CALAVERAS PUBLIC UTILITY DISTRICT
BOARD OF DIRECTORS SPECIAL MEETING: 3:00 PM
July 26, 2021

President J.W. Dell 'Orto
President of the Board

Director Richard Blood
Director Brady McCartney
Director Scott Speer

Calaveras Public Utility District hereby provides notice that it will convene its regularly scheduled public meetings of the Board of Directors exclusively by telephone conference until further notice. No attendance will be permitted by the public at the District office until further notice.

Based on guidance from the California Governor's Office and the Department of Public Health, to minimize the potential spread of the COVID-19 virus, please do the following:

- **Join the Conference Call meeting**
- **Dial-in number (US): 1(669)900-9128**
- **Join the online ZOOM meeting:** https://us02web.zoom.us/j/81097923196?pwd=a1h0SzdibHltbkdHTHNscWZ5RFUwdz09
- **Meeting ID: 810 9792 3196**
- **Meeting Passcode code: 589591**

Please mute your call before joining. This will limit technical difficulties with audio. Only unmute your call if the President has requested public comment on an item. Upon completing your comments, please mute your call again. Do not put the call on hold, as hold music can ruin the call for all other participants. If that occurs, or in the event of disruptive conduct, staff reserves the right to disconnect that caller. Do no talk over the top of any other callers. Conversations must be one at a time.

AGENDA

1. **CALL THE MEETING TO ORDER**

2. **ROLL CALL OF DIRECTORS**
   a. President J.W. Dell 'Orto
   b. Director Richard Blood
   c. Director Scott Speer
   d. Director Brady McCartney

3. **PLEDGE OF ALLEGIANCE**

4. **PUBLIC COMMENT (Limit: 3 min/person)**
   At this time, members of the public may address the Board on any matter within its jurisdiction which is not on the agenda. The public is encouraged to work with staff to

place items on the agenda for Board consideration. No action can be taken on matters not listed on the agenda. Comments are limited to 3 minutes per person.

ITEMS FOR BOARD DISCUSSION AND/OR ACTION

Board action may occur on any identified agenda item. Any member of the public may directly address the Board on any identified agenda item of interest, either before or during the Board's consideration of that item.

5. **CLEARWELL PROJECT**
    a. Authorize Interim General Manager to move forward with MCC Project and Execute Agreement with TSI
    b. Authorize the Interim General Manager to Execute a Construction Agreement for the Clearwell Tank Project, Phase 1

    Action Requested: Roll Call Vote
    a. Approve the Interim General Manager to move forward with MCC Project and Execute Agreement with TSI
    b. Approve the Interim General Manager to Execute a Construction Agreement for the Clearwell Tank Project, Phase 1

6. **CLOSED SESSION – PUBLIC EMPLOYEE APPOINTMENT** (Gov. Code § 54957)
    Title: General Manager
    Meeting with Gary Phillips of Bob Murray & Associates, District negotiator/recruiter for General Manager position.

7. **ADJOURNMENT**
    If there is no other Board business the President will adjourn the meeting to its next regular meeting August 10, 2021, at 3:00 p.m.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Office at (209) 754-9442. Notification in advance of the meeting will enable CPUD to make reasonable arrangements to ensure accessibility to this meeting. Any documents that are made available to the Board before or at the meeting, not privileged or otherwise protected from disclosure, and related to agenda items, will be made available at CPUD for review by the public.

Technical Systems Inc.

No. CA Office
1431 North Market Blvd.
Suite 9
Sacramento, CA 95834
Tel 707.678.1111
TSIcontrols.com

Scope Letter: 3 Pages **Quote Number: 8053 REV1**

6/18/21

To: **Bidding Contractors**

Attn: **Estimating**

Project: **Calaveras Public Utility District – Control Building MCC Replacement**

Bid Date: **6/28/21** **Bid Time:** **02:00 PM**

Technical Systems, Inc. (TSI) is pleased to provide a quote for the above referenced project. Material for this project will be shipped FOB destination, ready for installation and termination by Auburn Constructors, LLC. TSI's price includes applicable sales tax on taxable items.

It is our recommendation after inspection of the existing MCC that the unit be replaced due to the lack of available parts for the existing MCC. The MCC is approaching its life expectancy of 50 years. If the MCC fails, the District will not be able to run the plant until it is back in service or replaced.

Bid Items

Bid Item #	Bid Item Description	Price
1	MCC and Misc. Material	$39,200.00
2	MCC Installation	$18,900.00
3	Services – MCC Modifications, Start up and support services	$15,300.00
	Total Bid*	**$73,400.00**
***For supply of items and services as listed under scope of supply only.**		

The following **scope proposal** is based on our interpretation of the **applicable portions** of the referenced specifications and drawings for items listed under scope of supply only.

Specification Sections*

- Per MCC Drawings provided by TSI

Referenced Drawings*

- Per MCC Drawings provided by TSI

*TSI supplied equipment, software, and services as listed under scope of supply only

Addenda:

- NA

Notes:

- Quote valid for 90 days from bid date.
- Department of Industrial Relations: TSI Registration Number 1000005441

Scope of Supply:

Electrical Equipment

Bid Item #	Description	DWG / Spec Reference
1	MCC and Misc. Material	See attached TSI MCC01 drawings.

Installation

Bid Item #	Description	DWG / Spec Reference
2	MCC Installation • Pre-order and installation site investigation. • Relocation of Plant Controls to Plant Control Panel.	See attached TSI MCC01 drawings.

Services

Bid Item #	Description	DWG / Spec Reference
3	MCC Modifications, Start up and support services. (See below for services) • Functional Testing and Verification.	See attached TSI MCC01 drawings.

TSI Submittals

- Elementary wiring diagrams, elevation drawings, and BOM for items included in the above scope of supply.
- Operation and Maintenance Manuals
- Connection Diagrams for MCC to existing loads

Programming

As required for assistance with Functional Testing.

Software

NA

Spares

- Installed spare breakers only.

Meetings

- Includes a meeting prior to ordering MCC and a Pre-installation meeting to discuss the cut-over.

Training

- 1 session of 2 hours.

Testing*

- Testing includes energization, verification of proper operation of existing loads.
- Functional Testing and verification of signals back at Plant SCADA.

Warranty

12 Month Warranty.

Exclusions

- Installation of in-line instrumentation, process piping, tubing, fittings, supports, pipe stands, root valves etc. that are not specifically itemized above, and are not customarily furnished by the original equipment manufacturer.
- Fiber optic cable, installation, splicing, termination, and testing.
- All third-party electrical testing, studies, and analyses.
- All testing, commissioning, and training of equipment, controls, programming, and software provided by others.
- All instruments and instrument panels not listed under scope of supply.
- All local control stations, junction boxes, and other control panels not listed under scope of supply.
- All testing other than stated under scope of supply.
- All hardware, software and components not listed under scope of supply.

Please feel free to contact me to discuss any questions or comments you may have regarding this quotation.

Sincerely,

Jon Rodgers
Regional Manager
Business Development
(530) 710-3325
jonr@tsicontrols.com

Estimator: JR

TSI

Leaders in Integrated Water Solutions Since 1970

CALAVERAS PUBLIC UTILITY DISTRICT

MEMORANDUM

TO: **Board of Directors**

FROM: **Matt Ospital, District Engineer** MSO

RE: **Clearwell Tank Project – Phase 1**
Site Improvements

DATE: **July 13, 2021**

Discussion:

The bid opening for the Clearwell Tank Project – Phase 1 Site Improvements was conducted on June 17, 2021 at 9:30 a.m. The District received two bids for the project as follows:

Contractor	Base Bid Amount	Additive Alternate #1	Total
Campbell Construction	$249,366.00	$156,560.00	$405,926.00
Cole Tiscornia Construction	$279,370.30	$149,590.66	$428,960.96

Attached is a bid summary for the two bids received.

The Clearwell Tank Project - Phase 2 is currently out to bid. Bids for Phase 2 will be opened on August 3, 2021. Once those bids are received and reviewed, the District can determine whether or not to proceed with the Additive Alternate #1 for the Phase 1 portion of the project. Should the District decide to proceed, a contract change order will be prepared to add the additive alternate to the contract for Phase 1.

Recommendation:

Based upon the attached bid summary, I hereby recommend CPUD award the Base Bid Contract to the low bidder, Campbell Construction, in the amount of $249,366.

#2873/nlm
Board Award Memo Ph1_2021-06-30.doc

CALAVERAS PUBLIC UTLITY DISTRICT

PHASE I SITE IMPROVEMENT PROJECT

BID SUMMARY

BID OPENING - JUNE 17, 2021 AT 9:30 A.M.

BASE BID:

ITEM	DESCRIPTION	UNITS	QTY	ENGINEER'S ESTIMATE		CAMPBELL CONSTRUCTION GENERAL ENGINEER INC.		COLE TISCORNIA CONTSTUCITON	
				$/UNIT	TOTAL	$/UNIT	TOTAL	$/UNIT	TOTAL
1	MOBILIZATION (10% MAX)	LS	1	$5,000.00	$5,000.00	$24,000.00	$24,000.00	$25,300.00	$25,300.00
2	LOCATE AND PROTECT EXISTING UTILITIES	LS	1	$2,500.00	$2,500.00	$4,500.00	$4,500.00	$575.00	$575.00
3	CLEARING AND GRUBBING	LS	1	$20,000.00	$20,000.00	$49,000.00	$49,000.00	$103,500.00	$103,500.00
4	EARTHWORK	LS	1	$300,000.00	$300,000.00	$124,000.00	$124,000.00	$97,060.00	$97,060.00
5	EROSION CONTROL	LS	1	$5,000.00	$5,000.00	$17,000.00	$17,000.00	$13,800.00	$13,800.00
6	2" AGGREGATE BASE	TON	120	$75.00	$9,000.00	$100.00	$12,000.00	$109.78	$13,173.60
7	12" DIA. HDPE STORM DRAIN PIPE	LF	22	$100.00	$2,200.00	$280.00	$6,160.00	$104.55	$2,300.10
8	18" DIA. HDPE STORM DRAIN PIPE	LF	26	$100.00	$2,600.00	$281.00	$7,306.00	$138.00	$3,588.00
9	STORM DRAIN JUNCTION BOX (36"x36" ID)	EA	1	$5,000.00	$5,000.00	$5,400.00	$5,400.00	$6,900.00	$6,900.00
				TOTALS:	**$351,300.00**		**$249,366.00**		**$266,196.70**

ADDITIVE ALTERNATE #1:

ITEM	DESCRIPTION	UNITS	QTY	ENGINEER'S ESTIMATE		CAMPBELL CONSTRUCTION GENERAL ENGINEER INC.		COLE TISCORNIA CONTSTUCITON	
				$/UNIT	TOTAL	$/UNIT	TOTAL	$/UNIT	TOTAL
1	CLEARING AND GRUBBING	LS	1	$5,000.00	$5,000.00	$9,500.00	$9,500.00	$2,300.00	$2,300.00
2	2" AGGREGATE BASE	TON	125	$75.00	$9,375.00	$100.00	$12,500.00	$109.78	$13,722.50
3	EROSION CONTROL	LS	1	$5,000.00	$5,000.00	$8,100.00	$8,100.00	$4,600.00	$4,600.00
4	24" DIA. HDPE STORM DRAIN PIPE	LF	80	$150.00	$12,000.00	$210.00	$16,800.00	$138.00	$11,040.00
5	36" DIA. HDPE STORM DRAIN PIPE	LF	560	$175.00	$98,000.00	$166.00	$92,960.00	$161.00	$90,160.00
6	DROP INLET MODIFICATION	LS	1	$3,500.00	$3,500.00	$4,100.00	$4,100.00	$7,475.00	$7,475.00
7	STORM DRAIN JUNCTION BOX (48"x48" ID)	EA	2	$5,000.00	$10,000.00	$6,300.00	$12,600.00	$3,450.00	$6,900.00
				ADDITIVE ALTERNATE #1 TOTALS :	**$142,875.00**		**$156,560.00**		**$136,197.50**

BASE AND ADDITIVE ALTERNATE TOTALS: $494,175.00 $405,926.00 $402,394.20

CALAVERAS PUBLIC UTILITY DISTRICT

NOTICE TO CONTRACTORS AND SPECIFICATIONS

FOR

CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS

MAY 2021

BID OPENING: June 17, 2021 AT 9:30 A.M.

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NOTICE TO CONTRACTORS

Separate sealed BIDS for the **"CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS"** will be received by the Weber Ghio and Associates (WGA), **at the office of WGA, 394 E. Saint Charles Street (Mailing Address is P.O. Box 251), San Andreas, California, 95249**, until **June 17, 2021 at 9:30 a.m.** and then at said office publicly opened and read aloud. A **mandatory** pre-bid conference will be held **June 3, 2021 at 9:30 a.m.** at the **Calaveras Public Utility District's Office, 506 W. St. Charles Street, San Andreas, CA 95249.**

Bids are required for the entire project as set forth in the specifications, and all work shall be completed within **30 work days**. At the time the contract is awarded, the contractor shall possess a **Class A** license.

The work is generally described as follows:

Tree falling/removal and grading of approximately 1.5 acres of a hillside to accommodate for a future water tank. Installing storm drain piping and miscellaneous appurtenances.

All work is located on CPUD property in Mokelumne Hill, CA.

Project specifications, special provisions, plans, and proposal forms for bidding this project are available in an electronic file and can be requested from **Weber, Ghio & Associates** by emailing Nancy Zurbrick at n.mccartney@wgainc.net. No hard copies will be provided. It will be the bidder's responsibility to print the bid forms for submittal.

Inquiries or questions regarding the plans, specifications or estimate must be communicated as a bidder inquiry prior to bid opening directed to the Project Engineer in writing to Tyla Daries via email at t.daries@wgainc.net.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990 and payment to the contractor shall be in accordance with Section 9-1.16, "Progress Payment" of the State Standard Specifications and the project specifications.

The successful bidder shall furnish a fully executed payment bond and performance bond.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in Calaveras County have been determined by the Director of the California Department of Industrial Relations. The wages set forth in the General Prevailing Wage Rates for this project are available from the California Department of Industrial Relations' Internet web site at http://www.dir.ca.gov/DLSR/PWD.

The specifications. Future effective general prevailing wage rates which have been predetermined and are on file with the California Department of Industrial Relations are

referenced but not printed in the General Prevailing Wage Rates section of the project specifications.

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2017) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code Section 1771.1(a)]. No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2017) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The District reserves the right to reject any or all bids, and further reserves the right to waive any irregularities in the bids.

Matt Ospital, District Engineer — Date 5/21/21

PROPOSAL

PROPOSAL TO: CALAVERAS PUBLIC UTILITY DISTRICT

The undersigned bidder hereby proposes to furnish all labor, materials, equipment, tools and services necessary to perform all work required for complete improvements in accordance with the plans and specifications entitled **"CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS"** in accordance with the intent of plans, specifications, and all addenda issued by Owner.

EXISTENCE OF CONTRACT: A contract between the bidder and the public agency shall not be deemed to exist until all of the following three steps have been taken:

1. The contract has been awarded by the legislative body;

2. The contractor has executed a written agreement, in substantially the form set forth herein, within **10 days** after notice that the contract has been awarded.

3. The contractor has delivered to the public agency the written agreement together with the faithful performance bond and payment bond and such certificates of insurance in accordance with these special provisions.

If bidder fails to comply with all three steps within the time specified, the proposal guarantee furnished by bidder shall be forfeited to Owner as liquidated damages for such failure. If bidder executes the Contract, secures the required insurance and bonds, and furnishes the required insurance certificates within time specified herein, bidder's check, if furnished, shall be returned within five (5) days thereafter, and the bid bond, if furnished, shall become void.

Bidder further agrees to complete all work required under the Contract within the time stipulated in said specifications, and to accept as full compensation therefore the price(s) set forth in the bid summary.

BID SUMMARY
CPUD CLEARWELL TANK PROJECT –
PHASE 1 SITE IMPROVEMENTS

BASE BID

Item	Quantity	Description	Unit Price	Total Price
1.	1 LS	Mobilization (10% MAX) in accordance with the plans and specifications.	$	$
2.	1 LS	Locate & Protect Existing Facilities & Utilities in accordance with the plans and specifications.	$	$
3.	1 LS	Clearing and Grubbing in accordance with the plans and specifications.	$	$
4.	1 LS	Earthwork in accordance with the plans and specifications.	$	$
5.	1 LS	Erosion Control in accordance with the plans and specifications.	$	$
6.	240 TON	2” Aggregate Base in accordance with the plans and specifications.	$	$
7.	22 LF	12” Diameter HDPE Storm Drain Pipe in accordance with the plans and specifications.	$	$
8.	26LF	18” Diameter HDPE Storm Drain Pipe in accordance with the plans and specifications.	$	$
9.	1 LS	Storm Drain Junction Box (36” x 36” ID) in accordance with the plans and specifications.	$	$
			TOTAL	**$**

ADDITIVE ALTERNATE #1

Item	Quantity	Description	Unit Price	Total Price
1.	1 LS	Clearing and Grubbing in accordance with the plans and specifications.	$	$
2.	247 TON	2” Aggregate Base in accordance with the plans and specifications.	$	$
3.	1 LS	Erosion Control in accordance with the plans and specifications.	$	$
4.	80 LF	24” Diameter HDPE Storm Drain Pipe in accordance with the plans and specifications.	$	$
5.	560 LF	36” Diameter HDPE Storm Drain Pipe in accordance with the plans and specifications.	$	$
6.	1 LS	Drop Inlet Modification accordance with the plans and specifications.	$	$
7.	2 EA	Storm Drain Junction Box (48” x 48” ID) in accordance with the plans and specifications.	$	$
			TOTAL	**$**

CONTRACTOR NAME: _____

Bidder hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within thirty (30)consecutive work days thereafter. Bidder further agrees to pay liquidated damages as set forth in Section II-4 of these specifications.

CONFIRMATION OF ANY ADDENDUMS: The following addendums were received and considered as part of this bid package:

Addendum(s) _____ _____ _____

By submission of a bid, bidder certifies possession of a duly issued and valid contractor's license issued by the State of California, which license authorizes bidder to contract to perform the type of work required by the specifications and that bidder has not less than five years of comparable and acceptable public work experience. Bidder further certifies that the plans and specifications and project site have been reviewed, that the special state and federal requirements have been read and understood, and that full compensation for all work required for a complete and operational project has been included in the contract bid prices set forth above.

By submission of a bid, bidder certifies that pursuant to Labor Code Section 1725.5, he/she is registered with the Department of Industrial Relations. **No Contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.**

Should the Bidder fail to provide below, the number and classification of Bidder's State Contractor's License, and complete and accurate "Information Required of Bidder," the Owner may reject this bid therefore.

Dated:_____

By: _____
(Contractor's Signature)

Title: _____

Business Name: _____

Contractors Lic. No.: _____Expiration Date: _____

SEAL (if corporation)

DIR Registration No.: _____

INFORMATION REQUIRED OF BIDDER

The bidder shall furnish the following information. Failure to comply with this requirement will render the Proposal informal and may cause its rejection. Additional sheets shall be attached as required.

1. Contractor's name and address:
   _____
   _____
   _____

2. Contractor's telephone number: _____
   Contractor's email address: _____
3. Contractor's license: Primary classification _____
   State License No. _____ Exp. Date _____
   Supplemental classifications held, if any: _____
   _____

4. Number of years as a contractor in construction work of this type: _____*

5. Names and titles of all officers of contractor's firm:
   _____
   _____
   _____

6. Name of person in your firm who inspected site of the proposed work and reviewed the project plans and specifications.

   Name: _____

   Date of Inspection: _____

7. Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract:
   _____
   _____
   _____

*Contractor and his subcontractors shall have not less than five (5) years of successful experience in municipal public works construction of each phase of work required by this contract. Contractor represents that he has such experience and is qualified to perform all work except as set forth in paragraph 8, and that subcontractors listed hereon have been contacted and agreed to perform the designated work. Bidders are directed to Section II-3, "Award and Execution of Contract."

8. The bidder shall list below the name, business address, license number and DIR number of each subcontractor who will perform work under this contract in excess of one-half percent of the total bid price, or $5,000, whichever is greater; and shall also list the portion of the work which will be done by such sub-contractor. **This includes ready-mix haulers and companies that deliver ready-mixed concrete for public works projects in accordance with Labor Code Section 1722.1.** After the opening of proposals, no changes or substitutions will be allowed without the written approval of the Owner.

	Sub Contractor' Name Address	License No.	DIR No.	Work to Be Performed
1	_____ _____ _____	_____	_____	_____ _____ _____
2	_____ _____ _____	_____	_____	_____ _____ _____
3	_____ _____ _____	_____	_____	_____ _____ _____
4	_____ _____ _____	_____	_____	_____ _____ _____
5	_____ _____ _____	_____	_____	_____ _____ _____
6	_____ _____ _____	_____	_____	_____ _____ _____
7	_____ _____ _____	_____	_____	_____ _____ _____
8	_____ _____ _____	_____	_____	_____ _____ _____

Note: Attach additional sheets as required.

NON-COLLUSION DECLARATION

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID
(Public Contract Code Section 7106)

The undersigned declares:
I am the_____of, _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on_____[Date], at_____[District], _____[State].

_____
Contractor

_____
(Print Name)

_____
(Signature)

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____as principal, and _____ as Surety, are held and firmly bound unto _____hereinafter called "Owner," in the sum of _____dollars,
(not less than 10 percent of the total amount of the bid)
for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has submitted a bid to said Owner to perform all work required under the bidding schedule of the Owner's specifications entitled,
"CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS"

NOW THEREFORE, if said Principal is awarded a contract by said Owner and, within the time and in the manner required in the Owner's specifications, enters into a written contract on the form of agreement bound with said specifications and furnishes the required bonds, one to guarantee faithful performance and the other to guarantee payment for labor and materials, then this obligation shall be null and void; otherwise, it shall remain in full force and effect. In the event suit is brought upon this bond by said Owner and judgment is recovered, said Surety shall pay all costs incurred by said Owner in such suit, including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this ____ day of _____, 20____.

_____ (SEAL) _____ (SEAL)
(Principal) (Surety)

By: _____ By: _____
(Signature) (Signature)

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

WORKERS' COMPENSATION CERTIFICATE

Labor Code Section 3700, in relevant part, provides:

> "Every employer except the state shall secure the payment of compensation in one or more of the following ways:
>
> a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state;
>
> b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which certificate may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees,…"

I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract. I shall supply the Owner with certificates of insurance evidencing that Workers' Compensation Insurance is in effect and providing that the Owner will receive thirty (30) days' notice of cancellation.

_____
Name of Contractor

_____
Signature Date

_____
Print Name

(In accordance with Article 5 [commencing at Section 1860], Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under the contract.)

CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS

CONSTRUCTION AGREEMENT

THIS AGREEMENT, made and entered into on _____, 2021, by and between the **Calaveras Public Utility District**, California (hereinafter referred to as DISTRICT), and _____, Contractor, (hereinafter referred to as CONTRACTOR), or under the authority of the Public Contract Code of the State of California.

The parties hereto mutually agree as follows:

For and in consideration of the mutual promises and other valuable consideration set forth herein, receipt of which is hereby acknowledged, District agrees to employ Contractor and Contractor agrees to furnish all materials and labor for the prescribed work; perform and complete in good and workmanlike manner all the work pertaining thereto shown on the plans and specifications therefore; to furnish at his sole cost and expense all materials, tools, equipment and facilities, and all labor and services necessary therefore (except such materials, if any, which under the specifications are to be furnished by the District), and to do everything required by this Agreement and said plans and specifications, including but not limited to the payment of prevailing wages as required by state law.

Contractor is responsible for furnishing all said materials and labor, tools and equipment, and doing all the work contemplated and embraced in this Agreement, also for all loss and damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties which may arise or be encountered in the prosecution of the work until its acceptance by the District, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of work, except such as in the said specifications are expressly stipulated to be borne by the District. For well and faithfully completing the work and the whole thereof, in the manner shown and described in said plans and specifications, the District will pay and the Contractor shall receive in full compensation therefore the lump sum price, or if the bid is on the unit price basis, the total price for the several items furnished pursuant to the specifications, named in the schedule of the Bid Proposal in the amount of $_____.

The Notice to Contractors, Proposal, and Specifications are hereby incorporated into and made a part of this Agreement by reference as if fully set forth.

Civil Code Section 3247 requires every contractor that receives a public works contract to file a payment bond and performance bond with the awarding agency for the agency's review and approval. It is the public agency's mandatory duty to ensure that the general contractor's payment bond surety meets the requirement of Code of Civil Procedure 995.310.

The District requires that the contractor submit verification from the California Insurance Commissioner of the surety's certificate of authority to issue such bonds. If the surety is not admitted or the certificate is unavailable, the agency must reject the bonds and the proposed contract unless and until the contractor furnishes bonds provided by an admitted surety insurer or by otherwise sufficient sureties. Verification from the California Insurance Commission must be received, along with the bonds, before work begins, or no payment shall be made to Contractor.

Contractor shall submit a detailed schedule of work at the pre-construction conference for approval by the Engineer. This contract shall not take effect and no payment shall be made to Contractor until that schedule is submitted and approved.

If Contractor fails to complete the work in accordance with the schedule set forth in the specifications and/or accordance with Section II-4, of the project specifications, Contractor shall be liable for liquidated damages in the amount of $1,000 per day for each day of delay. Liquidated damages accrued shall be deducted from compensation due the Contractor and retained by District.

All certificates of insurance, policy endorsements, and all other certificates required by the specifications shall be on file with the District before work begins or no payment will be made to Contractor.

This is a public works contract within the meaning of Part 7 of Division 2 of the California Labor Code (Sections 1720 and following), and the contractor and **any subcontractor under him** shall pay not less than the specified prevailing rates of wages to all workmen employed and be registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

This contract is subject to the conditions and provisions included in Attachment A of this Construction Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this contract to be executed the day and year first above written.

CALAVERAS PUBLIC UTILITY DISTRICT

By_____ By_____
Date Date

Attest:_____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Contractor, and _____ as Surety, are held and firmly bound unto **CALAVERAS PUBLIC UTILITY DISTRICT** hereinafter called "Owner," in the sum of_____dollars,
(Equivalent to 100 percent of contract amount)
for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assign, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been awarded and is about to enter into the contract agreement with said Owner to perform all work required under the bidding schedule(s) of the Owner's specifications entitled **"CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS"**

NOW, THEREFORE, if said contractor shall perform all the requirements of said contract required to be performed on his part, at the times and in the manner specified therein, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED, that any alterations in the work to be done or the materials to be furnished, or changes in the time of completion, which may be made pursuant to the terms of said contract, shall not in any way release said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said contract release either said Contractor or said Surety, and notice of such alterations or extensions of the contract is hereby waived by said Surety.

SIGNED AND SEAL, this _____ day of _____, 20____.

_____ (SEAL) _____ (SEAL)
(Contractor) (Surety)

By: _____ By: _____
(Signature) (Signature)

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Contractor, and _____ as Surety, are held and firmly bound unto _____hereinafter called "Owner," in the sum of _____dollars,
(Equivalent to 100 percent of contract amount.)
for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assign, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been awarded and is about to enter into the contract agreement with said Owner to perform all work required under the bidding schedule(s) of the Owner's specifications entitled **"CLEARWELL TANK PROJECT - PHASE 1 SITE IMPROVEMENTS"**

NOW, THEREFORE, if said contractor, or subcontractors fails to pay for any materials, equipment, or other supplies, or for rental of same, used in connection with the performance of work contracted to be done, or for amounts due under applicable State law for any work or labor thereon, said Surety will pay for the same in an amount not exceeding the sum specified above, and, in the event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall inure to the benefit of any persons, companies, or corporations entitled to file claims under applicable State law.

PROVIDED, that any alterations in the work to be done or the materials to be furnished, or changes in the time of completion, which may be made pursuant to the terms of said contract, shall not in any way release said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said contract release either said Contractor or said Surety, and notice of such alterations or extensions of the contract is hereby waived by said Surety.

SIGNED AND SEAL, this _____ day of _____, 20____.

_____ (SEAL) _____ (SEAL)
(Contractor) (Surety)

By: _____ By: _____
(Signature) (Signature)

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

SECTION II - SUPPLEMENTAL GENERAL CONDITIONS

SECTION II-1. SPECIFICATIONS AND PLANS

II-1.00 GENERAL

The work embraced herein shall be done in accordance with the 2018 State Standard Specifications, and the 2018 Standard Plans of the Department of Transportation insofar as the same may apply and in accordance with the following special provisions.

In order to utilize the State Standard Specifications, some definitions are herein clarified. Unless the context otherwise requires, wherever in the specifications and other contract documents the following abbreviations and terms, or pronouns in place of them, are used, the intent and meaning shall be interpreted as provided in this Section One and Section 1-1.06, “Abbreviations” of the State Standard Specifications. The Contractor's attention is directed to Section II-1.01, "Definitions and Terms." A special effort has been made to discuss all references to State, Director, and Engineer as they apply to this project. The Owner's position of responsibility in regard to the Standard Specifications will be considered the same as the State where the Owner acts as manager of construction and will own and operate the improvement.

In case of conflict between the State Standard Specifications and these special provisions, the special provisions shall take precedence over and be used in lieu of such conflicting portions.

II-1.01 DEFINITIONS AND TERMS

Contingency Allowance. Allowances are allocations of the Contract Amount to portions of the Work that could not be specified sufficiently for competitive bidding. Unused amounts remaining in the contingency allowance shall be credited to the Department by Change Order.

Department of Transportation. The Department of Public Works of the CALAVERAS PUBLIC UTILITY DISTRICT, State of California.

Director of Transportation. The General Manager of the CALAVERAS PUBLIC UTILITY DISTRICT, State of California.

Engineer. The District Engineer of the CALAVERAS PUBLIC UTILITY DISTRICT, State of California, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Highway Facilities. All private and public property improvements, landscaping, and facilities adjacent to and/or pertaining to the work.

Laboratory. The established laboratory of the Materials and Research Department of the Department of Transportation of the State of California or laboratories authorized by the Engineer to test materials and work involved in the contract.

Owner. CALAVERAS PUBLIC UTILITY DISTRICT.

State of California. CALAVERAS PUBLIC UTILITY DISTRICT.

Transportation Building, Sacramento. CALAVERAS PUBLIC UTILITY DISTRICT OFFICE, State of California.

State Standard Specifications. The 2018 edition of the State Standard Specifications of the State of California, Department of Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to District or its corresponding agency, office or officer acting under this contract.

SECTION II-2. PROPOSAL REQUIREMENTS AND CONDITIONS

II-2.01 GENERAL

The bidder's attention is directed to the provisions in Section 2, "Bidding," of the State Standard Specifications and these special provisions for the requirements and conditions which must be observed in the preparation of the proposal form and the submission of the bid. Bidder shall possess a valid State of California Class A General Engineering Contractor's License.

The form of Bidder's Bond set forth in Section 2-1.34, "Bidder's Security," of the State Standard Specifications will be found following the Bid Form.

In conformance with Public Contract Code Section 7106, a Non-Collusion Declaration is included in these specifications. Signing the Proposal shall also constitute signature of the Non-Collusion Declaration.

II-2.02 PROPOSAL

Proposals shall be made on the blank forms prepared by the Owner or duplicate copies thereof. All proposals shall be for the entire work and give the prices proposed, shall give all other information requested herein, and shall be signed by the bidder or his authorized representative, with his address. If the proposal is made by an individual, his name, signature and post office address must be shown; if made by a firm or partnership, the name and post office address of the firm or partnership and the signature of at least one of the general partners must be shown; if made by a corporation, the proposal shall show the name of the state under the laws of which the corporation is chartered, the name and post office address of the corporation, and the title of the person who signs on behalf of the corporation. If the proposal is made by the corporation, a certified copy of the bylaws or resolution of the board of directors of the corporation shall be furnished showing the authority of the officer signing the proposal to execute contracts on behalf of the corporation. No bidder may withdraw its bid for a period of 45 days after the bid opening date.

II-2.03 PROPOSAL GUARANTEE

Each proposal shall be accompanied by a certified cashier's check or bid bond in the amount of ten percent (10%) of the total bid price payable to the Owner as a guarantee that the bidder, if bidder's proposal is accepted, will promptly execute the contract, secure payment of workers' compensation insurance and furnish a satisfactory faithful performance bond in the amount of one hundred percent (100%) of the total bid price and a labor and material bond in the amount of one hundred percent (100%) of the total bid price.

II-2.04 MAINTENANCE GUARANTEE

The Contractor shall guarantee the entire work constructed by Contractor under the Contract to be free of defects in materials and workmanship for a period of one (1) year following the date of acceptance of the work by the Owner. The Contractor shall make, at Contractor's own expense, any repairs or replacements made necessary by defects in materials and workmanship which become evident within said guarantee period. The Contractor shall indemnify and save harmless the Owner and the Engineer and officers, agents and employees of the Owner and the Engineer against and from all claims and liability arising from damage and injury due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the Engineer. Should Contractor fail to make the repairs and replacements promptly, the Owner shall cause the work to be done, and the Contractor and Contractor's surety shall be liable to the Owner for the cost of all such work.

Maintenance guarantee shall be a surety bond or other approved security which shall be delivered to the Owner prior to the date on which final payment is made. **Said security shall be in an approved form and executed by a surety company or companies satisfactory to the Owner in the amount of ten percent (10%) of the contract price or Five Thousand Dollars ($5,000), whichever is greater**. Security shall remain in force for the duration of the guarantee period specified herein. In lieu of providing security as prescribed above, the Contractor may provide for the Faithful Performance Bond furnished under the Contract to remain in force until the expiration of said guarantee periods.

Specific guarantees for periods longer than one (1) year may be specified in the Special Conditions for specific equipment and materials.

II-2.05 IDENTIFICATION OF SUBCONTRACTORS

In accordance with Section 4104 of the California Government Code, each bidder, in his Bid, shall set forth:

1. The name, DIR registration number, and location of the place of business of each subcontractor who will perform work or labor, or render services to the Contractor, in an amount in excess of one-half of one percent of the Contractor's total bid; and

2. The portion of the work which will be done by each such subcontractor.

In accordance with Section 4107 of the California Government Code, no Contractor whose bid is accepted shall, without consent of the OWNER, either:

1. Substitute any person as a subcontractor in place of the subcontractor designated in the original bid; or

2. Permit any such subcontract to be assigned or transferred, or allow it to be performed by anyone other than the original subcontractor listed in the bid; or

3. Sublet or subcontract any portion of the work in excess of one half of one percent of the Contractor's total bid as to which his original bid did not designate a subcontractor.

Labor Code Section 1720.9 defines the term “ready-mixed concrete” and specifies that the rate of pay shall be the current prevailing wage “for the geographical area in which the factory or batching plant is located” as determined by the Department of Industrial Relations. The statute also requires a written agreement between the party hauling or delivering ready-mixed concrete and the party that engaged its services. The agreement must specify compliance with the Prevailing Wage Law.

Section 1720.0 requires that the company hauling or delivering ready-mix concrete provide certified payroll records under Labor Code Section 1776(a) to the party that engaged its services and to the general Contractor within five working days after the employee has been paid, accompanied by a written time record. The time record must be certified by each driver for the performance of job duties.

Penalties for failure to comply with the foregoing sections of the California Government Code are set forth in Section 4106, 4110, and 4111 of the Government Code.

II-2.06 MANDATORY PRE-BID CONFERENCE

Bidders are required to attend a mandatory pre-bid conference to be held:

DATE: June 3, 2021

TIME: 9:30 A.M.

LOCATION: Calaveras Public Utility District Office,
506 W. St. Charles Street, San Andreas, California 95249

Representatives of the District and the District Engineer's office will be present to conduct a field review and answer all bidders' questions at that time.

II-2.07 ADDENDA

Each proposal shall include specific acknowledgment in the space provided of receipt of all addenda issued during the bidding period. Failure to so acknowledge may result in the proposal being rejected as not responsive.

SECTION II-3. AWARD AND EXECUTION OF CONTRACT

II-3.01 GENERAL

The bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution," of the State Standard Specifications and these special provisions. The award of contract, if it be awarded, will be made within **forty-five (45) days** to the lowest responsible bidder whose proposal complies with all the requirements prescribed herein.

Award shall be based upon the base bid.

Bid protests shall be delivered to: **CPUD Office, 506 W. Saint Charles Street, San Andreas, CA 95249.**

II-3.02 EXECUTION OF CONTRACT, AWARD OF CONTRACT

The District reserves the right to accept or reject any and all bids for a period of forty-five (45) days after the date of opening, and to waive any informality or irregularity in any bid. No bid can be withdrawn during such forty-five (45) day period.

Before a bid is considered for award, the District may, in addition to the Experience Qualifications form, require a bidder to submit a statement of facts and details as to its business, technical organization and financial resources and equipment available and to be used in performing the work. Additionally, the District may require evidence that the bidder has performed acceptable work of comparable magnitude and type. The District expressly reserves the right to reject any bid if it determines that the business and technical organization, equipment, financial and other resources or other experience of the bidder (including the bidder's subcontractors) is not sufficient to qualify bidder for the work bid upon and, therefore, justifies such rejection.

The award of the Contract, if awarded, will be to the lowest responsible responsive bidder whose bid complies with the requirements set forth herein and award thereto is in the best interest of the District. The issuance by the District of a notice to the successful bidder of the award of the contract (hereinafter "Notice of Award") shall be deemed the award of Contract.

The Contract shall be executed by the successful bidder and shall be returned, together with the contract bonds and required insurance certificates within 10 working days after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed documents shall be delivered to the following address: CPUD Office, 506 W. Saint Charles Street, San Andreas, CA 95249.

II-3.03 RETURN OF PROPOSAL GUARANTEES

Within 45 days after bids are opened, the Owner will return the proposal guarantees accompanying the proposals which are not to be considered in making the award. All other proposal guarantees will be held until the Contract has been fully executed after which they will be returned to the respective bidders whose proposals they accompany.

SECTION II-4. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES

II-4.01 BEGINNING OF WORK

Attention is directed to the provisions in Section 8-1.02, "Schedule," in Section 8-1.04, "Start of Job Site Activities," in Section 8-1.05, "Time," and in Section 8-1.10, "Liquidated Damages," of the State Standard Specifications and these special provisions.

The Contractor shall submit to the Engineer at the pre-construction conference, a complete schedule indicating all phases of the work and their start-up and completion dates. It shall be the responsibility of the Contractor to comply with the construction schedule and apprise the Engineer of any and all circumstances that require alteration to that schedule. The Engineer will require periodic updating of the schedule to insure timely and orderly completion of the project. It is the desire of the Owner to complete the project at its earliest possible time.

The Contractor shall begin work within **ten (10)** calendar days after receipt of the Notice to Proceed.

II-4.02 TIME OF COMPLETION

Said work shall be diligently prosecuted to completion before the expiration of **thirty (30) working days.**

Failure to provide a competent work force or diligently prosecute the work in accordance with the approved progress schedule shall be cause for temporary suspension of work or termination of the contract.

II-4.03 LIQUIDATED DAMAGES

The Contractor shall pay Owner liquidated damages pursuant to Section 8-1.10, "Liquidated Damages," of the Standard specifications for each and every calendar day after expiration of the working days plus any time extension approved by the Engineer.

SECTION II-5. GENERAL REQUIREMENTS

II-5.01 LABOR NONDISCRIMINATION

Attention is directed to the Miscellaneous Provisions of Section I and the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION
PROGRAM (GOV. CODE, SECTION 12990)

Attention is called to Section 7-1.02I(2), "Nondiscrimination," of the State Standard Specifications, which is applicable to all nonexempt state contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction contracts and subcontracts of $5,000 or more.

II-5.02 PUBLIC SAFETY

The Contractor shall provide for the safety of traffic and the public in accordance with the provisions in Section 7-1.04, "Public Safety," of the State Standard Specifications and these special provisions.

II-5.03 SURFACE MINING AND RECLAMATION ACT

Attention is directed to the Surface Mining and Reclamation Act of 1975, commencing in Public Resources Code, Mining and Geology, Section 2710, which establishes regulations pertinent to surface mining operations.

Material from mining operations furnished for this project shall only come from permitted sites in compliance with the Surface Mining and Reclamation Act of 1975.

The requirements of this section shall apply to all materials furnished for the project, except for acquisition of materials in conformance with Section 4-1.04, "Use of Materials Found on the Job Site," of the State Standard Specifications.

II-5.04 REMOVAL HAZARDOUS SUBSTANCES

When the presence of hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe, and shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In accordance with Section 25914.1 of the Health and Safety Code, all such removal of asbestos or hazardous substances including any exploratory work to identify and determine the extent of such asbestos or hazardous substance will be performed by separate contract.

Should compliance with this section delay the current controlling operation, as determined by the Engineer, the Contractor will be compensated for such delay as provided in Section 8-1.07, "Delays," of the State Standard Specifications.

II-5.05 SUBCONTRACTING

Attention is directed to the provisions in Section 5-1.13, "Subcontracting," of the State Standard Specifications and these special provisions.

No subcontract releases the Contractor from the contract or relieves the Contractor of their responsibility for a subcontractor's work.

If the Contractor violates Public Contract Code § 4100 et seq., the District may exercise the remedies provided under Public Contract Code § 4110. The District may refer the violation to the Contractors State License Board as provided under Public Contract Code § 4111.

The Contractor shall perform work equaling at least 30 percent of the value of the original total bid with the Contractor's own employees and equipment, owned or rented, with or without operators.

Each subcontract must:

1. Comply with the contract.
2. Have an active and valid State contractor's license with a classification appropriate for the work to be performed (Bus & Prof Code, § 7000 et seq.) and be registered with the Department of Industrial Relations.
3. Submit copies of subcontracts upon request by the Engineer.
4. Before subcontracted work starts, submit a Subcontracting Request form.
5. Do not use a debarred contractor; a current list of debarred contractors is available at the Department of Industrial Relations' Web site.

Upon request by the Engineer, immediately remove and not again use a subcontractor who fails to prosecute the work satisfactorily.

Pursuant to the provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at:

http://www.dir.ca.gov/DLSE/Debar.html

II-5.06 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

A prime contractor or subcontractor shall pay any subcontractor not later than 10 days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10 days is applicable unless a longer period is agreed to in writing.

Any delay or postponement of payment over 30 days may take place only for good cause and with the District's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction, and other remedies of that section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

II-5.07 PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS

The District shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the District, of the contract work, and pay retainage to the prime contractor based on these acceptances. The prime contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

II-5.08 PAYMENTS

Attention is directed to Section 9-1.16, "Progress Payments," and 9-1.17, "Payment After Contract Acceptance," of the State Standard Specifications and these special provisions.

No partial payment will be made for any materials on hand which are furnished but not incorporated in the work. Owner shall withhold five percent (5%) retention from all partial payments until the lien period has elapsed, and all payments to subcontractors and suppliers have been made.

Substitution of security in lieu of retention as set forth in Section 22300 of the Public Contract Code is subject to legal counsel review and approval by the Board of Supervisors of the security proposed.

The provisions of Section 9-1.06, “Changed Quantity Payment Adjustments,” of the State Standard Specifications do not apply to various items of work. Attention is directed to Section III, “Special Provisions,” of these specifications.

Contractor’s attention is directed to Section 5.09, “Claims,” of these specifications.

II-5.09 CLAIMS

All claims shall be in conformance with Section 9-1.17D, “Final Payment and Claims” of the State Standard Specifications except that the **District** will make the final determination of any claims which remain in dispute after completion of claim review by the Engineer.

Upon final determination of all claims, the Engineer shall make and issue his final estimate in writing, and within 30 days thereafter the District will pay the entire sum, if any, found due thereon. Such final estimate shall be conclusive and binding against both parties to the contract on all questions relating to the work done and the compensation, therefore.

II-5.10 CERTIFIED PAYROLL

All contractors will submit certified payrolls to the District Engineer within 7 days of the end of each weekly period. Other Labor Standards requirements for this project are set forth in this section of the specifications. **Payment will not be released until certified payrolls and labor standards certifications are current and complete.**

Section 1720.0 requires that the company hauling or delivering ready-mix concrete provide certified payroll records under Labor Code Section 1776(a) to the party that engaged its services and to the general Contractor within five working days after the employee has been paid, accompanied by a written time record. The time record must be certified by each driver for the performance of job duties.

No Contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code Section 1771.1(a)].

No Contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The prime Contractor must post job site notices prescribed by regulations.

All Contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement).

II-5.11 GENERAL PREVAILING WAGE RATES

Attention is directed to Section 7-1.02K(2), "Wages," of the Standard Specifications.

Labor Code Section 1720.9 defines the term “ready-mixed concrete” and specifies that the rate of pay shall be the current prevailing wage “for the geographical area in which the factory or batching plant is located” as determined by the Department of Industrial Relations. The statute also requires a written agreement between the party hauling or delivering ready-mixed concrete and the party that engaged its services. The agreement must specify compliance with the Prevailing Wage Law.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in Calaveras County have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project are available from the California Department of Industrial Relations’ Internet web site at http://www.dir.ca.gov/DLSR/PWD.

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code Section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The prime contractor must post job site notices prescribed by regulation.

All contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement).

SECTION III - SPECIAL PROVISIONS

SECTION III-1 GENERAL

III-1.01 STANDARD SPECIFICATIONS

The following Standard Specifications when referred to herein shall be complied with:

American Association of State Highway & Transportation Officials (ASSHTO)
American Concrete Institute (ACI)
American Gas Association (AGA)
American Gear Manufacturers Association (AGMA)
Institute of Electrical and Electronic Engineers (IEEE)
American Institute of Steel Construction (AISC)
American Society of Testing and Materials (ASTM)
American Society of Civil Engineers (ASCE)
American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
American Society of Mechanical Engineers (ASME)
American Standard Association (ASA)
American Water Works Association (AWWA)
American Welding Society (AWS)
American Wood Preserves Association (AWPA)
Antifriction Bearing Manufacturers Association (AFBMA)
Code of Federal Regulations (CFR)
Diesel Engine Manufacturers Association (DEMA)
Edison Electrical Institute (EEI)
Federal Specifications (Fed. Spec.)
National Electric Code (NEC)
National Electrical Manufacturers Association (NEMA)
National Electric Safety Code (NESC)
National Lumber Manufacturers Association (NLMA)
Underwriters' Laboratories, Inc. (UL)
California Building Code (CBC)
State Standard Specifications 2018, State of California, Department of Transportation (SSS)
State Standard Plans, State of California, Department of Transportation (SSP)

III-1.02 LOCATE AND PROTECT EXISTING UTILITIES

This item of work shall cover the location and protection of ALL existing underground and above ground utilities as required under Section 4215 of the Government Code as amended.

The Contractor's attention is directed to Section III-1.05, "Schedule and Sequence of Operation." Contractor shall, as an initial task, locate existing utilities and pothole designated areas for location and protection of existing underground facilities prior to start of other work within the project as necessary to coordinate and schedule work as approved by the Engineer.

Contractor shall conduct his operations to protect all existing utilities and shall contact the following underground alert systems for assistance:

Underground Service Alert (USA)	811
Calaveras Public Utility District	(209) 754-9442

These alert systems may be of assistance in the location of underground utilities. Underground utilities are located in the work area. The Contractor shall locate and protect all utilities.

Contractor's attention is directed to Section 5-1.36, "Property and Facility Preservation," of the State Standard Specifications. Nothing is this Section III-1.02 shall relieve the Contractor of his responsibility set forth in said Section 5-1.36.

When existing facilities are damaged or interrupted by Contractor's activity, repair shall be conducted immediately at Contractor's expense. Contractor shall be liable for all costs associated with repair consistent with utility standards, any interruption in service, the cost of lost water, any fines associated with discharge of wastewater, storm water, or other hazardous materials, and or any fines imposed upon the agency resulting from activities of the Contractor.

Whenever the Contractor encounters any utility requiring protection, he shall take all actions necessary to protect those facilities from damage caused by his operation and shall be responsible for perpetual protection of those facilities through the duration of work.

Contractor shall be responsible to have utility representatives on site during the course of excavation in and around any such facility to guarantee emergency shutoffs or other action can be taken in a timely manner, such as bracing utility poles adjacent to excavation. Contractor shall notify agency inspector when any work is conducted near existing utilities. Damage to facilities shall be immediately reported and all appropriate action taken to ensure emergency shut off and repairs are accomplished in a timely manner.

Contractor shall provide, at all times, resources necessary to make or arrange for emergency repair in accordance with the regulations of the agency and utility impacted.

The Contractor is alerted that all utilities may not be shown on the contract plans.

Full compensation for all labor, tools, materials, and incidentals for doing all work in completing this item of work in accordance with the plans and specifications shall be included in the lump sum contract price paid for "Locate & Protect Existing Utilities," and no additional compensation will be allowed, therefore. No delay compensation will be made for contractor's failure to coordinate with utilities in advance of the work.

III-1.03 WORKING HOURS

The Contractor shall restrict his working hours from 7:00 A.M. to 5:00 P.M., Monday through Friday, unless otherwise approved by the Engineer. No work will be allowed on holidays or weekends except as authorized by the Engineer. The District Inspector and Contractor shall notify property owners 48 hours in advance for work hour exceptions authorized by the Engineer.

The Engineer may restrict work hours in specific areas to protect the public. The Contractor will be given written notice of any work hour restriction. The Contractor is directed to Section III-1.05, "Schedule and Sequence of Operation."

III-1.04 ALIGNMENT AND GRADE CONTROL

The grade and alignment of work shall be maintained by conforming to the plans, details, and as directed by the Engineer. The Engineer will be available daily to answer all questions regarding the work.

Prior to any construction, the Contractor shall carefully examine the plans, sections, and details. In the event the Contractor finds a discrepancy, he shall immediately notify the District's Project Engineer. No work shall commence prior to resolution of all discrepancies.

Full compensation for control of work as set forth herein shall be included in the contract price paid for the various items of work, and no additional compensation or right of way delay claim will be allowed, therefore.

III-1.05 SCHEDULE AND SEQUENCE OF OPERATION

The Contractor shall submit to the Engineer at the pre-construction conference, a complete schedule indicating all phases of the work and their start-up and completion dates. It shall be the responsibility of the Contractor to comply with the construction schedule and apprise the Engineer of any and all circumstances that require alteration to that schedule. The Engineer will require periodic updating of the schedule to insure timely

and orderly completion of the project. It is the desire of the Owner to complete the project at its earliest possible time.

Should the Contractor fail to prosecute the work in compliance with these specifications, the schedule of work or reasonable modifications thereto, due to avoidable delay, the Owner may terminate the work in accordance with Section 8 of the State Standard Specifications. The Contractor's attention is directed to Section 8-1.14, "Contract Termination."

III-1.06 SUBMITTAL & SHOP DRAWINGS

The Contractor shall provide complete shop drawings and/or manufacturer's data on every manufactured item to be incorporated in this project. All materials required for this project shall be submitted to the Engineer for approval prior to installation of the materials.

Submittal Procedure:

A. Electronic copy submittals shall include Safety Plans, Progress Schedule, Product Data, Shop Drawings, Samples, Quality Assurance Control Data, and Certificates of Compliance for all items. All submittals shall be submitted prior to first pay request or within **fifteen (15)** calendar days after receipt of Notice to Proceed, whichever comes first unless otherwise approved by the Engineer. One copy of submittals will be returned to the Contractor.

B. Submittal data shall be presented in a clear, precise, and thorough manner. Photocopies are acceptable provided they are as good a quality as the original. The Contractor shall clearly and boldly mark each copy with arrows or circles to identify pertinent products (highlighting is acceptable, provided it is done on all copies submitted). Inapplicable portions shall be marked out.

C. The data shown on the submittals shall be complete with respect to quantities, dimensions, profile sizes, connections, attachments, fasteners, specified performance and design criteria, materials, applicable standards (such as ASTM numbers), etc., and similar data to show the Engineer the materials the Contractor proposes to provide and to enable the Engineer to review the information. Submittals shall be identified and organized by specification section number. All submittals shall include all information requested by each specification section in order to determine compliance with plans and these specifications. No partial submittals will be accepted unless previously authorized by the Engineer.

D. At the time of each submission, the Contractor shall provide the Engineer with specific written notice of all variations, if any, that the submittal may have and the reasons therefore. This written notice shall be attached to the submittal transmittal form. If the Engineer accepts deviation, it will be noted on its acceptance on the returned submittal.

E. Submittal coordination and verification is the responsibility of the Contractor.

F. Designation of Work “by others,” if shown in submittals, shall mean that work shall be the responsibility of the Contractor rather than the Subcontractor or supplier who has prepared submittals.

G. After review by the Engineer of each submittal, one copy of the submittal will be returned to Contractor with actions defined as follows:

1. NO EXCEPTIONS TAKEN - Accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. This does not constitute approval or deletion of specified or required items not shown on the submittal.

2. MAKE CORRECTIONS NOTED (NO RESUBMISSIONS REQUIRED) - Same as item 1 above, except that minor corrections as noted shall be made by Contractor.

3. REVISE AS NOTED AND RESUBMIT - Rejected because of major inconsistencies or errors that shall be resolved or corrected by the Contractor prior to subsequent review by Engineer.

4. REJECTED - RESUBMIT - Submitted material does not conform to drawings and/or specifications in major respect, i.e.: wrong size, model, capacity, or material.

H. The Contractor shall make a complete and acceptable submittal at least by second submission. The District reserves the right to deduct monies from payments due to the Contractor to cover additional costs of review beyond the second submission. Incomplete or illegible submittals will be rejected and returned for resubmission without review.

I. The Engineer will make a favorable review of submittals or reject them within **five (5)** business days of receipt. After the Engineer’s review of submittals, the Contractor shall revise as noted and resubmit as required. The Contractor shall identify changes made on re-submittals.

J. The Contractor shall not perform any fabrication or work until submittal approval. The Contractor shall not extrapolate from submittals covering similar work.

K. The Contractor shall copy, conform, and distribute approved submittals in sufficient numbers for Contractor’s files, Subcontractors, and vendors.

L. No substitutions will be considered after bid date except for: Non-availability of specified item due to strikes, lockouts, bankruptcy, discontinuance of production, proven shortage, or similar occurrences or when the Contractor pays the District a credit acceptable to the District and compensates the District for additional review time.

Burden of proof of merit of requested substitution is on Contractor.

No compensation will be made for any manufactured item ordered prior to approval of the shop drawings. Submittals shall be made by the Contractor allowing ample time for review and distribution. No time extensions or delay compensation will be made for contractor's failure to submit shop drawings or materials for review in a timely manner.

III-1.07 MOBILIZATION

Mobilization shall conform to the provisions of Section 9-1.16D "Mobilization," of the State Standard Specifications.

Mobilization shall include all preparatory work and operations, including but not limited to those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings, and other facilities necessary for work on the project; and for all other work and operations which must be performed, or costs incurred prior to beginning work on the various contract items of work.

Full compensation for mobilization in accordance with the plans and these specifications shall be included in the lump sum contract price paid for "Mobilization," and no additional compensation will be allowed therefore. Compensation paid for mobilization prior to completion of all work shall not exceed ten percent (10%) of the total contract price.

III-1.08 CLEAN UP

During the progress of the work, the Contractor shall keep the entire job site in a clean and orderly manner. Spillage resulting from hauling operations along or across existing streets or roads shall be removed immediately. All gutters and roadside ditches shall be kept clean and free from obstructions. Any deviation from this practice shall have prior approval from the Engineer. The Contractor shall clean the entire work area each day prior to the end of the day.

Before the final acceptance of the work, the Contractor shall carefully clean up each work area and premises, remove all temporary structures built by or for him, remove all surplus construction materials and rubbish of all kinds from the grounds occupied and leave them in a neat condition. The Contractor shall grade shoulders, ditches, and drainage swale to comply with the plans and these specifications.

Full compensation for complying with this Section III-1.08 in accordance with the plans and these specifications and for working within the time frame set forth in the contract shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore.

III-1.09 WATER POLLUTION CONTROL

The Contractor shall exercise every reasonable precaution and Best Management Practices (BMP's) to protect ditches, conduits, streams, lakes, and reservoirs from pollution with fuels, oils, bitumens, chemicals, concrete, wastewater, and other harmful materials and shall conduct and schedule his operations so as to avoid or minimize muddying and silting of said conduits, ditches, streams, lakes, and reservoirs.

The Contractor shall ensure that all vehicles and equipment used are in good working order (no leaks) and drip pans or absorbent materials placed under vehicles and equipment when not in use. If maintenance or refueling of vehicles or equipment occurs on-site, an approved designated area and/or a secondary containment area, located away from drainage courses to prevent the runoff of storm water and the runoff of spills shall be utilized. The Contractor shall ensure that all construction areas are covered by a site-wide spill response plan and shall have proper spill cleanup materials (absorbent pads, sealed containers, booms, etc.) on site at all times to contain the movement of any spilled substances.

Nothing in the contract documents shall relieve the Contractor of the responsibility for compliance with Section 5650 and 12015, California Fish and Game Code, or other applicable statutes relating to prevention or abatement of water pollution.

Erosion control features, where required, shall be constructed concurrently with other work and at the earliest practicable time. Care shall be exercised to preserve vegetation beyond the limits of construction. When borrow material is obtained from other than commercially operated sources, erosion control shall be provided for the borrow site during and after completion of the work, and erosion shall not result in water pollution. The material source shall be constructed, where practicable, so that water will not collect or stand therein.

The requirements of this Section III-1.09 shall apply to all work performed under the Contract and to all non-commercially operated borrow or disposal sites used for this project.

The Contractor shall be completely responsible for compliance with all local, county, state, and federal regulations pertaining to water pollution and soil erosion including the payment of any fines or penalties imposed by any governmental agency as a result of work performed by the Contractor.

Full compensation for conforming to the requirements of this Section III-1.09 shall be included in the contract prices paid for the various items of work and no additional compensation will be allowed, therefore.

III-1.10 DUST CONTROL

The Contractor shall provide dust control in accordance with Section 10-5, “Dust Control,” of the State Standard Specifications.

Dust control measures shall be implemented during preparation of backfill placement. Dust control measures will consist of applying a water spray to the area being worked and as clean fill is being placed. Real-time dust monitoring may be performed by the District to demonstrate that generation of airborne dust is minimized during earthwork operations.

Construction water will be supplied by the District. The Contractor shall contact the District for directions to water access and metering.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in “Dust Control” in accordance with the plans and specifications shall be included in the contract price paid for various items of work, and no additional compensation will be allowed therefore.

III-1.11 SAFETY (SHEETING AND SHORING)

The Contractor shall follow construction procedures necessary to provide safe working conditions through all phases of the work. Said procedures shall conform to the Safety Orders, Division of Industrial Safety, Title 8, California Administrative Code.

The Contractor is solely responsible for outlining the safety procedures to be followed by his workmen. The Contractor shall provide for the safety of the public both day and night where they are exposed to the construction operation.

Neither the Owner, the Engineer, nor any representatives thereof shall be responsible for the procedures followed by the Contractor.

Excavation for any trench five feet (5') or more in depth shall not begin until the permit herein specified is obtained and the Engineer has reviewed the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation of such trench. Such plan shall be submitted at least five (5) days before the Contractor intends to begin excavation for the trench and shall show the details of the design of shoring, bracing, sloping, or other protection to be made for worker protection during such excavation. No such plans shall allow the use of shoring, sloping, or other protection to be less effective than that required by the Construction Safety Orders of the Division of Industrial Safety. The plan shall be prepared and signed by an engineer who is registered as a civil or structural engineer in the State of California. The engineer who prepares the Contractor's shoring plans shall certify that the plans conform or exceed the Construction Safety Orders of the Division of Industrial Safety of the State of California. The Contractor shall procure an excavation permit from the Division of Industrial Safety in accordance with Section 1503 of Title 8, Chapter 4, Subchapter 4 of the California Administrative

Code. Instructions or lack thereof from the Engineer or his representative shall in no way relieve the Contractor of his responsibility with regard to safety.

Full compensation for all sheeting, shoring, bracing, or sloping necessary for compliance with this section shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed, therefore.

III-1.12 EROSION CONTROL

Erosion control shall conform to Section 21, “Erosion Control,” of the State Standard Specifications. This work consists of placing silt fences, straw waddles, gravel bags, and re-vegetation of ALL disturbed soil areas in and adjacent to the work area in accordance with the plans and these specifications. The Contractor shall also provide measures to prevent tracking out from the construction site.

The Contractor shall broadcast seed mixture over surface area of disturbed soil in accordance with these specifications. Broadcasting may be by hand or by hydromulching.

Hydroseed mix shall be Mother Lode Seed Mix or approved equal and the rate of hydraulic application per acre as follows:

Mulch - **2,250 lbs**
Tackifier - **50 lbs**
5-3-2 Fertilizer - **600 lbs**
Hydroseed - **25 lbs**

The Contractor shall coordinate with the Engineer and provide the Engineer an erosion control schedule.
The Contractor shall exercise every reasonable precaution and Best Management Practices (BMP's) to protect ditches, conduits, and streams from pollution with fuels, oils, bitumen, chemicals, concrete, and other harmful materials which could be hazardous to aquatic life. The Contractor shall conduct and schedule his operations so as to prevent muddying and silting of said conduits or streams.

Full compensation for providing erosion control, installing and maintaining BMP’s, in accordance with the plans and these specifications shall be included in the lump sum contract price paid for "Erosion Control," and no additional compensation will be allowed therefore.

III-1.13 CLEARING AND GRUBBING

Clearing and grubbing shall conform to the requirements of Section 17-2, “Clearing and Grubbing,” of the State Standard Specifications, except as modified or supplemented in these specifications. Storm drain inlet and pipe removal and disposal is included in this work.

Contractor's attention is directed to Section III-1.09, "Water Pollution Control" of these special provisions and Section 5-1.36, "Property and Facility Preservation," of the State Standard Specifications.

Clearing and grubbing debris, unsuitable for backfill shall become the property of the Contractor and disposed of off-site.

The Contractor shall restrict his equipment and operations to road right of ways along the project limits or as designated in the field. Equipment shall not be operated or stored beyond clearing limits. Contractor shall make his own arrangements for equipment and material staging.

Should Contractor, during the course of work, uncover any cultural resource, work shall be suspended until a determination is made of the significance of such resource. Contractor shall "move" his operation to other portions of project until resumption of work is authorized by the Engineer. Contractor may be compensated for "move" cost approved by the Engineer. Suspension shall be in accordance with Sections 8-1.06, "Suspensions," and 8-1.07, "Delays," of the State Standard Specifications.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in clearing and grubbing including removal and disposal of materials (aggregate base, piping, miscellaneous construction metal, concrete) in accordance with the plans and specifications and as directed by the Engineer shall be included in the lump sum contract price paid for "Clearing and Grubbing," and no additional compensation will be allowed therefore.

III-1.14 TREE REMOVAL

Tree removal limits will be identified as directed in the field. The Contractor shall protect existing trees outside of the removal limits. No equipment, materials, or other Contractor activity shall be conducted outside of the protection limits.

Trees shall be mulched and incorporated into erosion control work and disposed onsite at an area designated by the District.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in tree removal including removal and mulching of materials in accordance with the plans and specifications and as directed by the Engineer shall be included in the lump sum contract price paid for "Clearing and Grubbing," and no additional compensation will be allowed therefore.

III-1.15 PROTECTION OF EXISTING ROADWAY SURFACES

The Contractor shall protect all District roadway surfaces during the course of work. All equipment working in surfaced roadways shall be equipped with street pads. Damaged

roadway surfaces shall be repaired and/or restored at the Contractor's expense to the satisfaction of the Engineer.

III-1.16 SAFETY (SHEETING, AND SHORING)

The Contractor shall follow construction procedures necessary to provide safe working conditions through all phases of the work. Said procedures shall conform to the Safety Orders, Division of Industrial Safety, Title 8, California Administrative Code, and Caltrans' traffic control requirements.

The Contractor is solely responsible for outlining the safety procedures to be followed by his workmen. The Contractor shall provide for the safety of the public both day and night where they are exposed to the construction operation.

Neither the Owner, or the Engineer, or any representatives thereof shall be responsible for the procedures followed by the Contractor.

The Contractor's attention is directed to Section 7 of the State Standard Specifications.

Excavation for any trench five feet (5') or more in depth shall not begin until the permit herein specified is obtained and the Engineer has reviewed the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation of such trench. Such plan shall be submitted at least five (5) days before the Contractor intends to begin excavation for the trench and shall show the details of the design of shoring, bracing, sloping, or other protection to be made for worker protection during such excavation. No such plans shall allow the use of shoring, sloping, or other protection to be less effective than that required by the Construction Safety Orders of the Division of Industrial Safety. The plan shall be prepared and signed by an engineer who is registered as a civil or structural engineer in the State of California. The engineer who prepares the Contractor's shoring plans shall certify that the plans conform to or exceed the Construction Safety Orders of the Division of Industrial Safety of the State of California. The Contractor shall procure an excavation permit from the Division of Industrial Safety in accordance with Section 1503 of Title 8, Chapter 4, Subchapter 4 of the California Administrative Code. Instructions or lack thereof from the Engineer or Engineer's representative shall in no way relieve the Contractor of his responsibility with regard to safety.

Full compensation for all sheeting, shoring, bracing, or sloping necessary for compliance with this section shall be included in the contract price paid for various items of work, and no additional compensation will be allowed therefore.

III-1.17 TRENCHES AND BACKFILL

This work shall consist of performing all operations necessary to excavate earth and rock or other material, of whatever nature, including water, regardless of character and subsurface conditions, necessary to excavate trenches for pipes and appurtenances; to

place backfill for pipes and appurtenances and other facilities; to backfill trenches and depressions resulting from the removal of obstructions; to remove and replace unsuitable material; to construct protection dikes; and to remove unstable material and slide material which may enter trenches. All such work shall be in conformance with the plans and these specifications or as directed by the Engineer.

Backfill material shall conform to the provisions in Section 19, "Earthwork," of the State Standard Specifications. Pervious backfill material required by the plans and these specifications shall be considered structure backfill and full compensation therefore shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore.

When a firm foundation is not encountered due to soft, spongy, or other unsuitable material, such material shall be removed to the limits directed by the Engineer, and the resulting excavation shall be backfilled with approved pervious backfill compacted to ninety percent (90%) relative compaction.

When removal of unsuitable material requires excavation to a depth greater than 12" below pipe flow line grade, the Engineer will determine the limits of the required excavation. Excavation limits shall be trench width for the length specified by the Engineer.

Unsuitable materials shall become the property of the Contractor and disposed of in accordance with local regulations.

Ditches shall be kept clear for the purpose of handling road drainage. Drainage ways, walkways, and driveways shall be kept clear.

At the end of each working day, there shall be no open trench, unless otherwise permitted by the Engineer.

In connection with earthwork, all tests shall be made in conformance with the following requirements set forth in the State Standard Specifications:

Tests	Test Method No
Relative Compaction	Cal 216 & 231
Sand Equivalent	217
Resistance (R-value)	301
Sieve Analysis	202

Foreign material which falls into the trench prior to or during placement of the backfill shall be removed.

The trench widths set forth on the plans are minimum widths. Where excavation greater than the specified widths is necessary for execution of the work, machine or hand excavation to a stabilized slope will be permitted provided one-way traffic can be

maintained. Minimum trench width is the distance face-to-face of trench walls or inside face to inside face of sheeting should solid sheeting be used. Maximum trench widths from the bottom of the trench to the top of the pipe shall be limited to six inches (6") outside the specified minimum trench width, except with specific approval by the Engineer.

The Contractor shall furnish all materials and facilities required for trench excavation and shall make trenches and excavation dry throughout all pipe laying operations.

The location of underground utilities or other obstructions shall be determined by the Contractor sufficiently in advance of excavation so that pipe alignment can be confirmed or re- routed without delay. Contractor's attention is directed to Section III-1.02, "Locate and Protect Existing Utilities," of these Special Provisions.

Material for Class 1 and Class 2 Backfill shall be placed in uniform horizontal layers not exceeding one foot (1') in thickness before compaction and shall be brought up uniformly on all sides of the trench, structure, or facility. When the Contractor can satisfactorily demonstrate to the Engineer an alternative method of placing the backfill so that all requirements, other than the layer thickness, are met, the Engineer will permit the Contractor to use the alternative method. Under no circumstance will the Contractor use the alternative method unless the Engineer's approval is obtained in writing. Material for Class 3 Backfill shall be placed in layers not to exceed one foot (1') in thickness before compaction.

Each layer of backfill shall be compacted to a relative compaction indicated for the backfill involved.

Backfill shall not be placed until the pipe or other facility has been inspected by the Engineer and approved for backfilling. The percentage composition by weight as determined by laboratory sieves shall conform to the following requirements:

Class 1 Backfill

Sieve Sizes	% Passing Sieves*
No. 4	90-100
No. 200	<5

*Gradations requirements may be waived with written approval from the Engineer.

"Crusher fines" are acceptable for Class 1 backfill. "Pervious backfill" shall be coarse or medium screenings in accordance with Section 37, "Bituminous Seals," of the State Standard Specifications or as otherwise approved by Engineer.

Class 2 Backfill

Class 2 Aggregate Base, 3/4" maximum, in accordance with Sections 26-1.02, 26-1.02B, 26-1.03 of the State Standard Specifications except that percentage of No. 200 material shall be 15-30% unless otherwise approved by the Engineer.

Class 3 Backfill

Material for Class 3 Backfill may consist of material from excavation free from rocks or lumps exceeding three inches (3") in greatest dimension, vegetable matter, and other unsatisfactory material. Backfill shall be compacted to the relative compaction shown on the plans or as set forth in these specifications.

Class 4 Backfill

Class 4 Backfill shall be cement-sand slurry comprised of aggregate, cement and water. The aggregate, cement and water shall be proportioned either by weight or volume. Cement used shall be 190 to 210 pounds for each cubic yard of material produced. The water content shall be sufficient to produce a fluid workable mix that will flow and can be pumped without segregation of the aggregate while being placed.

Materials shall be thoroughly machine mixed in a rotary drum mix truck and placed in the trench from a direct truck discharge unless otherwise approved.

Mixing shall continue until cement and water are thoroughly dispersed throughout the material. All mixed slurry shall be placed within one hour of the introduction of water and cement to the material.

Aggregate shall be commercial-quality concrete sand.

The Contractor may use Class 4 backfill, slurry backfill, at locations approved by the Engineer as an alternative to Class 1 backfill. Slurry backfill shall be placed to neat line trench walls using care to completely envelope the pipe in the backfill. Road surfacing will not be permitted until the Engineer is satisfied that the set is sufficient to support traffic but in no case prior to setting four (4) hours. The Contractor shall include in all items of work using slurry backfill the full cost of all labor and equipment to prevent traffic from crossing any trench with slurry backfill prior to setting.

The Contractor may use sufficient amounts of additives for speeding the set of slurry backfill in accordance with manufacturer's recommendations. No additive shall be used without prior approval of the Engineer as to type and amount.

Slurry backfill shall be placed in a uniform manner that prevents voids in, or segregation of the backfill and will not float the pipe.

Full compensation for Class 4 backfill placed as part of trench restoration, trench backfill,

or as a convenience to the Contractor shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore.

Full compensation for complying with this section shall be included in the contract price paid for various items of work and no additional compensation will be allowed therefore.

III-1.18 COMPACTION TESTING

The Owner will provide compaction tests at various locations during the work as directed by the Engineer. In the event of a test failure, the Contractor shall remove and re-compact unacceptable backfill or fills in accordance with the plans and specifications.

THE COST OF RE-TESTING SHALL BE BORNE BY THE CONTRACTOR.

III-1.19 AS-BUILT PLANS

Contractor shall maintain, during the course of work, a clean and separate set of plans to mark thereon locations of all improvements associated with the work set forth herein. Special attention shall be given to location on the plans of existing utilities encountered during the course of work. All changes in work not set forth on the project plans shall be carefully noted and drawn to scale. Contractor shall coordinate with District Inspector weekly to corroborate on project plan deviations. After completion of work, and prior to final payment to contractor, a complete, legible, and clean set of project "as-built" plans shall be provided for review and acceptance by District.

III-1.20 COMPENSATION

Full compensation for complying with this Section III-1 and for working within the time frame set forth in the contract shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore. The provisions of Section 9-1.06, “Changed Quantity Payment Adjustments,” of the State Standard Specifications do not apply to items of work set forth in this Section III-1.

SECTION III-2 SITE WORK

III-2.01 GENERAL

The Contractor shall, at all times, provide an adequate and professional work force that will act, at all times, in a proper, workmanlike manner in the diligent and timely prosecution of the work.

The provisions of this section apply to all site work associated with this project. The Contractor's attention is directed to Section III-1 “General” and Section III-2.02 “Site Conditions.”

All construction equipment and materials except as authorized by the Engineer shall be removed from the work area, and all open excavations covered or protected at the end of each workday in accordance with the plans and these specifications. Contractor's equipment and construction materials shall be stored in staging areas approved by the District.

The following is a brief description of the proposed work:

- Clearing, grubbing, and tree removal.
- Demo of existing storm drain piping and inlet, and concrete.
- Grading work that includes a hillside cut of approximately 10,000 cubic yards and drainage features to accommodate for a future water tank.
- Placing spoils at a designated onsite area to be compacted.
- Minor grading to the road adjacent to the cut area to allow for access to the future water tank area.
- Installation of new storm drainage system.
- Placing aggregate base to restore adjacent road area.
- Placement of erosion control measures.

Contractor’s attention is directed to the limits of work as they pertain to finish grading of the tank pad as set forth on the plans and in these specifications.

III-2.02 SITE CONDITIONS

Existing fences, walls, and access roads shall be protected during the course of the work. Access to private property for contractor’s forces shall be as directed by the Engineer.

All areas shall be restored to equal or better condition than existed prior to commencement of work. Any property corner stakes disturbed by the work shall be referenced and reestablished by the Contractor to the satisfaction of the Engineer.

A Geotechnical Engineering Study has been completed in the work area and is presented as an attachment to these Specifications. The Contractor, upon becoming aware of subsurface conditions different from site inspections and/or review of the Geotechnical

Engineering Study, shall notify the Engineer as to the nature and extent of differing conditions.

Full compensation for complying with this section shall be included in the contract price paid for various items of work, and no additional compensation will be allowed.

III-2.03 EARTHWORK

Earthwork shall comply with Section 19 of the State Standard Specifications. All excess excavation material free of organic debris, asphalt, or concrete shall be disposed of on site at locations approved by the Engineer. A portion of the project may require hand grading. Materials unsuitable for incorporation into the work shall become the property of the Contractor and disposed of offsite.

Fill material shall consist of excavated onsite uncontaminated, predominantly granular, non-expansive native soil.

Rocks greater than 8 inches in nominal dimension (oversized rock) shall be removed from native soil by scarifying to a depth of 12 inches below finish grade in areas to support pavement. Oversized rock may be used in landscape areas or be removed from the site. Oversized rock can be stockpiled onsite and used to construct fills but shall be placed at or near the bottom of deep fills, in windrows to avoid nesting. Oversized rock shall not be placed in the upper three feet (3') of any structural fill. Unless used as rip-rap, oversized rock shall not be placed within five feet (5') horizontally of the finished fill slope face.

Fine grained, potentially expansive soil encountered during grading shall be mixed with granular soil, or over excavated and stockpiled for removal from the road section.

Loose fill within the proposed road alignment shall be over excavated through all loose soil to competent native soil or rock. Fill shall be replaced and compacted in accordance with these specifications.

After scarification, soil shall be uniformly moisture conditioned to within approximately 3 percentage points of the optimum moisture content in accordance with ASTM D1557 and compacted to achieve a minimum relative compaction of 90 percent of the maximum dry density in accordance with ASTM D1557.

Base keys shall be excavated at the toe of the fill a minimum of 2 feet into competent stratum. Bottom of base keys shall be sloped into the hillside at an approximate gradient of 5 percent.

The fill shall be benched into existing side slopes as fill placement progresses. Benching shall extend through loose surface soil into firm material, and at intervals such that no loose surface soil is beneath the fill.

Cohesive, predominantly fine grained, or potentially expansive soil encountered during

grading shall be stockpiled for removal, mixed as directed, or used in landscape areas.

Fill shall be placed in horizontal lifts to the lines and grades shown on the plans. Slopes shall be constructed by overbuilding the slope face and then cutting back to the design slope gradient. Fill slopes shall not be constructed or extended horizontally by placing soil on an existing slope face.

When suspect material is encountered, Contractor shall notify the engineer immediately and appropriate handling measures will be determined. Contractor's "schedule and sequence of operations" shall include flexibility to allow and County officials to review and test any potentially contaminated soils and direct any required change in work scope. Any such work shall be extra work in accordance with Section 4-1.05, "Changes and Extra Work," of the State Standard Specifications.

Contractor shall, as a minimum, provide dust mitigation measures such as limiting site access, restricting onsite construction vehicle speeds, covering stockpiled soil, and watering during grading to prevent generation of dust from the contractor's operations and achieve optimum moisture content requirement for compaction compliance.

Full compensation for all earthwork, ditch grading, watering, and dust control in accordance with the plans and these specifications shall be included in the lump sum contract price paid for "Earthwork", and no additional compensation will be allowed therefore.

III-2.04 AGGREGATE BASE

Aggregate base shall be Class 2 conforming to Section 26, "Aggregate Bases," of the State Standard Specifications and these specifications.

Asbestos content in aggregate base shall not exceed 0.01 percent.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in minor grading, placing aggregate base rock on existing access roads, in accordance with the plans and these specifications shall be included in contract price paid per ton for "2 inch Aggregate Base," and no additional compensation will be allowed.

III-2.05 ROCK SLOPE PROTECTION

Rock Slope Protection (RSP) shall conform to Section 72-2, "Rock Slope Protection," of the State Standard Specifications. Rock slope protection class shall be as shown on the plans by Method "B" placement at the inlet and outlet of storm drain pipe as specified on the plans. Rock sized 6" minus shall be used. Place rocks such that: there is a minimum of voids and larger rocks are in the toe courses and on the outside surface of the slope protection.

The appearance of the RSP shall be neat and uniform conforming to the lines shown on the plans or as directed by the Engineer.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in grading and placing rock slope protection, shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore.

III-2.06 COMPENSATION

Full compensation for complying with this Section III-2 and for working within the time frame set forth in the contract shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore. The provisions of Section 9-1.06, “Changed Quantity Payment Adjustments,” of the State Standard Specifications do not apply to items of work set forth in this Section III-2.

SECTION III-3 STORM DRAIN

III-3.01 HDPE STORM DRAIN PIPE

Contractor shall install HDPE storm drain pipe in accordance with plans and these specifications.

Installation of HDPE storm drain Pipe shall conform to the provisions in Section 64, “Plastic Pipe” and Section 70-5 “Drainage Appurtenances” of the State Standard Specifications. Storm drain pipe shall be N-12 Water Tight Inline Bell (WT IB) HDPE as manufactured by ADS, or approved equal. All piping shall be backfilled in accordance with Section III-1.20 “Trenches and Backfill” and as set forth on the plans. Culvert shall have a minimum of 18” of backfill from the top of the pipe to grade.

Pipe shall be laid in accordance with the plans to ensure proper drainage within the facility or as directed by the Engineer. Before any length of pipe is laid, it shall be carefully inspected for defects. No pipe or other material that shows defect, shall be placed. Pipe laying shall proceed up the grade with the bell ends of the pipe placed upstream. Each section of pipe shall be laid in such a manner as to form a watertight concentric joint with the adjoining pipe. The interior of the pipe shall be kept clear of all dirt and debris during construction.

All pipe laying and joining, including the maximum deflection of joints in curved alignment shall be in accordance with the pipe manufacturer's specifications and as directed by the Engineer.

Full compensation for furnishing all labor, materials, tools, equipment, backfill, and incidentals, and for doing all work involved in installing and backfilling storm drain pipe in accordance with the plans and these specifications, complete and in place, shall be included in the contract price paid per linear foot of “HDPE Storm Drain Pipe”, and no additional compensation will be allowed therefore.

III-3.02 CONNECTION TO EXISTING STORM DRAIN PIPE

The Contractor shall connect existing storm drain pipe at the locations shown on the plans in accordance with the plans and these specifications. The Contractor shall seal all connections to existing conduits by use of an approved coupling or connection as directed by the Engineer.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work necessary to connecting existing storm drain to the extension, in accordance with the plans and specifications and as directed by the Engineer shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore.

III-3.03 STORM DRAIN INLET MODIFICATION

Contractor shall use corrugated metal pipe (CMP) that conforms to the provisions in Section 66, "Metal Pipe" of the State Standard Specifications to extend the vertical height of the existing CMP inlet. The existing concrete collar shall be removed and repoured at the proposed finish grade. The entrance of the inlet shall be constructed as shown in the details of the plans. All piping shall be backfilled in accordance with Section III-1.20 and as designated on the plans.

Full compensation for furnishing all labor, materials, tools, equipment, backfill, and incidentals, and for doing all work involved in installing and backfilling new CMP, in accordance with the plans and these specifications shall be included in the lump sum contract price paid for "Storm Drain Inlet Modification," and no additional compensation will be allowed therefore.

III-3.04 JUNCTION BOX

Storm drain junction box shall be poured in place (6” thick walls) in accordance with the plans and specifications and the provisions of Section 51, “Concrete Structures,” of the State Standard Specifications with H-20 loading and the finished grade shall conform with the plans. Structure reinforcement shall conform with Caltrans Standard Plans.

Junction boxes shall have a manhole cover with cast in place manhole frame and grate as indicated on the plans. Frames, grates and covers shall conform to the provisions in Section 75, “Miscellaneous Metal,” of the State Standard Specifications.

Full compensation for furnishing all labor, materials, tools, equipment, backfill, and incidentals, and for doing all work involved in installing and backfilling storm drain pipe, in accordance with the plans and these specifications shall be included in the lump sum contract price paid for each "Junction Box" and no additional compensation will be allowed therefore.

III-3.05 COMPENSATION

Full compensation for complying with this Section III-3 and for working within the time frame set forth in the contract shall be included in the contract price paid for the various items of work, and no additional compensation will be allowed therefore. The provisions of Section 9-1.06, “Changed Quantity Payment Adjustments,” of the State Standard Specifications do not apply to items of work set forth in this Section III-3.

APPENDIX 1

Geotechnical Report

GEOTECHNICAL ENGINEERING STUDY
CALAVERAS PUBLIC UTILITY DISTRICT
JEFF DAVIS WATER TREATMENT PLANT
TANK ADDITION PROJECT
RAILROAD FLAT, CALIFORNIA

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March 25, 2021
Condor Project No. 8502

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CALAVERAS PUBLIC UTILITY DISTRICT
JEFF DAVIS WATER TREATMENT PLANT
TANK ADDITION PROJECT
RAILROAD FLAT, CALIFORNIA

1.0 INTRODUCTION

This report includes the results of a Geotechnical Engineering Study (GES) for Calaveras Public Utility District's (CPUD) tank addition project. The subject site is located at the Jeff Davis Water Treatment Plant, 1601 West Forty Road, Railroad Flat, California. The general location of the site is shown on Figure 1 – Vicinity Map, and Figure 2 – Site Map with Test Pit Locations, Appendix A. Condor Earth (Condor) performed this study at the request of Tyla Daries, Engineering Technician for WGA Inc. This report was prepared to meet the requirements of 2019 California Building Code (CBC) for Geotechnical Engineering Studies.

2.0 PURPOSE AND SCOPE

This GES was performed to 1) characterize geotechnical conditions at the site; 2) identify geotechnical or geologic conditions that might impact design or construction at the site; 3) provide geotechnical recommendations to mitigate geotechnical constraints at the site; and 4) provide geotechnical criteria for design of the proposed improvements. Condor completed the following work for this GES:

1. Reviewed available maps and documents relevant to the site geology, seismic setting, and geotechnical conditions.
2. Performed field explorations using backhoe test pits.
3. Analyzed the findings from the field exploration to develop geotechnical recommendations for:
    a) General earthwork, including site stripping, subgrade preparation, temporary excavations, permanent slopes, trench backfill, import fill, compaction criteria, and site surface drainage;
    b) Foundation design and construction, including foundation type, allowable bearing capacities, lateral resistance, settlement, and foundation depth;
    c) 2019 California Building Code (CBC) seismic design criteria;
    d) Potential geologic and seismic hazards and recommendations for mitigation; and
    e) Concrete slabs and exterior flatwork.
4. Prepared this written report summarizing our findings, conclusions, and geotechnical recommendations.

3.0 PROJECT DESCRIPTION

CPUD is planning for construction of a 500,000-gallon welded steel clear well tank supported on a concrete ringwall foundation. The area to the northwest of the existing clear well tank was evaluated for consideration of the planned improvements.

Site development plans will require cuts into native bedrock of approximately 30 feet deep. Trenching for utilities will require additional cuts below the proposed pad grade into native bedrock. Please refer to the conclusions section of the report for additional discussion regarding excavations.

4.0 GEOLOGIC AND SEISMIC SETTING

4.1 REGIONAL GEOLOGY

The site is located in the western foothills of the central Sierra Nevada. The basement rock of the Sierra Nevada range consists of steeply dipping metamorphic rocks of Paleozoic and Mesozoic age that have been intruded by the Mesozoic age granitic plutons of the Sierra Nevada Batholith. Within Calaveras County, these basement rocks are locally overlain by the eroded remnants of younger, Tertiary age, continental volcanic and sedimentary rock and Quaternary alluvium.

Uplift and westward tilting of the Sierra Nevada range began along the faults flanking its eastern edge. Erosion caused by west-flowing streams incised deep canyons and eroded much of the younger Tertiary rock that overlies the basement rock. Several episodes of glaciation during the last 2 million years have exposed much of the basement rock in the higher Sierra Nevada and generated the extensive deposits of glacial outwash in the Great Central Valley. The geologic processes of tectonic uplift and erosion continue to the present.

4.2 SITE GEOLOGY

The bedrock underlying the site and locally exposed in roadcuts and outcrops belongs to the Calaveras Formation consisting of weathered phyllite and slate. The estimated distribution of the various rock units in the site vicinity is shown on Figure 3 - Geologic Map.

4.3 FAULTING AND REGIONAL SEISMICITY

No active faults are known to cross the site, nor is the site located within an Earthquake Fault Hazard Zone, as established by the Alquist-Priolo Earthquake Fault Zoning Act (Bryant and Hart, 2007), therefore, ground rupture from faulting is not considered a significant hazard. The inactive Calaveras Shoo Fly Thrust fault is mapped in the vicinity of the site. However, ground rupture or seismic shaking from this fault is not a hazard. Geologically recent (late Pleistocene to Holocene) movement has been identified on only eight faults with the Sierra Nevada block. These recent faults are included in the Foothills Fault Zone shown on Figure 4 – Regional Fault Map, approximately 12 to 20 miles to the west.

5.0 SUBSURFACE CONDITIONS

On February 18, 2021, Condor evaluated the cut slope at the existing tank and observed the excavation of two (2) exploratory test pits (TP-1 through TP-2) to depths of approximately 6 feet at the locations shown on Figure 2 – Site Map with Test Pit Locations, Appendix A. The exploratory test pits were excavated by CPUD by use of a CAT Turbo 4x4 backhoe with a 12-inch bucket.

A Condor California certified engineering geologist logged the materials encountered at each test pit and selected sample locations representative of site conditions. The subsurface was classified using the Unified Soil Classification System and applicable rock classification system noting color, moisture, weathering, strength, hardness, texture, fabric, composition, and excavation rate. Selected samples were tested for plasticity index and corrosion potential. The test pit logs are provided in Appendix B. Laboratory test reports are provided in Appendix C.

5.1 EARTH MATERIALS

The cut slope west of the existing tank exposes approximately 2 to 3 feet of residual soil in sharp contact with the Calaveras Formation consisting of pale yellowish brown, highly weathered phyllite and gray black

slate locally. Rock exposed in the cut slope is soft, weak, highly weathered grading to moderately hard, weak, moderately weathered at approximately 6 feet below original grade. Freshly exposed rock is blocky and foliation fractures are closely spaced, N25E, 80SE, generally tight, slightly rough, and continuous. Less common fractures are oriented N60W, 75N and S85W, 20N, generally slightly open with oxide coating to wide and clay filled, slightly rough and continuous.

TP-1 was excavated into an existing cut slope and exposed residual soil consisting of dark reddish brown lean clay in sharp contact with moderately weathered phyllite bedrock that is generally pale yellowish brown to dark gray, blocky, moderately hard, and weak rock with closely spaced and slightly rough fractures. Excavation refusal was encountered at 6 feet below estimated original ground surface.

TP-2 was excavated in an existing 3-foot-deep trench. The trench removed the upper 2.5 feet of residual soil. The excavation exposed moderately weathered phyllite bedrock that is generally pale yellowish brown to dark gray, blocky, moderately hard, and weak rock with closely spaced and slightly rough fractures. Excavation refusal was encountered 3 feet below the trench invert, approximately 6 feet below original ground surface.

A detailed description of the encountered ground conditions is provided in the test pit logs, Appendix B. Test Pit, TP-1 was excavated perpendicular to

5.2 LOCAL GROUNDWATER CONDITIONS

No groundwater was observed during our field work, but ground conditions are typically dry until winter rains. Due to the fractured condition of the local bedrock, groundwater seeps are often encountered in similar geology during the winter and spring season.

5.3 SEISMIC CONSIDERATIONS

Probabilistic values of ground motion corresponding to various levels of seismic hazards are available online from professional organizations using the USGS data to retrieve the seismic design data and present the finding in a report format. The USGS uses a probabilistic model to estimate ground motions corresponding to various levels of seismic hazard. Site soils were classified using the procedures specified in the 2019 CBC, which utilizes ASCE 7-16.

The results of the general seismic analysis using the 2019 CBC for Site Class C (very dense soil and soft rock) are summarized below and provided in Appendix D. The recommended values for design of the proposed structure are:

Risk Category :	IV
Site Class:	C
Seismic Coefficient, S_s:	0.38g
Seismic Coefficient, S_1:	0.188g
Site Coefficient, Fa:	1.3
Site Coefficient, Fv:	1.5
Adjusted Seismic Coefficient , S_{MS}:	0.493g
Adjusted Seismic Coefficient , S_{M1}:	0.282g
Design Parameter, S_{DS}:	0.329g
Design Parameter, S_{D1}:	0.188g

g = acceleration due to gravity

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 GENERAL

Based on our findings, it is our professional opinion that the site is suitable to receive the proposed project improvements provided the geotechnical recommendations contained herein are incorporated into the project design. The primary geotechnical consideration from a development standpoint is the presence of resistant bedrock within the planned footprint of tank pad, foundation, and utilities. A secondary consideration is the potential for residual soil to be present near planned grade at the northeast edge of the tank where the planned cut depth is minimal. Because most of the tank foundation will be founded on weathered bedrock, residual soil exposed after cutting to grade should be removed and replaced with engineered fill compacted to 95 percent relative compaction where present below the tank footprint.

Specific conclusions and recommendations addressing this geotechnical consideration, as well as general recommendations regarding the geotechnical aspects of design and construction, are presented in the following sections.

6.2 GRADING AND EARTHWORK RECOMMENDATIONS

The grading and site work should be performed in accordance with the 2019 CBC, Title 24, Chapter 33 (Safeguards During Construction), Appendix J (Grading), and Chapter 18 (Soil and Foundations), and with the recommendations of the Geotechnical Engineer of Record during construction. Where the recommendations of this report and the cited sections of the CBC are in conflict, the owner should request clarification from the Geotechnical Engineer of Record. The recommendations of this report should not be waived without the consent of the Geotechnical Engineer of Record for the project. Recommendations for additional work and construction monitoring are contained in later sections of this report.

6.2.1 Site Preparation

The ground surface in the area of the proposed improvements should be stripped of all vegetation, debris, organic topsoil, or any other unsuitable material or soil. Stripping should extend at least 5 feet beyond the limits of the proposed improvements where possible. Soils containing more than 2 percent organic material by weight over baseline conditions should be considered organic. Roots remaining greater than ½-inch in diameter should be removed by either mechanical means or by hand during grading operations. Actual stripping depths should be determined at the time of grading by the geotechnical engineer or a qualified representative. Site strippings may be stockpiled for later use in landscape areas.

6.2.2 Subgrade Preparation

In areas to receive fill material per Section 6.1, the exposed subgrade consisting of or weathered bedrock should be scarified to a depth of 8 inches, uniformly moisture conditioned to between 2 and 4 percentage points above optimum moisture content and compacted to achieve a minimum relative compaction of 90 percent of the ASTM D1557 maximum dry density. Field density tests should be taken to verify compaction of the prepared subgrade in these areas. Scarification can be waived upon approval of the Geotechnical Engineer where moderately weathered bedrock is exposed, and scarification and compaction would not improve the subgrade.

The subgrade conditions exposed in cut bedrock areas will not warrant scarification and recompaction. Where moderately weathered bedrock is exposed in cuts deeper than 5 feet, we recommend that the exposed surface be thoroughly moisture conditioned and track walked with a dozer to break up the oversize material and provide a workable and dense surface. The Geotechnical Engineer or qualified representative should

observe this operation to verify that the oversize material has been properly broken down and the surface is firm and unyielding.

6.2.3 Engineered Fill Materials

Engineered fill used for the project should be either 1) select import engineered fill, or 2) general on-site materials with less than 2 percent organic content and a maximum particle size of 6 inches. However, the site bedrock may be difficult to process into workable fill.

Select import material used for engineered fill should be inorganic, have an R-value of at least 30, a liquid limit less than 30, and plasticity index less than 7. Engineered fill should also meet the following particle-size gradation:

Sieve Opening	Percent Passing, by Dry Weight
6-inch square	100
3/4-inch square	70 minimum
U.S. No. 4	60 minimum
U.S. No. 200	50 maximum

Samples of any proposed imported fill material should be submitted to the Laboratory of Record for testing and approved by the Geotechnical Engineer of Record prior to being brought to the site. If certified testing has been performed on any proposed imported fill material, the Geotechnical Engineer of Record or a qualified professional may approve its use based on the test results.

General on-site engineered fill should be inorganic, contain no rocks greater than 6 inches in least dimension, and be free of deleterious materials. Soils containing more than 2 percent by weight of organic material should be considered organic. Grading contractors should anticipate that processing of the weathered bedrock generated from cut may be necessary to meet the gradation requirements. This may include track walking with a dozer, screening, crushing, or other processing methods.

6.2.4 Engineered Fill Placement

Engineered fill should be placed in a series of horizontal layers not exceeding 8 inches in loose thickness, uniformly moisture-conditioned to between 2 and 4 percentage points above optimum moisture content, and compacted to achieve a minimum relative compaction of 95 percent of the ASTM D1557 maximum dry density. The required relative compaction may be reduced to 90 percent relative compaction beneath ancillary building and utility pad structures located at least 5) feet away from the tank foundation. Additional fill lifts should not be placed if the previous lift did not meet the required relative compaction or if soil conditions are not stable. Discing, tilling, and/or blending may be required to uniformly moisture-condition soils used for engineered fill.

6.2.5 Excavations

Construction site safety generally is the sole responsibility of the Contractor who shall also be solely responsible for the means, methods, and sequencing of construction operations. The Contractor should be aware that slope height, slope inclination, or excavation depths (including foundation excavations) should in no case exceed those specified in local, state, and/or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations). Heavy construction equipment, building materials, excavated soil, and vehicular traffic should not be allowed within a lateral distance equal to one-third the slope height from the top of any excavation. During wet weather, earthen

berms or other methods should be used to prevent runoff water from entering all excavations. Runoff water, seepage, and/or groundwater encountered within excavations should be collected and disposed of outside the construction limits.

Open temporary trenches and cuts should be monitored for evidence of incipient instability and should be in compliance with applicable OSHA regulations (California Construction Safety Orders, Title 8). The contractor is responsible for final determination of safe slopes for all temporary cuts and trenches.

The presence of resistant bedrock within the planned excavation depths for the tank pad, foundations and utilities should be considered when planning site grading. We anticipate that resistant bedrock encountered within the proposed cut areas may be rippable, without the aid of blasting, but may generate over-sized rock. However, in small excavations, such as foundations, impact mechanical excavation (jackhammer) will likely be required.

Resistant rock requiring percussion excavation or blasting is known to occur for developments in the area, particularly for excavations deeper than 5 feet, or narrow utility trenches. If blasting is necessary, Condor recommends that this work be performed by a certified state licensed blaster. If blasting is conducted, water sprays and/or blasting mats should be employed to reduce the potential for any environmental impact or accidents. Over-sized rock may require mechanical treatment to meet the requirements of maximum particle size stated in Section 6.2.3.

6.2.6 Temporary and Permanent Slopes

It is our opinion that temporary unbraced cut slopes up to 5 feet high in the weathered rock may be 1/2 H:IV, provided that the rock is not fissured and will remain intact while exposed. If the rock is wet or seepage is encountered, or if the rock is subject to other instability factors, the inclination of the slope should be flattened to maintain safe conditions. The soil mantle exposed by temporary cut slopes should be flattened to no steeper than 1-1/2H to 1V (horizontal to vertical) provided there is no evidence of saturation or seepage. Excavation deeper than 4 feet should be reviewed by a competent person at the time of exploration where the excavation cannot be sloped to 1-1/2 H:IV or flatter.

Permanent cut slopes in engineered fill should have an inclination no steeper than 2H to 1V (2H:1V). Permanent cut slopes in moderately weathered rock should be made no steeper than 1-1/2H:1V. Permanent cut slopes in competent rock may be made as steep as 1H:1V upon approval of the Geotechnical Engineer. For planning purposes, we recommend that cut slopes be designed at a slope of 1-1/2H:1V.

In large part, the stability of cut slopes is due to their location and orientation with respect to the structure of the underlying weathered bedrock. If adverse bedding, joint planes, or other zones of geologic weakness are encountered during earthwork, corrective grading may be required to provide permanent stability. Examples of corrective grading include buttress fills, reconstruction of the slope, or flattening of the slope. If exposed bedding dips steeper than 2H:1V stability problems probably will not pose a significant concern. If bedding planes are flatter, however, the beds would be exposed adversely to the cut and there would be a potential for slope failure, especially if weak clay interbeds are present. Accordingly, an engineering geologist should observe the initial grading of cut slopes during grading operations. If adverse bedding is discovered, the geologist can recommend a study scope to evaluate the conditions and provide remedial alternatives. Based on our test pit excavations and observation of the existing adjacent cut slope, we do not anticipate adverse bedding at the proposed slope inclinations.

Interceptor drains should be provided along the tops of slopes where the tributary area flowing toward the slope has a drainage path greater than 40 feet, measured horizontally. The interceptor drains should be sloped to a suitable drainage device and disposed off-site well below the toe of the slope. The permanent cut slopes should be inspected periodically for erosion, and if detected, repaired immediately. Interceptor drains should be cleaned before the start of each rainy season, and if necessary, after each rainstorm. To minimize erosion and gulling/rilling, disturbed areas should be planted with erosion-resistant vegetation suited to the area. As an alternative, jute netting or geotextile erosion control mats can be installed per the manufacturer's recommendations.

6.3 UNDERGROUND UTILITY TRENCHES

Unless concrete bedding is required around utilities, pipe bedding should consist of sand with a sand equivalent of at least 30 or the pipe manufacturer's requirements, whichever is more restrictive. The pipe bedding should extend from 6 inches below the invert of the pipe to 1 foot above the crown of the pipe. The pipe bedding material should be compacted to a minimum of 90 percent relative compaction or the manufacturer's recommendations if more stringent.

Trench backfill above the pipe bedding zone should be placed in the same manner as required in Section 6.2.4, Engineered Fill Placement. On-site fill soils and "non-organic" native soils may be used as backfill in trenches above the pipe bedding. Utility trench backfill should be placed in layers not exceeding a loose lift thickness of 8 inches, uniformly moisture conditioned, and compacted to a minimum of 90 percent relative compaction.

Compaction criteria for trench backfill above the bedding zone may be decreased to 85 percent relative compaction in landscape areas at least 5 feet beyond structural improvements, except in areas overlain by pavements, sidewalks, or other hardscapes. In landscape areas overlain by pavements, sidewalks, or other hardscapes, we recommend that the trench backfill be compacted to a minimum of 90 percent relative compaction to within 1 foot of the finished subgrade surface. The upper 1 foot should be compacted to 95 percent relative compaction.

6.4 SUBDRAINS

If seasonal perched groundwater or seeps, or evidence of such conditions are encountered, subdrains should be provided. The design of the subdrains depends on the topography, the specific seepage conditions, and the characteristics of adjacent improvements. Should evidence of wet conditions or seepage be encountered during site grading, we recommend that the geotechnical engineer evaluate the need for subdrainage and, if appropriate, prepare a subdrain design.

6.5 SURFACE DRAINAGE CONTROL

Surface drainage should be designed to prevent ponding and to drain surface water away from foundations, slabs-on-grade, and cut slope faces. Under no circumstances should concentrated surface water be allowed to run over slope faces. Surface runoff should be directed toward suitable collection or discharge facilities. A positive surface drainage of at least 5 percent should be provided within 10 feet of building foundations and tops of retaining walls. Elsewhere, positive surface drainage of at least 2 percent is recommended to allow for rapid removal of surface water or as recommended by the site development civil engineer. Roof drainage should be directed away from building foundations and retaining walls where bare ground is exposed. A detailed drainage plan is outside the scope of this report, but should be included in the preparation of the grading plans for new construction.

7.0 FOUNDATION RECOMMENDATIONS

7.1 GENERAL FOUNDATION RECOMMENDATIONS

The foundation improvements should be designed and constructed in accordance with the 2019 CBC, Title 24, Chapter 17 (Structural Tests and Special Inspections), Chapter 18 (Soil and Foundations), and all other sections applicable to the proposed structural improvements.

7.2 FOOTINGS

Footings should be embedded at least 24 inches below the lowest adjacent grade when founded on engineered fill or weathered bedrock prepared in accordance with Section 6.2. Condor defines lowest jacent grade as the tank bottom, the bottom of an adjacent pavement, or exterior soil subgrades, whichever results in a deeper footing. Footing thickness and widths should meet the minimum requirements in the 2019 CBC and AWWA Standard D100-05.

Footings bearing on compacted engineered fill or weathered bedrock or engineered fill should be designed using a maximum net allowable bearing capacity of 3,000 pounds per square foot (psf) for dead plus normal duration live loads. This allowable bearing capacity may be increased by one-third for total load conditions, including wind and seismic. This allowable value includes a factor of safety of 2.0.

Base friction resistance may be calculated using an ultimate friction coefficient of 0.30 for concrete on fill or native soil. For the steel tank bottom, a friction coefficient of 0.25 should be used. Passive resistance may be calculated using an allowable equivalent fluid unit weight of 350 bounds per cubic foot (pcf). The recommended passive resistance is reduced by a factor of about 1.5 from the ultimate value to reduce deflections to tolerable amounts. The recommended passive pressure and friction coefficients may be combined, without reduction, for calculating total lateral resistance. The passive resistance contributed by soils within 1 foot of the ground surface should be neglected unless these soils are protected and confined by a slab-on-grade or pavement over a lateral distance of 5 feet. Gaps between the footing and adjacent ground should be completely backfilled using engineered fill, concrete or lean cement slurry with a 28-day unconfined compressive strength of at least 100 pounds per square inch (psi).

Settlement of the ringwall foundation is estimated to be 3/4-inch and 1/2-inch for total and differential settlement, respectively. The settlement of the center of the tank relative to the ringwall foundation is estimated to be less than 1-inch.

8.0 SLABS-ON-GRADE

Concrete slabs should be constructed on a surface prepared as described in Section 6.2. Where dampness of floor slabs is to be minimized, the slabs should be constructed on a minimum 4-inch-thick layer of capillary break material covered with a high quality vapor retarder. The capillary break material should be free-draining, clean gravel or rock such as No. 4 by ¾-inch pea gravel or permeable aggregate complying with Caltrans Standard Specifications, Section 68, Class 1, Type B. The vapor retarder should have a minimum thickness of 15 mils, a permeance as tested before and after mandatory conditioning (ASTM E 1745, Section 7.1.2 – 7.1.5) of less than 0.01 perms [grains/(ft^2 · hr · inHg)], and comply with the ASTM E 1745 Class A requirements. Vapor retarders having these properties are commonly referred to as “vapor barriers”. The designer of record may omit the sand blotter over the vapor barrier at their discretion when concrete with a water-cement ratio of 0.45 or less is specified. The vapor retarder should be constructed in accordance with ASTM E 1643-09 using material which meets ASTM E 1745.

Slab surfaces to receive moisture sensitive floor coverings should have considerations for maximum vapor emission levels. Most floor coverings require 3 or 5 pound emission levels for a warranted installation. Emission levels may be controlled by the use of a sub-slab vapor barrier meeting ASTM E 1745 Class A, ASTM E 154-93 resistance to puncture of not less than 3,000 grams and ASTM E 154-93 tensile strength after soaking of not less than 55.5 (MD/TD) average.

Slabs should be cast using concrete with a maximum slump of 4 inches or less. Excessive water content is the major cause of concrete cracking. To reduce concrete shrinkage, a water reducing agent or plasticizer may be utilized in the concrete to increase slump while maintaining an appropriate water/cement ratio. Hot reinforcing steel should be cooled prior to concrete placement to help prevent concrete shrinkage at the bar location. Where there is potential for moisture accumulation under the slab, special consideration should be given to allow gravity drainage of any water that could migrate into the subgrade of the slab or rock cushion.

The project structural engineer should design the slab-on-grade of building structures. The following table provides our recommended interior slab-on-grade alternative in lieu of a Structural Engineer.

SLAB-ON-GRADE RECOMMENDATIONS

Building Pad Subgrade	Minimum Slab Thickness	Minimum Reinforcement
Weathered bedrock or engineered fill moisture conditioned and compacted to at least 90% relative compaction	5 inches PCC	No. 4 at 18 inches O.C.E.W.

Notes:

a) PCC = Portland Cement Concrete with minimum compressive strength of 3,000 psi, and jointed and reinforced per structural design for shrinkage. Minimum slab thickness may be revised per the design structural engineer.
b) Grading recommendations per Section 6.2 are to be followed, including increased relative compaction requirements beneath the tank structure.

Exterior concrete slabs should be constructed over 4 inches of Class 2 Aggregate Base over compacted engineered fill or weathered bedrock prepared as discussed in Section 6.2, and should be reinforced or jointed and scored to limit cracking from shrinkage. At the time of exterior slab construction, reprocessed native material should be moisture conditioned to near the optimum moisture content where imported soil is not supporting the slab.

9.0 CORROSION POTENTIAL

Chemical tests were performed on a composite sample of soil anticipated to be in contact with foundation improvements. Test results yielded a pH of 7.18, chloride ion concentration reflects none detected, sulfate ion concentration reflects none detected, and soil redox potential of 410-mV.

Resistivity test results of 10,0-00 ohm-centimeter indicate that the soil is mildly corrosive. A commonly accepted correlation between soil resistivity and corrosivity towards ferrous metals is provided in the following table developed by the National Association of Corrosion Engineers (NACE).

Soil Resistivity	Corrosivity
Less than 500 ohm-cm	Very corrosive
500 to 1,000 ohm-cm	Corrosive
1,000 to 2,000 ohm-cm	Moderately corrosive
2,000 to 10,000 ohm-cm	Mildly corrosive
Over 10,000 ohm-cm	Progressively less corrosive

Appendix C contains the results of the corrosivity tests performed, as well as a brief evaluation letter by our laboratory subcontractor. The brief evaluation provides general recommendations regarding protecting buried metals. If warranted, a corrosion expert should be consulted to develop specific recommendations.

10.0 ADDITIONAL SERVICES

The geotechnical recommendations and design criteria in this report are sensitive to the location, design details, and any special requirements of the new construction. Condor should review the geotechnical elements of project grading, foundation plans and specifications prior to construction bidding to check that the intent of our recommendations have been incorporated into these project documents. If Condor does not review the geotechnical elements of the plans and specifications, the reviewing geotechnical engineer or qualified professional civil engineer should thoroughly review this report and concur with its conclusions and recommendations or provide alternative recommendations.

Because surface conditions vary across the site, geotechnical recommendations used as a basis for construction contracting are sensitive to the possible need for adjustment in the field. The adjustments are dependent upon conditions revealed during construction that could previously only be assumed based upon site exploration. Since the intent of the recommendations given in this report are best understood by a Condor representative, we recommend that field observations and testing during earthwork and construction be performed by Condor. If Condor does not provide the field observations and testing, the Geotechnical Engineer of Record should thoroughly review this report and concur with its conclusions and recommendations or provide alternative recommendations.

A representative of the Geotechnical Engineer of Record or a qualified professional civil engineer should be on-site to observe and advise during site preparation, grading and earthwork, paving, and construction of foundations and slabs-on-grade. These observations should be supplemented with periodic density and compaction testing of subgrade and engineered fills to evaluate conformance with the recommendations contained in this report. It is important that foundation excavations be checked after cleaning and immediately prior to concrete placement to verify their suitability.

11.0 LIMITATIONS

The geotechnical conclusions and recommendations presented in this report are based on our findings during our February 18, 2021 field investigation, and are intended for planning, design, and construction of the proposed improvements at CPUD's Jeff Davis Water Treatment Plant. These conclusions and recommendations may be invalid if:

- the design assumptions change;
- the report is used for another site and/or project;
- the encountered soil or groundwater conditions are different than those anticipated in this report;

- the recommendations contained in this report are not followed; or
- any other change is implemented that materially alters the project.

This report was prepared in accordance with the generally accepted standards of geotechnical engineering practice existing in Calaveras County at the time it was written. No other warranty, expressed or implied, is made. It is the owner's responsibility to see that all parties to the project, including the designer, contractors, subcontractors, etc., are made aware of this report in its entirety.

The analyses and recommendations submitted herein are based upon the data obtained during our test pit investigation as shown on Figure 2. Subsurface exploration of any site is necessarily confined to selected locations and conditions may, and often do, vary between and around these locations. Should varied conditions come to light during construction on the project site, additional exploration, testing, or analysis may be required. Any person concerned with this project who observes conditions or features of the site or its surrounding areas that are different from those described in this report, should report them immediately to Condor for evaluation.

It should be noted that changes in the standards of practice in the field of geotechnical engineering, changes in site conditions (such as new excavations or fills), new agency regulations, or modifications to the proposed project are grounds for this report to be professionally reviewed. In light of this, there is a practical limit to the usefulness of this report without critical professional review. It is suggested that 2 years be considered a reasonable time for the usefulness of this report.

We trust this report provides the information required at this time. Please call with any questions.

Respectfully submitted,

CONDOR EARTH

Date: 3/25/2021

Ronald L Skaggs
Geotechnical Engineer, CA #2295

Chad Borean
Staff Geologist

X:\Project\8000_prj\8502 WGA, Inc. CPUD Tank Improvements\Reports\FR 20210325 CPUD GES.docx

12.0 REFERENCES

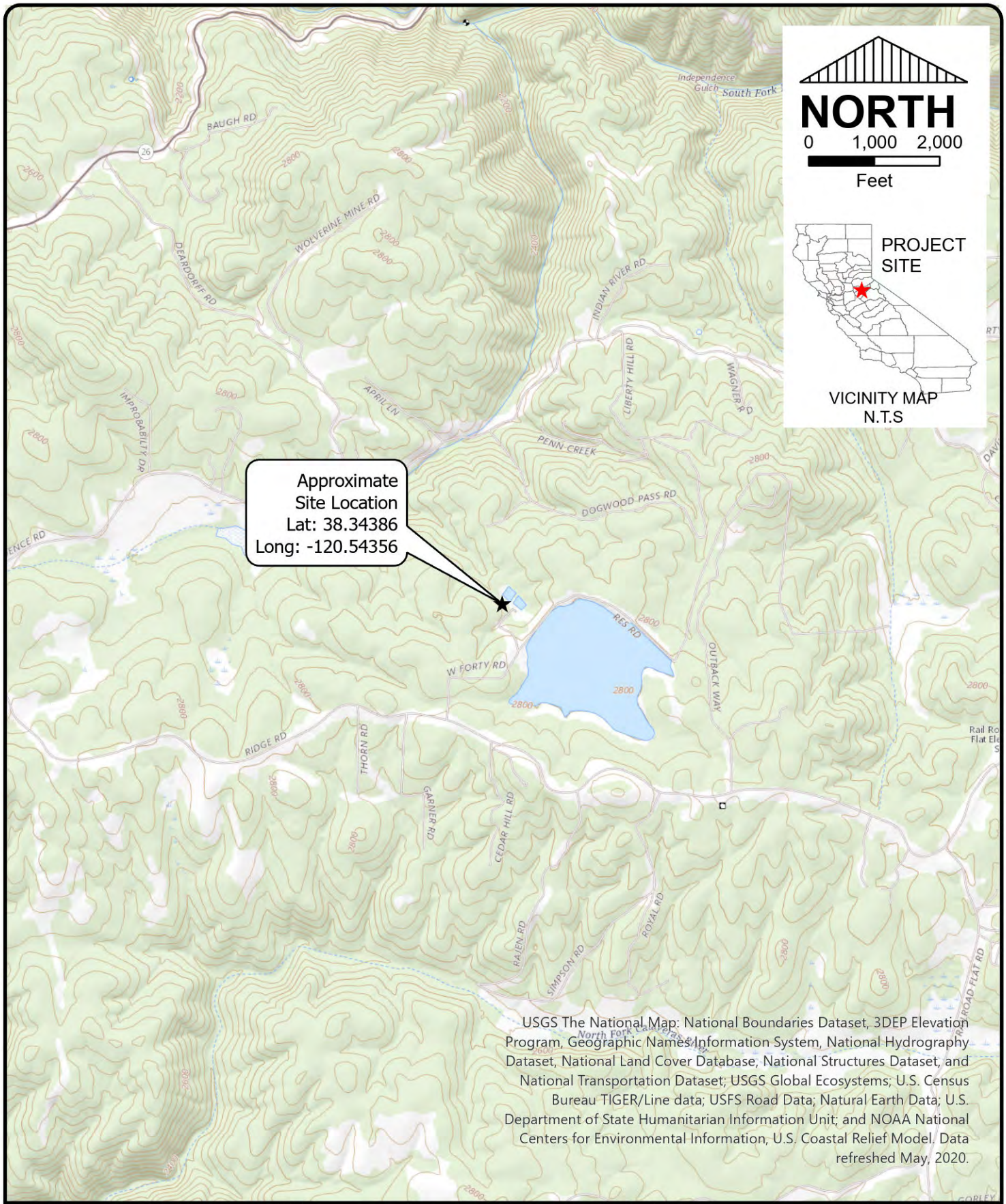
Bieniawski, Z.T. (1989) Engineering Rock Mass Classifications, John Wiley & Sons

Bryant, W.A., and Hart, E.W., (2007), Fault Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps, California Division of Mines and Geology, Special Publication 42.

California Building Code, 2019, California Building Standards Commission

Jennings, C.W., Fault Activity Map of California and Adjacent Areas, California Geological Survey (formerly California Division of Mines and Geology), 1994

APPENDIX A
Figures



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.

CONDOR EARTH
21663 Brian Lane
P.O. Box 3905
Sonora, CA 95370
(209) 532-0361
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www.condorearth.com

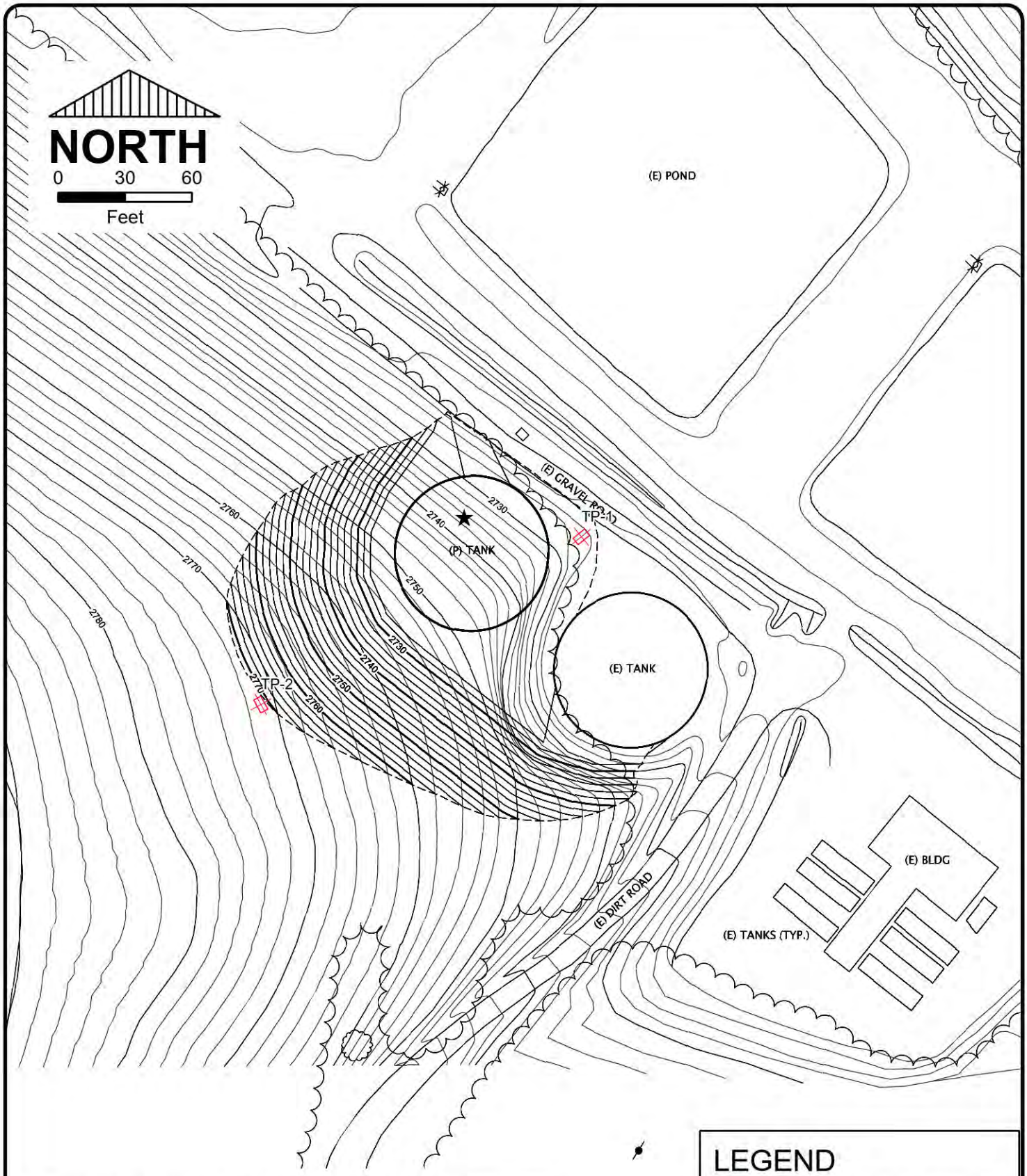
Job No.	Date	Scale	Drawn	Chk'd
8502	01 Mar 2021	AS SHOWN	JW	CB

VICINITY MAP
CPUD TANK ADDITION PROJECT
JEFF DAVIS WATER TREATMENT PLANT
1610 WEST FORTY ROAD
RAILROAD FLAT, CALIFORNIA

FIGURE 1

8502_CPUD.aprx

C:\Users\jwilson\Documents\GIS\Current Project\8502_CPUD\8502_CPUD.aprx



BACKGROUND DRAWING: WGA, INC. CIVIL ENGINEERING CONSULTANT

LEGEND

APPROXIMATE TEST PIT LOCATIONS

CONDOR EARTH
21663 Brian Lane
P.O. Box 3905
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fax (209) 532-0773
www.condorearth.com

Job No.	8502
Date	02 Mar 2021
Scale	AS SHOWN
Drawn	JW
Chk'd	CB

SITE MAP WITH BORING LOCATIONS
CPUD TANK ADDITION PROJECT
JEFF DAVIS WATER TREATMENT PLANT
1610 WEST FORTY ROAD
RAILROAD FLAT, CALIFORNIA

FIGURE 2

8502_CPUD.aprx

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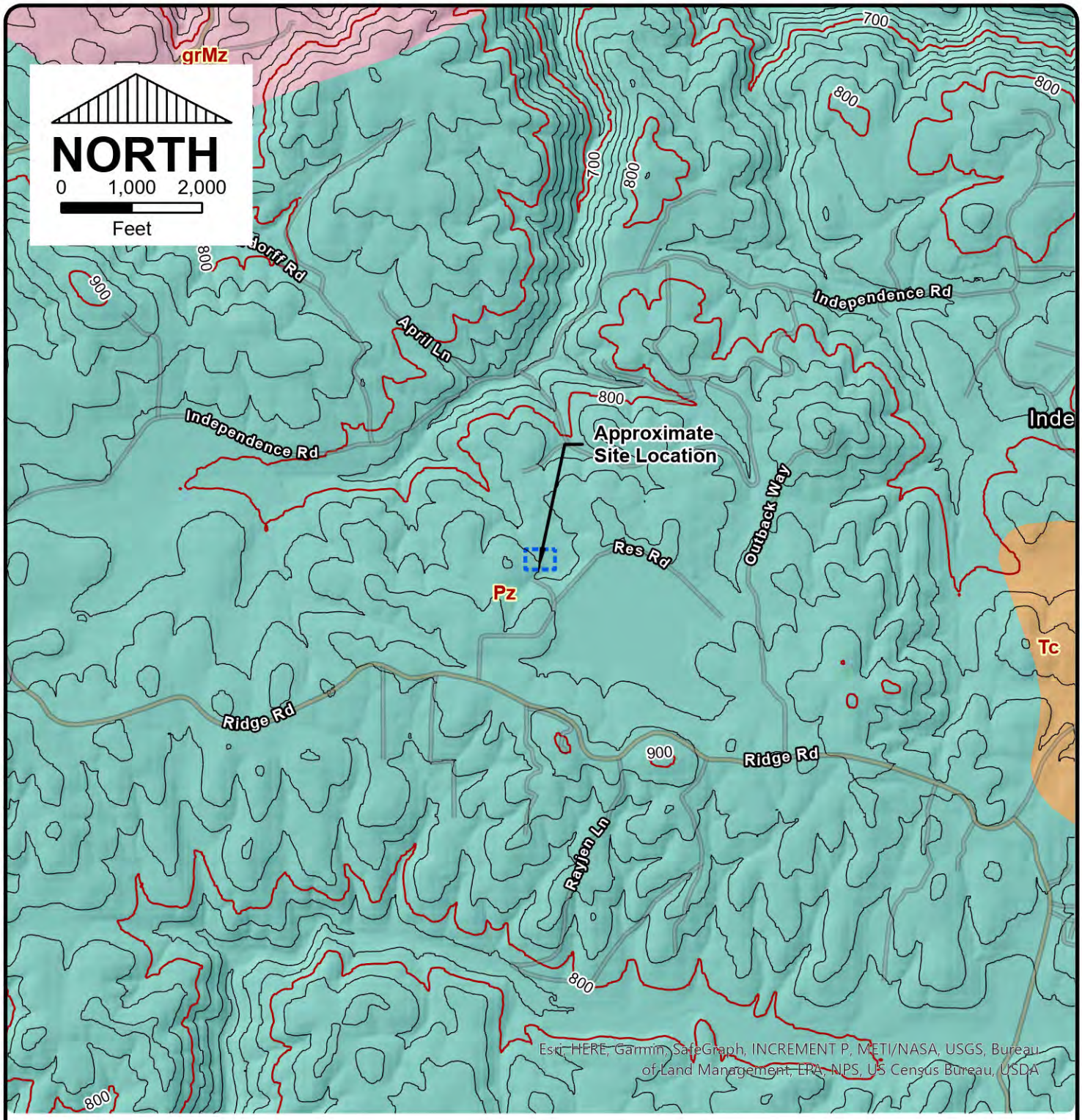

LEGEND

- APPROXIMATE SITE BOUNDARY
- TC: NONMARINE (CONTINENTAL) SEDIMENTARY ROCKS
- PZ: MARINE SEDIMENTARY AND METASEDIMENTARY ROCKS
- GRMZ: PLUTONIC ROCKS

Source:
California Geological Survey, C.W. Jennings, Carlos Gutierrez, William Bryant, George Saucedo, Chris Wills, 1977

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Job No.	8502
Date	01 Mar 2021
Scale	AS SHOWN
Drawn	JW
Chk'd	CB

GEOLOGIC MAP
CPUD TANK ADDITION PROJECT
JEFF DAVIS WATER TREATMENT PLANT
1610 WEST FORTY ROAD
RAILROAD FLAT, CALIFORNIA

FIGURE 3

8502_CPUD.aprx

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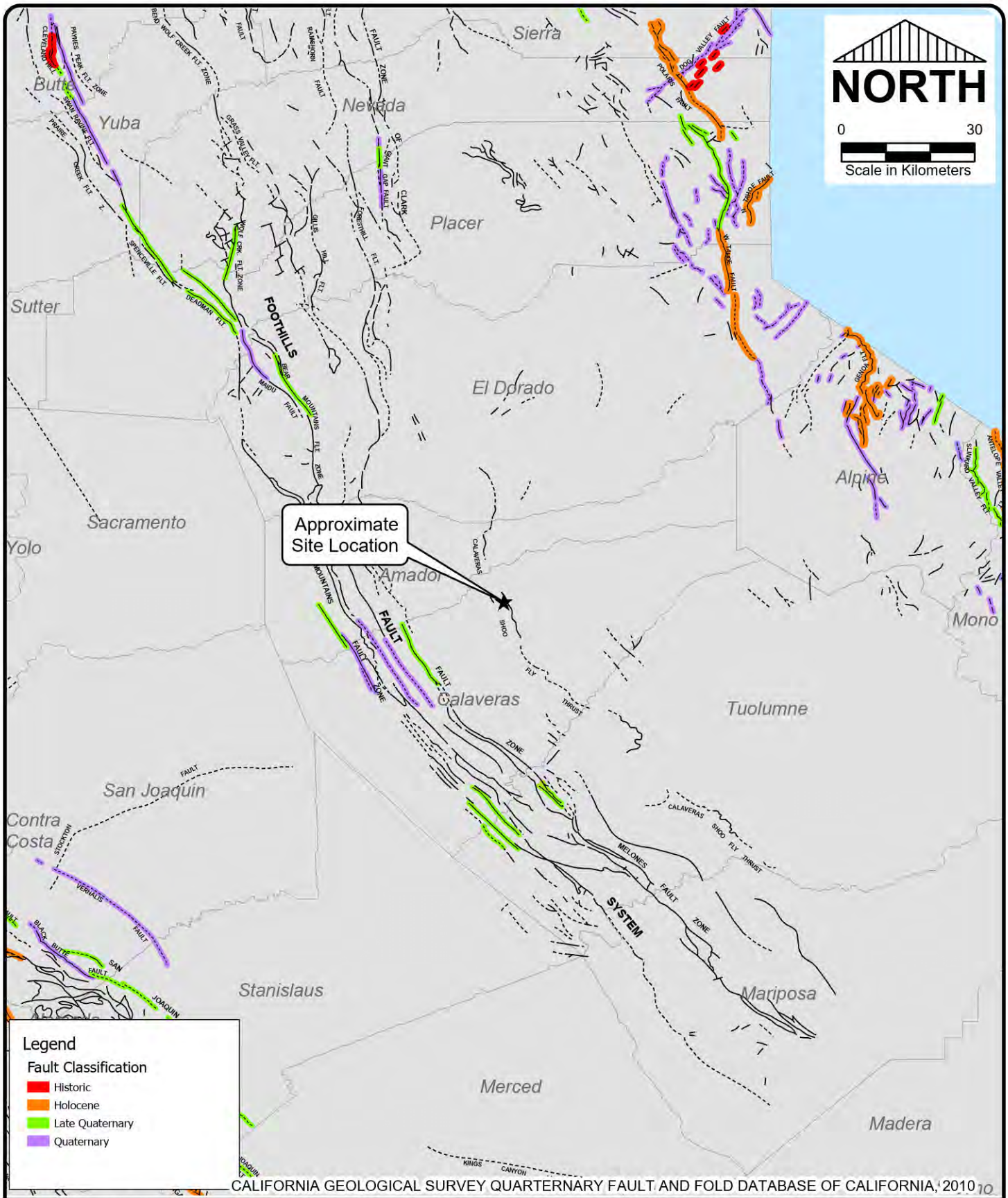

CALIFORNIA GEOLOGICAL SURVEY QUARTERNARY FAULT AND FOLD DATABASE OF CALIFORNIA, 2010

CONDOR EARTH
21663 Brian Lane
P.O. Box 3905
Sonora, CA 95370
(209) 532-0361
fax (209) 532-0773
www.condorearth.com

Job No.	8502
Date	01 Mar 2021
Scale	AS SHOWN
Drawn	JW
Chk'd	CB

REGIONAL FAULT MAP
CPUD TANK ADDITION PROJECT
JEFF DAVIS WATER TREATMENT PLANT
1610 WEST FORTY ROAD
RAILROAD FLAT, CALIFORNIA

FIGURE 4

8502_CPUD.aprx

C:\Users\jwilson\Documents\GIS\Current Project\8502_CPUD\8502_CPUD.aprx

APPENDIX B
Test Pit Logs and Photos

CONDOR EARTH

188 Frank West Circle, Suite I, Stockton, CA 95206 (209) 234-0518 FAX (209) 234-0538
21663 Brian Lane, PO Box 3905, Sonora, CA 95370 (209) 532-0361 FAX (209) 532-0773
1739 Ashby Road, Suite B, Merced, CA 95347 (209) 388-9601 FAX (209) 388-1778

• Engineering • Geotechnical • Environmental • Mapping •

TEST PIT LOG

Project No: 8502 – CPUD Tank Addition Project
Client: WGA, Inc.
Project Location: Railroad Flat, California
Test Pit Location: North of existing tank ~40-feet
Equipment: Cat Turbo 4x4 Extend-A-Hoe with 12-inch bucket

Test Pit No: TP – 1
Total Depth: 3.0 feet
Date Excavated: 2/18/21
Elevation: 2,600', Topo
Logged by: M. Crum

LOG	USCS	DESCRIPTION
0-0.3'	CL	RESIDUAL SOIL: Lean Clay (CL), dark reddish brown: Sharp contact with
0.3-3.0'	–	CALAVERAS FORMATION; Phyllite, generally pale yellowish brown, gray black locally; blocky, moderately hard, weak, closely spaced and slightly rough fractures, moderately weathered.

Notes: Test pit oriented perpendicular to existing north-south cut slope. Cut removed upper 2.5 feet of residual soil. Excavation refusal at 3.0 feet below toe of cut slope, ~6.0 feet below original grade. Original grade slopes 15 degrees east.

No groundwater encountered; bulk sample at 1-2 feet from test pit sidewall. Test pit backfilled at CPUD's discretion. Condor not onsite during placement of backfill.

CONDOR EARTH

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21663 Brian Lane, PO Box 3905, Sonora, CA 95370 (209) 532-0361 FAX (209) 532-0773
1739 Ashby Road, Suite B, Merced, CA 95347 (209) 388-9601 FAX (209) 388-1778

• **Engineering** • **Geotechnical** • **Environmental** • **Mapping** •

TEST PIT LOG

Project No: 8502 – CPUD Tank Addition Project
Client: WGA, Inc.
Project Location: Railroad Flat, California
Test Pit Location: Southwest of existing tank ~100-feet
Equipment: Cat Turbo 4x4 Extend-A-Hoe with 12-inch bucket

Test Pit No: TP – 2
Total Depth: 3.0 feet
Date Excavated: 2/18/21
Elevation: 2,600', Topo
Logged by: M. Crum

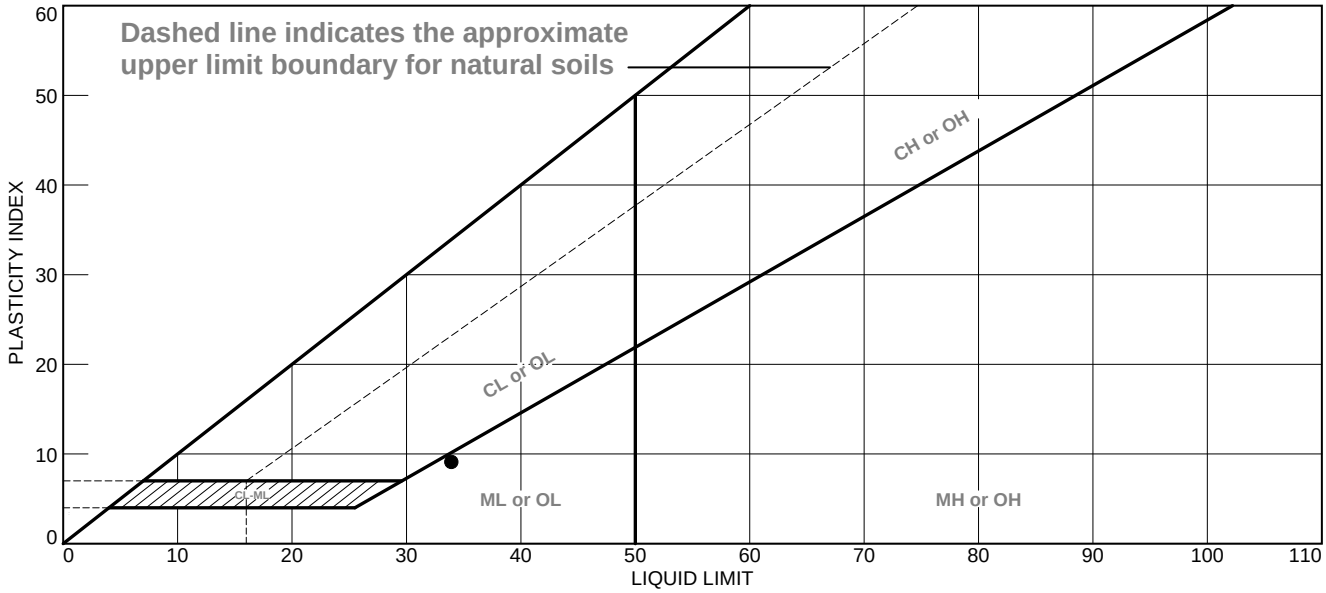
LOG	USCS	DESCRIPTION
0.0-3.0'	–	CALAVERAS FORMATION; Phyllite, generally pale yellowish brown, gray black locally; blocky, moderately hard, weak, closely spaced and slightly rough fractures, moderately weathered.

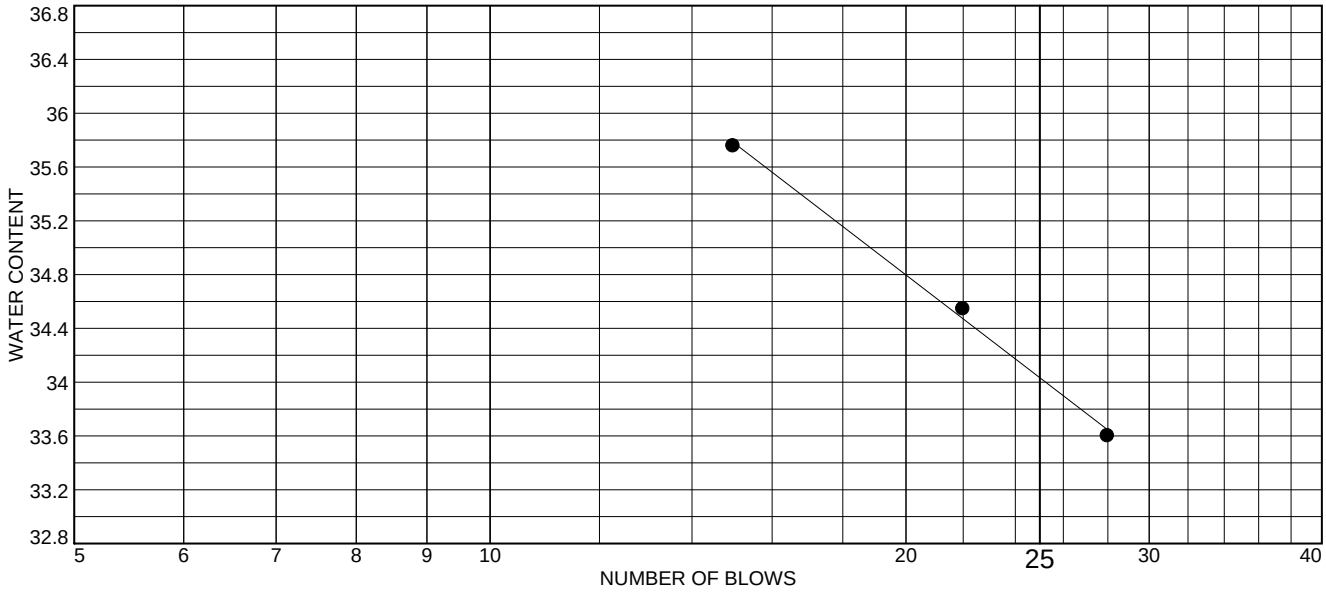
Notes: Test pit excavated in existing 3-foot-deep trench (possibly historic water ditch). Trench removed upper 2.5 feet of residual soil. Excavation refusal at 3.0 feet below trench invert, ~6.0 feet below original grade. Original grade slopes 15 degrees east.

No groundwater encountered; bulk sample of residual soil collected. Test pit backfilled at CPUD's discretion. Condor not onsite during placement of backfill.

APPENDIX C
Laboratory Test Results

LIQUID AND PLASTIC LIMITS TEST REPORT





	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Light Brown Silty Gravel with Cobbles	34	25	9			

Project No. 8502 **Client:** WGA, Inc.

Project: CPUD Tank Addition

Location: TP-1
Sample Number: PI-1 **Depth:** 3'

CONDOR EARTH TECHNOLOGIES INC.

Stockton, California

Remarks:
●3/2/2021

Figure

Tested By: E. Carrasco **Checked By:** R. Skaggs

California State Certified Laboratory No. 2153

CERCO analytical

1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 **462 2771** Fax. 925 **462 2775**
www.cercoanalytical.com

16 March, 2021

Job No. 2102179
Cust. No. 12016

Mr. Chad Borean
Condor Earth Technologies, Inc.
P.O. Box 3905
Sonora, CA 95370

Subject: Project No.: 8502
Project Name: Test Pit
Corrosivity Analysis – ASTM Test Methods

Dear Mr. Borean:

Pursuant to your request, CERCO Analytical has analyzed the soil sample submitted on February 26, 2021. Based on the analytical results, this brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurements, the sample is classified as "mildly corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentration was none detected at a reporting limit of 15 mg/kg.

The sulfate ion concentration was none detected at a reporting limit of 15 mg/kg

The pH of the soil was 7.18 which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential was measured at 410-mV which is indicative of aerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc. at (925) 927-6630.*

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

J. Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

Client:	Condor Earth Technologies, Inc.
Client's Project No.:	8502
Client's Project Name:	Test Pit
Date Sampled:	18-Feb-21
Date Received:	26-Feb-21
Matrix:	Soil
Authorization:	Signed Chain of Custody

Date of Report: 16-Mar-2021

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
2102179-001	TP-1 @ 3'	410	7.18	-	10,000	-	N.D.	N.D.

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327	ASTM D4327
Reporting Limit:	-	-	10	-	50	15	15
Date Analyzed:	12-Mar-2021	12-Mar-2021	-	15-Mar-2021	-	12-Mar-2021	12-Mar-2021

Cheryl McMillen
Laboratory Director

* Results Reported on "As Received" Basis
N.D. - None Detected

Quality Control Summary - All laboratory quality control parameters were found to be within established limits

APPENDIX D
USGS Seismic Design Parameters

Latitude, Longitude: 38.34386, -120.54365

Date	3/2/2021, 7:31:54 AM
Design Code Reference Document	ASCE7-16
Risk Category	IV
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	0.38	MCE_R ground motion. (for 0.2 second period)
S_1	0.188	MCE_R ground motion. (for 1.0s period)
S_{MS}	0.493	Site-modified spectral acceleration value
S_{M1}	0.282	Site-modified spectral acceleration value
S_{DS}	0.329	Numeric seismic design value at 0.2 second SA
S_{D1}	0.188	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.3	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.16	MCE_G peak ground acceleration
F_{PGA}	1.24	Site amplification factor at PGA
PGA_M	0.199	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	0.38	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	0.397	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.188	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.196	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.957	Mapped value of the risk coefficient at short periods
C_{R1}	0.956	Mapped value of the risk coefficient at a period of 1 s

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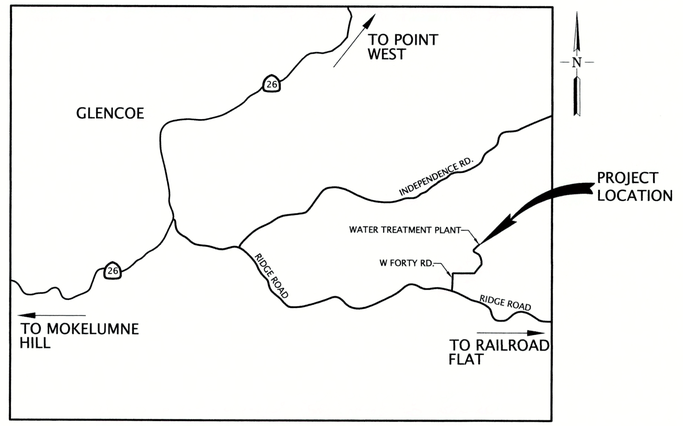
APPENDIX 2

Plans

CALAVERAS PUBLIC UTILITY DISTRICT

CLEARWELL TANK PROJECT
PHASE I - SITE IMPROVEMENTS

JEFF DAVIS WATER TREATMENT PLANT
1601 W. FORTY ROAD
MOKELUMNE HILL, CA
MAY 2021



LOCATION MAP

NOT TO SCALE

GRADING NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS, INCLUDING THOSE CONTAINED IN CALAVERAS COUNTY CODE CHAPTER 8.10, 12.02, 13.01 AND 15.05.
2. A COPY OF THE APPROVED PLAN MUST BE AVAILABLE ON-SITE AT ALL TIMES.
3. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT 811 FOR UTILITY LOCATION BEFORE EXCAVATION WORK.
4. TO ALLOW FOR INSPECTION, ALL WORK IS TO BE PERFORMED DURING DAYLIGHT HOURS ONLY, MONDAY THRU FRIDAY, EXCLUDING COUNTY HOLIDAYS
5. CUT SLOPES SHALL BE NO STEEPER THAN 1.5:1 (HORIZONTAL TO VERTICAL); FILL SLOPES SHALL BE NO STEEPER THAN 1.5: 1 (HORIZONTAL TO VERTICAL). A GEOTECHNICAL REPORT MUST BE SUBMITTED FOR CUT AND FILL SLOPES IN EXCESS OF 1.5:1.

   ESTIMATED QUANTITY OF CUT MATERIAL IS 10,000 CUBIC YARDS.
   ESTIMATED QUANTITY OF FILL MATERIAL IS 10,000 CUBIC YARDS.
   SITE BALANCES.
6. FILL MATERIALS SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 90% UNDER ALL FILL AREAS. TEST RESULTS AND A DESCRIPTION OF THE TEST METHOD MUST BE SUBMITTED BY A LICENSED CIVIL ENGINEER ARE REQUIRED AS EVIDENCE OF COMPLIANCE.
7. CONTRACTOR TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) TO CONTROL EROSION AND REDUCE THE OFF-SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICABLE.
8. EROSION CONTROL (BMP'S) SHALL BE IN PLACE AND MAINTAINED ALL YEAR ROUND.
9. CONTRACTOR SHALL KEEP ADJOINING PUBLIC STREETS FREE OF DIRT, MUD, AND OTHER PROJECT RELATED DEBRIS THROUGHOUT CONSTRUCTION.
10. DUST GENERATION MUST BE MINIMIZED AND A WATER TRUCK MUST BE AVAILABLE ON-SITE FOR ADEQUATE DUST CONTROL.
11. SURVEY MONUMENTS SHALL BE RE-ESTABLISHED BY A LICENSED SURVEYOR AT THE CONTRACTORS EXPENSE IF DISTURBED DURING CONSTRUCTION.
12. CONSTRUCTION STAKING IS TO BE IN PLACE PRIOR TO BEGINNING OF CONSTRUCTION AND IS TO BE MAINTAINED OR REPLACED AS NEEDED FOR CONSTRUCTION PURPOSES. MINIMUM STAKING FOR PUBLIC AND PRIVATE ROADS INCLUDES THE BC, EC, BVC, PVI, AND EVC OF ALL CURVES AND AT 50-FOOT INTERVALS. FIELD LOCATE AND DELINEATE EASEMENTS, RIGHTS-OF WAY, AND PROPERTY LINES.
13. ALL REQUIRED LOCAL, STATE, AND FEDERAL PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION AND COPIES OF ALL SUCH PERMITS SHALL BE AVAILABLE ON-SITE.
14. IF MORE THAN ONE ACRE OF GROUND IS DISTURBED, THE CONTRACTOR MUST APPLY TO THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD FOR COVERAGE UNDER THE STATE'S "STORM WATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES" AND COMPLY WITH ALL ASSOCIATED PERMIT REQUIREMENTS.

ABBREVIATIONS:

AB	AGGREGATE BASE
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DIA.	DIAMETER
DI	DROP INLET
E	ELECTRIC
(E)	EXISTING
EG	EXISTING GRADE
ELEV.	ELEVATION
FL	FLOW LINE
G	GAS
OH	OVERHEAD
JB	JUNCTION BOX
SD	STORM DRAIN
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN-OUT
SSMH	SANITARY SEWER MANHOLE
UP	UTILITY POLE
W	WATER
WM	WATER METER
WV	WATER VALVE

LEGEND:

	(P) JUNCTION BOX
	(P) STORM DRAIN
	(E) DROP INLET
W W	(E) WATERLINE
SS SS	(E) SANITARY SEWER
X X	(E) FENCE
E E	(E) ELECTRICAL
	(E) STORM DRAIN
G G	(E) GAS
OH OH	(E) OVERHEAD ELECTRICAL
	(E) FLOW LINE
	(E) CENTERLINE
	(E) ADJACENT PROPERTY LINE
	(E) PROPERTY LINE
	(E) UTILITY POLE
	(E) WATER VALVE
	(E) SANITARY SEWER MANHOLE
	(E) SANITARY SEWER CLEANOUT
	(E) DROP INLET
	(E) WATER METER

SHEET INDEX:

CALAVERAS COUNTY
PUBLIC UTILITY DISTRICT

5/24/21

INTERIM GENERAL MANAGER — DATE

Plot May 20, 2021 at 5:16pm M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\2873_01_CPUD TANK PROJECT - GENERAL - FINAL.dwg

REVISIONS

REV. No.	DESCRIPTION	REV. DATE	BY
1			
2			
3			
4			
5			
6			

WEBER, GHIO & ASSOCIATES
civil engineering consultant
394 E. SAINT CHARLES ST. | PO BOX 251 | SAN ANDREAS, CA 95249
(209) 754-1824

CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT
PHASE 1 - SITE IMPROVEMENTS
JEFF DAVIS WATER TREATMENT PLANT
MOKELUMNE HILL, CA 95245
CALAVERAS COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW STEPHEN OSPITAL
No. 7659
STATE OF CALIFORNIA

PRJ. No.:	2873
DATE:	5/18/2021
SCALE:	AS SHOWN
DRAWN BY:	TAD/DMV
CHECKED BY:	MSO

C1

SHT. 1 of SHT. 12

BENCH MARK DATA:

TAG	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	BENCH MARK	10481.34	9629.26	2661.42'
2	MH	10189.60	9765.50	2667.22'
3	SSMH	10115.00	9697.39	2661.55'

0 30 60

(E) ACCESS RD.

(P) SPOILS DISPOSAL AREA

(P) ACCESS

(P) ACCESS

(E) BM 1

(E) BACKWASH POND NO. 2

(E) BACKWASH POND NO. 1

(E) MH 2

(P) 36" DIA. HDPE PIPE (ADDITIVE ALTERNATIVE #1)

(P) 36" DIA. CMP w/ H-20 GRATE (ADDITIVE ALTERNATIVE #1)

(P) JB-1 (48X48 ID) w/ H-20 GRATE (ADDITIVE ALTERNATIVE #1)

(P) 36" DIA. HDPE PIPE (ADDITIVE ALTERNATIVE #1)

(P) JB-2 (48X48 ID) w/ H-20 MANHOLE LID (ADDITIVE ALTERNATIVE #1)

(P) 24" DIA. HDPE PIPE (ADDITIVE ALTERNATIVE #1)

(P) JB-3 (36X36 ID) w/ H-20 GRATE (ADDITIVE ALTERNATIVE #1)

(E) RELIEF VENT

(E) CONC. VAULT

(E) SSMH 3

(P) JB-4 (36X36 ID) w/ H-20 MANHOLE LID (BASE BID)

(P) 12" DIA. HDPE PIPE (ADDITIVE ALTERNATIVE #1)

(P) 12" DIA. HDPE PIPE (BASE BID)

(P) 18" DIA. HDPE PIPE (BASE BID)

(E) SALT STORAGE SHED

(E) WATER TREATMENT PLANT

FUTURE TANK

(E) TANK

(E) PUMP STATION

(E) FILTER TANKS, (TYP.)

(P) TANK GRADING

(E) GENERATOR BUILDING

(E) SD DI

HATCH LEGEND:

EXISTING AGGREGATE BASE ROCK (TO REMAIN)

EXISTING CONCRETE (TO REMAIN)

(P) ADDITIVE ALTERNATIVE #1 SPOILS DISPOSAL AREA

OVERALL SITE PLAN

Plot May 24, 2021 at 10:58am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_01_CPUD TANK PROJECT - GENERAL - FINAL.dwg

REVISIONS

REV. No.	DESCRIPTION	REV. DATE	BY
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CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT
PHASE 1 - SITE IMPROVEMENTS
JEFF DAVIS WATER TREATMENT PLANT
MOKELUMNE HILL, CA 95245
CALAVERAS COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW STEPHEN OSPITAL
No. 76594
CIVIL
STATE OF CALIFORNIA

PRJ. No.:	2873
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SCALE:	AS SHOWN
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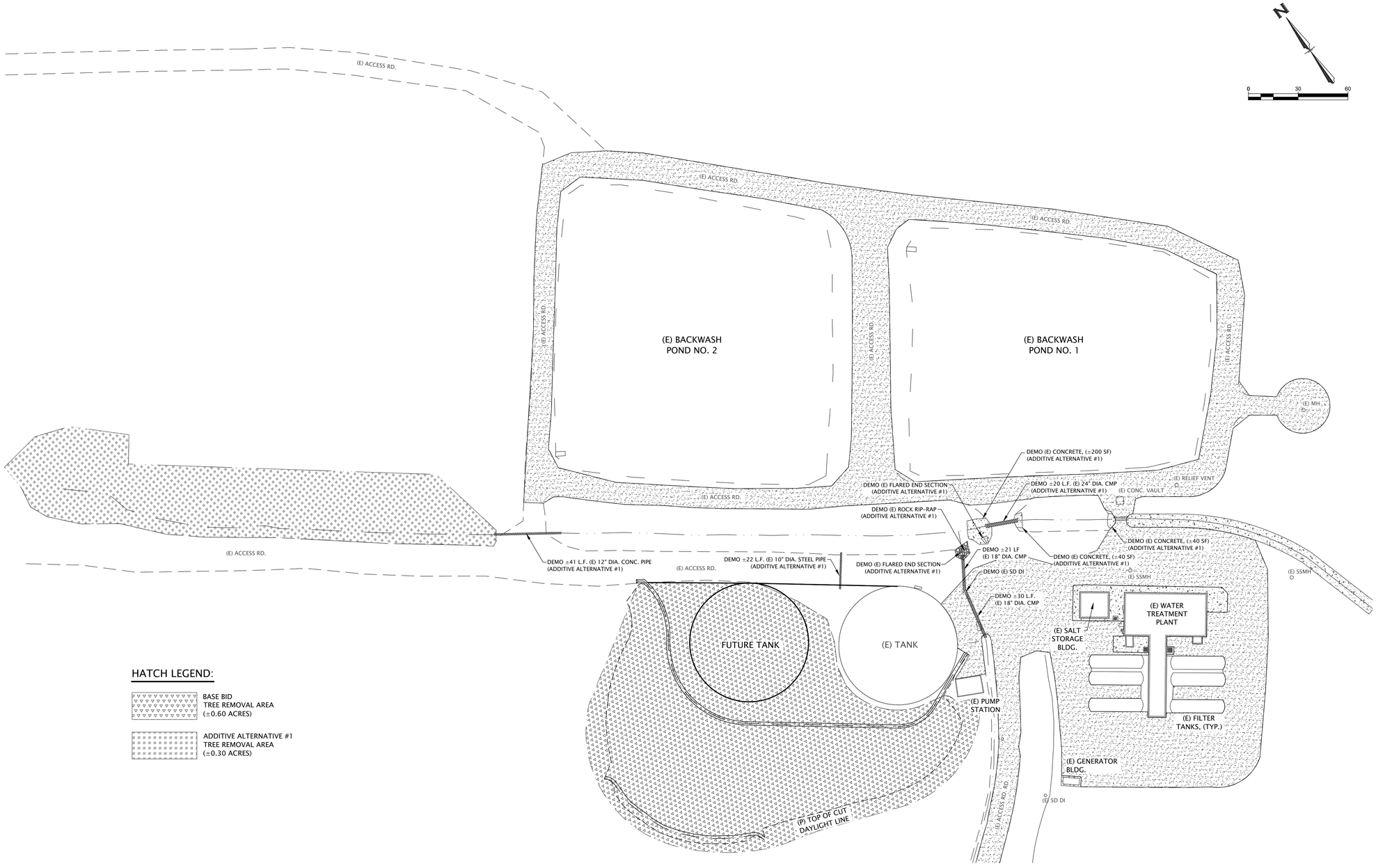
C2

SHT. 2 of SHT. 12



HATCH LEGEND:

BASE BID
TREE REMOVAL AREA
(±0.60 ACRES)

ADDITIVE ALTERNATIVE #1
TREE REMOVAL AREA
(±0.30 ACRES)

DEMOLITION PLAN

Plot May 24, 2021 at 10:56am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_01_CPUD TANK PROJECT - GENERAL - FINAL.dwg

REVISIONS

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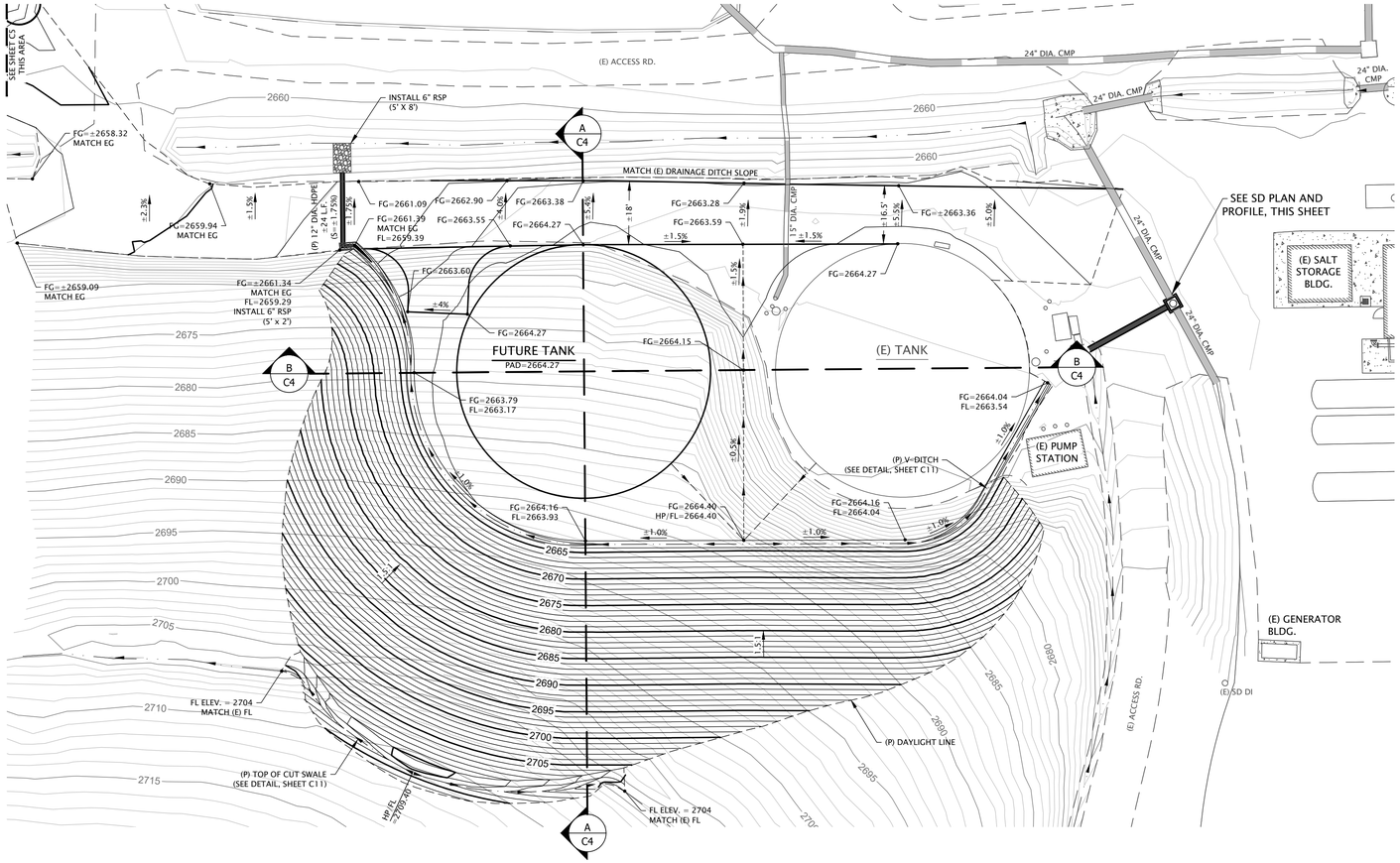
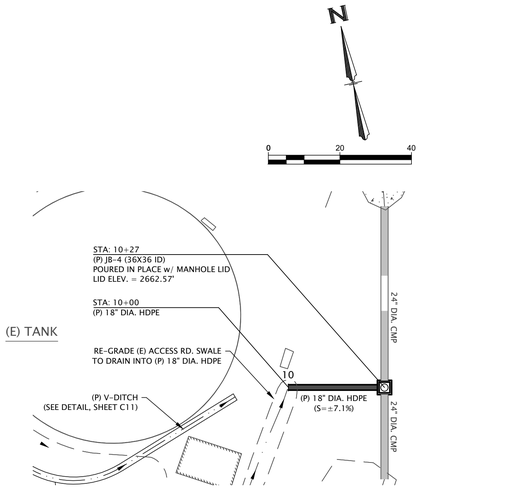
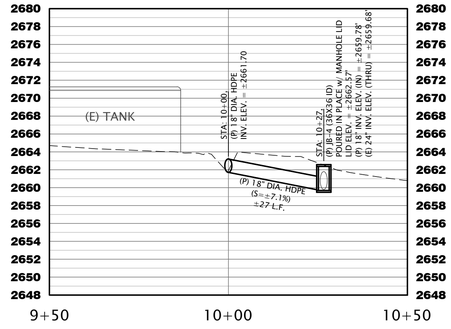
C3

SHT. 3 of SHT. 12

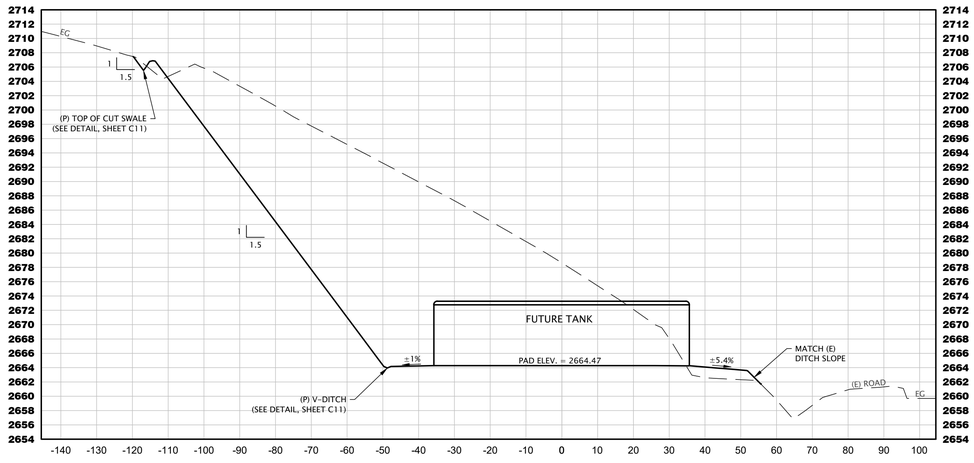






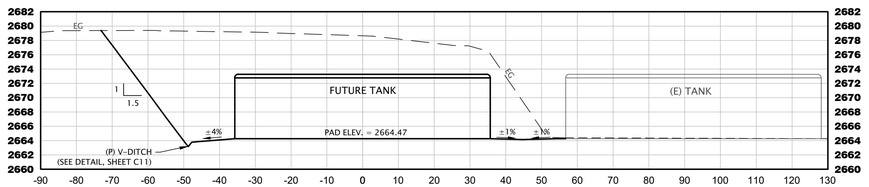
STORM DRAIN
PLAN AND PROFILE

HORZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 8'



SECTION 'A' – 'A'

HORZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 10'



SECTION 'B' – 'B'

HORZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 10'

FUTURE TANK GRADING AND STORM DRAIN UTILITY PLAN

Plot May 24, 2021 at 10:52am M:\Projects\CPUD\2873–Clearwell Tank Project_DSGN DWG's\PHASE I\2873_02A_CPUD TANK PROJECT – GRADING BASE – FINAL.dwg

REVISIONS

REV. No.	DESCRIPTION	REV. DATE	BY
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CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT
PHASE 1 - SITE IMPROVEMENTS
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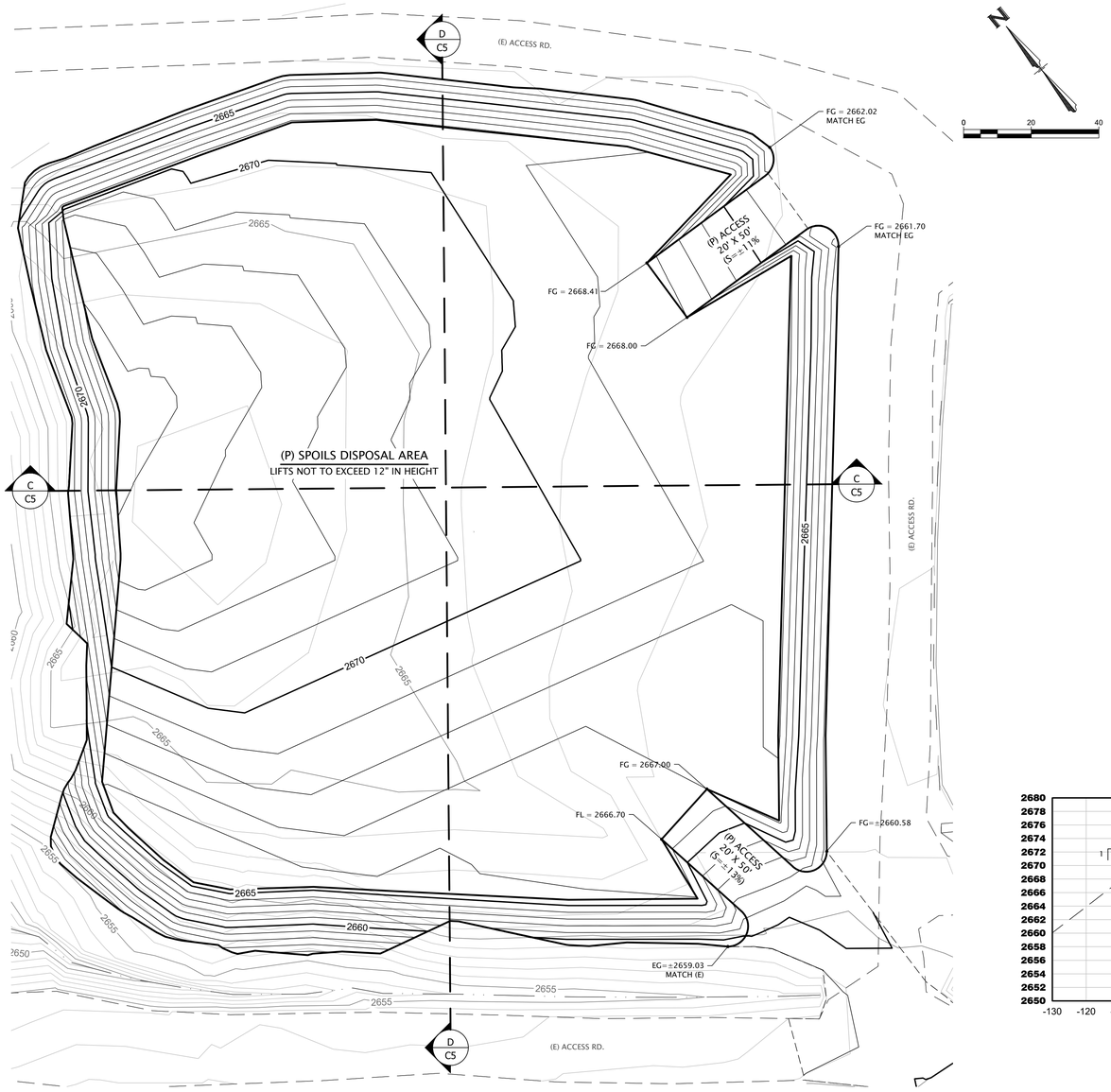
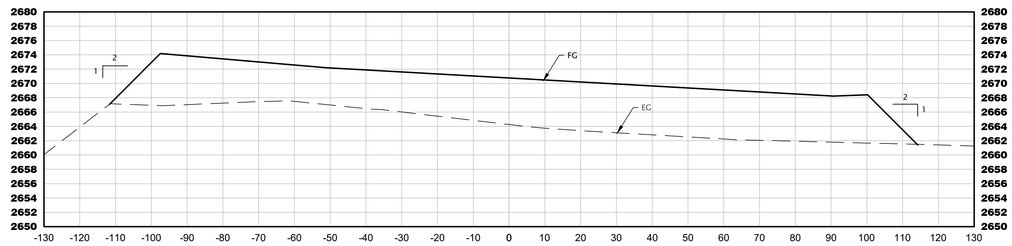
C4

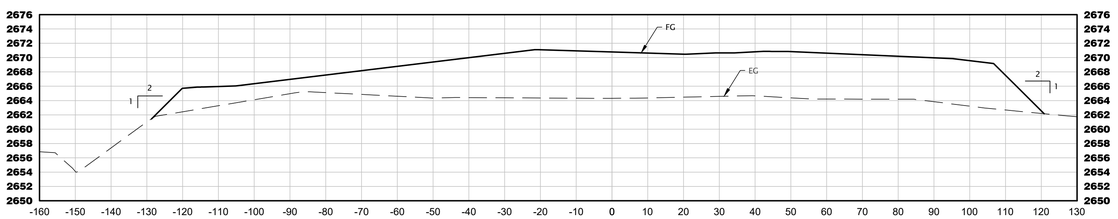
SHT. 4 of SHT. 12



SPOILS DISPOSAL AREA
GRADING PLAN



SECTION 'C' - 'C'
HORZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 10'



SECTION 'D' - 'D'
HORZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 10'

Plot May 24, 2021 at 10:44am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_02A_CPUD TANK PROJECT - GRADING BASE - FINAL.dwg

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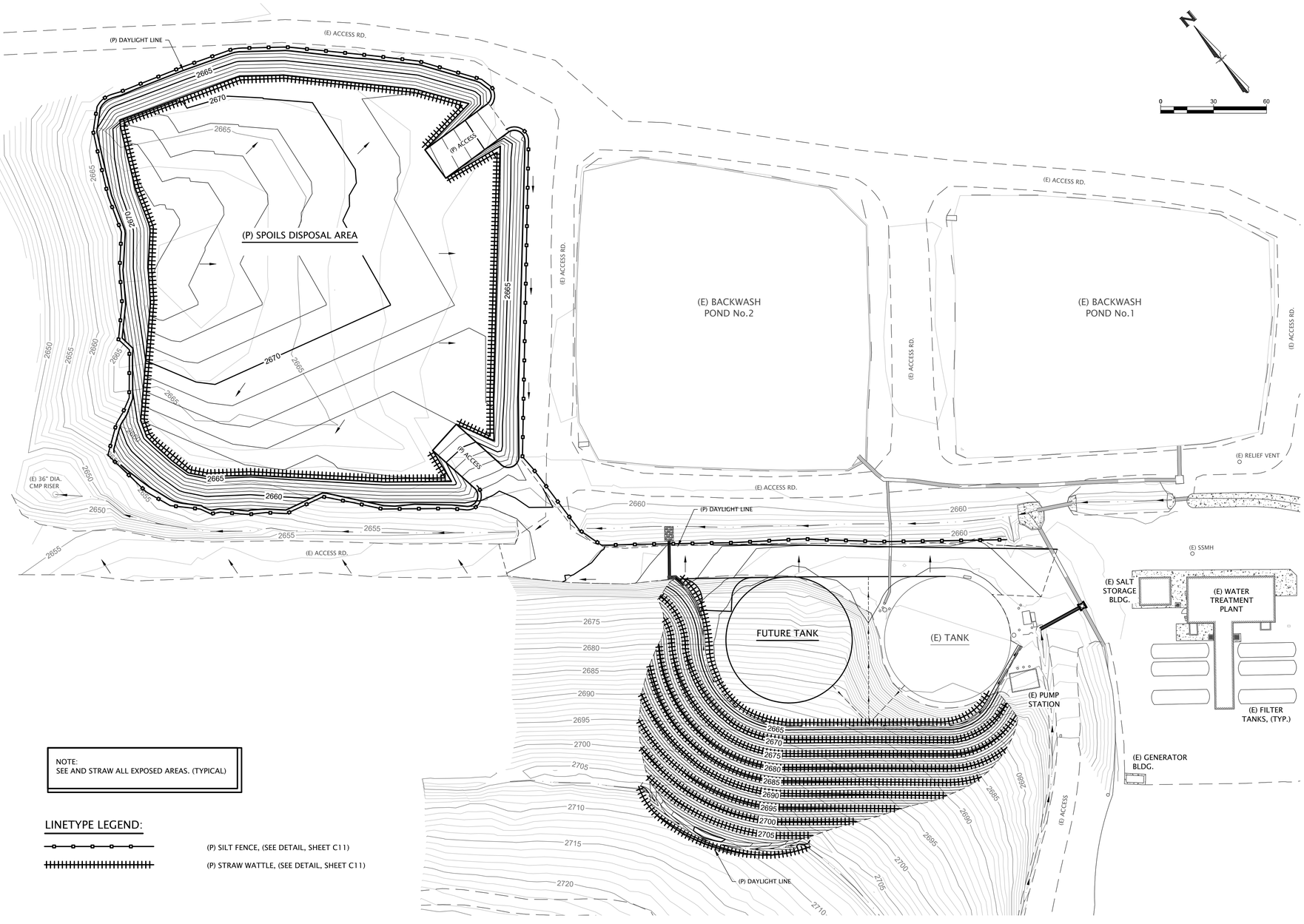
C5

SHT. 5 of SHT. 12



NOTE:
SEE AND STRAW ALL EXPOSED AREAS. (TYPICAL)

LINETYPE LEGEND:

(P) SILT FENCE, (SEE DETAIL, SHEET C11)

(P) STRAW WATTLE, (SEE DETAIL, SHEET C11)

EROSION CONTROL PLAN

Plot May 24, 2021 at 10:48am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_02A_CPUD TANK PROJECT - GRADING BASE - FINAL.dwg

REVISIONS

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CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT
PHASE 1 - SITE IMPROVEMENTS
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CALAVERAS COUNTY CALIFORNIA

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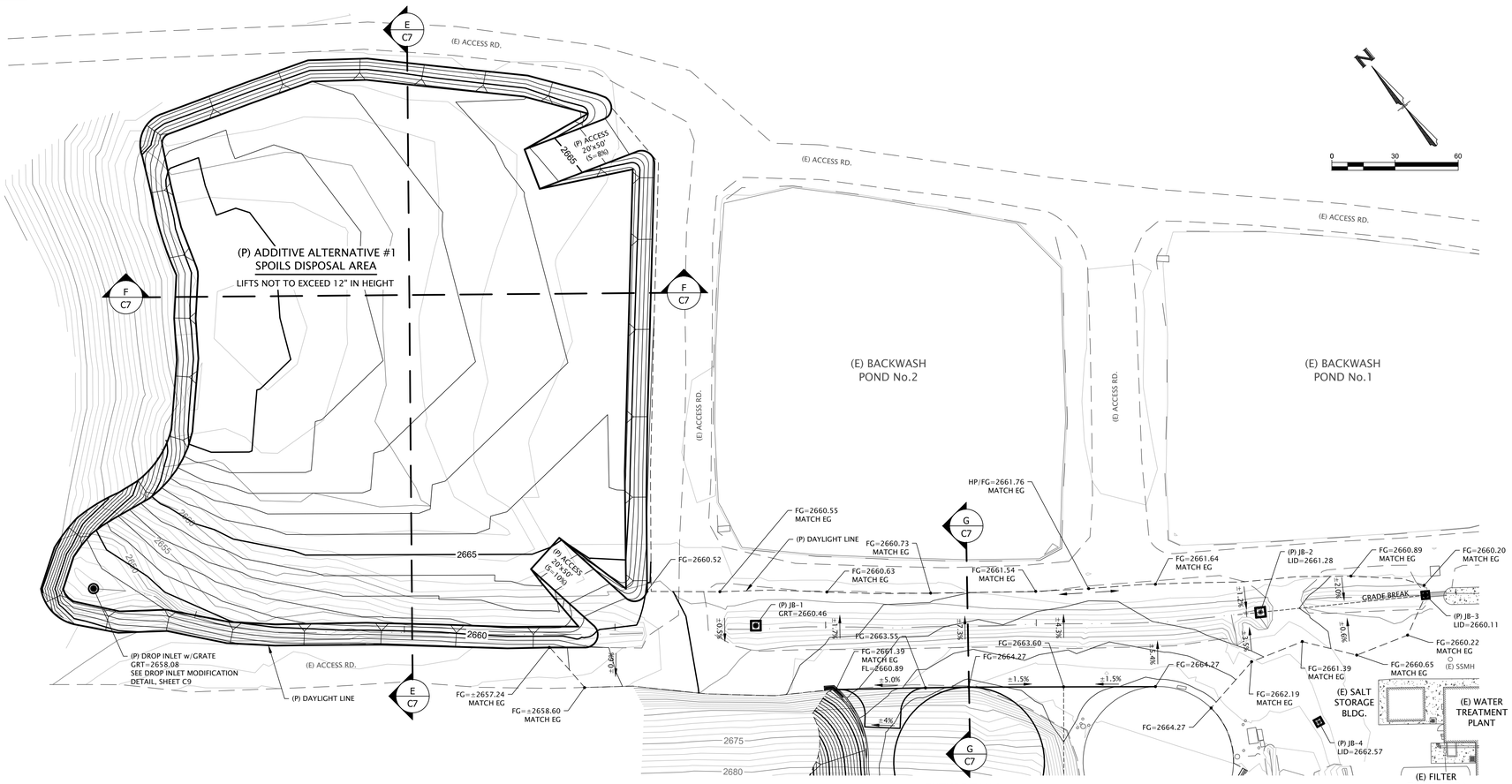
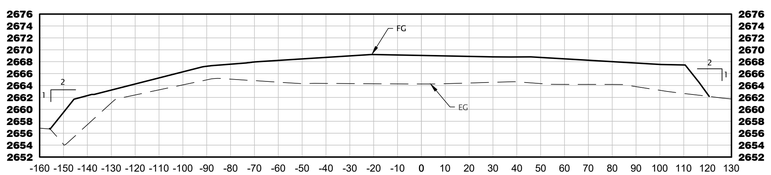
C6

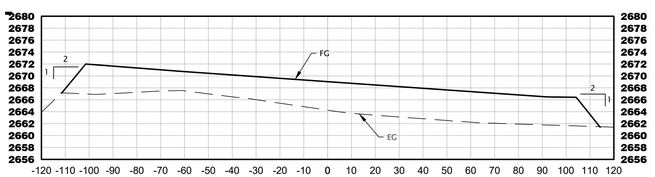
SHT. 6 of SHT. 12





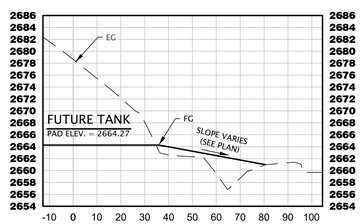
SECTION 'E' – 'E'

HORZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 10'



SECTION 'F' – 'F'

HORZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 10'



SECTION 'G' – 'G'

HORZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 10'

ADDITIVE ALTERNATIVE #1
GRADING PLAN

Plot May 24, 2021 at 11:05am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_02B_CPUD TANK PROJECT - GRADING ALTERNATIVE - FINAL.dwg

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CALAVERAS COUNTY CALIFORNIA

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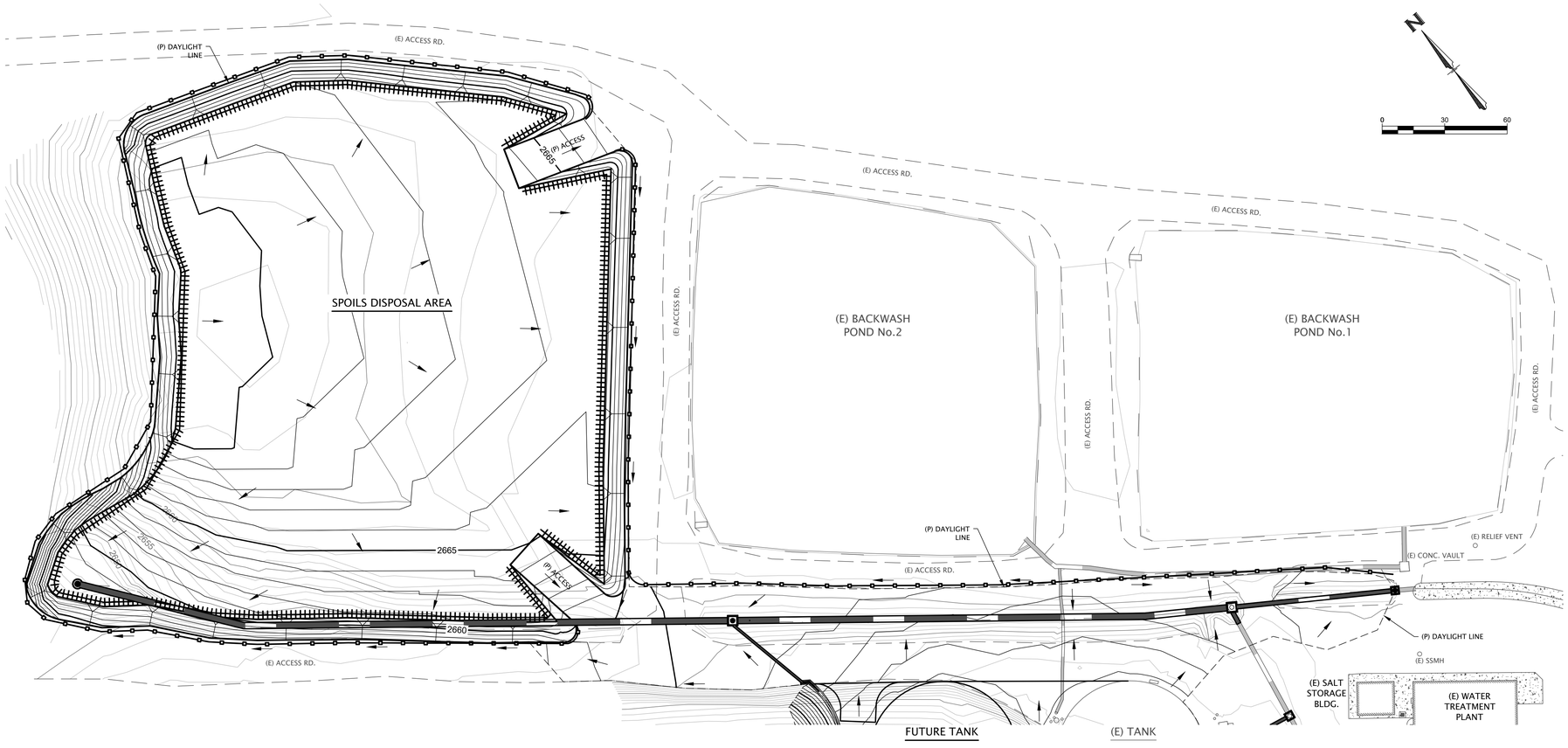
C7

SHT. 7 of SHT. 12



ADDITIVE ALTERNATIVE #1
EROSION CONTROL PLAN

NOTE:
SEE AND STRAW ALL EXPOSED AREAS. (TYPICAL)

LINETYPE LEGEND:

(P) SILT FENCE, (SEE DETAIL, SHEET C11)

(P) STRAW WATTLE, (SEE DETAIL, SHEET C11)

Plot May 24, 2021 at 11:01am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_02B_CPUD TANK PROJECT - GRADING ALTERNATIVE - FINAL.dwg

REVISIONS

REV. No.	DESCRIPTION	REV. DATE	BY
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CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT
PHASE 1 - SITE IMPROVEMENTS
JEFF DAVIS WATER TREATMENT PLANT
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CALAVERAS COUNTY CALIFORNIA

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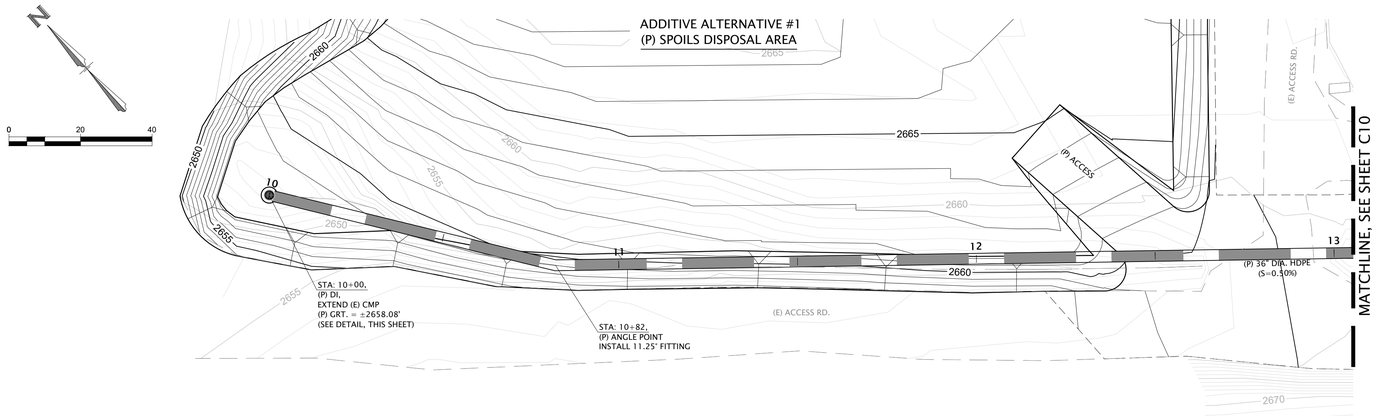
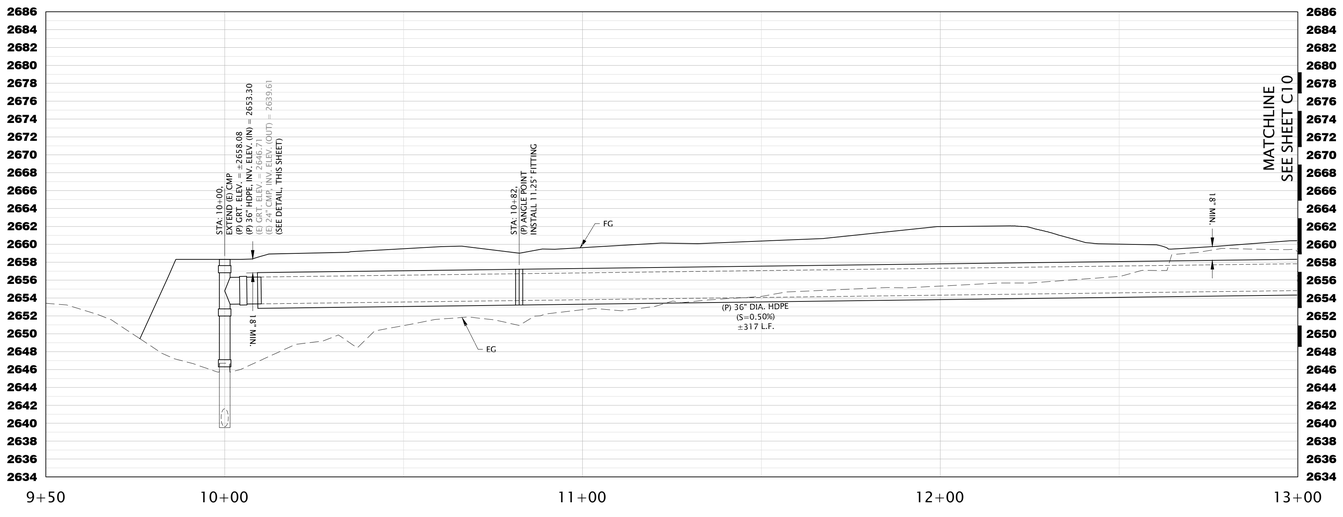
C8

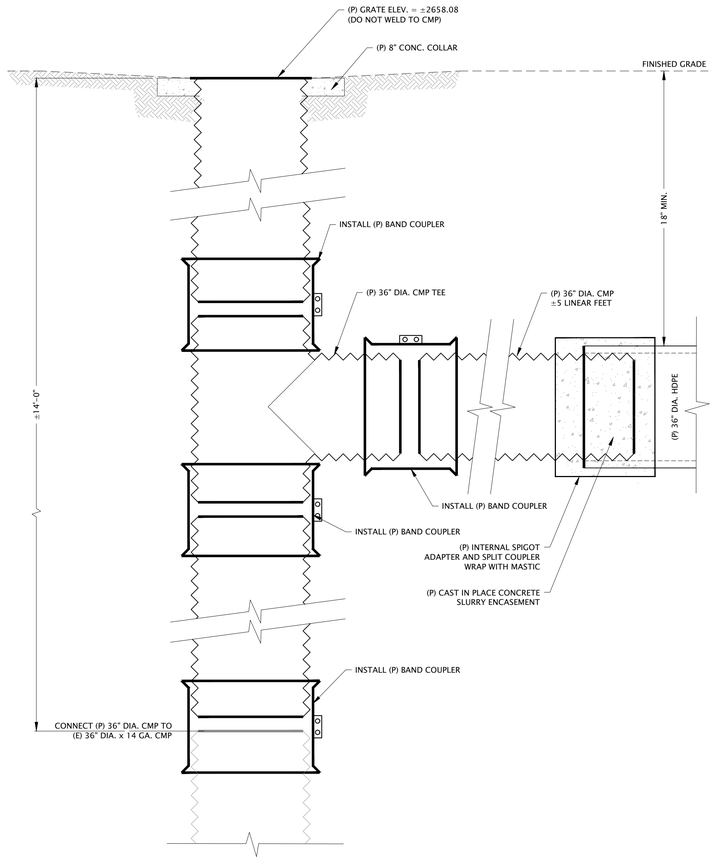
SHT. 8 of SHT. 12



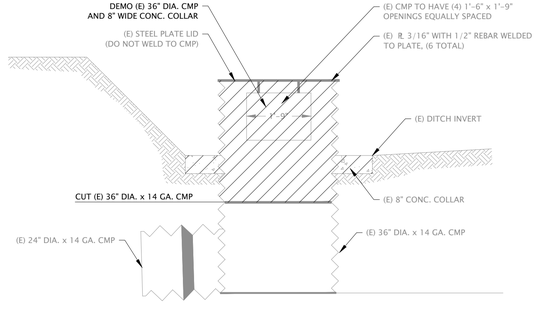


ADDITIVE ALTERNATIVE #1
STORM DRAIN PLAN AND PROFILE

HORZ. SCALE: 1"=20'
VERT. SCALE: 1" = 8'



(P) DROP INLET MODIFICATION DETAIL
NOT TO SCALE



(E) DROP INLET DETAIL
NOT TO SCALE

REVISIONS			
REV. No.	DESCRIPTION	REV. DATE	BY
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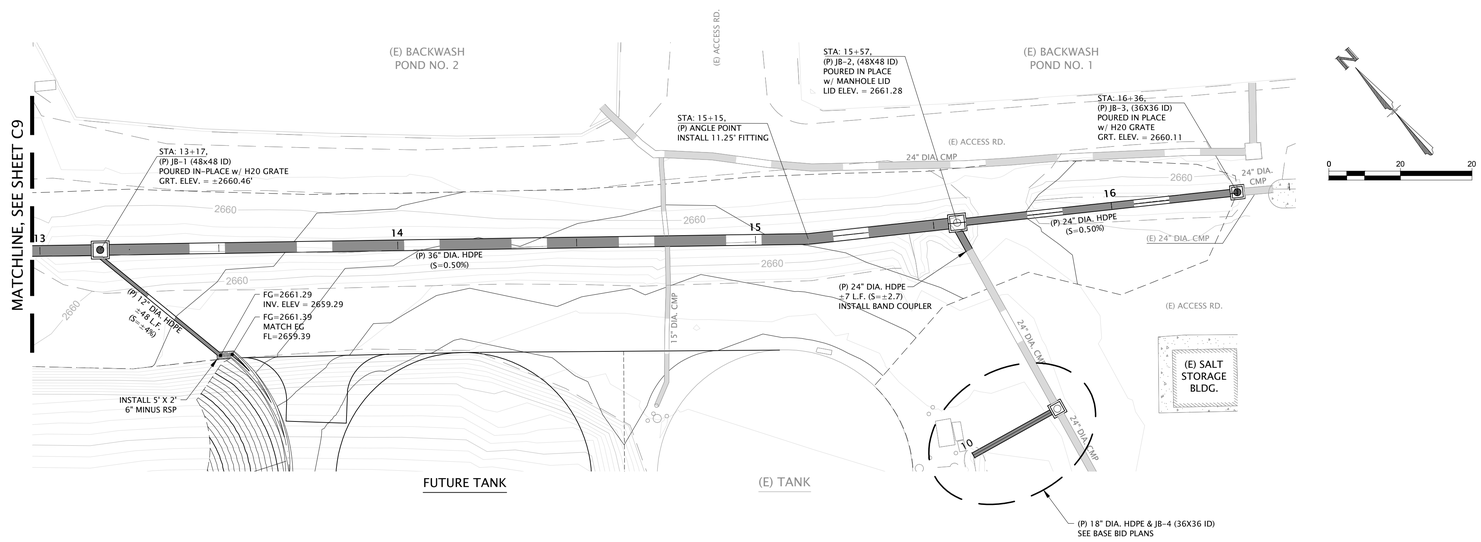
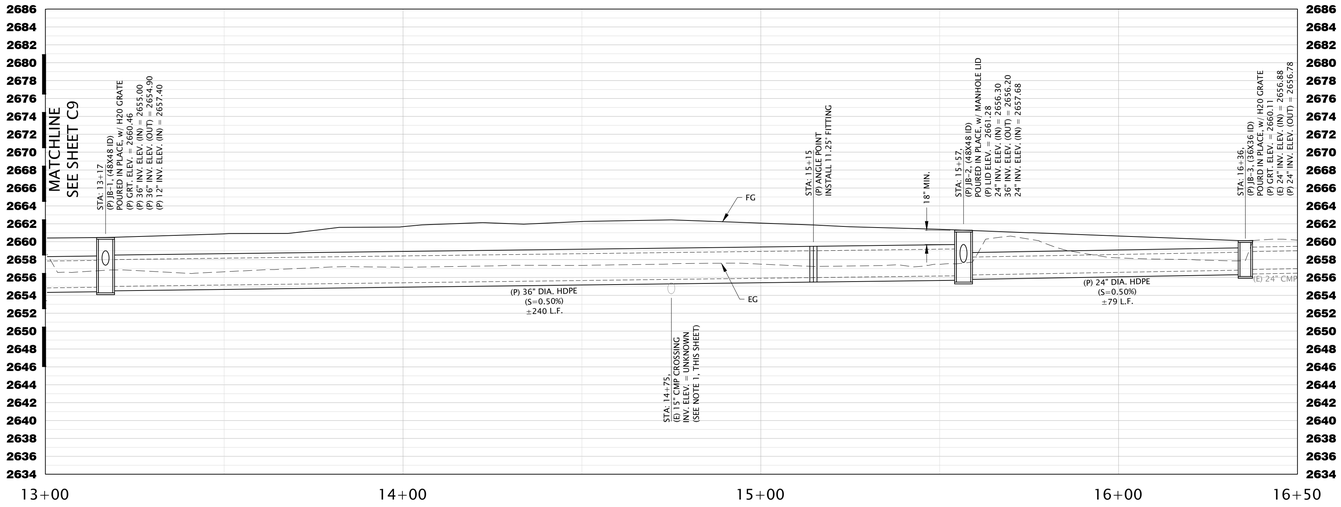
C9

SHT. 9 of SHT. 12





ADDITIVE ALTERNATIVE #1
STORM DRAIN PLAN AND PROFILE

HORZ. SCALE: 1"=20'
VERT. SCALE: 1" = 8'

NOTE:

1. CONTRACTOR TO POTHOLE AND FIELD VERIFY ALL STORM DRAIN CONFLICTS.

REVISIONS			
REV. No.	DESCRIPTION	REV. DATE	BY
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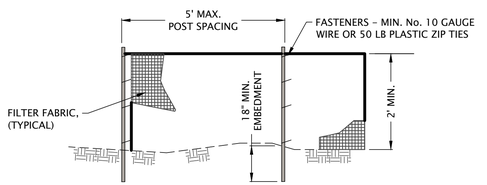
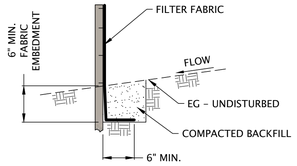
C10

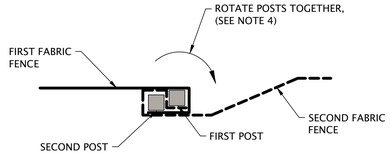
SHT. 10 of SHT. 12



ELEVATION



ANCHOR DETAIL



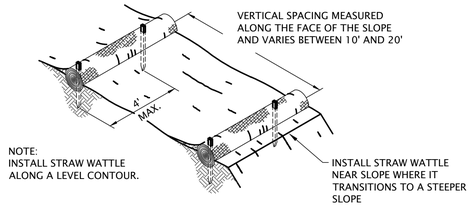
SPLICE DETAIL-PLAN VIEW

NOTES:

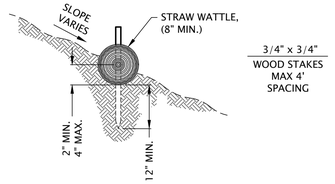
1. TEMPORARY SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. FENCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS L WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
3. FENCE POSTS SHALL BE EITHER WOOD POST WITH A MINIMUM CROSS-SECTIONAL AREA OF 1.5" X 1.5" OR A STANDARD STEEL POST.
4. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP. THEN DRIVE BOTH POSTS AND BURY THE FLAP. COMPACT BACKFILL WELL.

SILT FENCE DETAIL

NOT TO SCALE



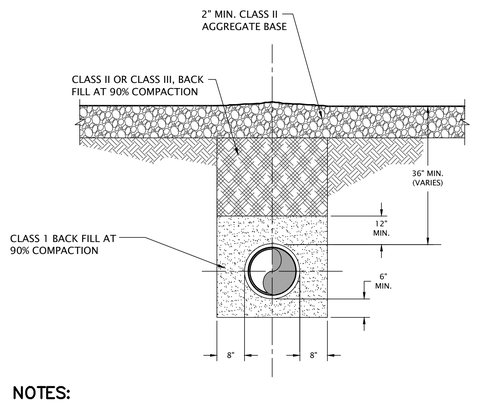
TYPICAL INSTALLATION



ENTRENCHMENT DETAIL

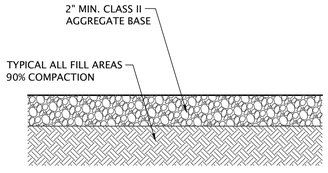
STRAW WATTLE DETAIL

NOT TO SCALE



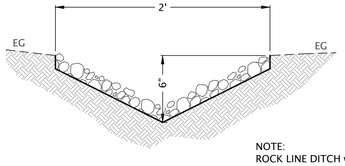
NOTES:

1. PIPE BEDDING SHALL COMPLY WITH DISTRICT IMPROVEMENT STANDARDS.
2. MINE TAILINGS ARE UN-ACCEPTABLE FOR ANY TRENCH BACKFILLING.
3. PIPE COVER 40" OR GREATER MUST BE PRE-APPROVED BY DISTRICT ENGINEER.
4. STRUCTURAL SECTION ELEMENTS MAY BE INCREASED WHERE REQUIRED BY THE DISTRICT ENGINEER DUE TO SOIL CONDITIONS. THE REPLACEMENT STRUCTURAL SECTION SHALL EQUAL THE EXISTING SECTION AS A MINIMUM REQUIREMENT IN GENERAL.



TYPICAL AB SECTION

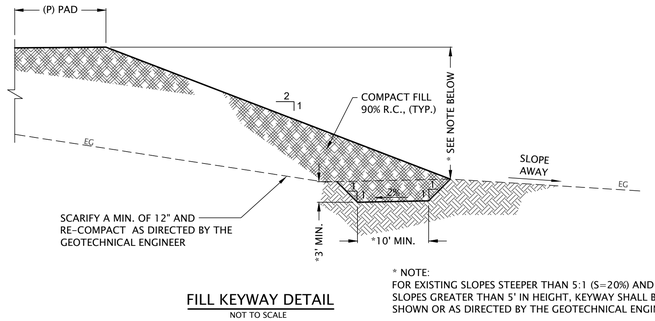
NOT TO SCALE



NOTE:
ROCK LINE DITCH w/ 6" MINUS ROCK
IF SLOPE IS GREATER THAN 5%

V-DITCH

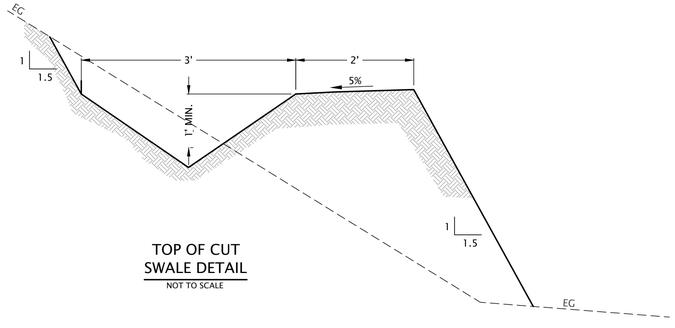
NOT TO SCALE



FILL KEYWAY DETAIL

NOT TO SCALE

* NOTE:
FOR EXISTING SLOPES STEEPER THAN 5:1 (S=20%) AND FILL SLOPES GREATER THAN 5' IN HEIGHT, KEYWAY SHALL BE AS SHOWN OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER



TOP OF CUT SWALE DETAIL

NOT TO SCALE

REVISIONS

REV. No.	DESCRIPTION	REV. DATE	BY
1			
2			
3			
4			
5			
6			

WEBER, GHIO & ASSOCIATES
civil engineering consultant
394 E. SAINT CHARLES ST. | PO BOX 251 | SAN ANDREAS, CA 95249
(209) 754-1824

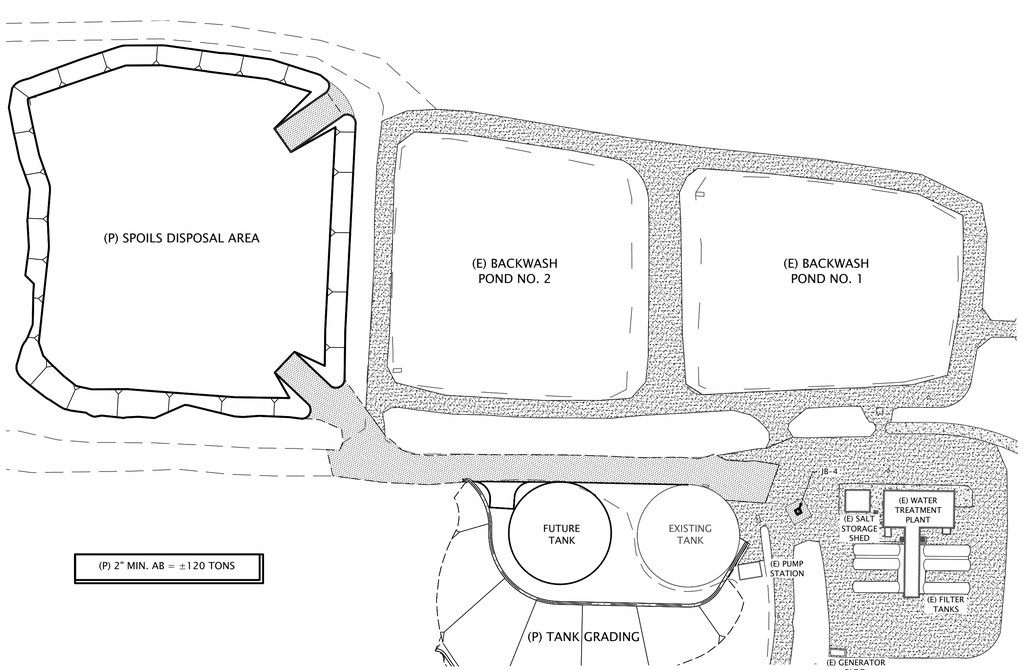
CALAVERAS PUBLIC UTILITY DISTRICT
CLEARWELL TANK PROJECT
PHASE 1 - SITE IMPROVEMENTS
JEFF DAVIS WATER TREATMENT PLANT
MOKELUMNE HILL, CA 95245
CALAVERAS COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW STEPHEN OSBORNE
No. 76594
CIVIL
STATE OF CALIFORNIA

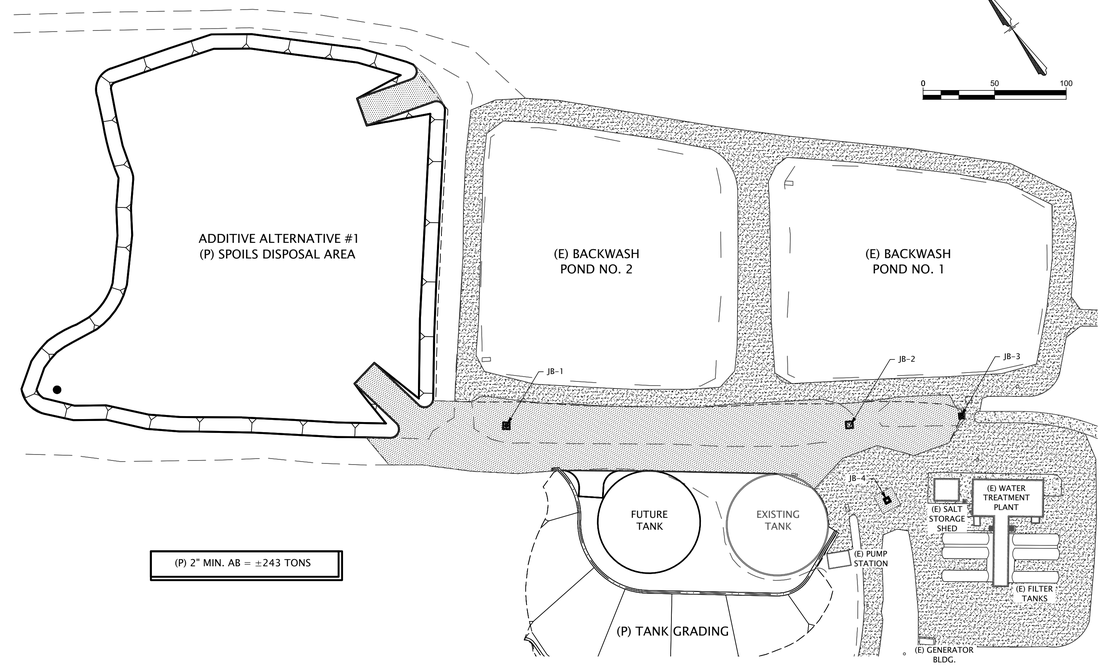
PRJ. No.:	2873
DATE:	5/24/2021
SCALE:	AS SHOWN
DRAWN BY:	TAD/DMV
CHECKED BY:	MSO

C11

SHT. 11 of SHT. 12



AGGREGATE BASE PLAN



ADDITIVE ALTERNATIVE #1
AGGREGATE BASE PLAN

HATCH LEGEND:

- EXISTING AGGREGATE BASE ROCK (TO REMAIN)
- EXISTING CONCRETE (TO REMAIN)
- PROPOSED 2" MIN. AGGREGATE BASE ROCK BASE BID AND ADDITIVE ALTERNATIVE #1

Plot May 24, 2021 at 11:34am M:\Projects\CPUD\2873-Clearwell Tank Project_DSGN DWG's\PHASE I\2873_05_CPUD TANK PROJECT - AB PLAN - FINAL.dwg

REVISIONS

REV. No.	DESCRIPTION	REV. DATE	BY
1			
2			
3			
4			
5			

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C12

SHT. 2 of SHT. 12