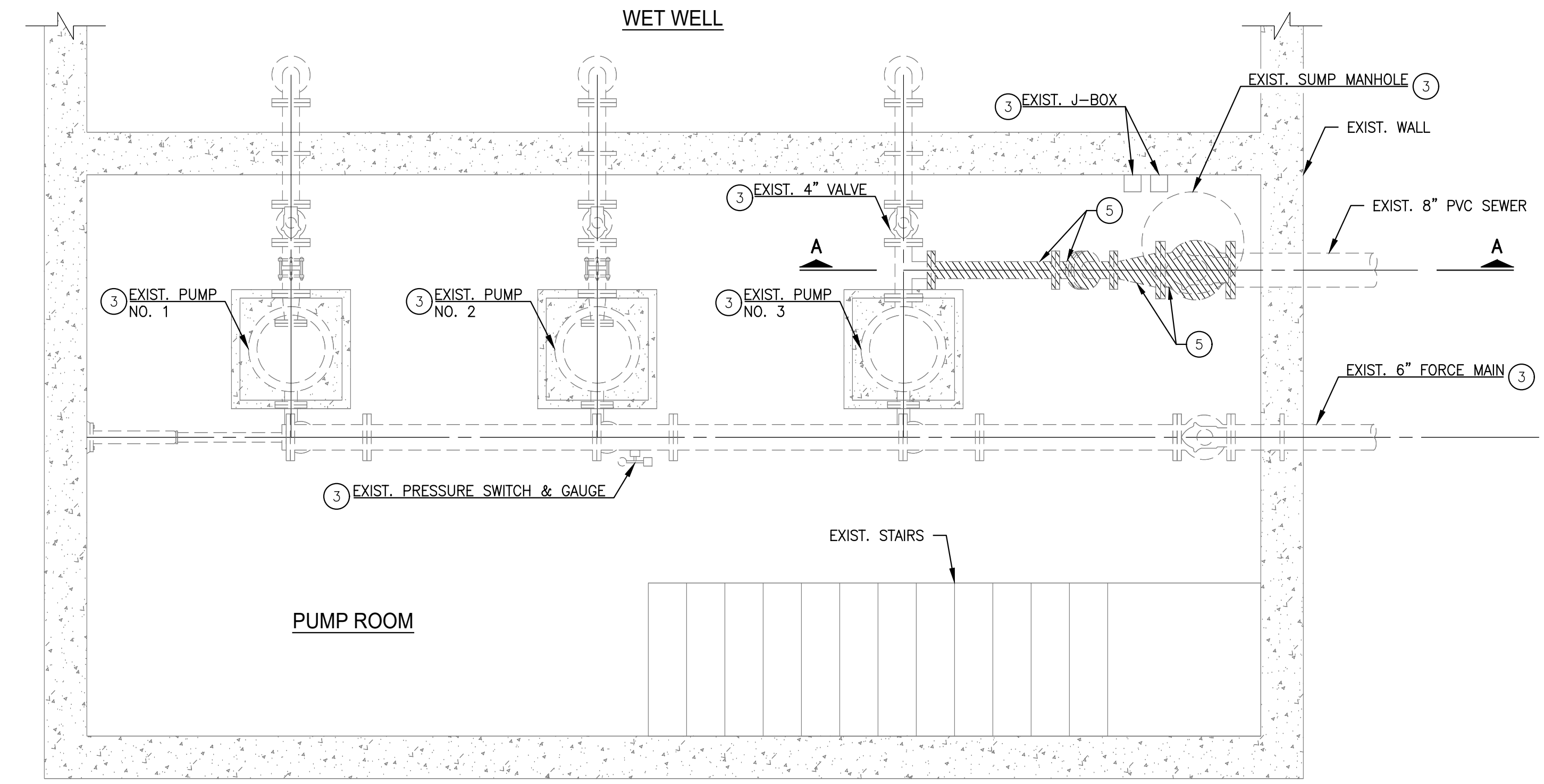
CONSTRUCTION NOTES

- 9 CONSTRUCT 4" DUCTILE IRON BLIND FLANGE (EPOXY COATED)
- 10 CONSTRUCT 8" DUCTILE IRON BLIND FLANGE (EPOXY COATED)
- 11 CUT EXISTING 8" PVC SEWER
- 12 CONSTRUCT INTERIM RETROFIT OF EXISTING SEWER MANHOLE FRAME AND COVER PER 1-C-3



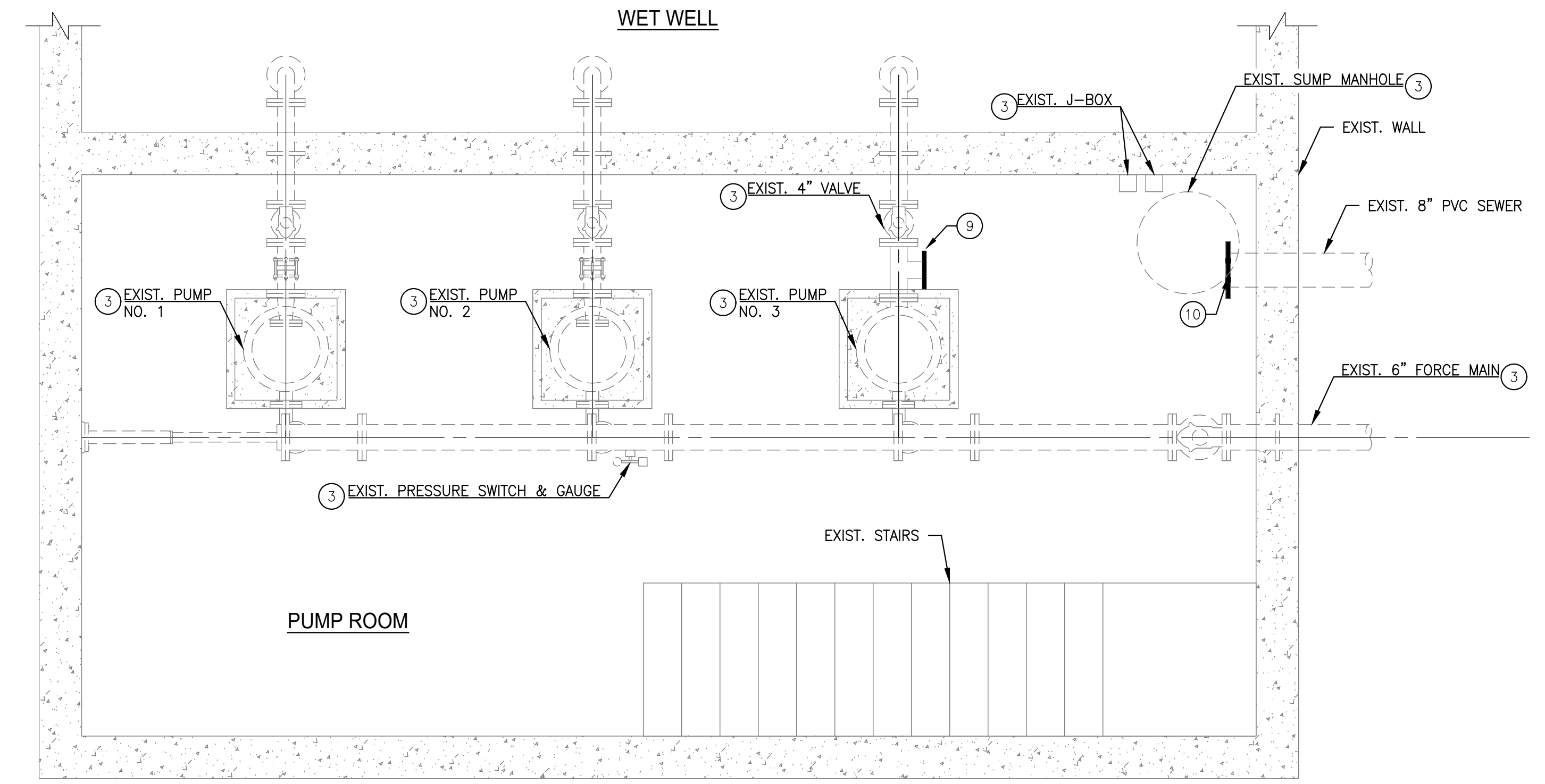
SECTION A-A

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



MECHANICAL DRY PIT DEMOLITION PLAN

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



MECHANICAL DRY PIT IMPROVEMENTS PLAN

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

CONTRACTORS 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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REV.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

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www.jigconsultants.com

APPROVED

TRABUCO CANYON WATER DISTRICT

DATE

LORRAINE S. LAUSTEN, P.E. RCE #67027
DISTRICT ENGINEER

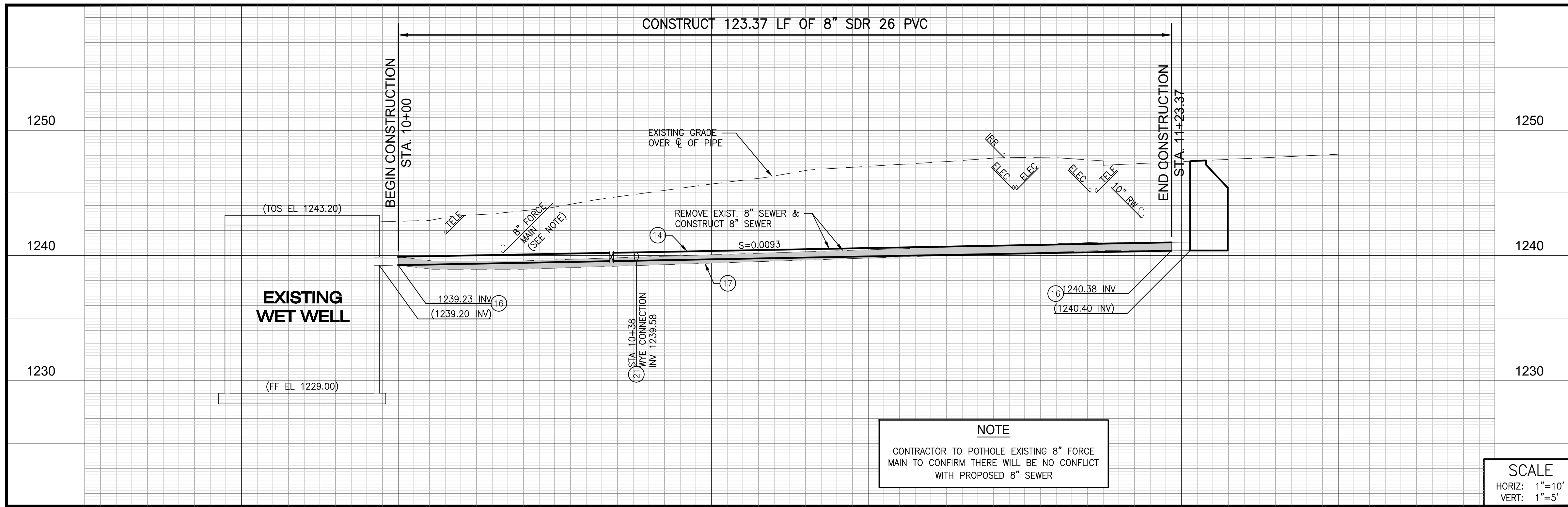
TRABUCO CANYON WATER DISTRICT

TRABUCO CANYON WATER DISTRICT

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

SITE DEMOLITION PLAN AND MECHANICAL DRY PIT IMPROVEMENTS

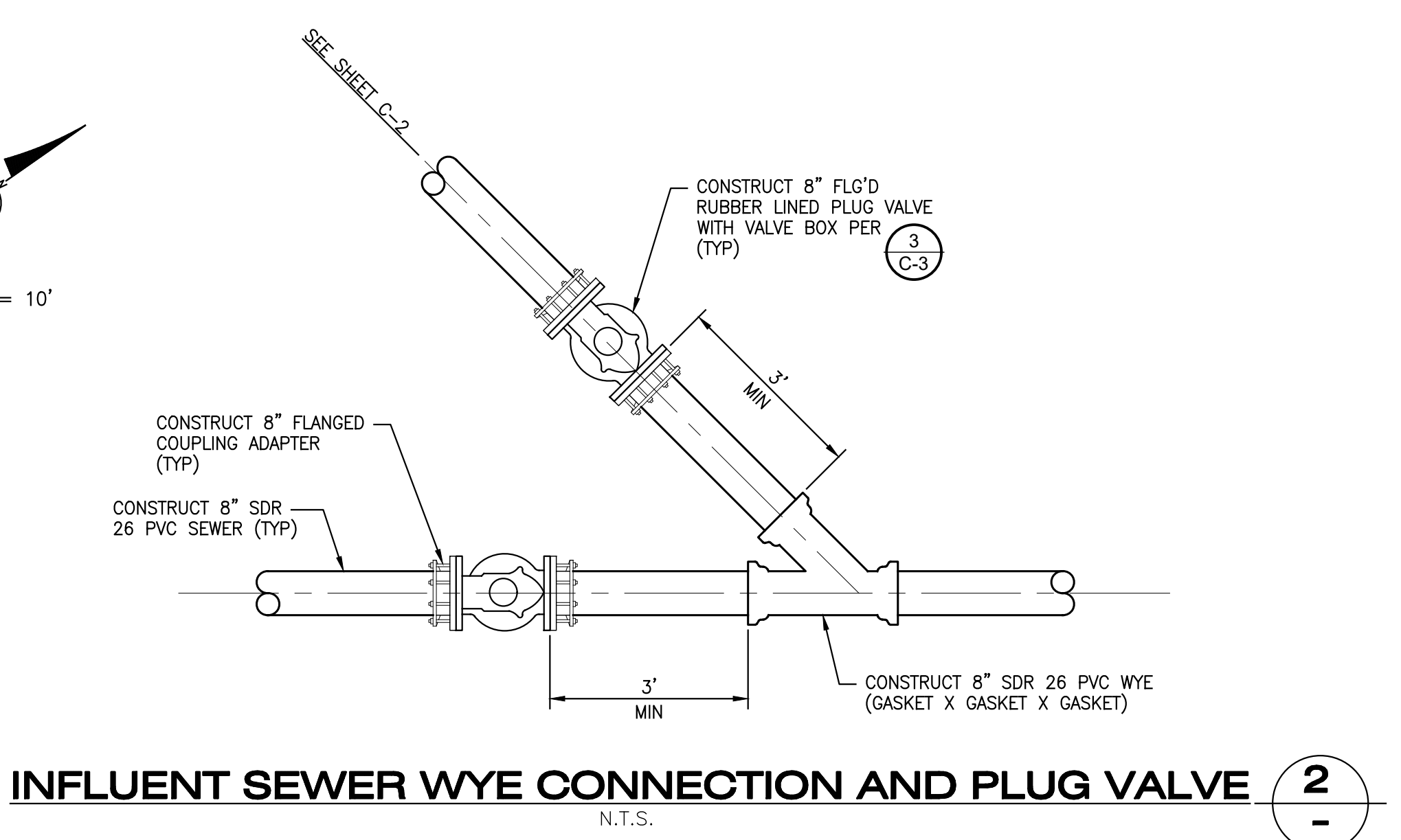
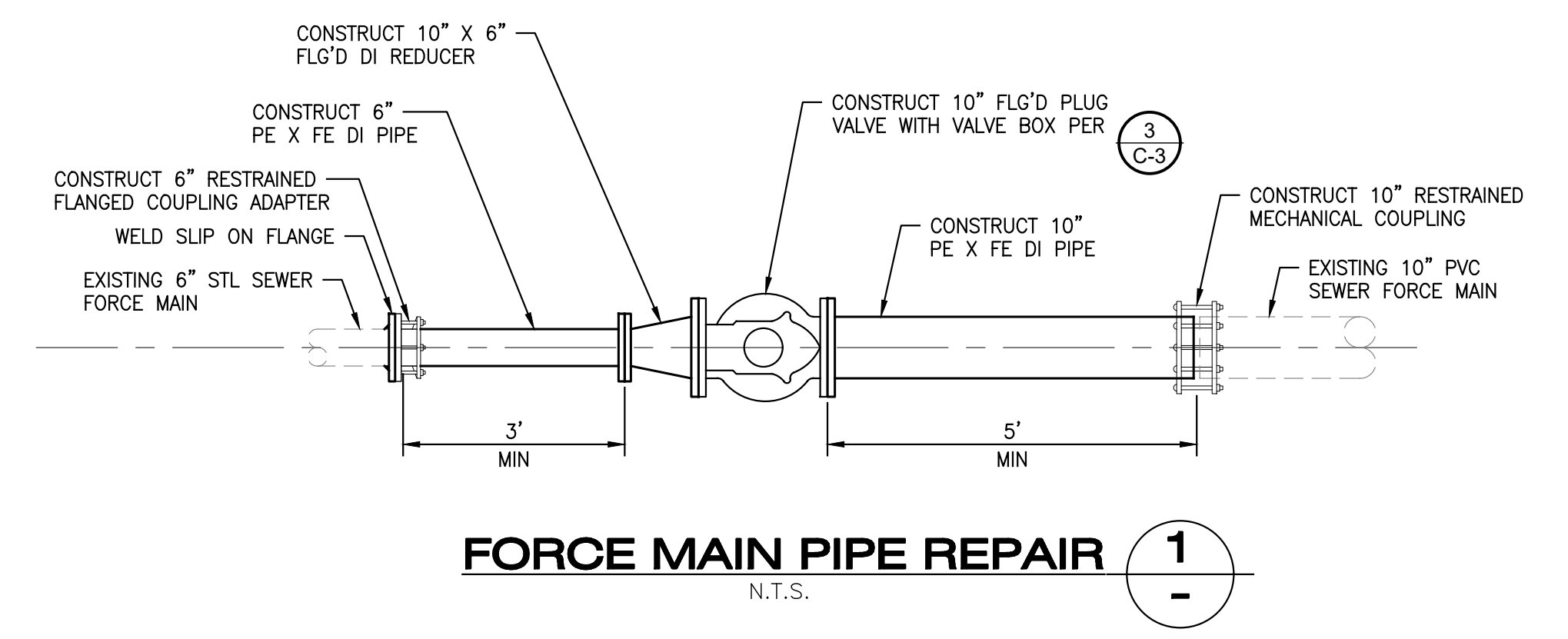
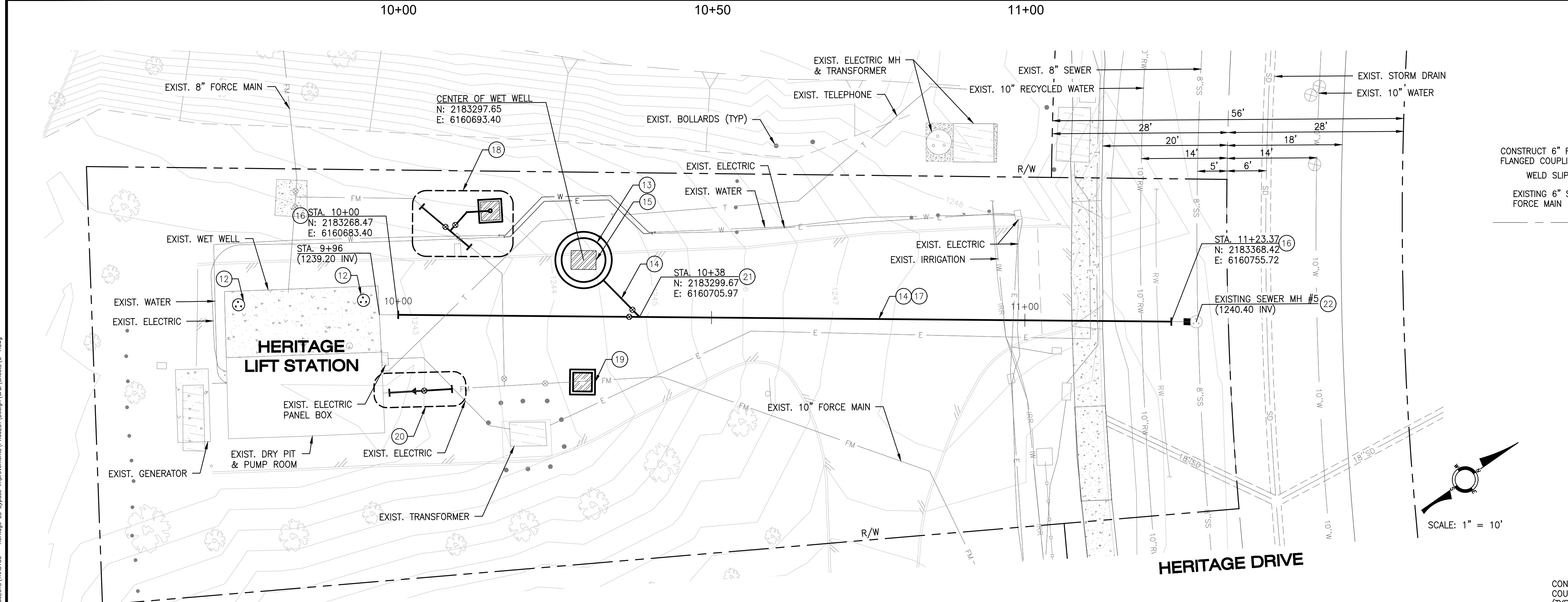
HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT



- CONSTRUCTION NOTES**
- 12 CONSTRUCT INTERIM RETROFIT OF EXISTING SEWER MANHOLE FRAME AND COVER PER (1-C-3)
 - 13 CONSTRUCT 7'-0" I.D. PRECAST CONCRETE BYPASS WET WELL WITH BOTTOM SLAB PER SHEET C-2
 - 14 CONSTRUCT 8" SDR 26 PVC SEWER PER (2-C-3)
 - 15 CONSTRUCT 3 FT x 4 FT ALUMINUM SINGLE LEAF, SPRING ASSISTED H-20 TRAFFIC RATED ACCESS HATCH
 - 16 JOIN EXISTING 8" SEWER WITH STAINLESS STEEL SHIELDED RUBBER COUPLING
 - 17 REMOVE EXISTING 8" PVC SEWER
 - 18 CONSTRUCT PERMANENT 6" BYPASS PIPING, PLUG VALVES, AND STRUCTURE PER (5-C-3)
 - 19 CONSTRUCT 2" AIR RELEASE ASSEMBLY WITH STRUCTURE PER (8-C-3)
 - 20 REMOVE EXISTING 10" PVC FORCE MAIN AND REPLACE WITH 10 LF OF 10" DI FORCE MAIN, 10" PLUG VALVE WITH VALVE BOX, AND 10" X 6" REDUCER PER (1-)
 - 21 CONSTRUCT 8" INFLUENT SEWER WYE CONNECTION WITH PLUG VALVES PER (2-)
 - 22 CONSTRUCT TEMPORARY PLUG ON EXISTING MANHOLE OUTLET

HYDRAULIC DATA

FROM STA. TO STA.	DIAMETER (INCH)	DEPTH (FEET)	VELOCITY (FT/SEC)	d/D	SLOPE
10+00.00 TO 11+23.37	8"	0.29	3.74	0.44	0.0093
Q _{peak} = 210 GPM		0.22	3.26	0.33	
Q _{average} = 126 GPM					



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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

REV.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

DESIGN BY: J.T.

REVIEWED BY: J.G.

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
CIVIL ENGINEER

JIG CONSULTANTS

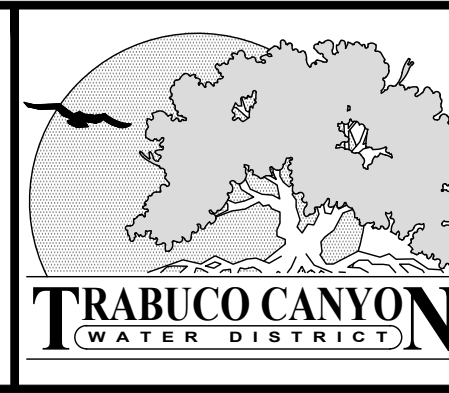
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APPROVED

TRABUCO CANYON WATER DISTRICT

LORRAINE S. LAUSTEN, P.E. RCE #67027
DISTRICT ENGINEER

DATE



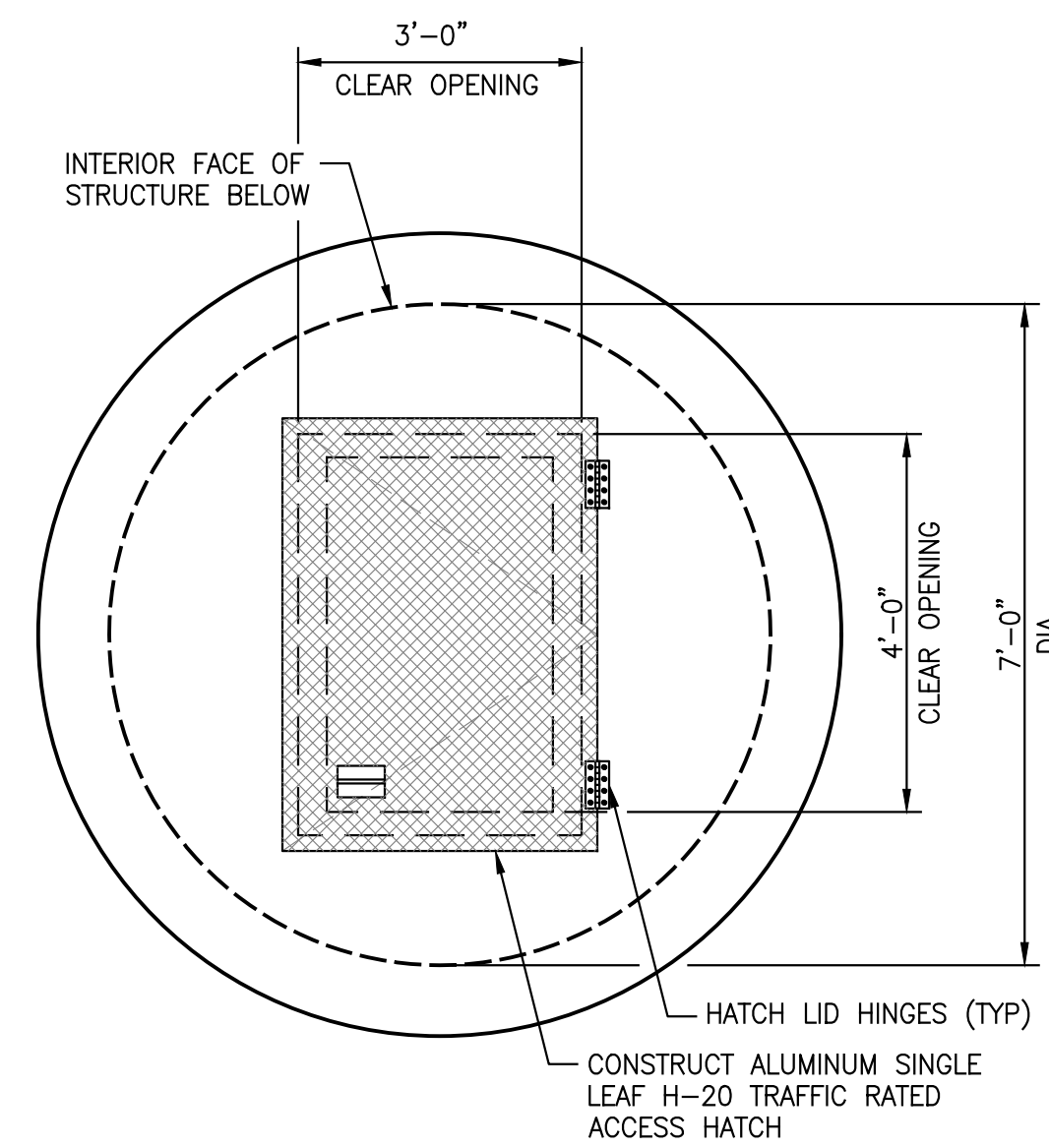
TRABUCO CANYON WATER DISTRICT

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

PLAN & PROFILE OF 8-INCH INFLUENT SEWER

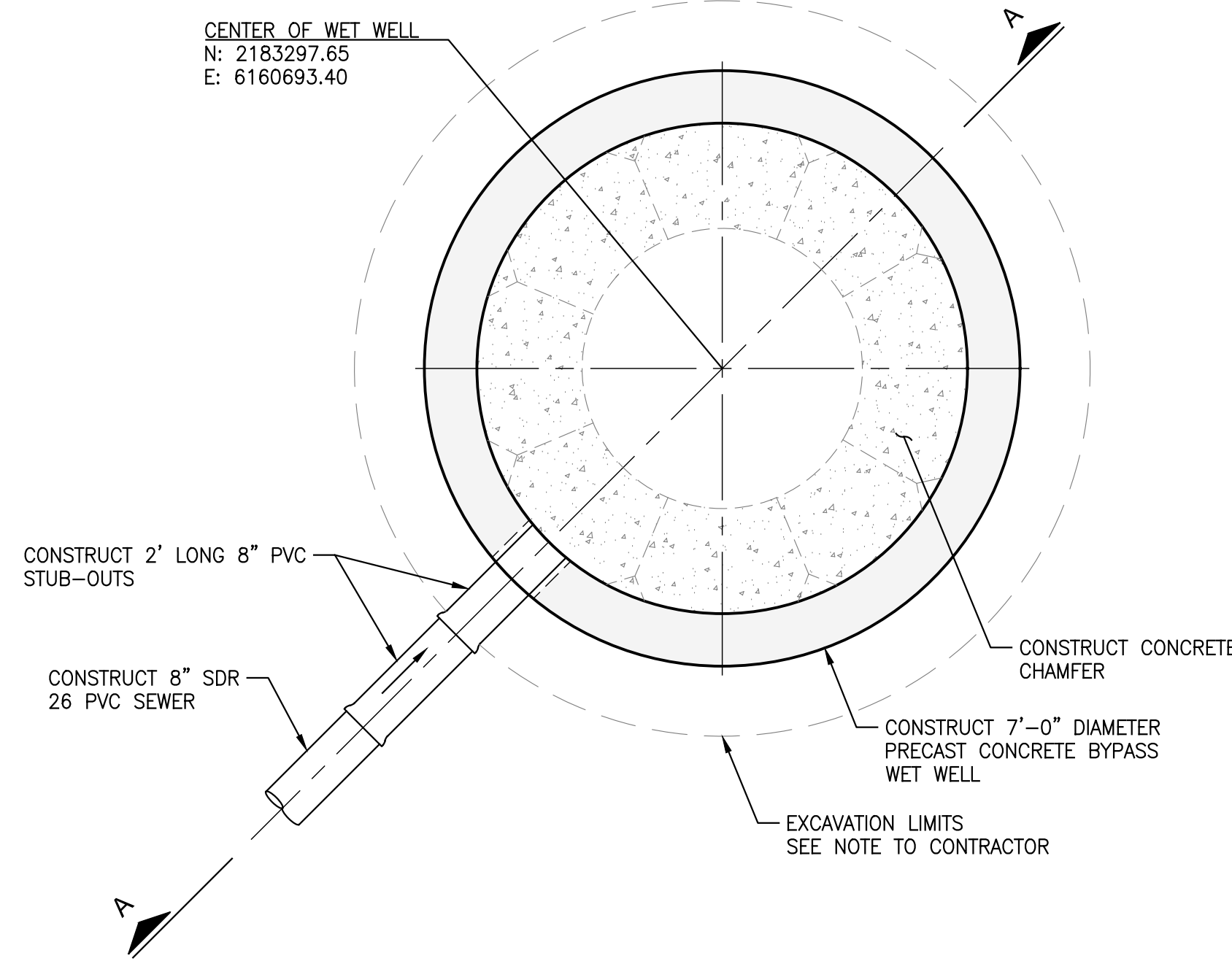
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HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT



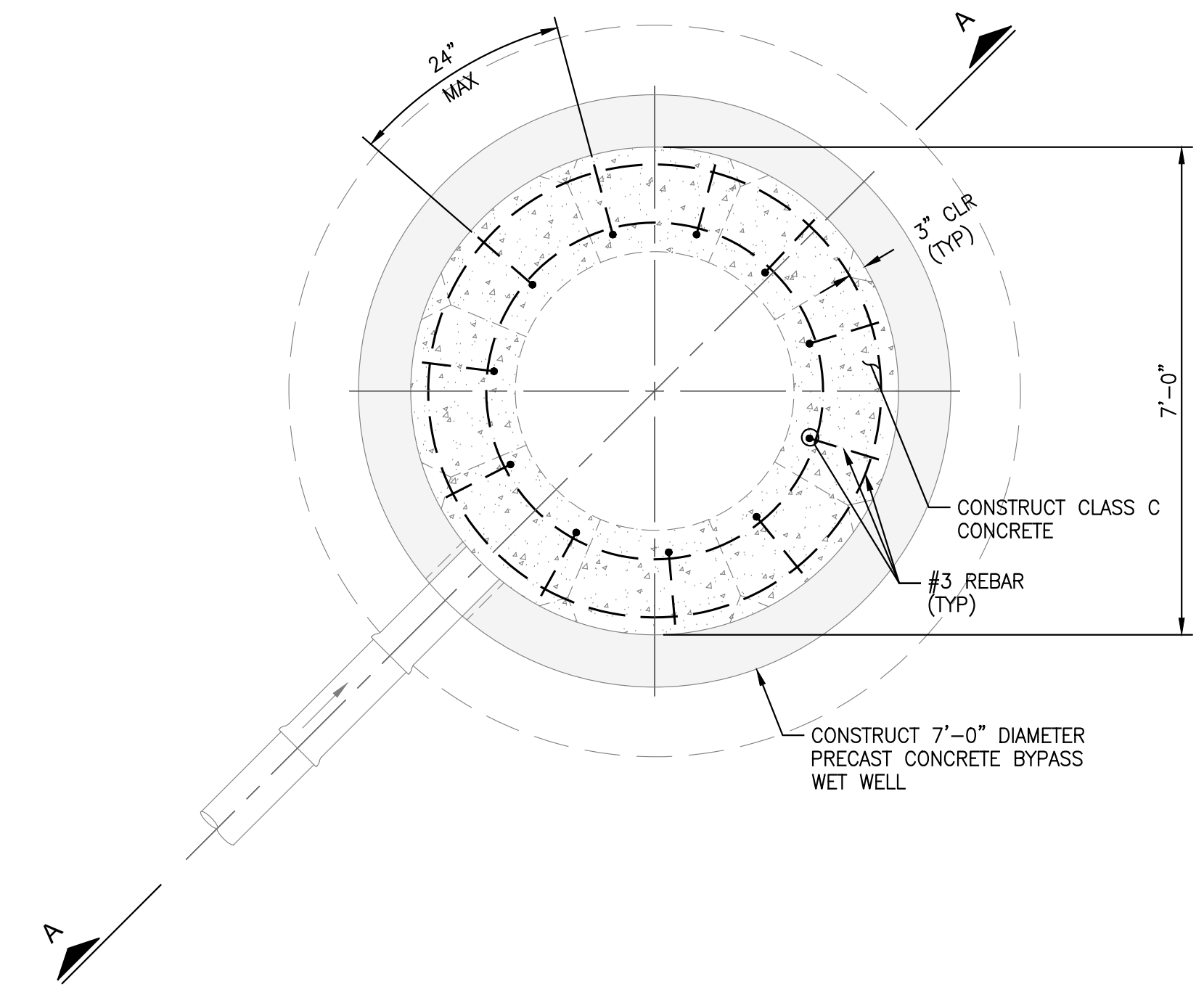
**BYPASS WET WELL
TOP SLAB PLAN**

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



**BYPASS WET WELL
FLOOR PLAN**

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

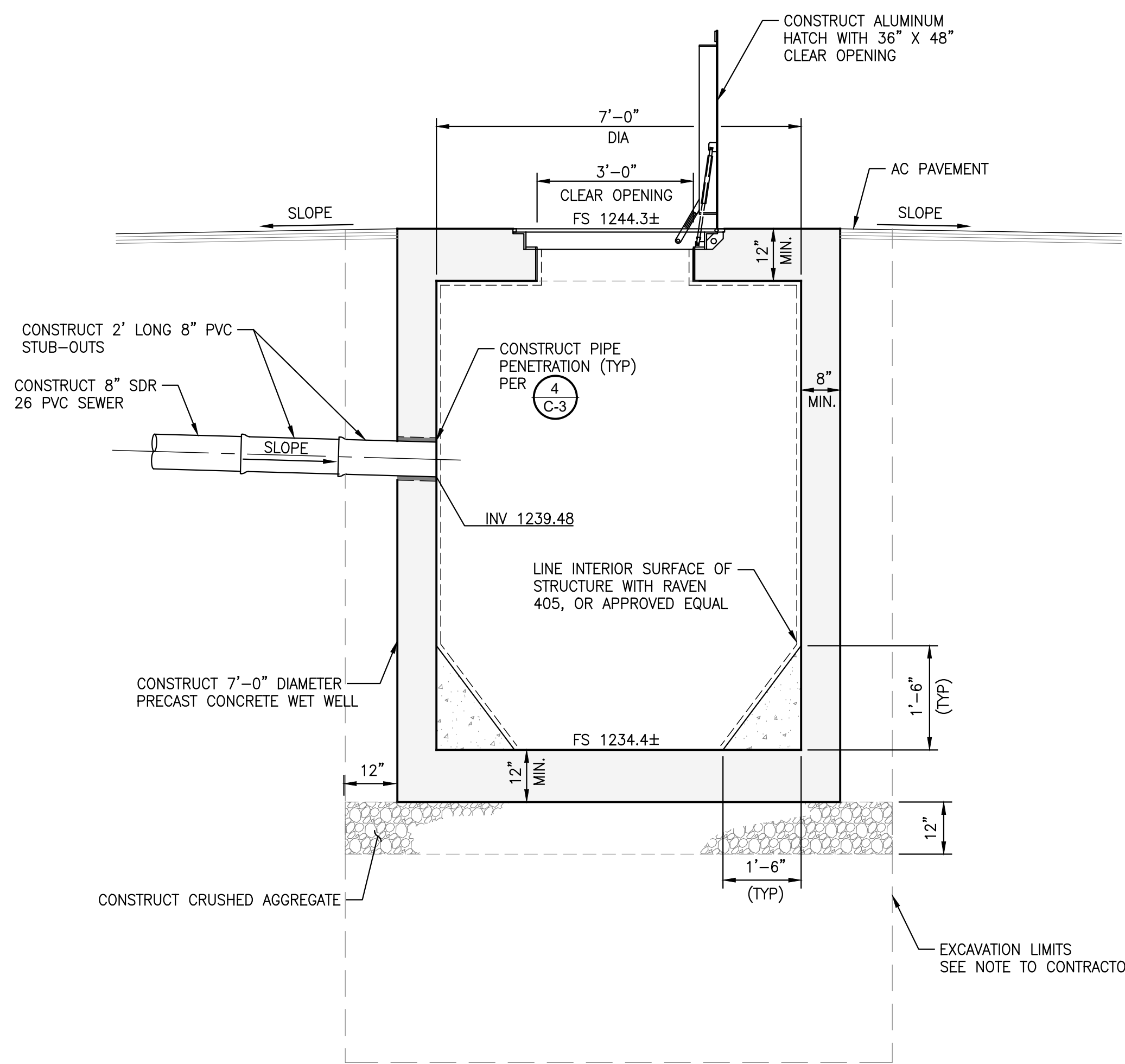


**BYPASS WET WELL
REINFORCING LAYOUT PLAN**

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

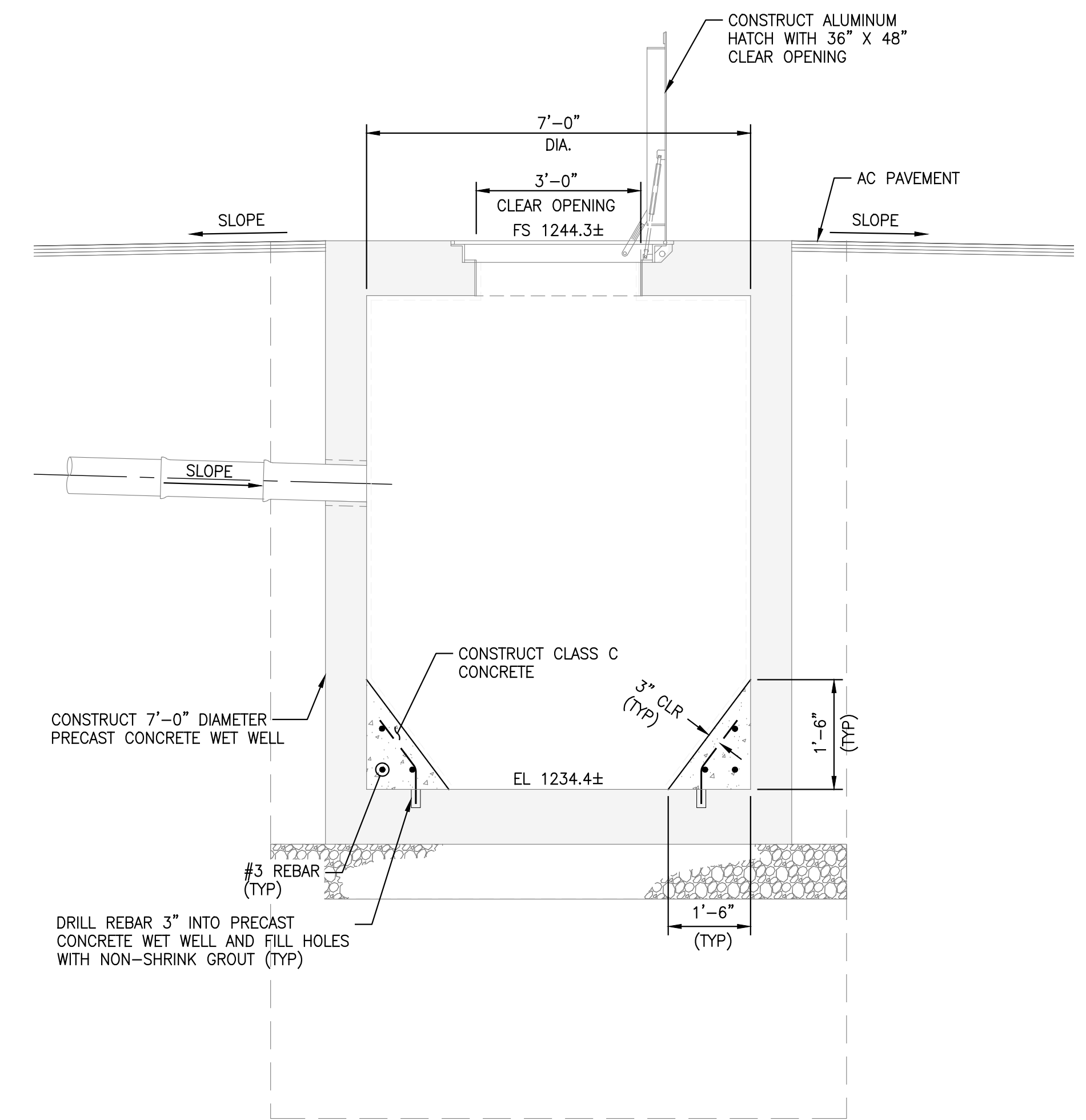
NOTE TO CONTRACTOR

CONTRACTOR TO PREPARE SITE USING RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION AND FOUNDATION DESIGN PARAMETERS PREPARED BY GMU. CONTRACTOR SHALL EXCAVATE TO A DEPTH OF AT LEAST 5 FEET BELOW THE BOTTOM OF THE STRUCTURE/FOOTING ACROSS THE ENTIRE FOOTPRINT OF THE BYPASS WET WELL AND EXTEND AT LEAST 1 FOOT BEYOND THE PERIMETER. THE BOTTOM OF THE EXCAVATION SHOULD THEN BE SCARIFIED TO A DEPTH OF AT LEAST 6". FILL MATERIAL SHALL BE PLACED IN 6" TO 8" THICK LIFTS, MOISTURE CONDITIONED TO 2% ABOVE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO ACHIEVE 90% RELATIVE COMPACTION. ONSITE MATERIAL MAY BE USED AS FILL MATERIAL, OR CONTRACTOR'S ELECTION TO USE SLURRY IS ACCEPTABLE. NO ROCK OR BROKEN CONCRETE GREATER THAN 6" IN DIAMETER SHOULD BE UTILIZED IN FILLS.



**BYPASS WET WELL
SECTION A-A**

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



**REINFORCING LAYOUT PLAN
SECTION A-A**

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

Drawing Name: C:\Users\Public\Desktop\WIG\Consultants\PROJECT\Design\LOAD SHEETS\C-2.dwg
 Plot Date: 04/04/2021 10:22am By: JIG DAD 2

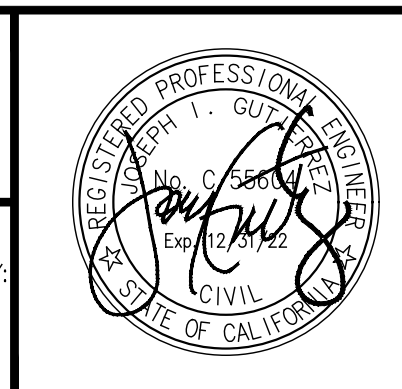
CONTRACTORS SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. SEE GENERAL NOTES FOR FURTHER INFORMATION.

CALL BEFORE YOU DIG
TOLL FREE 1-800-227-2800
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

REV.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

DESIGN BY:
J.T.

REVIEWED BY:
J.G.



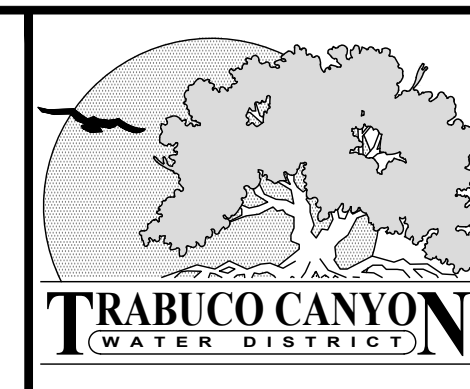
JIG CONSULTANTS

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

APPROVED
TRABUCO CANYON WATER DISTRICT

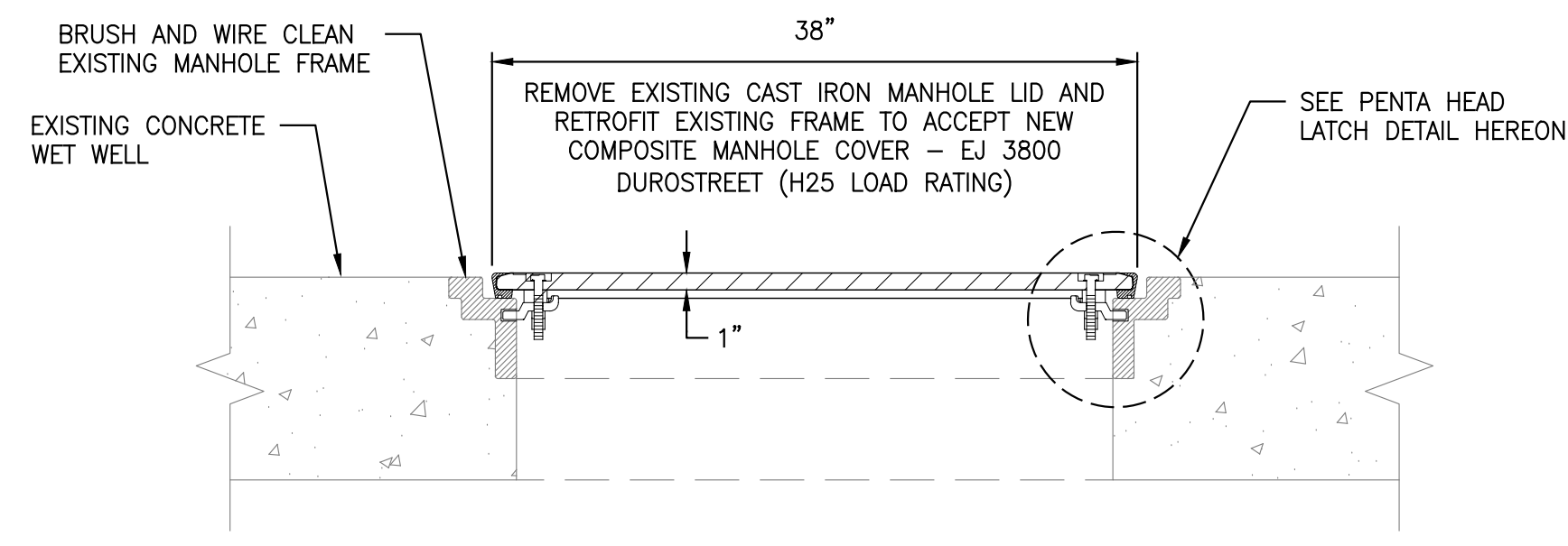
LORRAINE S. LAUSTEN, P.E. RCE #67027
DISTRICT ENGINEER

DATE

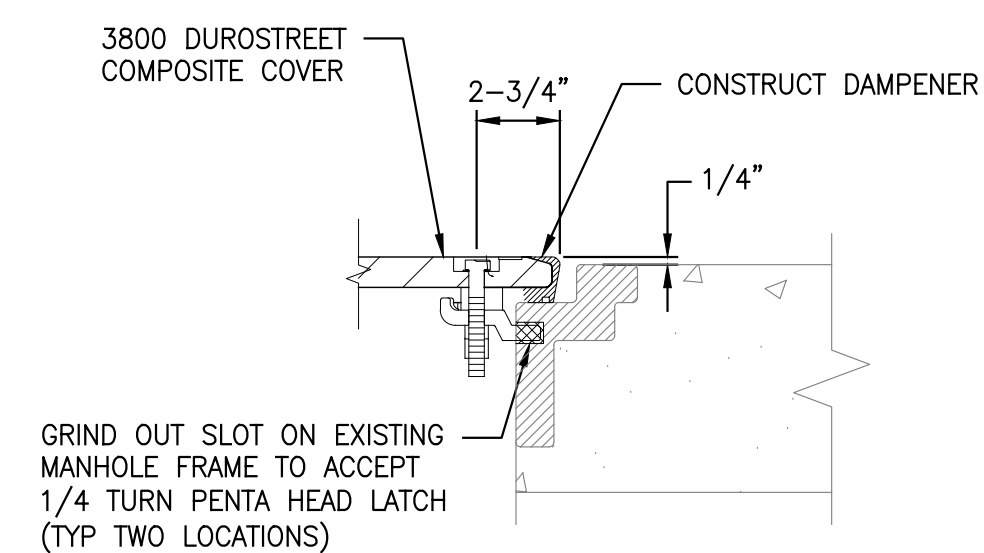


TRABUCO CANYON WATER DISTRICT
HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

BYPASS WET WELL
PLAN AND SECTIONS



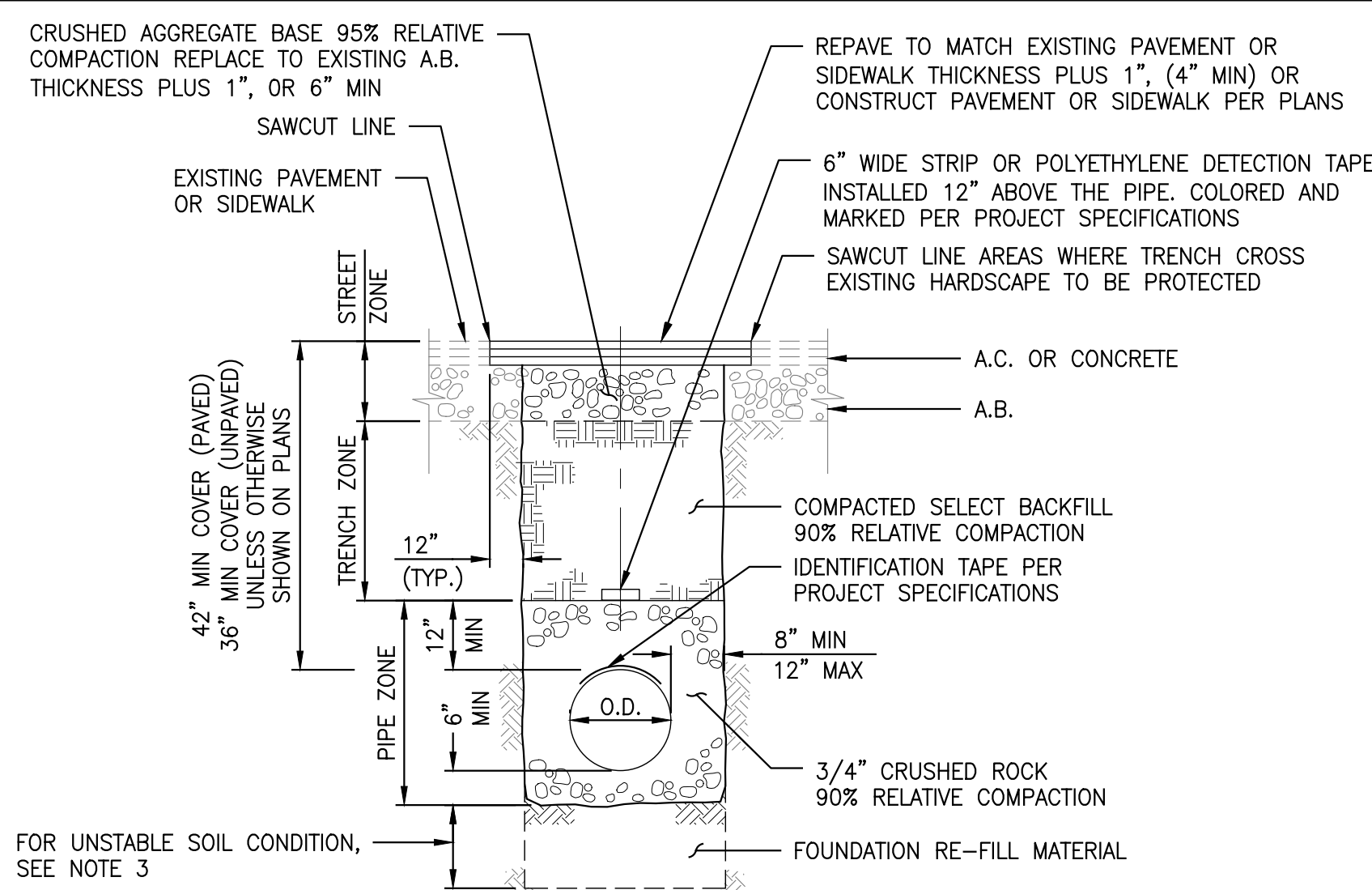
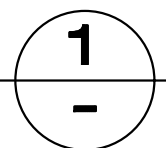
COMPOSITE COVER



PENTA HEAD LATCH

INTERIM MANHOLE FRAME AND COVER RETROFIT

N.T.S.

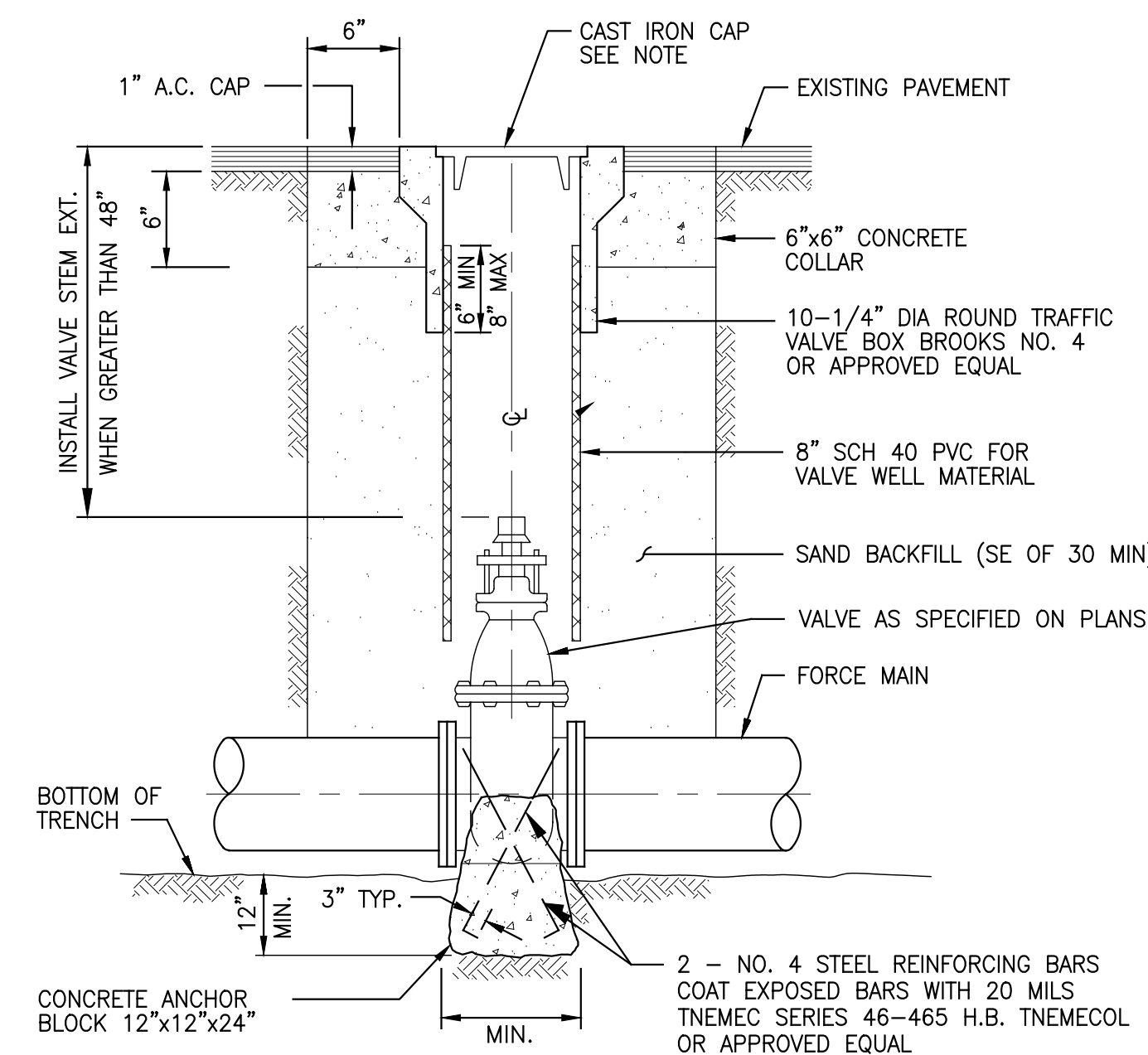
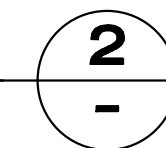


NOTES

1. CONTRACTOR SHALL REPLACE AC OR PCC TO THE LIMITS SHOWN ON THE TYPICAL TRENCH SECTION SHOWN ABOVE TO THE THICKNESS PLUS 1" OF THE EXISTING AC OR PCC UNLESS OTHERWISE DIRECTED ON THE PLANS. FOR TURF OR LANDSCAPED AREAS, CONTRACTOR SHALL RESTORE TO THE ORIGINAL CONDITION, TO OWNER'S SATISFACTION.
2. ALL PAVEMENT AND SIDEWALK REMOVAL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE SAWCUT PRIOR TO REMOVAL. THE OWNER SHALL BE REQUESTED BY CONTRACTOR TO APPROVE EXTENT OF PAVEMENT AND SIDEWALK REMOVAL PRIOR TO STARTING WORK. DISPOSAL OF REMOVED A.C. PAVEMENT AND CONCRETE SHALL BE AT AN APPROVED OFF-SITE DUMP SITE.
3. IF UNSTABLE SOIL IS ENCOUNTERED, THE DISTRICT REPRESENTATIVE SHALL DETERMINE OVEREXCAVATION DEPTH AND FOUNDATION RE-FILL MATERIAL PER SPECIFICATION SECTION 31 23 00.

TYPICAL TRENCH SECTION

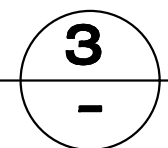
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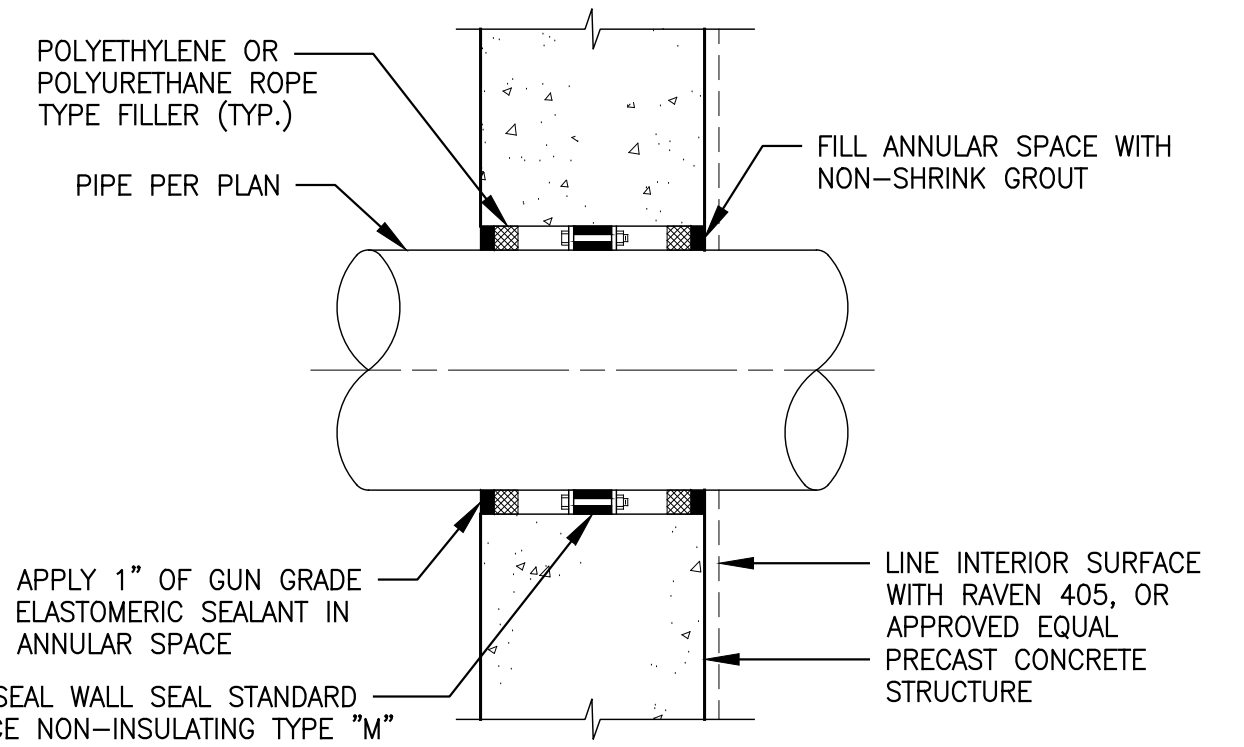
NOTE:
PROVIDE CAST IRON COVER WITH TOP MARK AS SHOWN TO THE RIGHT.

VALVE & VALVE BOX

N.T.S.

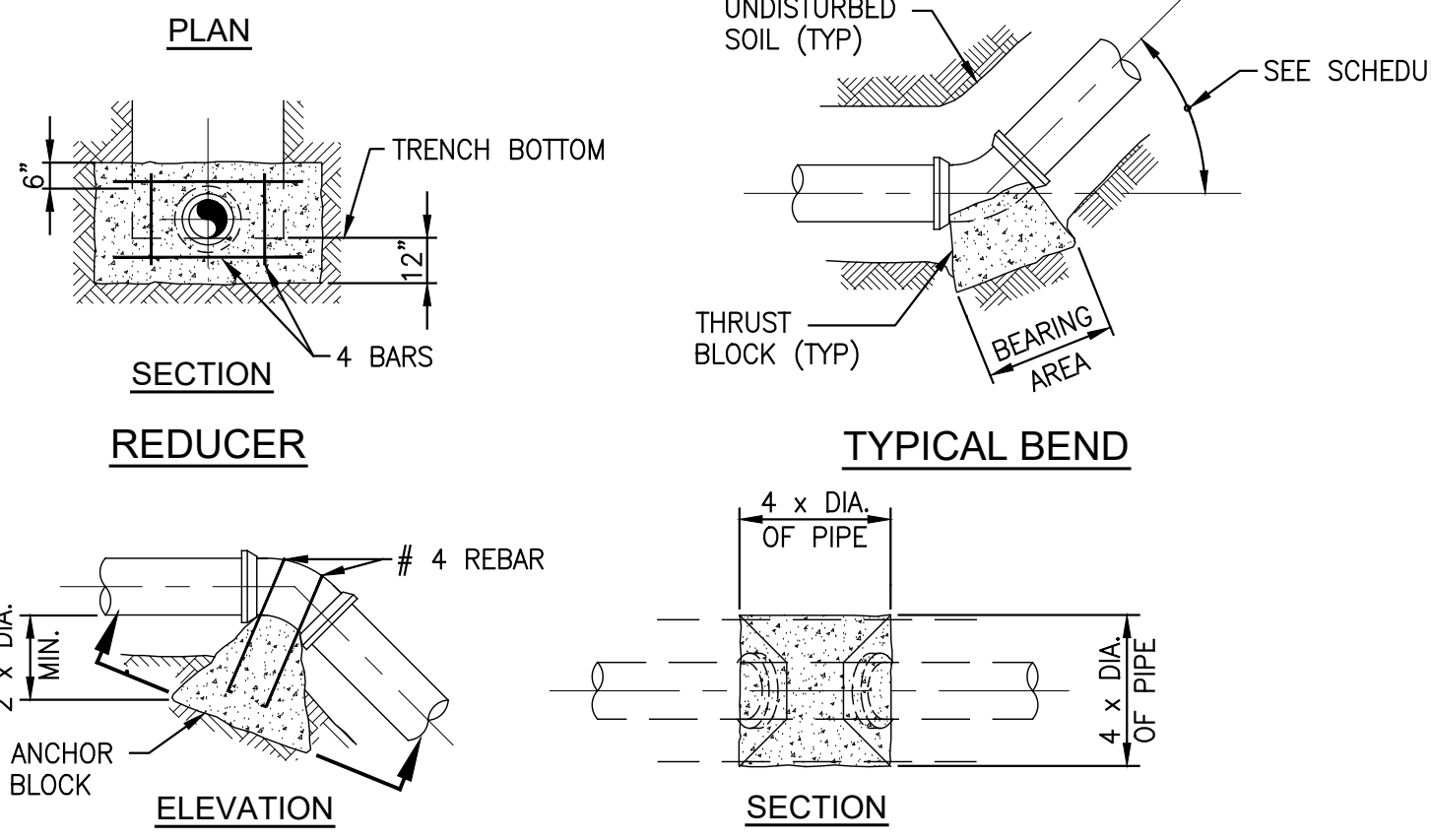
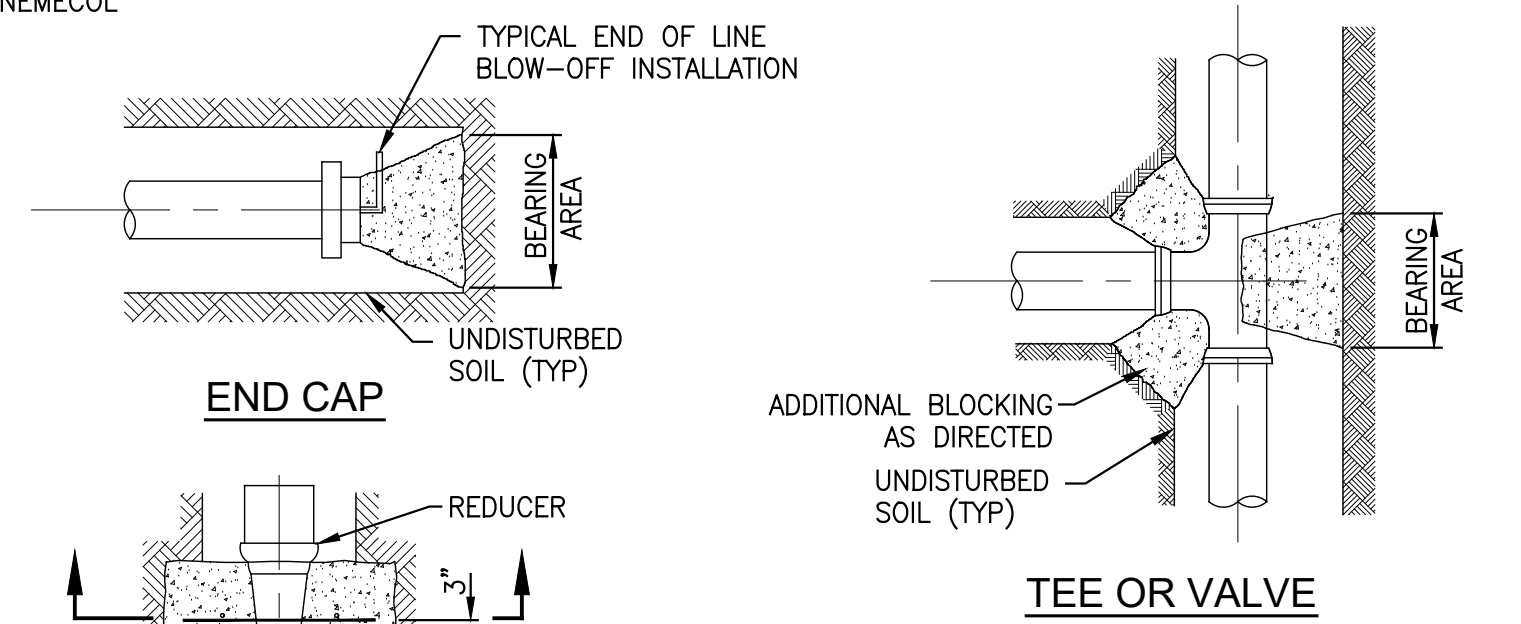
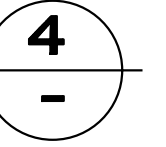


OUTSIDE STRUCTURE **INSIDE STRUCTURE**



WALL PENETRATION DETAIL

N.T.S.

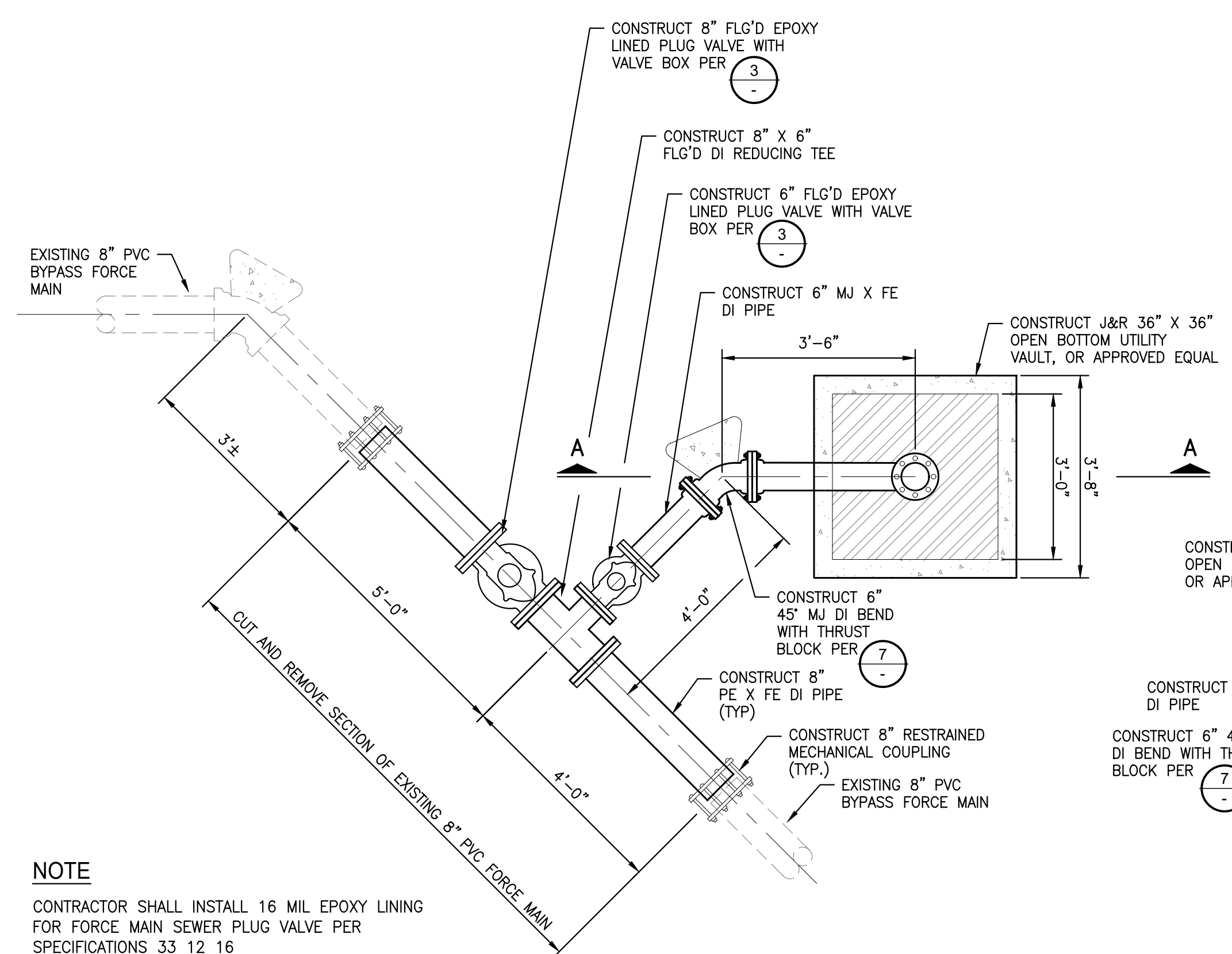
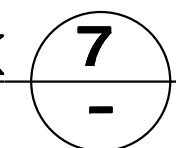


PIPE SIZE	11 1/4" BEND		22 1/2" BEND		45" BEND		90" BEND		DEAD ENDS & TEES	
	HORIZ. L1 X L2	VERT. C.Y.	HORIZ. L1 X L2	VERT. C.Y.	HORIZ. L1 X L2	VERT. C.Y.	HORIZ. L1 X L2	VERT. C.Y.	HORIZ. L1 X L2	VERT. C.Y.
6"	22" X 4"	0.04	22" X 8"	0.08	22" X 15"	0.16	20" X 20"	0.28	22" X 19"	-

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

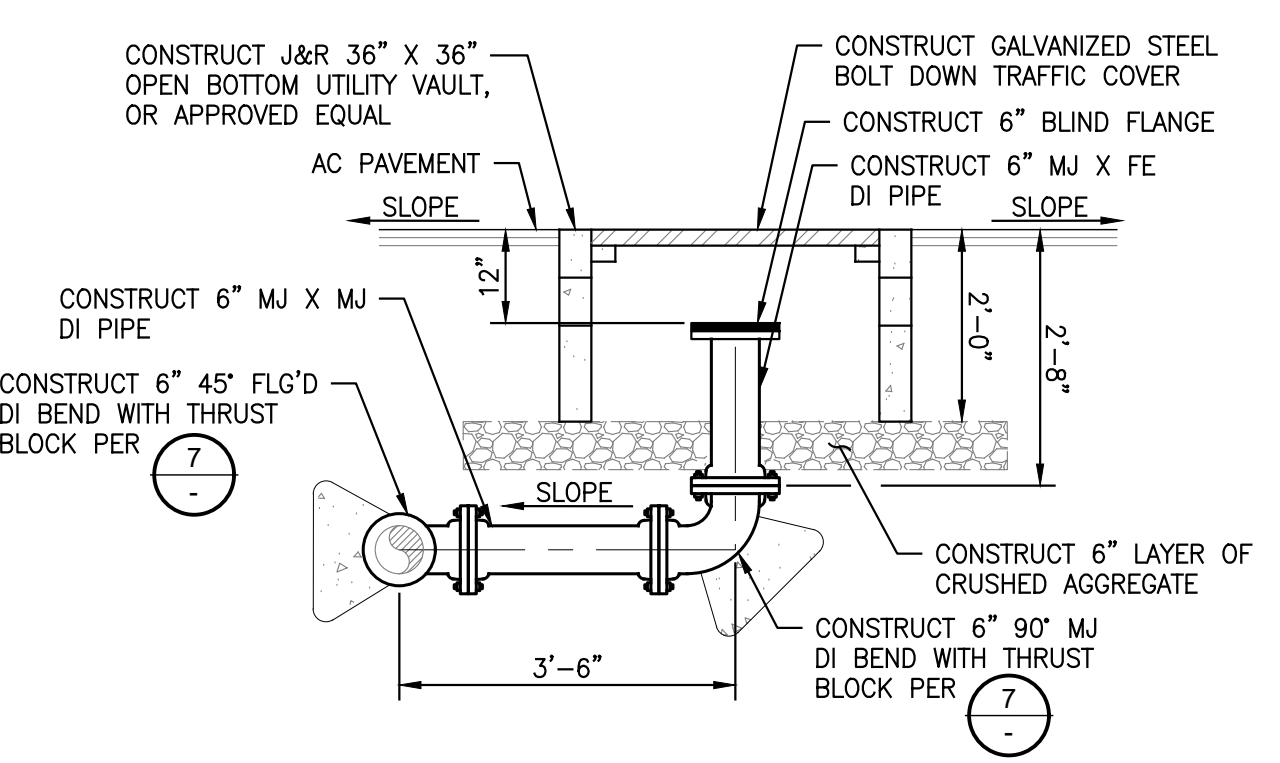
THRUST BLOCK

N.T.S.



MECHANICAL PLAN

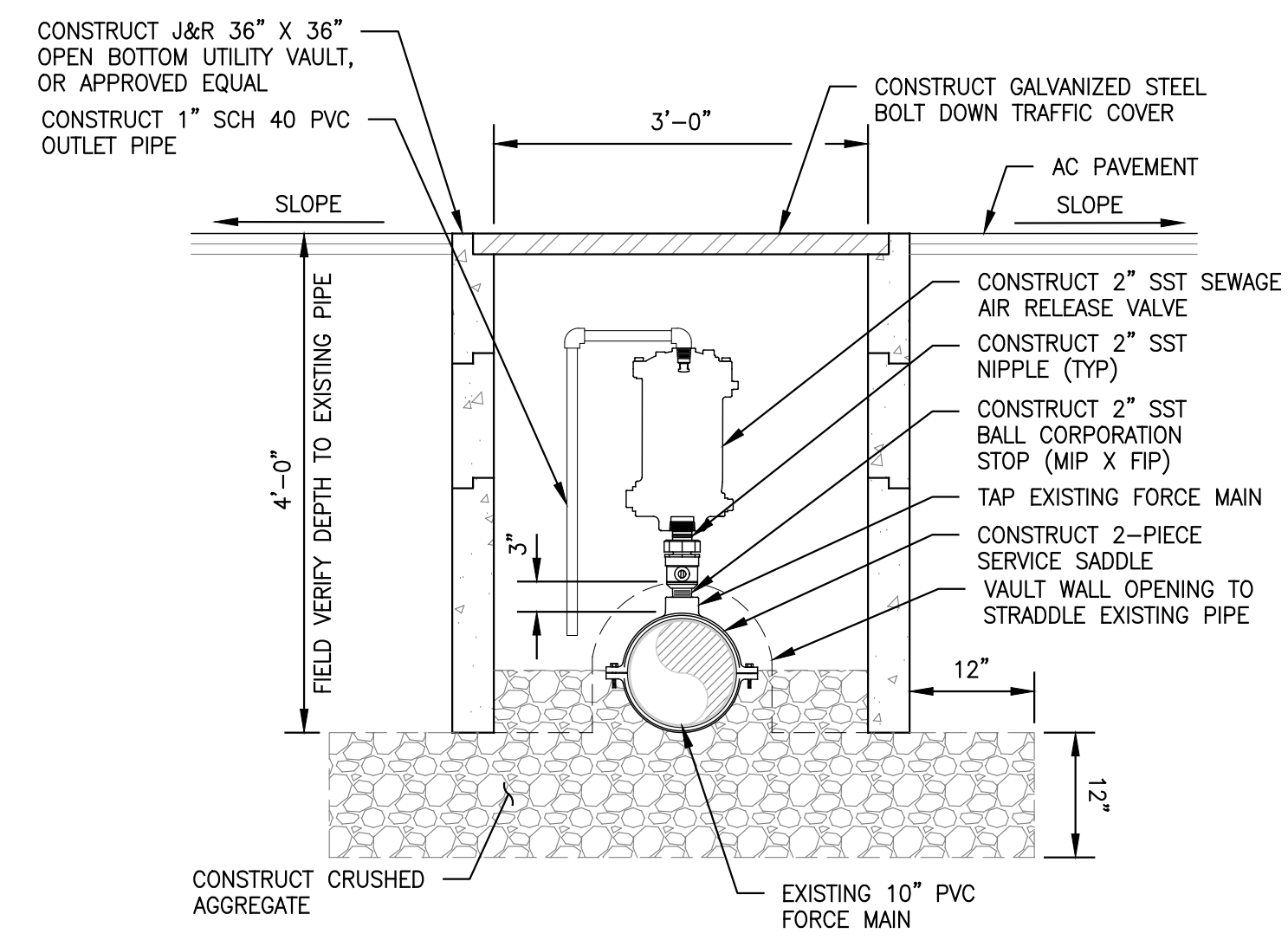
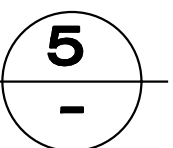
NOTE
CONTRACTOR SHALL INSTALL 16 MIL EPOXY LINING FOR FORCE MAIN SEWER PLUG VALVE PER SPECIFICATIONS 33 12 16



SECTION A-A

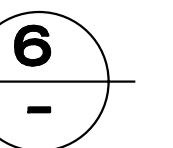
BYPASS ASSEMBLY

N.T.S.



AIR RELEASE ASSEMBLY

N.T.S.



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

DIGALERT

CALL BEFORE YOU DIG

TOLL FREE 1-800-227-2800

A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

REV.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

DESIGN BY: J.T.

REVIEWED BY: J.G.

APPROVED BY: [Signature]

JIG CONSULTANTS

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

APPROVED

TRABUCO CANYON WATER DISTRICT

LORRAINE S. LAUSTEN, P.E. RCE #67027
DISTRICT ENGINEER

DATE

TRABUCO CANYON WATER DISTRICT

TRABUCO CANYON WATER DISTRICT

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

MISCELLANEOUS CIVIL DETAILS

C-3

SHEET

6

OF 6 SHEETS

HERITAGE SEWER LIFT STATION IMPROVEMENTS PROJECT

ENR: 16739

Los Angeles Construction Cost

Jun-22

Section	Size	Description	Unit Cost	Quantity	
00 00 00		PROCUREMENT AND CONTRACTING REQUIREMENTS			
00 61 00		Bonds	1.56%	1 LS	\$5,600
01 04 00		Coordination and Scheduling	0.50%	1 LS	\$1,800
01 31 19		Project Meetings	0.20%	1 LS	\$700
01 32 00		Construction Progress Documentation	0.20%	1 LS	\$700
01 32 33		Construction Photographic and Video Documentation	\$1,500	1 LS	\$1,500
01 33 00		Submittal Procedures	0.50%	1 LS	\$1,800
01 50 00		Temporary Facilities and Controls			
01 50 00		Mobilization	2.78%	1 LS	\$10,000
01 71 13		Demobilization	1.19%	1 LS	\$4,300
01 50 00		Construction Information Signs	\$500	4 ea	\$2,000
01 61 00		Common Product Requirements	0.10%	1 LS	\$400
01 65 00		Project Delivery Requirements	0.10%	1 LS	\$400
01 66 00		Project Storage and Handling Requirements	0.10%	1 LS	\$400
01 74 00		Cleaning and Waste Management	0.63%	1 LS	\$2,300
01 77 00		Closeout Procedures	0.50%	1 LS	\$1,800
01 78 39		Project Record Documents	0.18%	1 LS	\$600
02 00 00		EXISTING CONDITIONS			
02 41 13		Selective Site Demolition	1.81%	1 LS	\$6,500
02 41 14		Remove Bituminous Pavement	\$0.50	1000 SF	\$500
02 41 15		Utility Line Removal and Abandonment			
02 41 15	8 in	Force Main Pipe Removal	\$54	20 LF	\$1,080
02 41 15	10 in	Force Main Pipe Removal	\$67	10 LF	\$670
02 41 15	8 in	Sewer Removal	\$49.20	125 LF	\$6,150
02 41 15	6 in	Bypass Valve and Plug Valve Removal and Disposal	\$190	8 ea	\$1,520
02 41 15		Remove Existing Air Release Vault	\$2,600	1 ea	\$2,600
02 41 16		Structure Demolition			
02 41 16		Demolition of Existing Bypass Wet Well	\$20,000	1 LS	\$20,000
02 41 16	500 SF	Mechanical and Electrical Equipment Demolition	\$7,150	1 ea	\$7,150
03 30 00		CAST-IN-PLACE CONCRETE			
03 30 00		Reinforced Concrete for Wet Well Chamfer	\$1,010	2 CY	\$2,020
07 70 00		ROOF AND WALL SPECIALTIES AND ACCESSORIES			
07 72 33	5 ft	Roof and Floor Hatches	\$13,900	1 ea	\$13,900
31 00 00		EARTHWORK			
31 05 50		Protecting Existing Utilities	1.01%	1 LS	\$3,600
31 23 33		Trenching and Backfilling			
31 23 33		Trench and Excavation Safety	2.12%	1 LS	\$7,600
31 23 33	10 ft	Trenching and Backfilling	\$12.60	160 LF	\$2,016
32 10 00		BASES, BALLASTS, AND PAVING			
32 11 00		Base Courses			
32 11 00	6 in	Granular SubBase	\$21.00	50 SY	\$1,050
32 11 00	4 in	Class 2 Aggregate Base	\$2.30	1000 SF	\$2,300
32 12 00		FLEXIBLE PAVING			
32 12 16	3 in	Asphalt Concrete Paving	\$3.02	1000 SF	\$3,020
33 00 00		UTILITIES			
33 01 30		SEWER INSPECTION, BYPASSING, AND REHABILITATION			
33 01 30		Sewage Bypassing	\$5,000	1 LS	\$5,000
33 01 38		Maintenance Hole and Wet Well Rehabilitation			
33 01 38		Coat Wet Well Interior	\$10,000	1 LS	\$10,000
33 05 00		COMMON WORK RESULTS FOR UTILITIES			
33 05 16		Precast Concrete Utility Structures			
33 05 16	120 in	deep Precast Concrete Bypass Wet Well	\$46,500	1 ea	\$46,500
33 05 16	48 in	deep Precast Concrete Air Release Vault	\$18,600	1 ea	\$18,600
33 05 16	24 in	deep Precast Concrete Bypass Vault	\$9,300	1 ea	\$9,300
33 05 23	16 ft dp	Bypass Wet Well Excavation and Backfill	\$26,200	1 ea	\$26,200
33 05 33		Couplings, Tie-Rods, Flange Connectors, and Unions			
33 05 33	8 in	Flanged Coupling Adaptor	\$340	4 ea	\$1,360
33 05 33	8 in	Flanged Coupling Adaptor (Restrained)	\$670	2 ea	\$1,340
33 05 33	10 in	Flanged Coupling Adaptor (Restrained)	\$850	2 ea	\$1,700
33 08 00		COMMISSIONING OF UTILITIES			
33 08 11		Pressure Testing and Flushing of Water Utilities			
33 08 11		Pressure Testing of Pipelines	\$5,480	1 ea	\$5,480
33 11 00		WATER UTILITY PIPING			
33 11 11		Ductile Iron Pipe			
33 11 11	6 in	90 Degree Ell	\$510	1 ea	\$510
33 11 11	6 in	45 Degree Ell	\$390	1 ea	\$390
33 11 11	8 in	Tee	\$890	2 ea	\$1,780
33 11 11	8 in	Blind Flange	\$450	1 ea	\$450
33 11 11	4 in	Blind Flange	\$130	1 ea	\$130
33 11 11	10 in	Ductile Iron Pipe - Class 52 Tyton	\$191	10 LF	\$1,910
33 11 11	8 in	Ductile Iron Pipe - Class 52 Tyton	\$159	10 LF	\$1,590
33 11 11	6 in	Ductile Iron Pipe - Class 52 Tyton	\$125	15 LF	\$1,875
33 12 00		WATER UTILITY DISTRIBUTION VALVES AND EQUIPMENT			
33 12 16		Plug Valves			

33 12 16	10 in	Eccentric Plug Valve - Class 150	\$8,300	1 ea	\$8,300
33 12 16	8 in	Eccentric Plug Valve - Class 150	\$5,400	1 ea	\$5,400
33 12 16	6 in	Eccentric Plug Valve - Class 150	\$3,200	1 ea	\$3,200
33 12 16	8 in	Eccentric Plug Valve - Rubber Lined	\$14,000	2 ea	\$28,000
33 12 22		Bronze Valves 3-Inches and Smaller			
33 12 22	2 in	Corporation Stop	\$480	1 ea	\$480
33 12 25		Air and Vacuum Valves for Wastewater Service			
33 12 25	2 in	Sewage Air Release Valve	\$8,100	1 ea	\$8,100
33 30 00		SANITARY SEWERAGE UTILITIES			
33 30 00		Sanitary Sewer Service Tap	\$4,110	1 ea	\$4,110
33 30 00	8 in	Connection to Existing Sewer	\$4,700	2 ea	\$9,400
33 30 00	8 in	Connection to Existing Force Main	\$5,200	4 ea	\$20,800
33 30 31		Polyvinyl-Chloride Gravity Sewer Pipe			
33 30 31	8 in	PVC Sewer Pipe - SDR 26	\$138	125 LF	\$17,250
33 40 00		STORM DRAINAGE UTILITIES			
33 40 00		Manhole Covers and Frames	\$2,000	2 ea	\$4,000

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST	\$359,131
---	------------------

<i>Contingency (All Other Work)</i>	5%	\$	17,957
<i>Field Order Allowance</i>		\$	30,000

ENGINEER'S OPINION OF PROBABLE TOTAL COST	\$407,088
--	------------------

These figures have been prepared, at the request of a client, before finalizing Contract Documents. Figures are only an opinion and are provided solely as a guide. Estimator is not responsible for fluctuation in cost of material, labor or components or unforeseen contingencies.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENGINEERING MATTERS

ITEM 5: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING EL TORO SEWER LIFT STATION SURGE TANK REHABILITATION PROJECT

Trabuco Canyon Water District (District) owns and operates the El Toro Lift Station (Station) near the intersection of El Toro Road and Santa Margarita Parkway (SMP) in the City of Lake Forest. The station is a three (3)-level lift station consisting of a control room, storage room, pump room (dry pit), surge tank and wet wells. The lift station has a dual wet well/dry pit configuration with two separate wet wells. The station pumps from a gravity pipeline flowing east to west along El Toro Road to a force main in SMP, which conveys the flows to the Chiquita Treatment Plant owned and operated by Santa Margarita Water District.

In Fiscal Years Ending (FYE) 2019 & 2020, District staff has replaced pumps at this facility with the assistance of Flo-Services which is shared cost with Santa Margarita Water District (SMWD). In FYE 2021 staff recommended the replacement of certain electrical wiring and conduit throughout the station, including wiring from the MCC to the pumps. At this time, the surge tank has failed and the station is being bypassed to IRWD's Los Alisos Reclamation Plant. District Engineering and Operations staff have been working on a replacement of the system to include a new surge tank, structural supports, compressor, electrical and control system. Plans are included in Exhibit 1.

FUNDING SOURCE:

Reserves (Unbudgeted)

FISCAL IMPACT:

\$225,000 (Includes Engineering and Administration Services During Construction)

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption

RECOMMENDED ACTION:

Receive information at the time of the meeting, and take action as deemed appropriate.

EXHIBIT(S):

1. El Toro Sewer Lift Station Surge Tank Replacement Plans

CONTACTS (staff responsible): LAUSTEN/PEREA/STROUD

GENERAL NOTES

1. 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.
2. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT 811 AT LEAST 48 HOURS PRIOR TO STARTING WORK.
3. 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.
4. CONCRETE WORK SHALL BE PER PLANS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
5. PIPELINES SHALL BE PRESSURE TESTED TO 200 PSIG IN ACCORDANCE WITH SECTION 33 08 11.
6. CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND NOISANCE 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 EQUAL PRIOR TO END OF EACH WORK DAY AS A MINIMUM.
7. 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.
8. 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.
9. 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.
10. 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 EQUAL.
11. THE SURROUNDING AREA SHALL BE RETURNED TO THE CONDITION ENCOUNTERED AT THE START OF CONSTRUCTION.
12. 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.
13. 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 TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET. TIE SHEETS SHALL BE PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR AND SHALL BE DELIVERED TO THE COUNTY OF ORANGE PRIOR TO CONSTRUCTION.
14. 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.
15. CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POINTS OF CONNECTION PRIOR TO COMMENCING CONSTRUCTION.
16. 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.
17. CONSTRUCTION SURVEYS FOR THIS PROJECT SHALL BE PROVIDED BY THE DISTRICT. SURVEY POINTS DESTROYED AS A RESULT OF THE CONTRACTORS NEGLIGENCE OR FAILURE TO PROVIDE PROPER PROTECTION, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
18. 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.
19. 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.
20. 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 SHAPED TO FACILITATE DRAINAGE AND AVOID PONDING AND SHALL BE RESTORED TO NEAR NATURAL OR PRE-CONSTRUCTION CONDITIONS.
21. 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.

22. 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 COMPLETIONS 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 NOISANCE; 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, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR STUCCO 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.

23. 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.

24. CONSTRUCTION WORK HOURS SHALL BE 8:00 AM TO 4:30 PM EXCLUSIVE OF SATURDAYS, SUNDAYS, OR HOLIDAYS, UNLESS OTHERWISE NOTED.

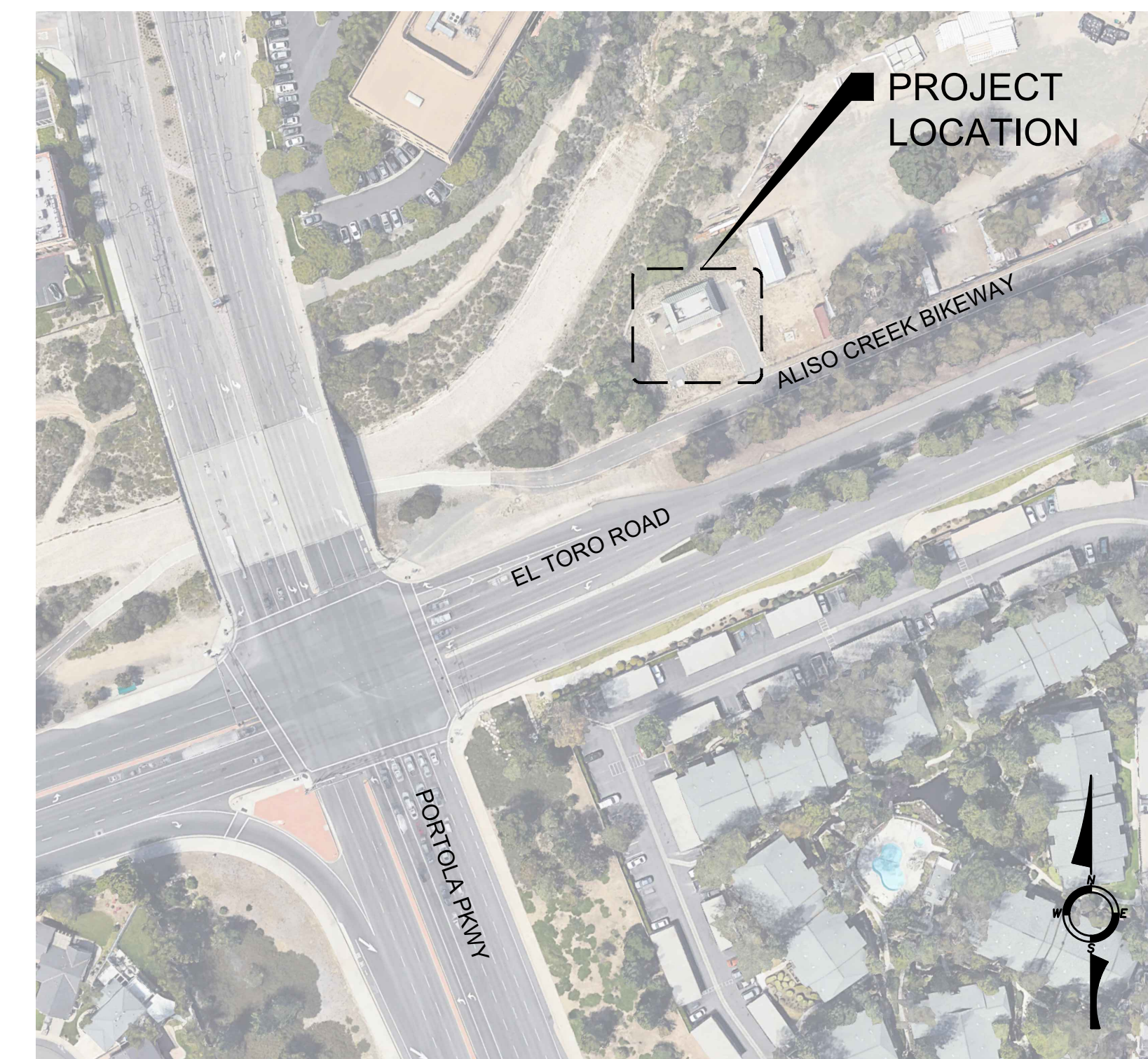
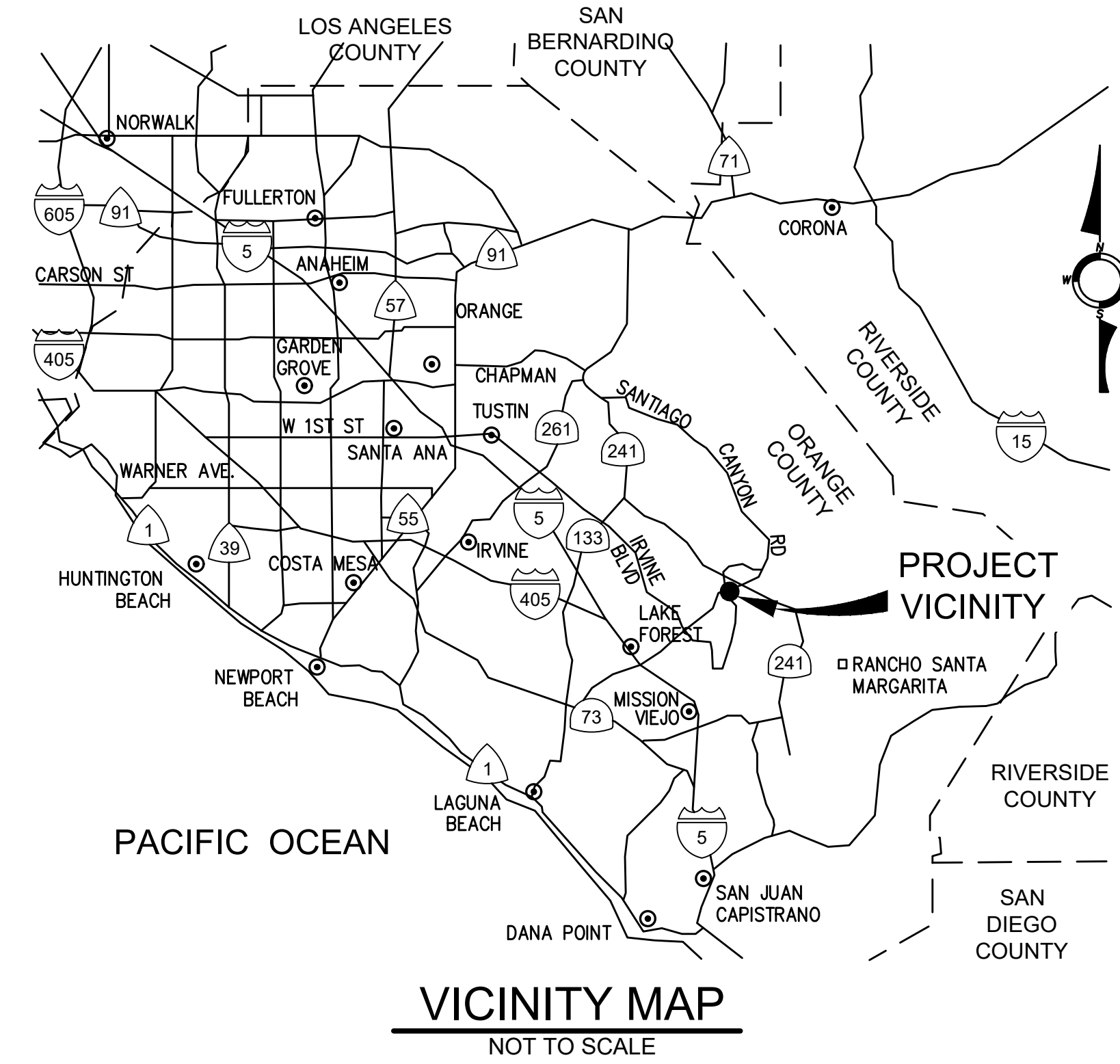
25. BY ACCEPTING THIS CONTRACT, CONTRACTOR HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND, HOLD HARMLESS THE OWNER, TRABUCO CANYON WATER DISTRICT AND IT'S REPRESENTATIVES, ENGINEER (HEREINAFTER JIG CONSULTANTS) THEIR PARENT AND SUBSIDIARY COMPANIES, AGENTS, EMPLOYEES, CONSULTANTS AND REPRESENTATIVES 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, LEGEND, VICINITY AND LOCATION MAPS
D-01	3	CIVIL, MECHANICAL, AND ELECTRICAL DEMOLITION PLAN AND DETAILS
C-01	4	SURGE TANK SITE PLAN, MECHANICAL PLAN AND SECTION
C-02	5	SITE PLAN AND LAYOUT PLAN FOR CONTROLLER AND COMPRESSOR
C-03	6	MISCELLANEOUS DETAILS

LEGEND

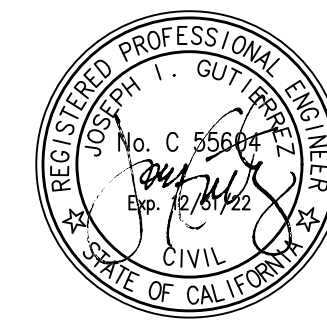
	EXIST. CONCRETE
	AIR TUBING
	ELECTRIC CONDUIT
	SIGNAL CONDUIT
	UNDERGROUND UTILITY
	ABOVE GROUND UTILITY
	BALL VALVE
	AIR SOLENOID VALVE
	SAFETY VALVE
	4-1/2" DIAL PRESSURE GAUGE
	AIR BLEED MUFFLER
	SST FLEXIBLE CONNECTOR
	SAFETY RELIEF VALVE
	LEVEL TRANSMITTER



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

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

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



NO.	DATE	REVISIONS

DESIGN:	MM
DRAWN:	MM
CHECKED:	JG

DATE	10/27/21
ENGINEER	JOSEPH I. GUTIERREZ RCE 55604
DISTRICT ENGINEER	LORRIE LAUSTEN RCE 67027

TRABUCO CANYON WATER DISTRICT
EL TORO SEWER LIFT STATION SURGE TANK REPLACEMENT
PROJECT NO.

GENERAL NOTES, SHEET INDEX,
LEGEND, VICINITY AND LOCATION MAPS

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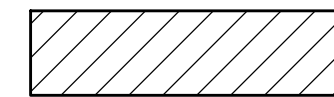
DEMOLITION NOTES

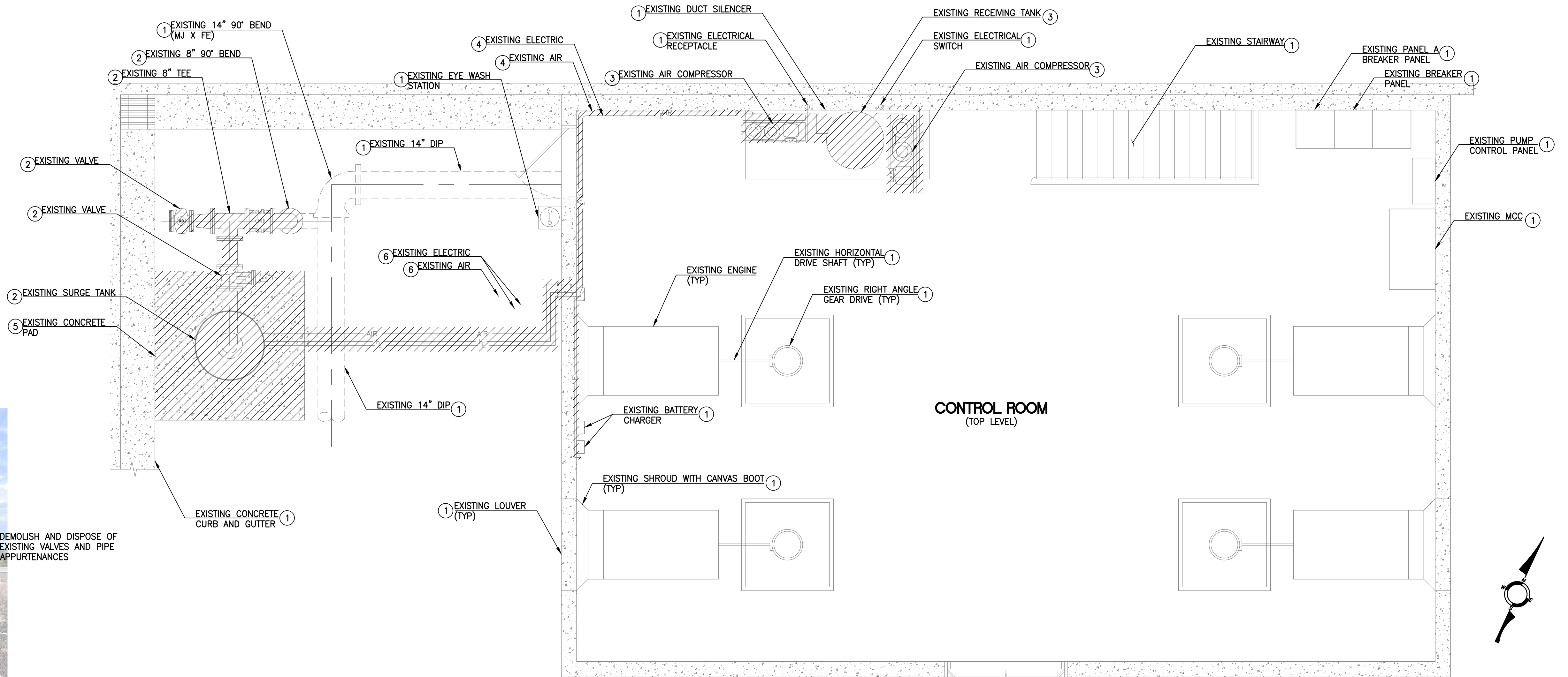
- 1 PROTECT IN PLACE
- 2 DEMOLISH AND DISPOSE OF EXISTING SURGE TANK, PIPING, VALVES, AND APPURTENANCES PER 1
- 3 DEMOLISH AND DISPOSE OF EXISTING AIR COMPRESSOR AND RECEIVING TANK PER 2 & 3
- 4 DEMOLISH AND DISPOSE OF ABOVE GRADE AIR TUBING & ELECTRIC CONDUITS PER 4 & 5
- 5 DEMOLISH AND DISPOSE OF EXISTING CONCRETE PAD
- 6 DEMOLISH AND DISPOSE OF BELOW GRADE AIR TUBING & ELECTRIC CONDUITS

NOTES

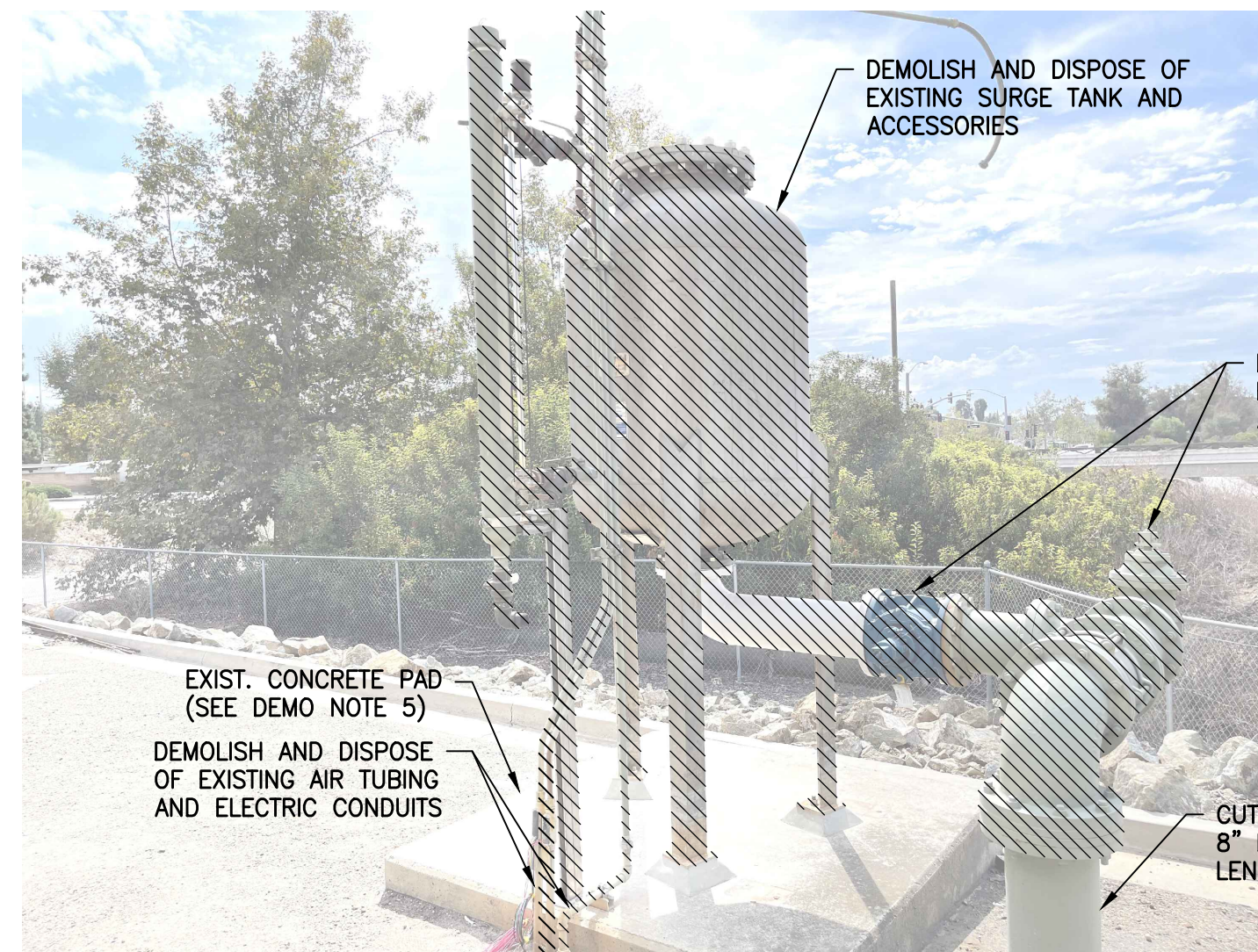
- 1. AFTER DEMOLITION OF EXISTING AIR COMPRESSOR, RECEIVING TANK, AND PIPING, REMAINING BOLT HOLES SHALL BE FILLED WITH NON SHRINK CEMENT GROUT

LEGEND

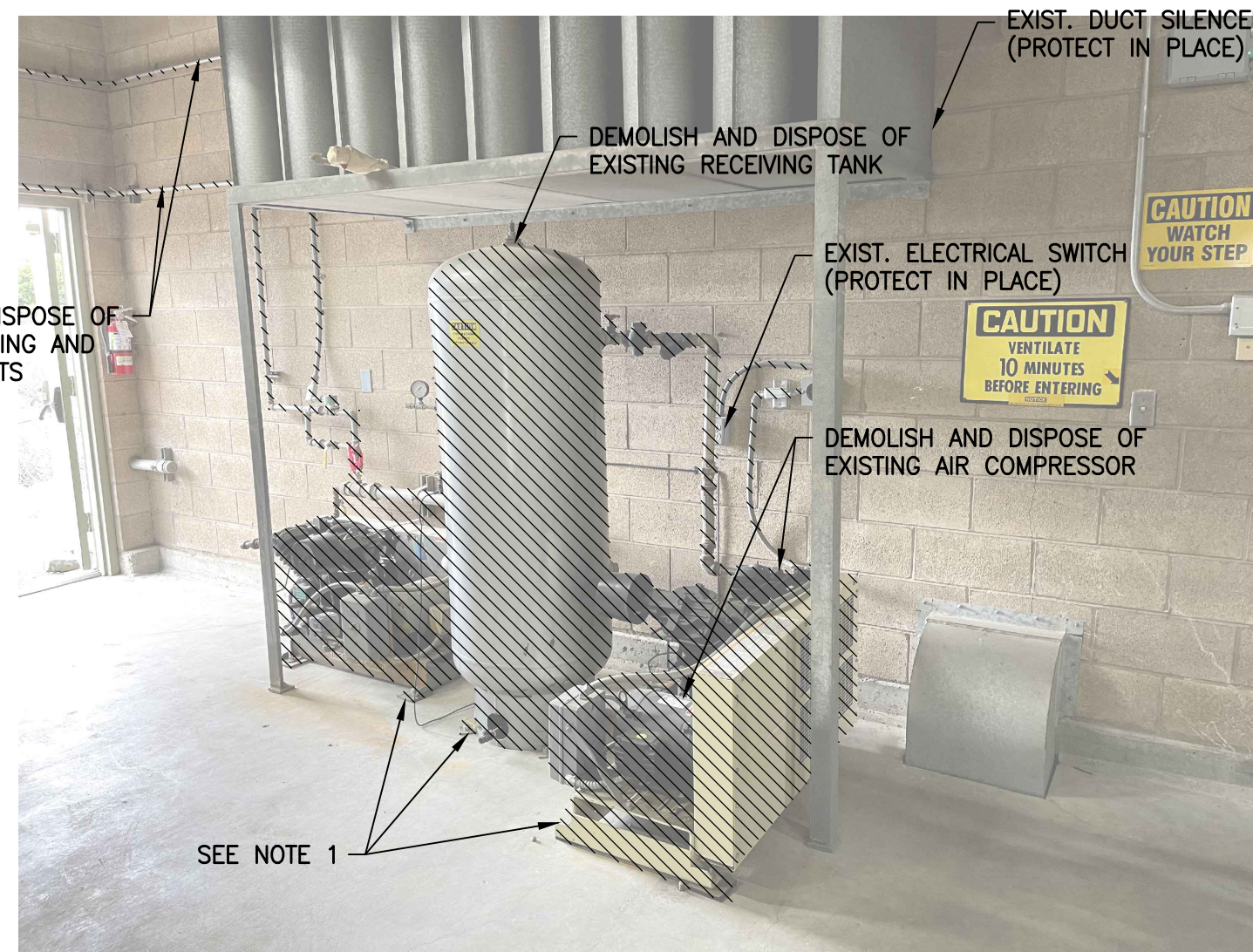
 DEMOLISH AND DISPOSE OF EXISTING AIR COMPRESSOR, PUMPS, CONCRETE, AND SURGE TANKS



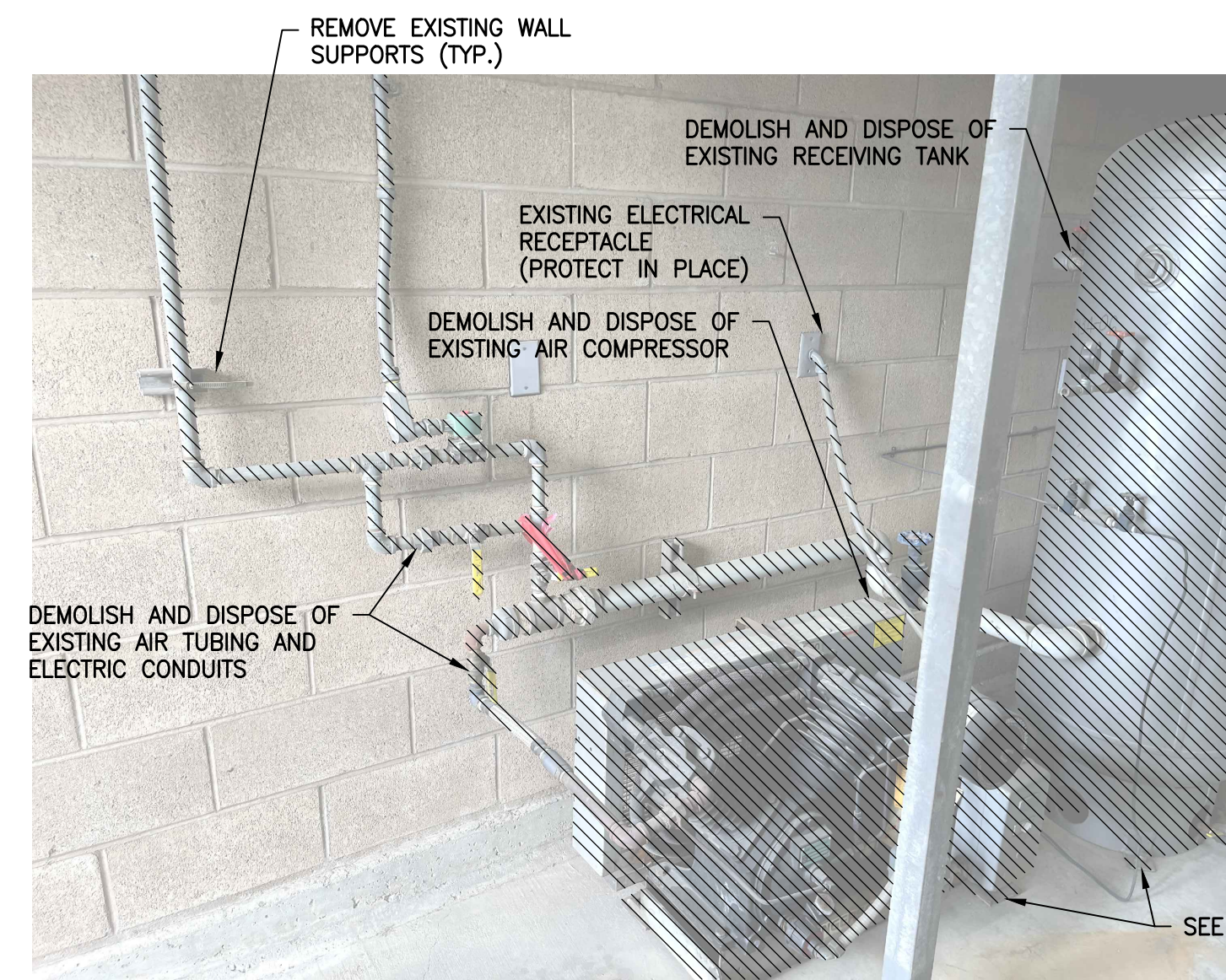
DEMOLITION SITE PLAN
SCALE: 3/8" = 1'-0"



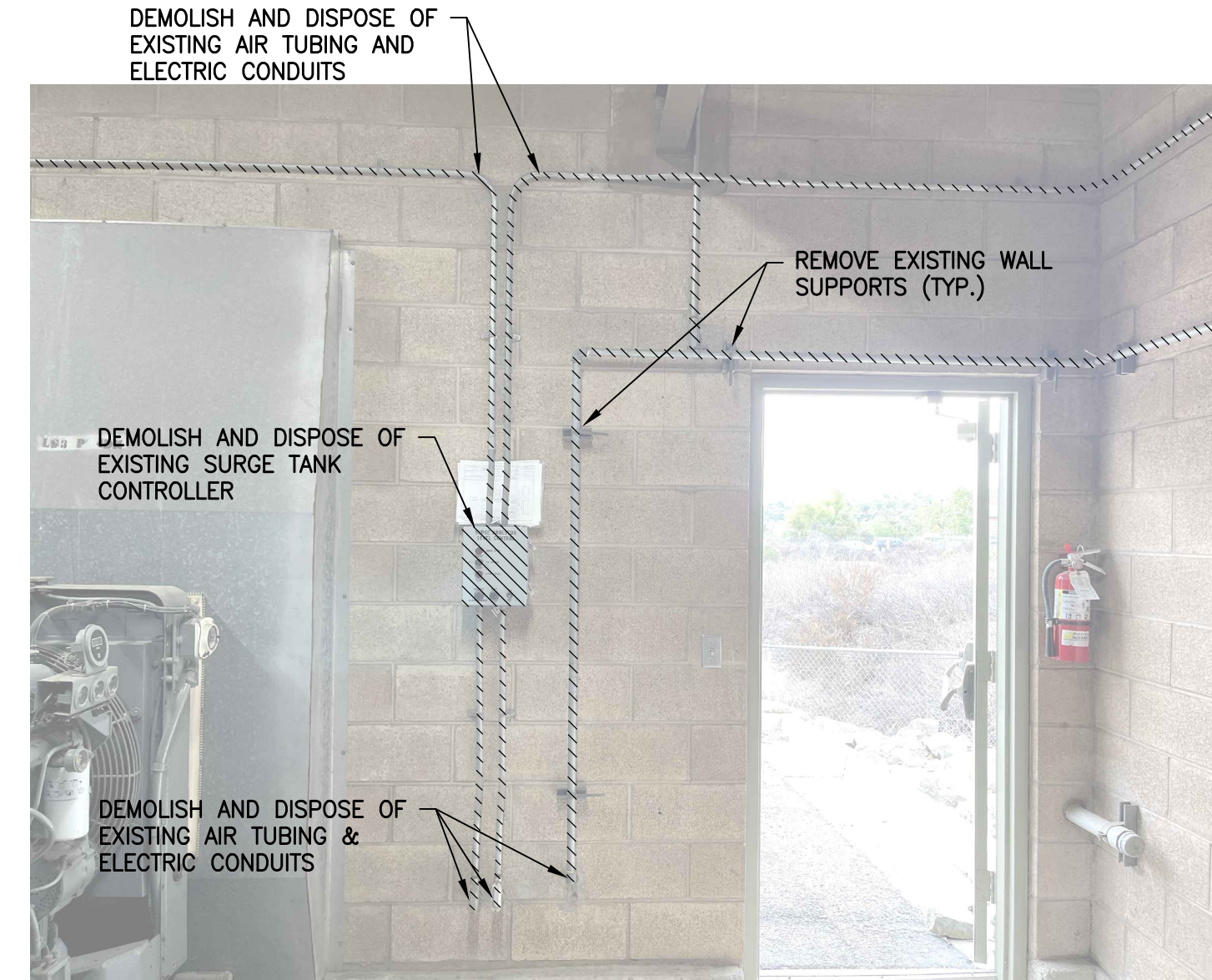
DEMOLITION DETAIL 1
NOT TO SCALE



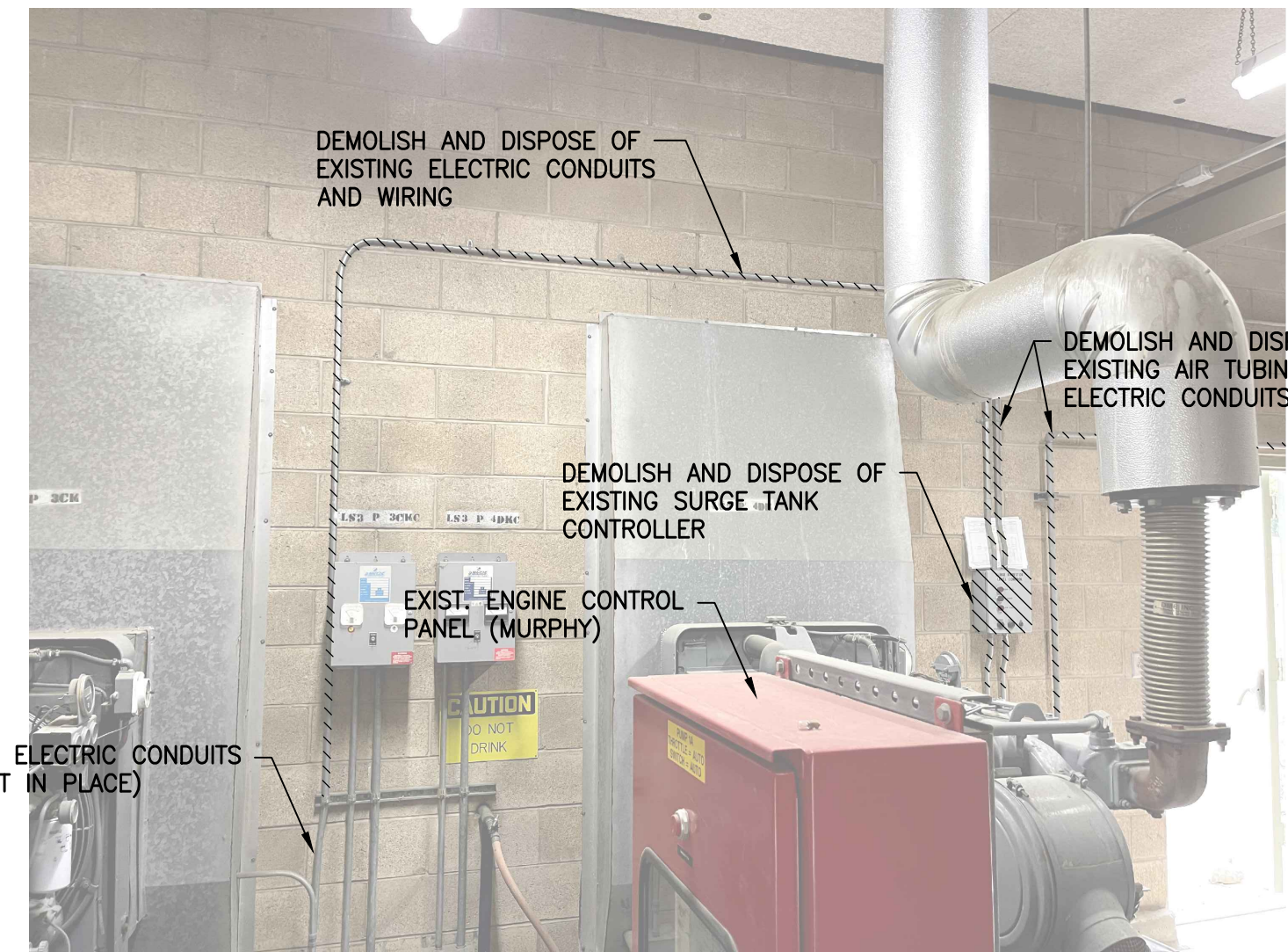
DEMOLITION DETAIL 2
NOT TO SCALE



DEMOLITION DETAIL 3
NOT TO SCALE



DEMOLITION DETAIL 4
NOT TO SCALE



DEMOLITION DETAIL 5
NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER
JOSEPH L. GUTIERREZ
RCE 55604
CIVIL
STATE OF CALIFORNIA

TRABUCO CANYON WATER DISTRICT

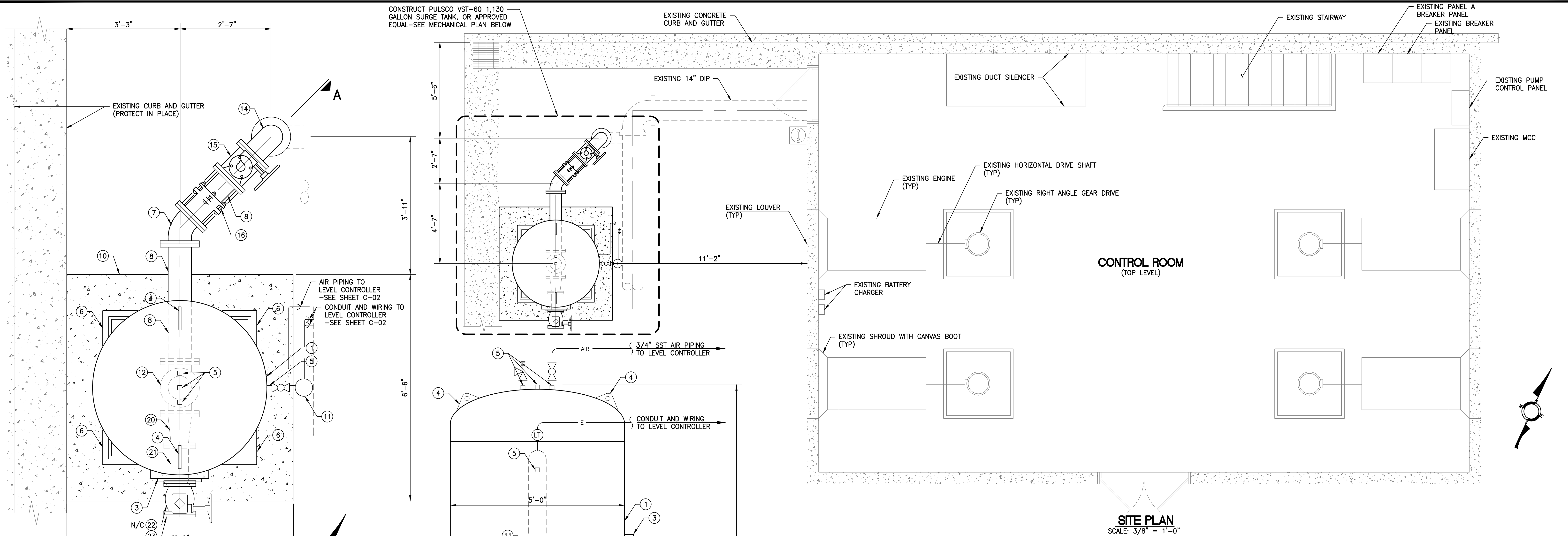
DATE: 10/27/21
ENGINEER: JOSEPH L. GUTIERREZ RCE 55604
DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027

TRABUCO CANYON WATER DISTRICT
EL TORO SEWER LIFT STATION SURGE TANK REPLACEMENT PROJECT NO.

CIVIL, MECHANICAL, AND ELECTRICAL DEMOLITION PLAN AND DETAILS

D-01
SHEET 3 OF 6

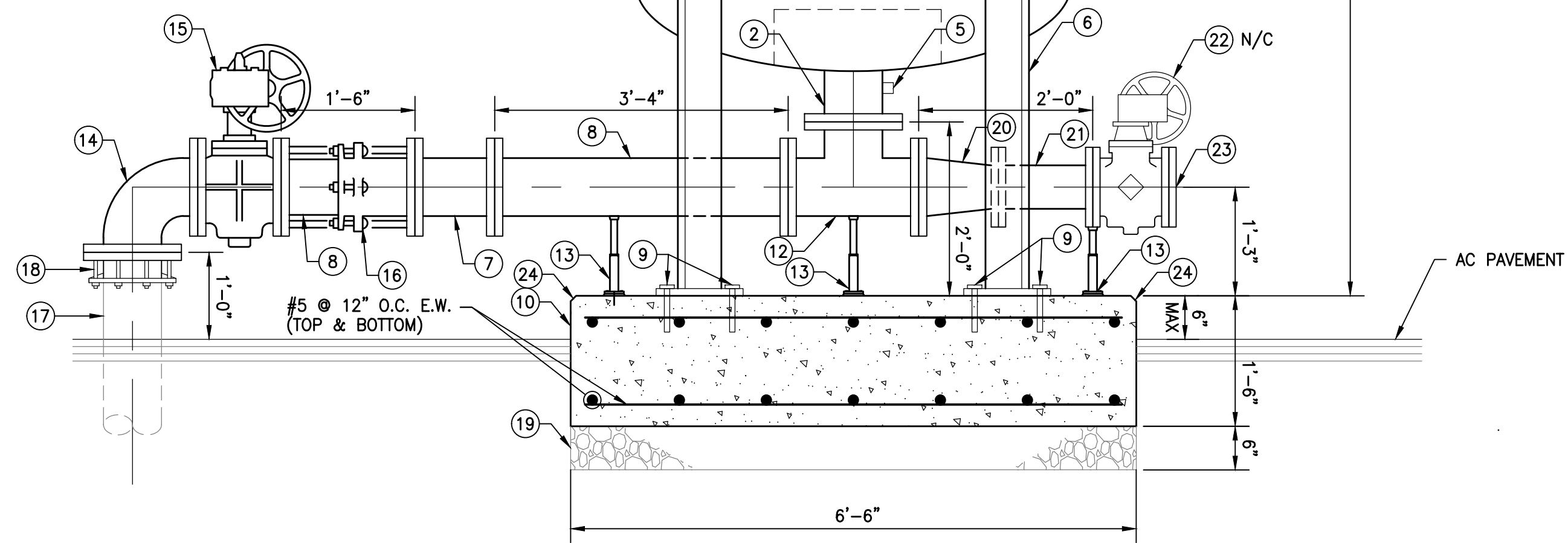
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SURGE TANK MECHANICAL PLAN
SCALE: 3/4" = 1'-0"

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

NOTE:
USE CLASS A CONCRETE MIX



SECTION A-A
SCALE: 3/4" = 1'-0"

CONSTRUCTION NOTES:

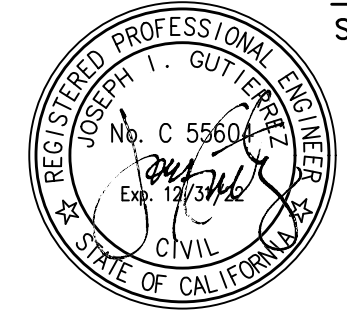
- 1 CONSTRUCT PULSCO VST-60 SURGE TANK, OR APPROVED EQUAL
- 2 CONSTRUCT 8" FLG'D OUTLET
- 3 CONSTRUCT 14" x 18" ELLIPTICAL MANWAY
- 4 CONSTRUCT LIFTING LUGS
- 5 CONSTRUCT 3/4" NPT COUPLINGS
- 6 CONSTRUCT SUPPORT LEGS & ANGLE BEAMS
- 7 CONSTRUCT 8" FLG'D DI 45° BEND
- 8 CONSTRUCT 8" FLG'D DI SPOOL PIECE - LENGTH AS SHOWN
- 9 ANCHOR TANK LEGS TO CONCRETE PAD PER MANUFACTURERS RECOMMENDATIONS
- 10 CONSTRUCT REINFORCED CONCRETE PAD TO DIMENSIONS SHOWN
- 11 CONSTRUCT LIQUID LEVEL INDICATOR
- 12 CONSTRUCT 8" x 8" FLG'D DI TEE
- 13 CONSTRUCT PIPE SUPPORT PER (1) C-03
- 14 CONSTRUCT 8" 90° DI BEND
- 15 CONSTRUCT 8" PLUG VALVE WITH HANDWHEEL
- 16 CONSTRUCT 8" FLEXIBLE COUPLING AND RESTRAINING RODS
- 17 CUT EXISTING 8" DI PIPE TO DESIRED LENGTH AS SHOWN
- 18 CONSTRUCT RESTRAINED FLANGED COUPLING ADAPTER
- 19 CONSTRUCT 3/4" CRUSHED ROCK BASE
- 20 CONSTRUCT 8" x 6" FLG'D DI REDUCER
- 21 CONSTRUCT 6" FLG'D DI SPOOL PIECE - LENGTH AS SHOWN
- 22 CONSTRUCT 6" PLUG VALVE WITH HANDWHEEL
- 23 CONSTRUCT BLIND FLANGE
- 24 CONSTRUCT 3/4" CHAMFER

LEGEND

- BALL VALVE
- SAFETY RELIEF VALVE
- LEVEL TRANSMITTER

DIG ALERT CALL TOLL FREE 811
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CHECKED: JG	DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027



TRABUCO CANYON WATER DISTRICT
EL TORO SEWER LIFT STATION SURGE TANK REPLACEMENT PROJECT NO.

SURGE TANK SITE PLAN, MECHANICAL PLAN AND SECTION

C-01
SHEET 4 OF 6

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



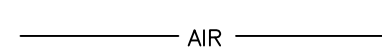
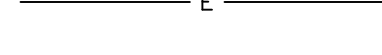

CONSTRUCTION NOTES:

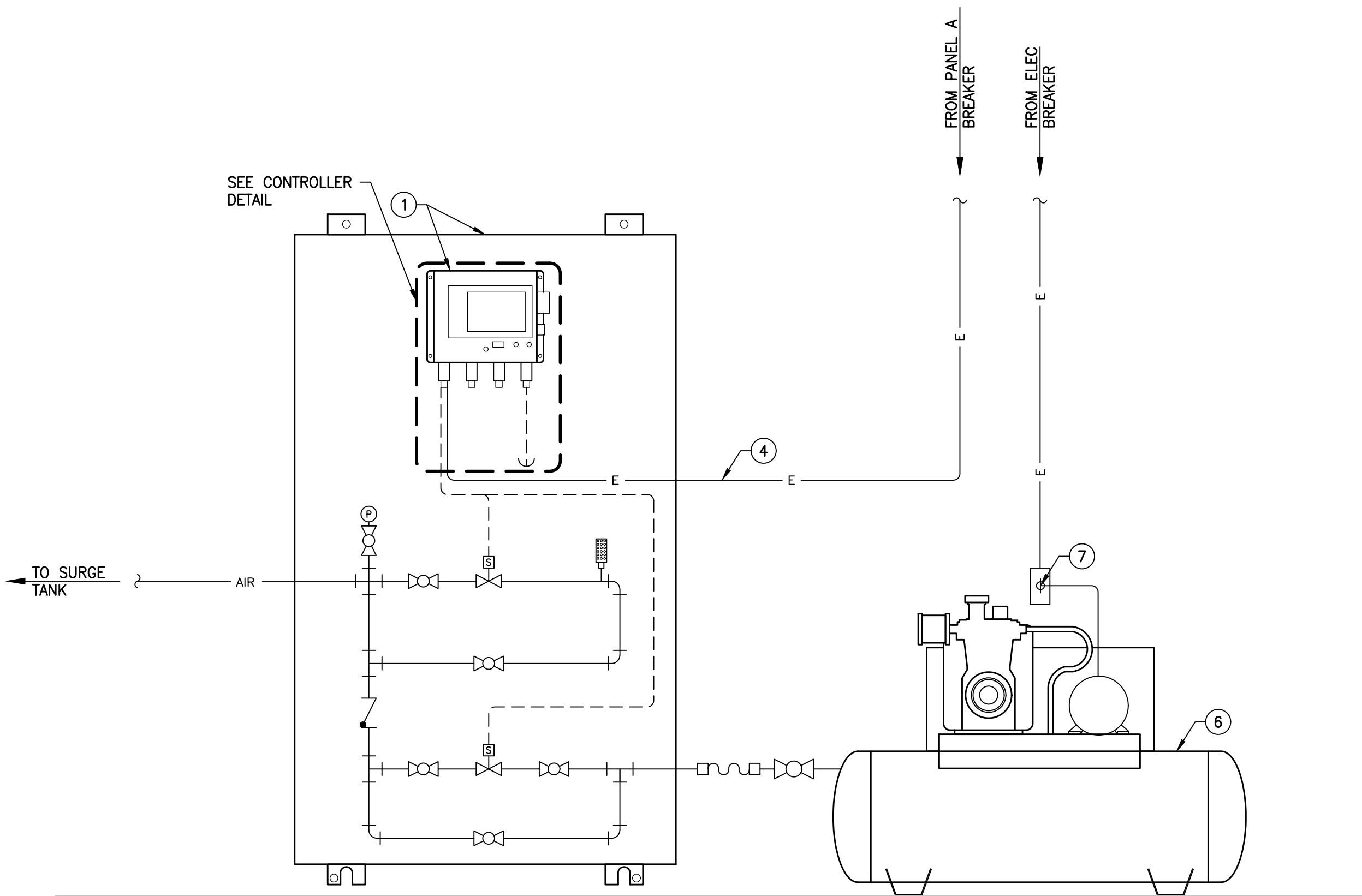
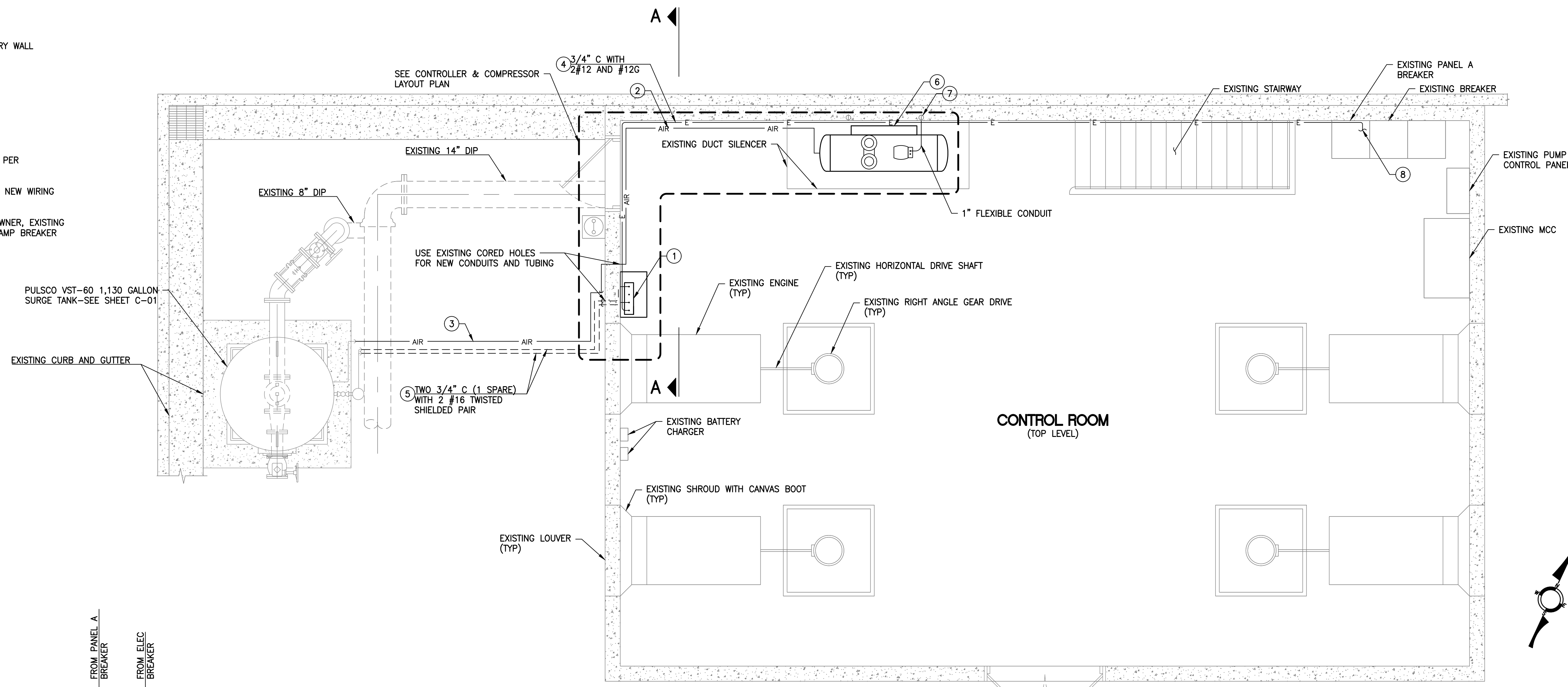
- ① CONSTRUCT SKYPARK 750 SURGE CONTROLLER IN NEMA 4 ENCLOSURE – MOUNT TO MASONRY WALL PER MANUFACTURER'S RECOMMENDATION
- ② CONSTRUCT 3/4" SST AIR TUBING WITH WALL SUPPORT PER  C-03
- ③ CONSTRUCT BELOW GRADE 3/4" SST AIR TUBING
- ④ CONSTRUCT ELECTRICAL CONDUITS WITH WALL SUPPORT PER  C-03
- ⑤ CONSTRUCT BELOW GRADE PVC ELECTRICAL CONDUITS
- ⑥ CONSTRUCT QUINCY F310HP 80 GAL AIR COMPRESSOR – ANCHOR LEGS TO CONCRETE SLAB PER MANUFACTURER'S RECOMMENDATION
- ⑦ CONSTRUCT FLEXIBLE CONDUIT FROM AIR COMPRESSOR TO EXISTING WALL RECEPTACLE. PULL NEW WIRING THROUGH EXISTING CONDUITS FROM COMPRESSOR TO BREAKER (2#10 AND #10G)
- ⑧ VERIFY IF WIRING ON CIRCUIT 18 ON EXISTING PANEL A CAN BE REMOVED. ACCORDING TO OWNER, EXISTING WIRING ARE FOR CHART RECORDERS WHICH ARE OBSOLETE – USE EXISTING CIRCUIT 18 20 AMP BREAKER FOR POWER TO NEW LEVEL CONTROLLER

NOTES:

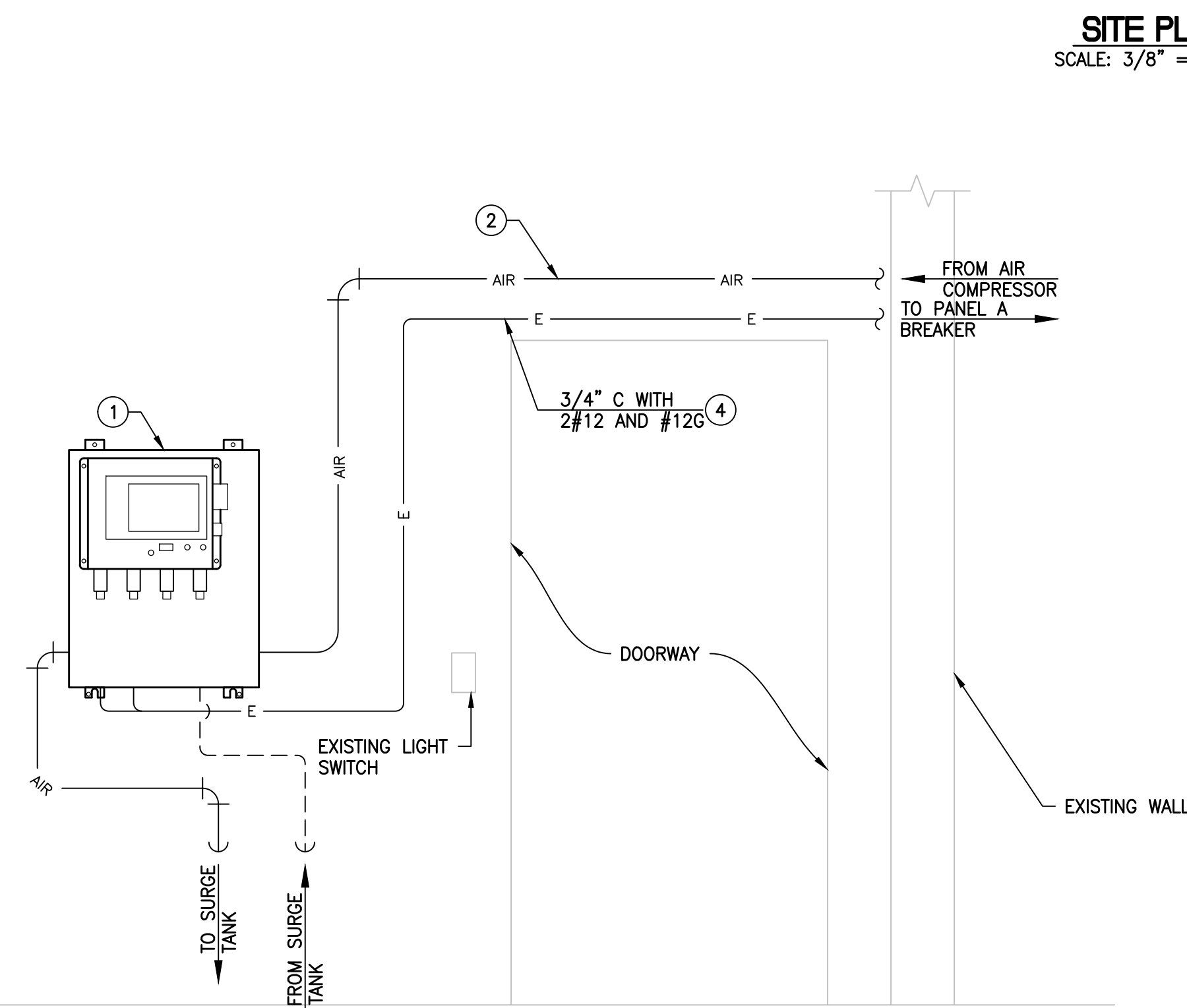
1. FOR CLARITY, ALL VALVES ARE SHOWN IN PLAN VIEW, EVEN WHEN VALVES WILL BE INSTALLED IN VERTICAL POSITION OR ON COMMON WALLS
2. ALL VALVES SHALL MEET 250 PSIG WORKING PRESSURE
3. AIR TUBING SHALL BE 3/4" STAINLESS STEEL
4. ALL ABOVE GROUND CONDUITS, PULL BOXES, AND FITTINGS SHALL BE PVC COATED CORROSION RESISTANT, OCAL, OR APPROVED EQUAL. ALL BELOW GRADE CONDUITS AND FITTINGS SHALL BE PVC ELECTRICAL CONDUITS.

LEGEND

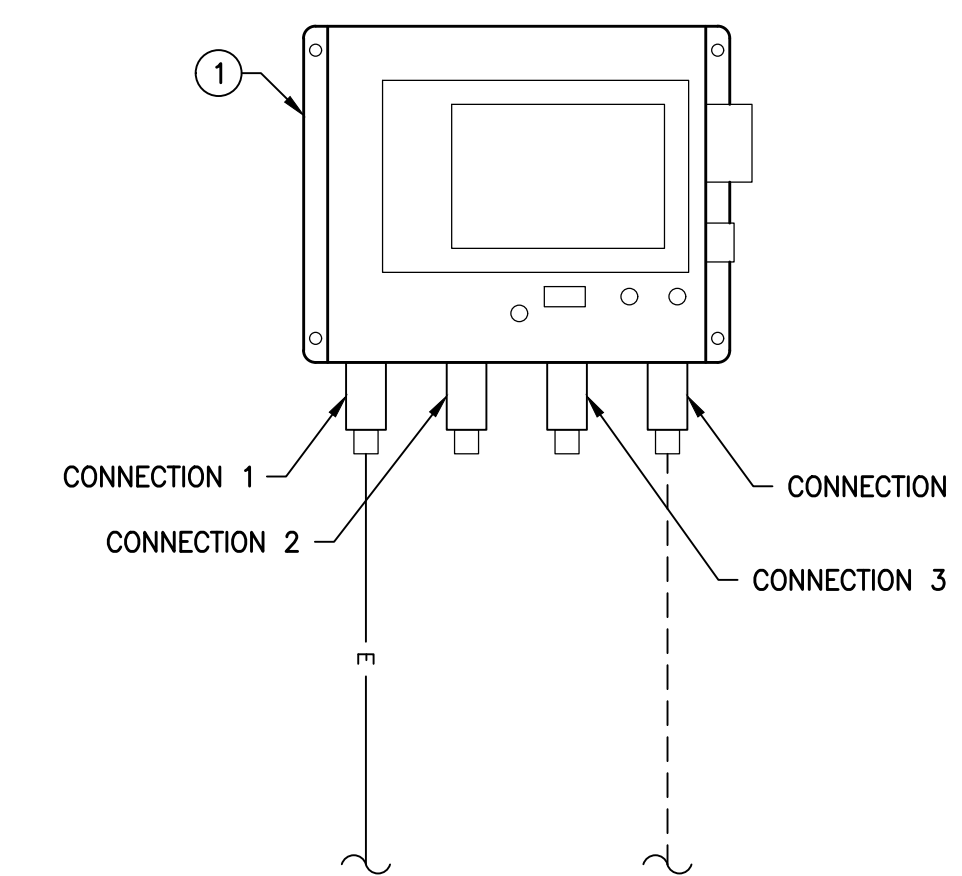
-  BALL VALVE
-  AIR SOLENOID VALVE
-  SAFETY VALVE
-  4-1/2" DIAL PRESSURE GAUGE
-  AIR BLEED MUFFLER
-  SST FLEXIBLE CONNECTOR
-  AIR TUBING
-  ELECTRIC CONDUIT
-  SIGNAL CONDUIT



CONTROLLER AND COMPRESSOR LAYOUT PLAN
N.T.S.



SECTION A-A
CONTROLLER CONNECTION LAYOUT
N.T.S.



CONTROLLER CONNECTIONS

CONNECTION	FUNCTION	APPLICATION
1	POWER & OUTPUTS	INPUT: 120VAC POWER OUTPUT: AIR SOLENOID VALVES
2	DRY CONTACTS	OUTPUT: HIGH LEVEL ALARM DRY CONTACT (FUTURE) OUTPUT: LOW LEVEL ALARM DRY CONTACT (FUTURE)
3	INPUTS	-
4	ANALOG IN & OUT	OUTPUT: 4-20mA TANK LEVEL STATUS SIGNAL OUT (FUTURE) INPUT: 4-20mA TANK LEVEL FROM LEVEL TRANSMITTER

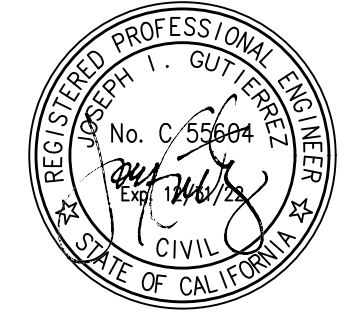
CONTROLLER DETAIL
N.T.S.

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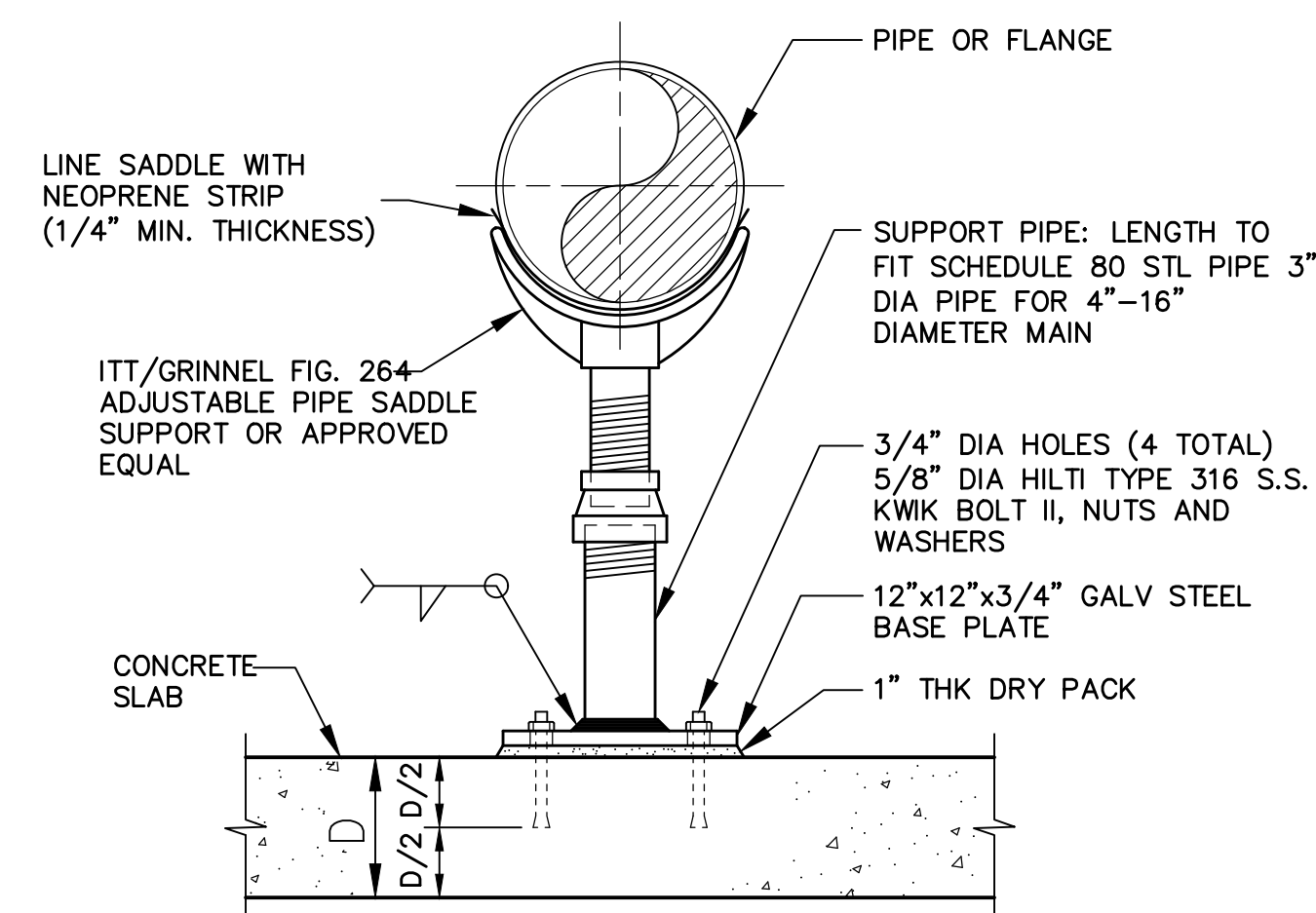


NO.	DATE	REVISIONS

DESIGN: MM	DATE: 10/27/21
DRAWN: MM	ENGINEER: JOSEPH J. GUTIERREZ RCE 55604
CHECKED: JG	DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027

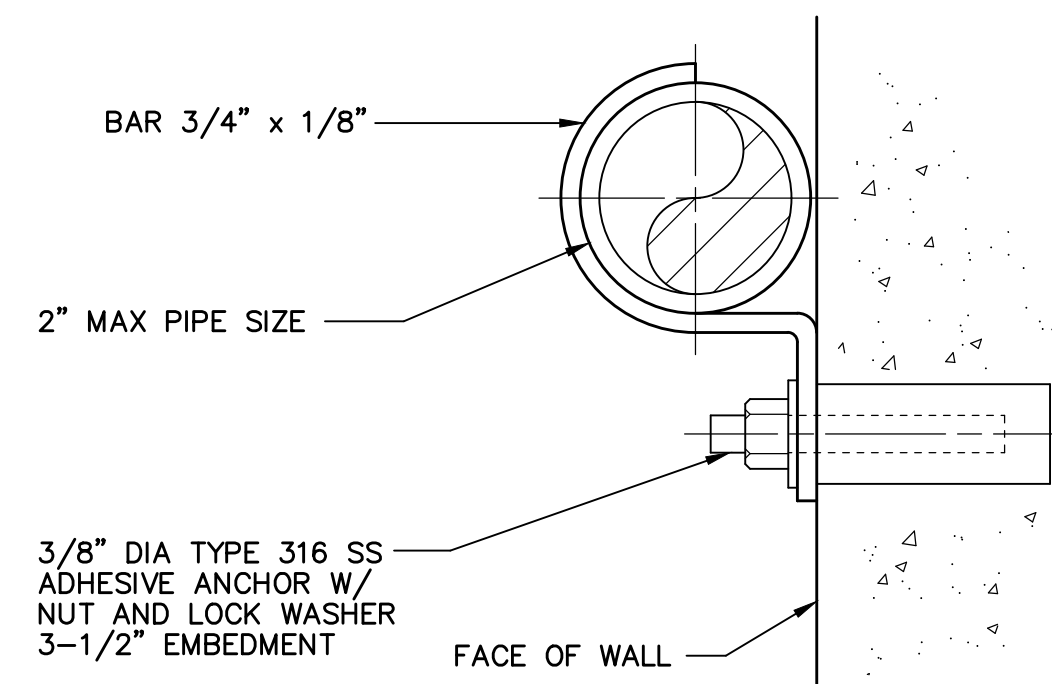
TRABUCO CANYON WATER DISTRICT
EL TORO SEWER LIFT STATION SURGE TANK REPLACEMENT PROJECT NO.

SITE PLAN AND LAYOUT PLAN FOR CONTROLLER AND COMPRESSOR



NOTE:
PIPE SUPPORT MATERIALS SHALL BE GALVANIZED

PIPE SUPPORT DETAIL 1
N.T.S.



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

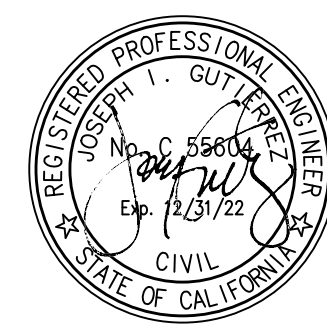
WALL SUPPORT DETAIL 2
N.T.S.

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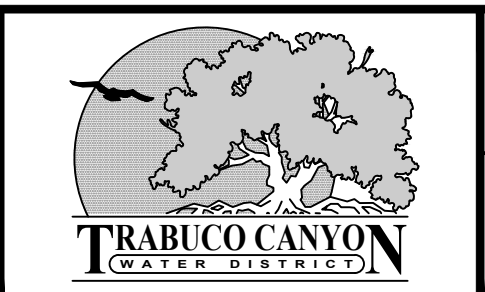
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JOSEPH J. GUTIERREZ RCE 55604 ENGINEER
LORRIE LAUSTEN RCE 67027 DISTRICT ENGINEER

TRABUCO CANYON WATER DISTRICT
EL TORO SEWER LIFT STATION SURGE TANK REPLACEMENT
PROJECT NO.

MISCELLANEOUS DETAILS

C-03
SHEET 6 OF 6

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENGINEERING MATTERS

ITEM 6: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING ADOPTION OF UPDATED MEMORANDUM OF UNDERSTANDING BETWEEN THE COUNTY OF ORANGE FOR USE OF COUNTYWIDE MASS NOTIFICATION SYSTEM (ALERTOC)

In 2008, the County of Orange initiated a Countywide Mass Notification System called “AlertOC” for the purpose of contacting hundreds of thousands of Orange County residents in the event of an emergency. In 2013, this system was made available to other public agencies throughout the County, including Trabuco Canyon Water District (District), and the system has been used for a wide range of notifications, including severe weather warnings, COVID-19 notifications, and other emergencies.

At the June 19, 2013 Regular Board Meeting, the District’s Board of Directors approved the Memorandum of Understanding (MOU) with the County to use the Countywide Mass Notification System under the terms and conditions of the system operating guidelines and vendor-provided agreements. On June 22, 2021, the County Board of Supervisors approved an updated version of the MOU for a 4-year term beginning July 1, 2021.

To continue to participate and use AlertOC, the District would need to sign an updated MOU with the County and attend training on the use of the system. There is no cost to use the system at this time as the County is sponsoring this program. In partnership with the County of Orange, the Water Emergency Response Organization of Orange County (WEROC) serves as the Operational Area Water and Wastewater Mutual Aid Coordinator and facilitator of the execution on this agreement with all water and wastewater special districts that choose to use the system for the following reasons:

- Oversight of MOU and tracking of agencies using the system
- Execution tracking of the MOU
- Execution of the User Agreement
- Ensure training is provided on the system to the identified users
- Ensure training is provided on the coordination process contained in the AlertOC Policy/Standard Operating Procedure (SOP)
- Maintenance of universal templates for water and wastewater agencies in compliance with state and federal requirement on regulatory language

District staff recommends the Board of Directors approve and authorize the General Manager to execute the updated MOU between the County of Orange and Participants for Use of the Countywide Mass Notification System

FUNDING SOURCE:

General Fund

FISCAL IMPACT:

System Costs: The County sponsors the system and financial burden.

District Costs: None other than certain costs associated with staff time for training and data management of the system already approved in the FY 2021/2022 General Fund Budget – Salaries & Benefits.

ENVIRONMENTAL COMPLIANCE:

None

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

RECOMMENDED ACTION:

Recommend the Board of Directors approve and authorize the General Manager to execute the Memorandum of Understanding Between the County of Orange and Participants for Use of Countywide Mass Notification System (Action Calendar).

EXHIBIT(S):

1. Memorandum of Understanding Between the County of Orange and Participants for Use of Countywide Mass Notification System

CONTACTS (staff responsible): PALUDI/PEREA/STROUD

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE COUNTY OF ORANGE
AND
PARTICIPANTS
FOR USE OF COUNTYWIDE MASS NOTIFICATION SYSTEM**

This Memorandum of Understanding, hereinafter referred to as “MOU,” dated June 30, 2021, which date is stated for purposes of reference only, is entered into by and between the County of Orange, a political subdivision of the State of California, hereinafter referred to as “COUNTY,” and the undersigned municipalities, public universities and water agencies responsible for protecting a resident population and maintaining a dedicated public safety answering point (PSAP) within the County of Orange, hereinafter referred to individually as “PARTICIPANT” or collectively as “PARTICIPANTS.”

This MOU is intended to establish governance and terms of use for a Countywide Public Mass Notification System.

RECITALS

WHEREAS, COUNTY is sponsoring a Countywide Public Mass Notification System (“System”) for the primary intent of providing timely communication to the public during times of emergency; and

WHEREAS, the County is making use of the System available to all cities and agencies within the County of Orange who have the responsibility for protecting a resident population and maintaining a dedicated public safety answering point (PSAP); and

WHEREAS, COUNTY entered into Orange County Agreement No. MA-060-20010263 (“Agreement”) with Everbridge, Inc., for the provision of Public Mass Notification System Services, on or about December 31, 2019 attached hereto as Exhibit A, to disseminate critical, time-sensitive emergency information to COUNTY’s citizens and businesses through phone and e-mail devices for emergency notification purposes; and

WHEREAS, COUNTY agrees to provide to PARTICIPANTS access to the services provided by Everbridge, Inc. as contained in the Agreement in exchange for abiding by the terms set forth in this MOU; and

WHEREAS, PARTICIPANTS agree to uphold the same terms and conditions of the Agreement, to use the System in compliance with all usage agreements, including but not limited to the End User License Agreement, identified and incorporated herein as Exhibit A (Orange County Agreement No. MA-060-20010263, Exhibit B (Countywide Public Mass Notification System Policy and Guideline), and Exhibit C (Nondisclosure Document), and the terms of this MOU to receive the benefits under the Agreement

NOW, THEREFORE, the parties agree as follows:

I. Definitions:

“Agreement” shall refer to Orange County Agreement No. MA-060-20010263 between COUNTY and Everbridge, Inc. .

“Countywide” shall mean all geographic locations in Orange County, California.

“Contact information” shall mean PARTICIPANT and public contact data stored in the System for the purpose of disseminating communication in accordance with this MOU and its Exhibits.

“Confidential Information” shall include but not be limited to personal identifying information about an individual such as address, phone number, Social Security number, or any other identifier protected from disclosure by law, and/or any other information otherwise protected from disclosure by law, for example, the identity of a victim of a sex crime or a juvenile.

“Emergency” shall include, but not be limited to, instances of fire, flood, storm, epidemic, riots, or disease that threaten the safety and welfare of the citizens and property located within the boundaries of the COUNTY and PARTICIPANTS’ respective jurisdictions.

“Emergency information” shall mean information relevant to the safety and welfare of recipients in the event of an Emergency. Such information shall include but not be limited to instructions and directions to alleviate or avoid the impact of an emergency.

“Emergency notification situation” shall mean instances when emergency information is to be distributed through the System.

“Individual User” shall mean an agent, officer, employee or representative of PARTICIPANT that has been granted access to the System as set forth in this MOU.

“Non-emergency information” shall refer to information that is not relevant to the safety and welfare of recipients, but has been deemed to be of significant importance to a PARTICIPANT’s jurisdiction to justify the use of the System to distribute such information.

“Non-emergency notification situation” shall mean instances when a PARTICIPANT deems non-emergency information to be of significance to a PARTICIPANT’S jurisdiction and the PARTICIPANT uses the System to distribute such information.

“System” shall mean the Public Mass Notification System as provided by Everbridge, Inc. to COUNTY under the Agreement. The System is designed to disseminate information by utilizing common communications, i.e. telephone and e-mail communications to citizens and businesses as permitted under the Agreement.

Hold Harmless: PARTICIPANT will defend, indemnify and save harmless COUNTY, its elected officials, officers, agents, employees, volunteers and those special districts and agencies which COUNTY's Board of Supervisors acts as the governing Board ("COUNTY INDEMNITEES") from and against any and all claims, demands, losses, damages, expenses or liabilities of any kind or nature which COUNTY, its officers, agents, employees or volunteers may sustain or incur or which may be imposed upon them for injury to or death of persons, or damages to property as a result of, or arising out of the acts, errors or omissions of PARTICIPANT, its officers, agents, employees, subtenants, invitees, licensees, or contracted vendors. COUNTY will defend, indemnify and save harmless PARTICIPANT, its officers, agents, employees and volunteers from and against any and all claims, demands, losses, damages, expenses or liabilities of any kind or nature which PARTICIPANT, its officers, agents, employees or volunteers may sustain or incur or which may be imposed upon them for injury to or death of persons, or damages to property as a result of, or arising out of the acts, errors or omissions of COUNTY, its officers, agents, employees, subtenants, invitees, licensees, or contracted vendors.

III. Term: This MOU shall be in effect from July 1, 2021 and shall expire on December 30, 2024 unless COUNTY funding of the System becomes unavailable at which time PARTICIPANTS will be given six-month advance notice per the termination terms found in Paragraph IX. Termination, below.

IV. Scope of Services: PARTICIPANTS shall receive from COUNTY access to the same services being provided by Everbridge, Inc. to the COUNTY under the Agreement. COUNTY's involvement in this MOU is limited only to extending the availability of the terms and conditions of the Agreement to the PARTICIPANTS.

V. Use: Use of the System and its data, including but not limited to contact information, is governed by the terms, conditions and restrictions set forth in the terms provided in Exhibit A, B, C, and D. All PARTICIPANTS agree to the terms and conditions contained in Exhibits A, B, C, and D. COUNTY retains the right to update Exhibits A, B, C, and D as needed, in whole or in part, during the life of this MOU. Any and all revised Exhibits will be distributed to PARTICIPANTS within five business days of the revision date and shall be incorporated into this MOU. Such modifications to the Exhibits shall not be deemed an amendment for the purposes of Paragraph X. Amendments, below.

PARTICIPANT, including each of its agents, officers, employees, and representatives who are given access to the System, agrees to abide by the individual terms of each agreement and the additional conditions incorporated herein. Breach of use may result in individual user or PARTICIPANT access account termination.

PARTICIPANT agrees to require each Individual User to execute an Individual User Agreement (Exhibit D) regarding their obligations to maintain the confidentiality of login and password information; ensure that they will use the System in accordance with all applicable laws and regulations, including those relating to use of personal information; that they may be responsible for any breach of the terms of the Agreement with

Everbridge and/or this MOU; and the confidentiality provisions of this MOU. PARTICIPANT further agrees to provide a copy of the signed Individual User Agreement to COUNTY and notify COUNTY, in writing, if an individual user withdraws their consent to the Individual User Agreement at anytime during the term of this MOU.

The scope of services under the Agreement is limited to using the System to distribute business communication to PARTICIPANT inter-departmental resources and/or emergency information to the public in emergency notification situations.

All PARTICIPANTS have read and accept the terms and conditions found in COUNTY's "Countywide Public Mass Notification System Policy and Guideline (June 30, 2008)", attached hereto as Exhibit B.

- VI. Notice:** Any notice or notices required or permitted to be given pursuant to this MOU shall be submitted in writing and delivered in person, via electronic mail or via United States mail as follows:

COUNTY:

County of Orange – Sheriff-Coroner Department
Emergency Management Division
Attn: Director of Emergency Management
2644 Santiago Canyon Road
Silverado, CA 92676

PARTICIPANTS: Each PARTICIPANT shall provide to COUNTY a contact person and notice information upon entering into this MOU. Each PARTICIPANT shall notify COUNTY if there is an updated contact person.

Notice shall be considered tendered at the time it is received by the intended recipient.

- VII. Confidentiality:** Each party agrees to maintain the confidentiality of confidential records and information to which they have access a result of their use of the System and pursuant to all statutory laws relating to privacy and confidentiality that currently exist or exist at any time during the term of this MOU. All information and use of the System shall be in compliance with California Public Utilities Code section 2872. No party shall post confidential information as part of a mass notification unless the law allows such information to be released.

- VIII. Termination:** The COUNTY or any PARTICIPANT may terminate its participation in this MOU at any time for any reason whatsoever. If any PARTICIPANT chooses to terminate its participation in this MOU, the terminating PARTICIPANT shall provide written notification in accordance with Paragraph VII. Notice, above. Such notice shall be delivered to the COUNTY 30 days prior to the determined termination date. A terminating PARTICIPANT shall uphold the obligations contained in Paragraph II. Hold Harmless, in its entirety and Paragraph VIII. Confidentiality, above. Upon termination, PARTICIPANT agrees to inform each PARTICIPANT user to stop using the System and

to relinquish all System access, user accounts, passwords and non-PARTICIPANT data to COUNTY immediately. PARTICIPANT may choose to delete and/or export non-public PARTICIPANT (aka inter-departmental) owned contact information, as well as, export resident provided contact information prior to termination. Resident provided contact information acquired through PARTICIPANT sources shall remain in the System and available to the County for regional or multi-jurisdictional notification use as needed.

Should COUNTY discontinue its funding for the System, which shall be grounds for COUNTY's termination of its participation, COUNTY shall give PARTICIPANTS one month advance courtesy notice prior to terminating the Agreement. All other reasons for terminating by COUNTY shall be valid upon providing notice to the PARTICIPANTS. Upon termination by COUNTY, this MOU shall no longer be in effect.

Termination by a PARTICIPANT shall not be deemed an amendment to this MOU as defined in Paragraph X. Amendments, below.

IX. Amendments: This MOU may be amended only by mutual written consent of the parties involved unless otherwise provided for in this MOU. The modifications shall have no force and effect unless such modifications are in writing and signed by an authorized representative of each party. Termination by a PARTICIPANT or adding a new PARTICIPANT to this MOU shall not be deemed an amendment.

IN WITNESS WHEREOF, the parties hereto have caused this Memorandum of Understanding to be executed by their duly authorized representatives as of the dates opposite the signatures.

COUNTY OF ORANGE

By: _____ Date: _____
Don Barnes, Sheriff-Coroner
County of Orange

By: ~~Wendy Phillips~~ Date: May 21, 2021
Wendy Phillips (May 21, 2021 08:43 PDT)
Wendy Phillips, County Council
County of Orange

PARTICIPANT: _____

By: _____ Date: _____
Authorized Signature

Print Name and Title

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

ENGINEERING MATTERS

ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. DWTP Office and Storage Improvements
2. Saddle Crest Development
3. Golf Club Sewer Lift Station Surge Tank Replacement
4. Other Projects

RECOMMENDED ACTION:

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

EXHIBIT(S):

1. DWTP Office and Site Layout Exhibits

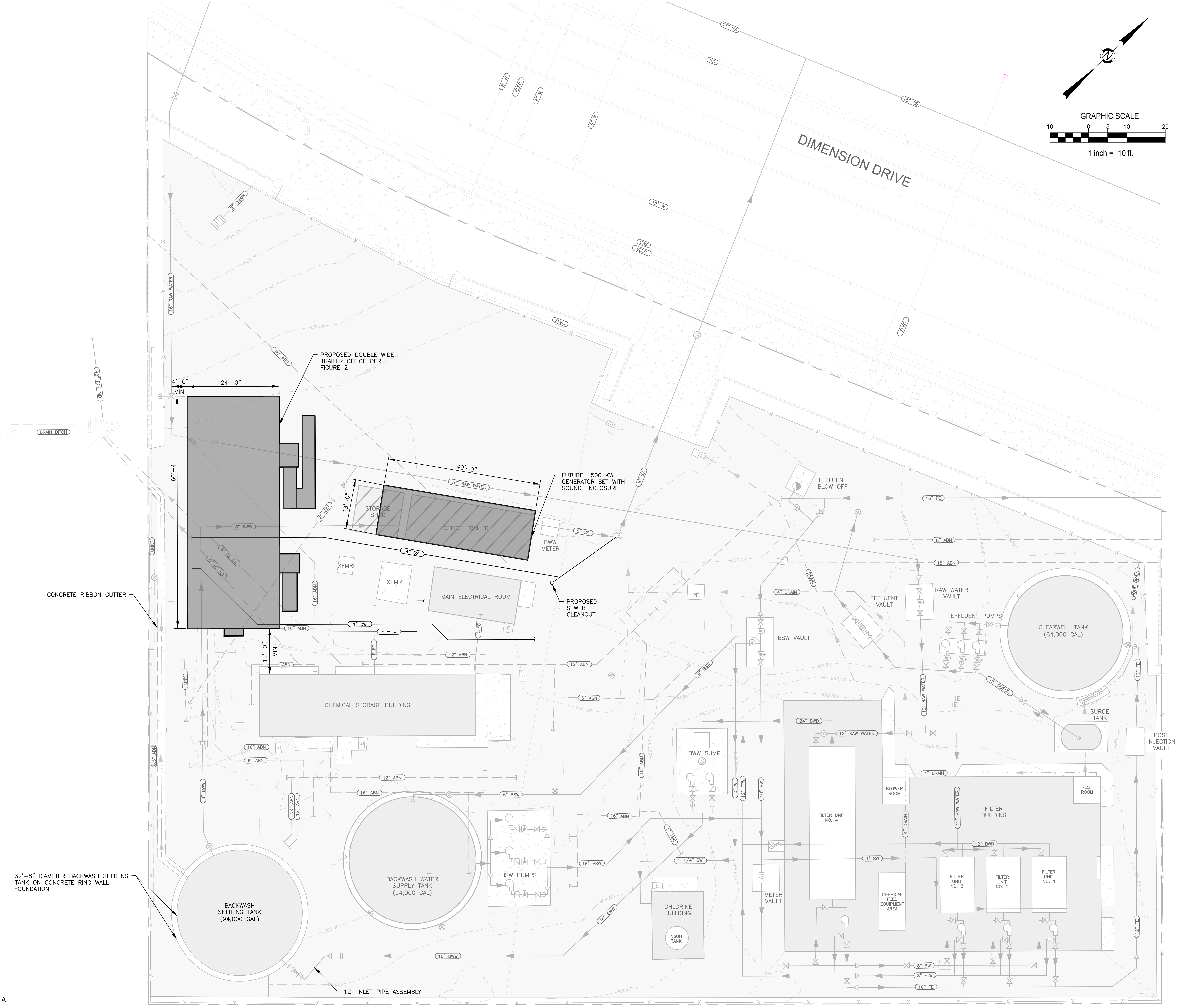
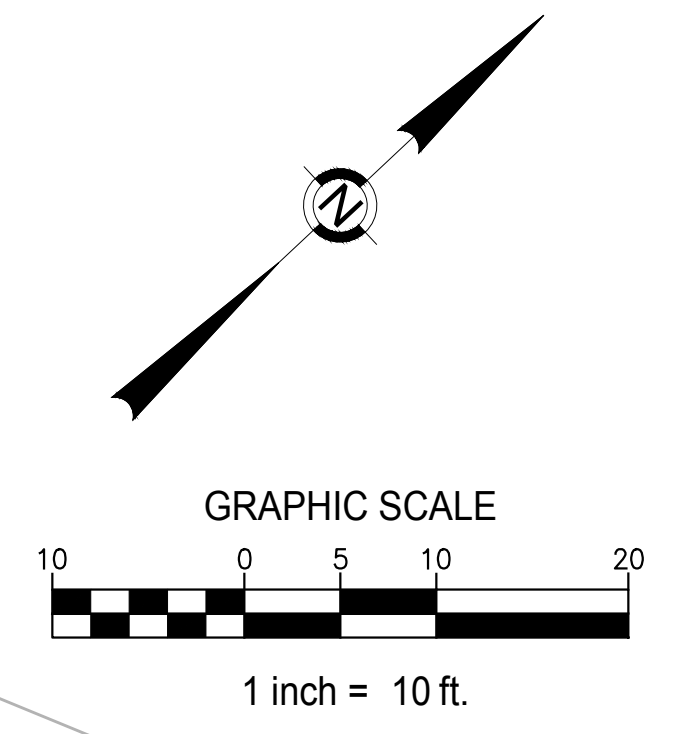
CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

LEGEND:

- | | | | |
|--|---------------------|--|---------------------------|
| | EXISTING LINE | | BLOW OFF |
| | ABANDONED LINE | | PUMP |
| | DRAIN LINE | | GATE VALVE |
| | FENCE | | BUTTERFLY VALVE |
| | BLOCK WALL | | CHECK VALVE |
| | PROPERTY LINE | | PRESSURE REDUCING VALVE |
| | CENTERLINE | | METER |
| | WATER LINE | | REDUCER |
| | STORM DRAIN LINE | | CAP |
| | GAS LINE | | PIPE ELBOW |
| | ELECTRIC LINE | | OVERFLOW |
| | CONTOUR LINE | | PIPE CONTINUATION |
| | CONCRETE | | FLOW ARROW |
| | ASPHALT CONCRETE | | BOLLARD |
| | BUILDING/STRUCTURE | | ELECTRIC BOX |
| | ABANDONED VAULT | | UTILITY BOX/VAULT/PULLBOX |
| | SIZE-IDENTIFICATION | | SANITARY SEWER MANHOLE |
| | | | EXPANSION JOINT |
| | | | COUPLING |
| | | | DRAIN GRATE |
| | | | CLEANOUT |

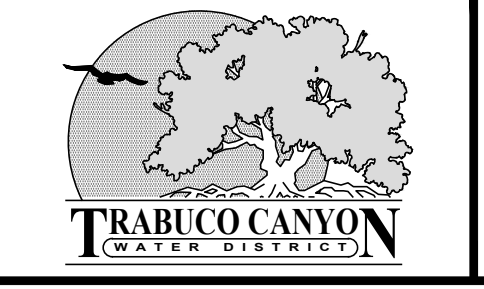
ABBREVIATIONS:

- | | |
|---------|--------------------------|
| ABN | ABANDONED |
| AC | ASBESTOS CEMENT |
| BF | BACKFLOW |
| BW | BACKWASH |
| BSW | BACKWASH SUPPLY WATER |
| BWD | BACKWASH WASTE DRAIN |
| BWR | BACKWASH WATER RECOVERY |
| BWW | BACKWASH WASTE WATER |
| DW | DOMESTIC WATER |
| E, ELEC | ELEC |
| FE | FILTERED EFFLUENT |
| FTW | FILTER TO WASTE |
| PB | PULL BOX |
| RCP | REINFORCED CONCRETE PIPE |
| SD | STORM DRAIN |
| SS | SANITARY SEWER |
| SW | SURFACE WASH |
| W | WATER |
| XFMR | TRANSFORMER |



	CALL TOLL FREE 811		318 W KATELLA AVE, SUITE A ORANGE, CA 92867 (714) 978-4407 www.jigconsultants.com
	CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. SEE GENERAL NOTES FOR FURTHER INFORMATION.		

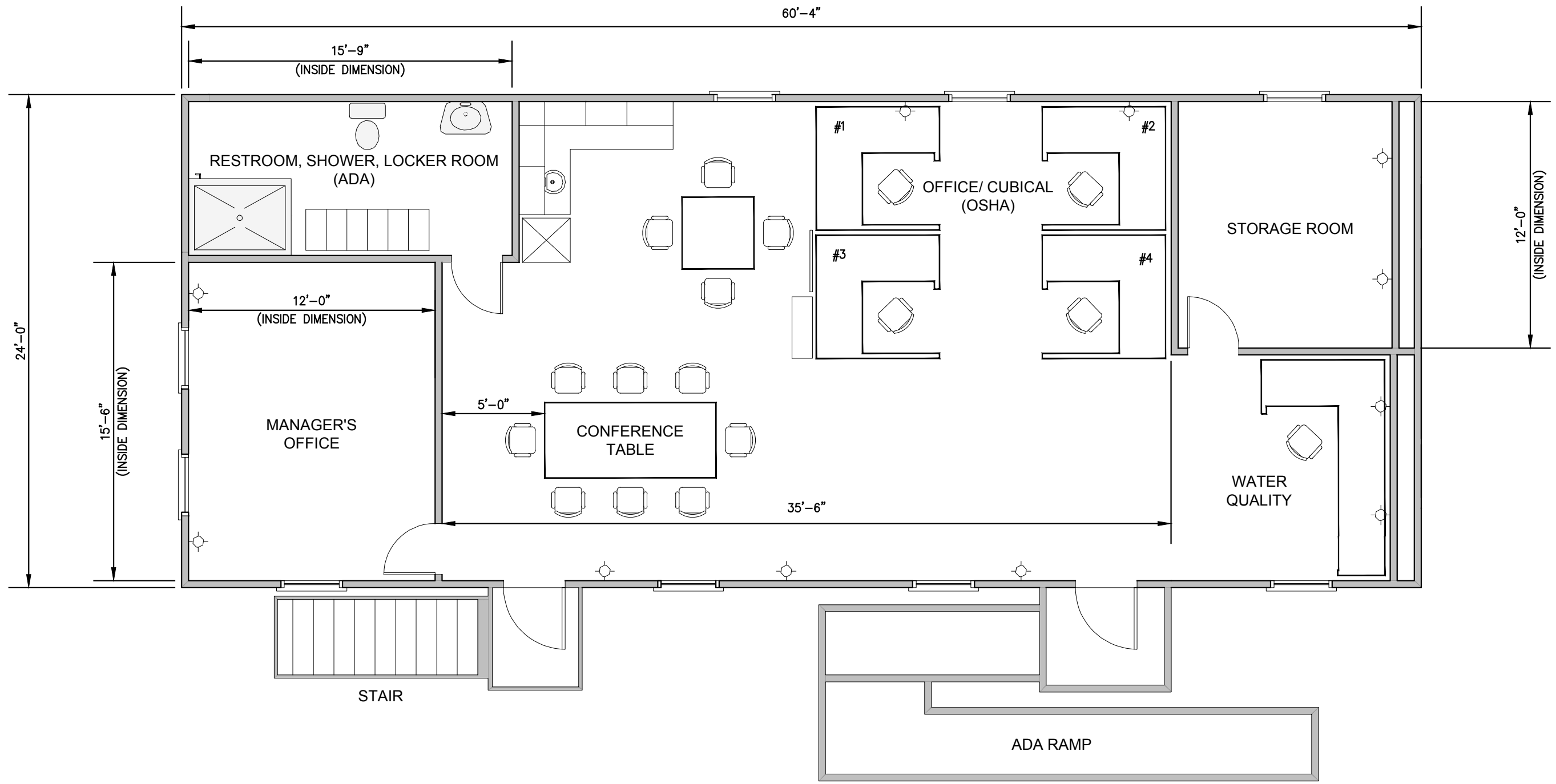
NO.	DATE	REVISIONS	DESIGN:
			JT
			JT
			JG



**TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT**

**FIGURE 1
OPERATIONS OFFICE SITE PLAN**

C:\Users\jg\OneDrive\Documents\Projects\Trabuco Canyon\Design\Operations Office\Figure 1 - operations office site plan.dwg, 22-Sep-2021 10:48:00 AM, JG, CAD 2




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

TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT

FIGURE 2
OFFICE LAYOUT

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

OPERATIONAL MATTERS

ITEM 8: WATER SYSTEM UPDATES

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

Projects and Repairs

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

1. Worked with Ferreira Construction to repair a 10" domestic water emergency pipeline break on Live Oak Canyon Road.
2. Replaced the backwash waste valve on Filter No. 2 at the Dimension Water Treatment Plant (DWTP).
3. Completed eight fire flow tests in the both the Saddle Crest Development and Shelter Canyon Development.
4. Worked with Wastewater Operations assistance to repair a leaking water valve in the Rancho Cielo community.
5. Relocated excess spoils from DWTP Backwash Tank Rehabilitation Project to Coyote Flats below Robinson Ranch Wastewater Treatment Plant.

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

Monthly Water System Operations Summary

CONTACTS (staff responsible): PALUDI/KESSLER

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

2021													
DIMENSION WTP													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
SAC METER AC/FT	160	125	75	176	214	136	0	0					
BACKWASH AC/FT	4	4	2.0	6	5	3	0	0	3				
FLUSHWATER AC/FT	7	6	3.0	9	9	4	0	0	5				
WTP EFFLUENT AC/FT	175	124	83	176	213	132	0	0	131				
Wells													
TRABUCO CREEK GWTF	0	0	0	0	0	0	0	0	0				
US WELL AC/FT	0	0	0	0	0	0	0	0	0				
AMP WATER													
SMWD AC/FT	0.12	2	8	0	0	51	122	146	55				
IRWD AC/FT	0	12.4	53.4	10	0	51	137	131	59				
TOTAL SUPPLY													
AC/FT	175	138	145	186	213	234	259	277	245				
CFS DAILY AVERAGE	2.8	2.5	2.3	3.1	3.4	3.9	4.2	4.6	4.1				
AC/FT PER DAY	5.6	5.0	4.6	6.2	6.9	7.8	8.4	9.2	8.1				
OPERATIONS in GAL.													
WTP DOMESTIC	32,239	27,377	29,845	35,380	41,215	23,936	0	374	27,277				
WWTP DOM	17,354	18,176	8,751	7,629	10,322	7,232	7,884	10,913	5,385				
OPERATIONS (AF)													
SUPPLEMENT TO RW	0	0	0	0	0	0	0	0	0				
LOSSES in GAL.													
FLUSHING (gal.)	0	0	0	0	0	0	0	30,000	25,000				
SEWER CLEANING (gal.)	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000				
LINE BREAKS (gal.)	100,000	24,000	200,000	50,000	0	0	0	75,000	100,000				
SYSTEM DEMAND **													
CFS DAILY AVERAGE	2.8	2.5	2.3	3.0	3.4	3.9	4.1	4.6	4.1				
AC/FT PER DAY	5.6	5.0	4.6	6.2	6.9	7.8	8.4	9.2	8.1				
RESERVOIR STORAGE													
MONTHLY AVG (MG)	9.0	8.8	8.4	8.1	8.0	8.6	8.7	8.9	8.8				
DAYS OF STORAGE	4	3	3	3	3	3	3	4	4				
ZONES (AF)													
RIDGELINE PS	127	107	73	127	199	124	0	0	131				
EL TORO P.S.	18	20	53	10	0	51	137	131	59				
TOPANGA	2	2	2	3	4	4	4	4	3				
FALCON	0.3	0.2	2.4	0.7	0.7	0.7	1.2	1.1	1.1				
ROSE PRV/ OAKS	1	1	1	Inop.	Inop.	Inop.	1	5	4				
CANYON CREEK	0.1	0.2	0.2	0.3	0.4	0.3	0.5	0.4	0.5				
ROSE P.S.	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.3				
ROBINSON RANCH	31	31	34	53	63	72	68	60	75				
DOVE CANYON	61	54	62	75	84	86	95	96	83				
PORTOLA HILLS	11	10	10	11	12	13	15	14	15				

* Usage estimated new meter installed

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

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

OPERATIONAL MATTERS

ITEM 9: WASTEWATER SYSTEM UPDATES

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

Projects and Repairs

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

1. Worked with TESCO Controls on SCADA system upgrades.
2. Worked with Maintenance Department to install a back-up polymer pump for solids handling.
3. Completed wastewater and recycled water quarterly sampling schedule.
4. Worked with Brightview Landscape for weed abatement of overflow structures at Dove Lake and Reservoir.
5. Cleaned gravity sanitary sewer lines from Falcon View Estates to El Toro Lift Station overnight with Traffic Control assistance.
6. Worked with Maintenance Department on blower motor improvements at the Robinson Ranch WWTP.

Sewer System Management Plan (SSMP) Report

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

Sewer System Management Plan (SSMP) Monthly Update	
Total Sewer Line, Feet*	210,495
Total Sewer Line Cleaned (Ft) – Month	23,137
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	71,524
Cleaning Cycle Period (Mos.) [Start date: 08/2021]	3
Total Sewer Line Cleaned, %	33%
The Oaks at Trabuco – Pumping Frequency for the Month	14
O’Neill Park Sewer System Status	Ok
O’Neill Park Sewer System Repairs	None
SSMP Quarterly Report – <i>Next Quarterly Report</i>	4Q 2021
SSMP Program Audit – <i>Next Audit Report**</i>	January 2022

**This amount includes the OC Parks-owned O’Neill Park sewer system the District is contracted to clean.*

***Periodic internal audits shall be conducted, at a minimum every two years, with reports kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and TCWD’s compliance with the mandatory elements of TCWD’s SSMP:*

Monthly Recycled Water System Operations Summary

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

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

1. Monthly Recycled Water System Operations Summary

CONTACTS (staff responsible): PALUDI/PEREA/ULLOA

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

RECYCLED WATER SUPPLY															
	MAX	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	50.6	43.9	52.8	42.8	46.2	44.1	47.0	47.0	45.0				419.4	550.04
Reclaimed Reservoir Level, FT	1274.5	1,266.0	1,268.5	1,270.8	1,268.9	1,268.2	1,264.0	1,255.2	1,257.5	1,248.0				-	-
Reclaimed Reservoir Free Board, FT	25.5	8.5	6.0	3.7	5.6	6.3	10.5	19.3	17.0	26.5				-	-
Reclaimed Reservoir Storage, AF	145.5	96.4	112.5	125.2	115.4	110.4	87.5	51.6	59.5	30.4				-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8				3.8	72.88
RECYCLED WATER SYSTEM DEMAND															
NON DOMESTIC WATER USER	ALLOC. AF	8% JAN	17% FEB	25% MAR	33% APR	42% MAY	50% JUN	58% JUL	67% AUG	75% SEP	83% OCT	92% NOV	100% DEC	TOTAL	ALLOC. %
Dahlia Court	8.2	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.0				1.7	21%
Dove Canyon Golf Course	106.7	6.6	7.1	10.6	25.6	37.2	42.2	55.2	46.4	37.2				268.1	251%
Dove Canyon Master Association	279.3	5.5	5.7	7.1	16.1	22.3	30.4	31.1	30.6	26.2				175.0	63%
Robinson Ranch	80.2	0.9	1.3	1.3	2.4	4.1	4.9	4.7	4.1	3.8				27.5	34%
Trabuco Highlands	159.7	3.7	3.0	2.1	6.6	8.8	10.0	11.8	9.7	21.0				76.7	48%
City of RSM	0.1	0.00	0.00	0.00	0.30	0.01	0.01	0.02	0.1	0.02				0.49	379%
Construction Water	N/A	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%
SMWD	N/A	0.0	0.0	0.0	6.6	2.8	2.2	1.0	3.9	2.3				18.8	N/A
TY Nursery	17.9	0.0	5.8	4.0	6.2	0.0	0.0	0.0	0.0	0.0				16.1	90%
TOTAL, AF	653.2	16.8	23.1	25.3	64.1	75.6	90.0	104.0	95.0	90.5				584.3	89%
PERCENTAGE OF NDW ALLOCATION/YEAR		3%	6%	10%	20%	31%	45%	61%	76%	89%					
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		0.04	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01				0.16	21.22
Dove Tick Creek Production*	Dry Season	0.0	0.0	0.0	7.0	6.8	5.3	4.5	2.1	3.3				29.0	102.7
	TCWD Portion	0.0	0.0	0.0	3.5	3.4	2.7	2.2	1.0	1.7				14.5	-
	SMWD Portion	0.0	0.0	0.0	3.5	3.4	2.7	2.2	1.0	1.7				14.5	-
Dove Lake Water Pumped		0.0	0.0	0.0	11.3	28.5	20.0	24.0	63.5	1.6				148.9	201.7
Dove Lake Free Board, Ft		5.6	5.3	3.2	4.1	5.9	7.2	9.0	14.3	14.3				-	-
Dove Lake Storage		128.0	131.5	166.4	158.1	117.2	107.0	79.0	28.0	28.0				-	-
Total Rainfall, In.		1.7	0.0	1.2	0.0	0.0	0.0	0.0	0.1	0.0				3.0	14.5

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

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

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

OPERATIONAL MATTERS

ITEM 10: MAINTENANCE DEPARTMENT UPDATES

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

Projects and Repairs

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

1. Finished repairs at Falcon Booster Pump Station with new motors, and rebuilt pumps.
2. Scheduled Quinn CAT Mobile Services to repair the CAT 430E backhoe stinger ram, located at the Robinson Ranch Wastewater Treatment Plant.
3. Excavated a 12' deep x 16' long x 3' wide trench for the Orange County Fire Authority to perform their annual trench safety training.
4. Provided flood damage assistance at the Administration building.
5. Staff attended the SCADA kick-off meeting with TESCO Controls.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

None

CONTACTS (staff responsible): PALUDI/STROUD

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | NOVEMBER 3, 2021**

**REGULATORY AND OTHER MATTERS
ITEM 11: OTHER MATTERS/REPORTS**

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

RECOMMENDED ACTION:

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

EXHIBITS

None

CONTACTS (staff responsible): PALUDI